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Article

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On the occurrence of *Crotalaria uncinella* subsp. *elliptica* (Fabaceae) in Andaman and Nicobar Islands, India

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Abstract

We present a first wild record of *Crotalaria uncinella* subsp. *elliptica* (Fabaceae) from Saddle Peak National Park, North Andaman, India with its comprehensive morphological description, illustration, photographs and lectotypification.

Keywords: Crotalarieae, subspecies, Roxburgh, India, new addition

Introduction

William Roxburgh (1751–1815) was used to receive seeds from botanists from different countries and to grow them in the Botanic Garden at Calcutta (HBC), West Bengal (Forman 1997). A few such garden grown plants were described by him as new species, regardless of their origin. *Crotalaria elliptica* Roxb. (Roxburgh 1832: 284) described based on the plants grown at HBC from the seeds he had received from China. Thereafter, this species has not yet been recorded from India and hence it has been excluded from the Indian flora's (Baker 1876; Ansari 2008). However, the species has been recognized well in the Southeast and East Asian flora (Bentham 1843; Forbes & Hemsley 1886; Craib 1928). In later years the species was synonymised (Peltier 1959; de Munk 1962) with the African *Crotalaria uncinella* Lam. (Lamarck 1786: 201), which has been reinstated as subspecies by Polhill (1971) due to its allopatric nature, small flowers and legumes.

In search of *Grewia indandamanica* J.L. Ellis & L.N. Ray (1991:341), *Murdannia saddlepeakensis* Ramana & Nandikar (2013:10) and *Euphorbia epiphylloides* Kurz (1873:247) authors made a visit to Saddle Peak National Park, North Andaman in October 2017. While climbing down from the peak we had collected a lemon flowered *Crotalaria*, which turned out to be *Crotalaria uncinella* subsp. *elliptica*, a new addition to Indian flora, making a total of 82 species for the genus in India. It can be easily recognized in the field by tri-foliate leaves, which has characteristically white, velutinous abaxial leaf surface, distinctly rusty pubescent young branches, inflorescence, and small globose, sericeous, two seeded legumes.

The protologue of *Crotalaria elliptica* Roxb. is imprecise about the type, except 'a native of China, from thence introduced into the Botanic Garden, where it flowers in August and September.....'. Our search at BR, BM, E, K, OXF, G, and L (Stafleu & Cowan 1983; Forman 1997) failed to locate original material of *C. elliptica*. The collections from Calcutta Botanic Garden (viz. HBC) referred to the Wallich Catalogue no. 5433 are available at K (K633844 and K1120897) and CAL (104325). Though all were collected from the HBC, cannot be served as original material as these were not collected by Roxburgh and in fact these were collected subsequently to Roxburgh when he left India or after his death (Forman 1997). However, a beautiful drawing in Icones Roxburghianae No. 1888 is available at K, which is explicitly agreeing the protologue and part of the original material is selected here as lectotype in accordance with Art. 9.3 of ICN (Turland *et al.* 2018). The Icon. Roxb. No. 1599 is erroneously labeled as *Crotalaria elliptica*, which represents *C. cytisoides* Roxb. ex DC (Candolle 1825:131) (Sealy 1956; Forman 1997).

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Studies on Biochemical composition of *Lyngbya martensiana* Meneghini ex Gomont from Kopargaon Region, Dist. Ahmednagar, (M.S.) India

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Now a day's, lot of research is going on the applied aspects of Algae such as Food, Fodder, Fertilizers, Liquid fertilizer, Biodiesel, Fish food, Carotenes and Biochemical studies. There are very limited botanists who paid their attention in the Phycological studies, while very few are paying the attention towards floristic survey of fresh water algae. Some of the workers studied algae for its biochemical contents. The present studies were carried out on fresh water alga, *Lyngbya martensiana* Meneghini ex Gomont. The algal material is collected from Yesgaon canal and S.S.G.M.College, Botanical Garden water tank during the period from March, 2012 to February, 2014. The alga was collected when canal does not flow and there is formation of small water ponds in the canal. Screening of collected algal material for its protein, carbohydrates and lipid contents is carried out. The protein content analyzed from the samples ranged from 15.28% to 18.01%. Quantitative estimation of total carbohydrate in the studied alga revealed a range from 22.55% to 31.8%, while estimated values of lipids were 3.5% to 3.9% in both the years. Analysis of the recorded results has shown that, the fresh water alga *Lyngbya martensiana* contains significant amount of protein, moderate amount of total carbohydrate and lipids.

INTRODUCTION

Main basic needs of humanbeings are food, shelter and clothing. Besides this, another need of man is the medicine. All the basic needs are fulfilled by plants and plant products. Among the plants, higher larger plants are fulfilling most of the essential things. But some lower plants like bryophytes, algae fungi, bacteria and lichens are also beneficial for humanbeings by different ways. Among the lower plants, Cyanobacteria are one of the useful algal groups widely used in food industries and in few biotechnological applications (Venkataraman and Becker, 1985). This group is having diverse applied aspects. They store reserve food materials which can be used as the source of pigments, lipids, vitamins, proteins and certain secondary metabolites.

Cyanobacterial protein has received worldwide attention for either as food supplement or as an alternative source of food. Some species of *Anabaena, Nostoc* and *Spirulina* are consumed as food due to their high protein and fibre content (Anusuya *et al.*, 1981; Anupama, 2000). A large number of marine nitrogen fixing Cyanobacteria serve as complete aquaculture feed source due to their nutritional quality and non toxic property.

By considering explode population, it can be expected that the food requirement in the prospect could not be covered by conventional agriculture. Therefore, in recent years, innumerable attempts have been taken to search non-conventional, renewable and alternate sources of food in order to feed ever-increasing population of the world. Amongst non conventional food sources, algae as alternate source of food have attracted attention of most of the world. This is because of richness of algae in proteins, carbohydrates, vitamins, minerals and fatty acids.

MATERIAL AND METHODS

The present studies were carried out on fresh water alga, *Lyngbya martensiana* Meneghini ex Gomont. The algal material is collected from Yesgaon canal and S.S.G.M. College, Botanical Garden water tank during the period from March, 2012 to February, 2014. The algae was collected when canal does not flow and there is formation of small water ponds in the canal. Algal identification was carried out with relevant literature like Deshikachary (1959).

About the alga- *Lyngbya martensiana* Meneghini ex Gomont is the fresh water alga appears in the water canal from November onwards and attains a peak growth in the month of January- February. The thallus of the alga is filamentous, 6-18 cm in length, dark green, and unbranched.

- Proteins were estimated by following Lowry's method (Lowry *et al.*, 1951) using folin-Ciocalteau reagent.

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Nostocales From Godavari River at Nashik, (M.S.), India

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ABSTRACT: *Nostocales is one of the orders of Blue Green Algae. The attempt was made to study the diversity of Nostocales of Godavari river. The present study was carried out for two consecutive years (2005-2007). Five sampling stations at starting stretch of Godavari river were selected for the collection of algal forms. Near about 97 km area was covered for the study from Nashik to Nandur-Madhmeshwar dam. Monthly collection of algal forms were carried out and analyzed for its qualitative study. At many sampling stations domestic wastes and municipal sewage is being dumped daily in addition to agricultural run-off, which causes the enrichment of nutrients in river water causing the luxurious growth of algae.*

During present investigations, in all, 9 genera and 17 species belonging to four families viz. Oscillatoriaceae, Nostocaceae, Scytonemataceae and Rivulariaceae of order Nostocales were encountered from all 5 sampling stations of Godavari river. It was also observed that Oscillatoriacean members were found to be the dominant group. During present studies, tremendous variations in algal diversity were noticed during summer and winter as compared to monsoon season. Change in water flow, transparency and temperature affected the growth and abundance of Nostocalean algal forms in river water.

Keywords: *Nostocales, Blue green algae, Godavari river.*

Introduction

Algae are playing very important role in human life. They are primary producers of aquatic ecosystem. Nostocales is one of the groups of Blue Green Algae. Nostocales from Godavari rive was studied for two consecutive years (2005-2007). Godavari river is one of the important water resources in South India and its water is used for various purposes. It originates at Trymbakeshwar in Western Ghats just 30 km upstream of Nashik city. Flowing through Maharashtra, Andhra Pradesh, it joins the Bay of Bengal. River receives huge quantity of domestic waste and municipal sewage of Nashik city causing organic pollution. It resulted the growth and population of number of phytoplankton. Many workers has studied the algae in relation to water pollution and used algae as pollution indicators (Rana and Palria, 1988). However, algal studies at starting stretch of Godavari river remained untouched. Therefore, it is intended to assess the river water with special reference to Nostocalean flora.

Materials and Methods

Monthly collection of water samples was done from five different sampling stations The plastic containers of two liter sized were used for the collection of water samples, while for estimation of dissolved oxygen and biological oxygen demand, samples were collected in 250 ml sized BOD bottles and fixed at sampling sites. For algal studies, samples were collected separately by using plankton net 25 meshes bolting silk and preserved in 4% formaldehyde and Lugol's solution. Some algal forms were collected by hand with the forceps. Parameters like pH, light penetration, temperature were detected at sampling sites, while remaining parameters were analyzed after reaching the laboratory. For physico-chemical parameters standard methods described in APHA (1985) and Trivedi and Goel (1986) were used, while Nostocalean forms were identified by using relevant literature like Prescott (1951), Deshikachary (1969)etc.

Results and Discussion

Nostocales

This class was represented by 9 genera and 17 species (Table.1). The commonly recorded genera were *Spirulina, Oscillatoria, Lyngbya, Arthrospira, Nostoc, Anabaena, Aulosira, Tolypothrix* and *Rivularia*. During summer season more number was recorded and might be due to availability of more free CO_2, sunlight, phosphate and nitrate concentration. Our results correlate with Moore (1977). The common pollution tolerant genera recorded during present studies were *Lyngbya, Spirulina, Anabaena, Oscillatoria,* etc. Lowest number of algal taxa of BGA were recorded during monsoon months particularly in months of July, August and September. Lowest number might be attributed to high water velocity, turbidity and dilution of nutrients due to rain. Raised

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Seasonal Variations of Euglenophyceae, Charophyceae and Dinophyceaen Algae of River Godavari with Reference to Pollution Status

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Algal studies were made for one year covering monsoon, winter and summer seasons chiefly to understand the seasonal variations of Euglenophyceae, Charophyceae and Dinophycean algae of Godavari river with special reference to pollution status of river.

Godavari river is one of the important rivers flowing through South India. It originates at Trymbakeshwar in Western Ghats just 30 km upstream of Nasik city. Flowing through Maharashtra, Andhra Pradesh, it joins the Bay of Bengal. River receives huge quantity of domestic waste and municipal sewage of Nasik city causing organic pollution. It resulted the variations in the of number of phytoplankton.

During present investigations, water quality of Godavari river was monitored for one year (August 2003-July-2004). From five sampling stations, water samples were collected and monitored for physico-chemical properties and algal studies. Seasonal growth and population of algae of river Godavari with reference to Euglenophyceae, Charophyceae and Dinophyceae has been monitored.

At station 2 and 3 the dominance of this group might be due to higher values of alkalinity, nitrates, phosphates chlorides, hardness, free CO_2 and BOD. The pollution tolerant genera of Euglenophyceae, Charophyceae and Dinophyceae and raised values of physico-chemical parameters showed the organic pollution of river water indicating its unsuitability for potable purpose. Present study revealed that water flow, higher values of temperature, alkalinity, chlorides, free CO_2, BOD, nitrates and phosphates influenced the occurrence and abundance of Euglenophyceae, Charophyceae and Dinophycean algal forms.

Keywords : Godavari river, Euglenophyceae, Charophyceae, Dinophyceae, Pollution.

INTRODUCTION

Godavari river is commonly called as Ganga of South India. It is the important river flowing through South India. It emerges out at Trymbakeshwar in Western Ghats just 30 Km upstream of Nasik city. Flowing through Maharashtra, AP, it joins the Bay of Bengal. Nasik is one of the largest cities situated at the bank of river at starting stretch. The huge quantity of organic matter in the form of domestic wastes, municipal sewage, faecal matter is being dumped daily resulting the organic pollution of river water. Many workers have studied the pollution status of many rivers. However, pollution studies of Godavari river at starting stretch remain untouched. Therefore, it was intended to access the water quality of Godavari river with reference to some algal groups.

MATERIAL AND METHODS

Five sampling stations were selected along the river covering a stretch of 50 kms. Station 1 was situated upstream of Nasik city. Station 2 was the Ramkund at Panchvati, Station 3 was near village Eklahare, Station 4 was point at confluence of Darna and Godavari river, while 5 was Nandur - Madhameshwar pick up well. Monthly collection of water samples were made for 1 year (August 2003-July-2004). For water analysis, water samples were collected in plastic containers, while algal collections were made by using plankton net (200 mesh/ linear inch) and preserved in 4% formaldehyde and Lugol's solution. Parameters like pH, light penetration and temperature were detected at sampling sites, while other parameters were analyzed after reaching the laboratory. For physico-chemical analysis, standard methods described in relevant literatures like APHA (1985), Trivedi and Goel (1986), Abbasi (1998) were followed. Phytoplankton identification was done with Philipose (1967) and Prescott (1962).

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Estimation of Major and Minor elements from fresh water alga *Lyngbya martensiana* Meneghini ex Gomont

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ABSTRACT: : Algal studies were carried out by many phocologists for human welfare. Many workers has pointed out that, the algae has potential as biofertilizer. Due to more use of of chemical fertilizers the quality of water and soil is decreasing day by day. These fertilizers are also costly. Therefore, it becomes very essential to substitute the chemical fertilizers. Algae can be used as biotertilizers as some have nitrogen fixing capacity. Some algae have potential of having different major and trace elements. The present studies were carried out on fresh water alga, Lyngbya martensiana Meneghini ex Gomont for its potential as a source of major and minor elements. The algal material is collected from Yesgaon canal from Kopargaon taluka during the period from March, 20012 to February, 2014. The alga was collected when canal does not flow and there is a formation of small water ditches in the canal. Screening of collected algal material for Major and Minor elements is carried out. It is concluded from the present investigations that, the fresh water alga Lyngbya martensiana contains significant quantity of major and minor elements. Among major elements, total nitrogen and phosphorus contents are moderate, while potassium values are lower than the reported values in marine algae. Ca and Mg contents are higher, while Fe content is low. Manganese values are in the range but fluctuating, while zinc and boron contents are higher than the marine algae. This alga may be used as important source of major and minor elements for the crop improvement.

Key Words: Lyngbya , Major, Minor elements, biofertilizer

Introduction:

Different aspects of algae and their potential applications as feed, fodder, fertilizer are being revealed by many workers in all over the world. Biochemical constituents viz proteins, carbohydrates, lipids, major and minor elements etc. of algae were analyzed by several workers from different parts of the world.

Improvements in agricultural production, food and nutrition situation depend on land, water and energy resources. Research on the selection of new high yielding varieties started after the second world war and the selected new cultivars (varieties) were spread all over the world during 1960-70. The new plants produced by such techniques are supposed to be resistant to diseases, predators, drought and can be grown without fertilizers or pesticides.

In most of the developing countries, use of chemical fertilizers to increase the crop production is becoming highly essential. At the same time uncontrolled application of these fertilizers has created major problems in farming. Day by day production cost of these fertilizers is increasing and that's why biological methods of improving soil fertility now a days becoming important. Use of living organisms to increase soil fertility is a recent biotechnological process. Biologically fixed nitrogen is important source which can supply an adequate amount of nitrogen to the plants and other nutrients to some extent. It is a non hazardous way of increasing soil fertility. As these microbes or plants multitiplying rapidly, biofertilizers are required in less quantity. Now days, algae are commonly used as biofertilizers. Some are used as inoculants, while some are directly used as fertilizer as they are having different major and minor elements. The Cyanophycean alga Lyngbya is used as bioertilizer as it contains major and minor elements.

Materials and Methods:

Study area:

The present studies were carried out on fresh water algae, *Lyngbya martensiana* Meneghini ex Gomont. The algal material is collected from Yesgaon canal during the period from March, 20012 to February, 2014. The alga was collected when canal does not flow and there is formation of small water ponds in the canal.

About the alga- *Lyngbya martensiana* Meneghini ex Gomont is the fresh water alga. The thallus of the alga is filamentous, 6-18 cm in length, dark green and unbranched (Desikachary, T.V. 1959).

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Potentiality of weeds against Diabetes.

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ABSTRACT: *: Diabetes is a very common metabolic disorder which is responsible for increasing the blood glucose level. This causes disturbance in metabolism of carbohydrates, fats and proteins. Diabetes is becoming serious threat to mankind. Present investigation was undertaken to evaluate efficiency of weed plants against diabetes. 10 weeds were selected for antidiabetic study. Among their Clitoria ternata and Alternethera tenella were proved significant for antidiabetic activity. α-amylase activity has been proven a very effective strategy to lower blood glucose level and to control the diabetes. Chemical drugs have many side effects on the human health and hence herbal medicine have therapeutic efficacy. In present study starch agar gel diffusion assay have been tested for α-amylase inhibitor.*

Key Words: *VAM, Portulaca, VAM, Vegetative growth.*

ction-

s mellitus is a complex disease characterized by defects in carbohydrates, fats and protein lism [1]. It results from the defects in insulin secretion, action or in both [2]. D.M. is a serious health being the third greatest cause of death all over the world, and if not treated, it is responsible for omplications affecting the various organs in the body [3]. The rate of diabetes is increasing. ide, it affects 230 million people of which 30 millions are from India [2]. Diabetes mellitus is d into different categories, based on the etiology of disease, but two main types are widely accepted. Type -1,occurs in patients with little or no insulin secretary capacity and D.M.Type -2,is most known aracterized by abnormality in insulin secretion and its resistance[4].Mammalian α-Amylase is a nt enzyme in pancreatic juice which breaks down large and insoluble starch molecules in to ble molecules[1]. The most important digestive enzyme is pancreatic α-Amylase catalyzes the sis of α-1, 4 glycosidic linkages of starch, amylose, amylopectin, and glycogen and is responsible of starch digestion in humans [2]. The common strategy is regulating and decreasing the blood sugar fall within the normal level [4]. One effective way of tackling the problem is to inhibit the activity of e enzymes like α-Amylase and others that are involved in the hydrolysis of starch hence reducing centration of sugar after meals in the diabetic patients [8].The management of diabetes can be by reducing post-prandial hyperglycemia by delaying the activities of the enzyme α- Amylase and sidase which are responsible for the digestion of carbohydrates and absorption of glucose in the tract, respectively [5]. Medicinal plant as a source of remedies, are widely used as alternative tic tools for the prevention or treatment of many disease. Recently great attention has been to the use of natural compound, due to their nutritional and pharmacological istics[6].Different plants have been reported to show α-Amylase inhibitory activity Chemical of α-Amylase and other carbohydrate digestive enzymes are known to produce serious side effects it their use as a therapeutic drug[2].Existing hypo glycemic agents such as voglibose,acarbose and miglitol effectively control glycemic level but carry prominent estinal effects. The search for inhibitors devoid of side effects has been geared towards natural s, namely, medicinal plants [10]. Herbal medicines have ever been used and claimed as antidiabetic t very less are available on commercially formulated forms [7]. Plants are well known in l medicine for their hyperglycemic activities. There has been increasing demand for the use of ucts with antidiabetic activity due to low cost, easy availability and lesser side effects. Therefore, being continuously explored for their possible effect as hypoglycemic agent [9].

s and Methods-

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Sr. No.	Common name	Scientific name	Family
1	Chibukata	*Alternanthera tenella*	Amaranthaceae
2	Punarnava	*Boerhavia diffusa*	Nyctaginaceae

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15. Study of Antibacterial Activity of Punica Granatum L. and its Phytochemical Analysis

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Abstract

Punica granatum L. belongs to family Punicaceae. The objective of the present work was to identify the phytochemical constituents and to study of antibacterial activity of pomegranate peel extract. *Punica granatum* L. are utilized by local people as the part of their meal and treat health diseases. Peoples supposed to consume *Punica granatum* seed and their peel was thrown as waste. Present study was designed to evaluate the antibacterial activity of *Punica granatum* L. peel against human pathogens. The extract was prepared using ethanol.The antibacterial property of pomegranate was tested against *E.coli*, *B. subtilis*, and *Pseudomanas* spp.Evaluations were based on the zone of inhibition using Agar well diffusion assay. The inhibitory activity was found to be zone of inhibition. This study represents that ethanol extracts and aqueous extract of waste material (peel) of *Punica granatum* L.may be utilize as a potential source of antimicrobial agents. The phytochemical investigation showed the presence of active chemical constituents such as alkaloids, tannins, flavanoids, steroids, cardiac glycosides and terpenoids.

Keywords : *Punica granatum*, Ayurvedic medicines, Antibacterial activity, Peel extract.

Introduction

Medicinal plants have been the mainstay of traditional herbal medicine amongst rural dwellers worldwide since antiquity to date. The therapeutic use of plants certainly goes back to the Sumerian and the Akkadian civilizations in about the third millenium BC. Hippocrates, one of the ancient authors who described medicinal natural products of plant and animal origins, listed approximately 400 different plant species for medicinal purposes. Natural products have been an integral part of the ancient traditional medicine systems, e.g., Ayurvedic. Over the years they have assumed a very central stage in modern civilization as natural source of chemotherapy

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STUDY OF SEED BORNE FUNGI OF SOME SEEDS FROM AHMADNAGAR MARKET

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ABSTRACT:

Identification of seed borne fungi of common Seeds from Ahmadnagar market was conducted. A total of nine fungi namely Aspergillus, Penicilium, Rhizopus, Verticilium, Alternaria, Monilia, Fusarium, Helmintosporium, Mucor, and there different species were isolated from the five different seed samples namely groundnut. (Arachis hypogea), maize. (Zea mays) gram. (Cicerarietinum), jawar. (Sorghum vulgare), pea. (Pisumsativum). In the present study we studied external and internal different fungus on the basis of their growth of the colony, color, spore and mycelium morphology of seeds from Ahmadnagar seed market. Occurance of common fungi like Aspergillus (four species), Penicilium (two species on the basis of colour), Mucor, Rhizopus etc. But Seed borne fungi like Fusarium, Verticilum, Gliocladium, Cladosporium as such have occurred on few seeds. On the other hand Alternaria, Drechslera, Helminthosporium, occurred on jawar seeds. These fungi have production of masses of conidiospores also and the study on seed borne fungi by blotter method has shown occurrence of few forms but culturing seeds on medium showed excellent response. On CD Amedium more forms have been recorded than PDA Medium. It may be due to balanced dose of nutrients in a medium. I n particular Alternaria, Helmithosporium, Fusarium occurred profusely on many cultured seed material

INTRODUCTION:

Seeds are vital role in associating micro-organisms which prove hazardous for the seed or the new plant created from it. The associated micro-organisms may be pathogenic, weak parasites or saprophytes. They may be associated internally and externally with the seed or as contamination as sclerotia, gall, fungal bodies, bacteria looze, infected plant parts soil partical etc. mixed with the seed. Seed borne pathogen may or may not be seed transmitted. Seed borne microorganism not only create problems in agricultural production but prove hazardous to animals and human being thus play generally a negative roll in human welfare. A heavy loss has been observed to caused by seed borne pathogen in various crops. Seed rots, seedling rots i.e. pre and post emergence losses disease at various stages of crop growth like leaf spot, stem, rot, wilt, root rot, fruit rot etc. Influenced the crop stand and ultimate yield. In number of leaf spot pathogen are also seed borne like *collitotrichum gramineum, Curvularia, lunata.* The term seed pathology denotes the science dealing with seed health and concern with the seed born microorganism which may be associated externally, internally or as contamination or physical condition, deficiency of element.

In India also seed pathology has attracted attention of agricultural as well as traditional universities. Many scientists have been trained in seed pathology at the Danish government institute of seed pathology for developing countries. The seed borne fungi may be present in the form of hyphae, conidia, oospore, chlamadospore, sclerotia. Seeds provide natural substrate for the growth of associated fungi. Moist blotter method with its various modifications is the most widely used method of seed health testing. It is very economic easy to perform and is suitable for the detection of wild variety of seed borne fungi. As the seed is the basic unit in crop production technology, people were conscious of seed quality and methods of seed treatment for improvement of seed germination and emergence. From the ancient times it has been confirmed that some seed get lost during germination so some seed born agencies may be present which cause disease. Now it has been confirmed that a number of disease are seed born and seed are accompanied by variety of fungal organisms. Some fungal diseases are contagious and carried through seed .Thus it was established by many scientists, that seed plays a vital role in associating micro-organism which proves hazardous for the seeds or for the new plant created from it.This knowledge of seed born nature of micro-organism launched a new era in plant pathology the term 'seed pathology' refers to the science dealing with seed health and is connected with seed born micro-organism or physical conditions, and controlling the seed borne diseases in the field and during storage seed carry several destructive pathogens and cause severe losses. Such disease spread from infected plant to healthy plant within a short

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STUDIES ON HIGH FREQUENCY MULTIPLE SHOOT INDUCTION OF *SOLANUM SURATTENSE* BURM F FROM FLORAL BUD EXPLANTS

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ABSTARCT
An efficient and reproducible protocol has been developed for in vitro propagation from floral bud in Solanum surattense on MS medium fortified with various concentrations of cytokinins such as BAP and Kn individually and also in combination with auxins IAA(0.5mg/L)+BAP/Kn (1.0-8.0mg/L) for multiple shoot induction. High multiple shoot buds/explnt (19.0 ± 0.35) proliferation was observed at IAA (0.5mg/L) and BAP (3.0mg/L) from the floral bud explants within four weeks of culture was attained. Individual shoots were aseptically excised and sub cultured in the same media for shoot elongation. The elongated shoots were transferred to (IBA) (1.0–5-0 µM) for root induction. Rooting was observed within two weeks of culture. Rooted plantlets were successfully hardened under culture conditions and subsequently established in the field conditions. The recorded survival rate of the plants was 96%. Plants looked healthy with no visually detectable phenotypic variations.

KEYWORDS: In Vitro Proliferation, High frequency, floral bud explants, Solanum surattense. Burm.F.

INTRODUCTION
Medicinal plants are the source of various alkaloids and other chemical substances essential for mankind. The exploitation of tissue culture techniques in medicinal plants is indeed desirable for their *in vitro* propagation and extraction of important chemical compounds. *Solanum surattense* Burm. (Solanaceae) is a perennial herb. It is usually found in India, Pakistan, Malaya, and Australia. In Bangladesh, it was found as wild herb in almost all northern parts and it was very common in the Barind region. Nowadays, this plant rarely gets in the Barind region only. The solasodine and glycosides are rich in this plant, are very common properties for anticancer (Cham, 2007). Besides, this plant is widely used as folk medicine for breathing trouble, heart diseases and pain. Some drug companies (Unani, Hamdard Laboratories, Ayurvedic) are developed in India based on plant extract and they are attracted by the people. These companies are using extract of *S. surattense* as to prepare remedy for breathing disease; as well this plant is widely planted in highland of Bangladesh. Since this herb becoming a potential medicinal plant in south Asia, more advance investigations are needed concerning modification of characteristics including rapiid growth, increase essential chemicals content, disease resistant and stress tolerance in this plant. Limited reports have been published on the *in vitro* prropagation as well as genetic transformation systems of *S. surattense*. Pawar *et al.* (2002) developed a technique for direct shoot organogenesis from shoot tip and leaf segments. Using nodal and shoot tip segments, a micropropagation technique also established on this plant by Rama Swamy *et al.*, (2004). Rama Swamy *et al.*, (2005a) established a protocol on plantlet regeneration through somatic embryogenesis from cotyledon and leaf explants. Callus induction and shoot orgganogenesis system from apical bud were also reported earlier for this plant proliferation (Prasad *et al.*, 1998).

Ayodhya Ramulu. *et.al.*, (2014) reported protoplast isolation from leaf explants of *S. surattense*. Ugandhar *et al.*, (2016) Plantlet regeneration via callus induction from leaf explants of *S. surattense*. Rama Swamy (2006) reported *Agrobbacterium-mediated* genetic transformation systems using leaf explants of *S. surattense*. (Rama Swamy *et. al.*, 2005b) established streptomycin-resistant *S. surattense* plantlets using *in vitro* mutagenesis. For genetic improvement of plant, we usually use selection method as well as *in vitro* molecular breeding technique. Plant breeders showing great interest on molecular breeding technique for plant modification genetically because conventional selection method takes long time, tedious and occurs large variation within clones. For molecular breeding based

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RESEARCH ARTICLE

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BENTHAM SCIENCE

Synthesis of Novel Fused Regioisomeric Oxetane Bicycles *via* Paternò-Büchi Reaction of L-Ascorbic Acid and Evaluation as Antiproliferative Agents

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Abstract: ***Aim and Objective:*** To develop efficient method for the synthesis of unusual oxetanes bicycle and diversely functionalized oxetane motifs bearing medicinally relevant functional group in new chemical space and evaluation as cytotoxic agents.

Materials and Methods: General procedure for the synthesis of 2, 3, 9 and 11: A mixture of L-ascorbic acid derivative 1 or 8 or 10 (10 mmol) and benzophenone (12 mmol) in dry benzene (125 mL) was purged with dry nitrogen for 5 min. The solution was then irradiated for 20-24 h with UV light (125 W, medium-pressure mercury lamp) in an immersion-well photoreactor at ambient temperature under nitrogen. After completion of the reaction, the solution was washed with aqueous $NaHCO_3$ (10%), dried (Na_2SO_4), and concentrated under reduced pressure to give crude product which was purified by column chromatography using ethyl acetate: *n*-hexane (5-20%) as eluent to yield pure product as white solid.

Results: 3-*O* and 2-*O* methyl derivatives of 5,6-*O*-isopropylidene-L-ascorbic acid 8 and 10 were irradiated with Benzophenone to give single regioisomer 9 and 11 in 78 % and 69 % yield respectively, while in case of 5,6-*O*-isopropylidene-2,3-di-*O*-methyl-L-ascorbic acid, it gave both regioisomer 2 and 3. The presence of only oxetanes moiety improved the cytotoxic activity compared to oxetanes bicycle moiety. It was scrutinized that all the compounds in series of 2 and 4 displayed more MCF-7 cell proliferation than their regioisomers 3 and 6.

Conclusion: We have developed a versatile strategy to prepare diversely functionalized fused oxetane bicycles involving alkoxy, hydroxy methyl, alkyl, and aryl substituents. A wide variety of functional groups have been introduced on the oxetane ring, accessing new chemical space. These compounds were tested for growth inhibition against MCF-7 breast cancer cell line, compounds 2d, 4b, 4d and 6d showed comparable cytotoxic activity with L-ascorbic acid. These oxetane motifs will provide interesting new structural elements for medicinal chemistry programs as well as synthesis.

Keywords: L-Ascorbic acid, carbohydrates, cycloadditions, Paternò-Büchi reaction, oxetane, cytotoxicity.

1. INTRODUCTION

Although oxetane ring appears in few natural products, it exhibits important biological activity which is often dependent on the nature of ring (Fig. **1**). Perhaps the most well-known example is Taxol, which was first isolated in 1971 from the stem bark of the Taxus brevifolia and used in the cancer chemotherapy [1]. Various other oxetane-containing compounds have been isolated from natural sources. Oxetanocin A [2] inhibits the replication of human immunodeficiency virus (HIV) and Oxetin has antibacterial as well as herbicidal effects [3]. Similarly, both maoyecrystal I and mitrephorone A were shown to have cytotoxic effect [4, 5]. Growth of rat neurons can be stimulated by Merrilactone A, which was first isolated from the pericarps of the Illicium merrillianum plant [6]. Oxetanes motifs have gained significant attraction as desirable modules for drug discovery [7].

The synthesis of oxetane ring is the primary challenge to synthetic chemistry due to its inborn ring strain and kinetics of cyclisation, which favor the formation of three, five and six membered saturated cyclic ethers compared to the four membered analogues [8]. Mandal and co-workers have reported one-pot synthesis of a variety of cyclic ethers, including oxetanes, using a Williamson etherification protocol [9]. Saccharides have been used extensively as starting materials for the synthesis of oxetanes, due to the repeating 1,3-functionality and the opportunity to access enantioenriched and diastereomerically distinct oxetanes [10]. Similarly, these starting materials have been used in the synthesis of small oxetanes containing natural products, though typically this approach can be lengthy. Sugars have been used extensively by Fleet and co-workers as starting materials for the synthesis of enantioenriched Oxetanes, through ring contraction of the triflates of α-hydroxy-γ-lactones [11, 12]. Wengel and co-workers have synthesized bicyclic oxetane-containing nucleoside from known ulose and evaluated the thermal stabilities of duplexes with numerous oxetane-containing modified oligonucleotides against the complementary single-stranded DNA and RNA [13].

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RESEARCH ARTICLE

BENTHAM SCIENCE

Synthesis of Bis(indolyl)methanes Using Naturally Occurring, Biodegradable Itaconic Acid as a Green and Reusable Catalyst

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Abstract: ***Aim and Objective:*** To explore the use of naturally occurring biodegradable organic acids as a catalyst in organic synthesis. The development of a simple, inexpensive, highly efficient yet ecofriendly catalyst for the synthesis of bis(indolyl)methanes is explored.

Materials and Method: A mixture of indole 1a (1.0 g, 8.53 mmol), benzaldehyde 2a (0.45 g, 4.26 mmol), and itaconic acid (0.12 g, 0.92 mmol, 20 mol%), in H_2O (5.0 mL) was refluxed at 100°C for indicated time. After the completion of the reaction (TLC check), the reaction mixture was cooled to room temperature and extracted with ethyl acetate (3 × 5.0 mL), organic layer was dried over Na_2SO_4 and concentrated under vacuum. The crude residue was purified by column chromatography on silica gel using ethyl acetate:hexane as an eluent.

Results: Initially optimal reaction conditions were developed for the synthesis of bis(indolyl)methanes by selecting model reaction between indole and benzeldehyde. It was found that optimal conditions for the synthesis of bis(indolyl)methanes are use of indole (1.0 mmol), aldehyde (0.5 mmol) and catalyst 20 mol% in water as a solvent, under air atmosphere and at 100°C. Moreover, it was found that aqueous solution of the catalyst can be reused with the same catalytic efficiency for ten times without any pre-treatment. This is an important achievement with regard to the efficiency and reusability of the catalyst in synthesis.

Conclusion: We have shown that itaconic acid in water can be used as an excellent green catalyst with high reusability. It efficiently catalyzes electrophillic substitution reaction of indoles (ESRI) with various aldehydes to give the corresponding BIMs in an efficient manner. Therefore, itaconic acid in water as a catalyst can be a good alternative for the use of hazardous mineral acid and Lewis acid catalyst.

Keywords: Itaconic acid, catalysis, green chemistry, Bis(indolyl)methanes, biodegradable, electrophillic substitution reaction of indoles.

1. INTRODUCTION

Developing green chemistry methodologies is a challenge which can be viewed through the framework of "Twelve Principles of Green Chemistry" [1]. Green chemistry emphasizes on the use of non-hazardous chemicals, environmentally benign reagents, and the use of reagents in catalytic amounts, the avoidance of the use of volatile organic solvents and use of water as a green solvent. Catalyst is an important aspect of green chemistry. The design and application of new catalysts and catalytic systems are playing an important role in achieving goals of environmental protection and economic benefit. Reusability of the catalyst without any loss of activity is an indispensable facet of green chemistry. The use of a naturally occurring, biodegradable and commercially available catalyst has immense importance in green protocol.

Indoles and their derivatives are one of the important classes of heterocyclic compounds that are present in various natural products, pharmaceuticals, agrochemicals and other compounds of importance [2]. These compounds have shown important pharmaceutical activities such as anticancer [3] antihyperglycemic, antiviral and antimicrobial properties [4] and are known as a promoter of estrogen metabolism [5]. 3,3'-bis- (indolyl)methane (BIM) has an important function in preventing breast cancer [6]. In addition bis(indolyl)methanes also possess insecticidal, cytotoxic and antioxidative activites [7]. Hong *et al.* [8] and Kedmi *et al.* [9] have reported the possible beneficial effects of 3,3-bisindolylmethanes on the proliferation and induction of apoptosis in human prostate and breast cancer cells. Bis(Indolyl) methane derivatives have been reported to possess promising biological activities including cardiovascular antipyretic anthelmintic, antifungal, anti-inflammatory, anticonvulsant, antimicrobial and selective COX-2 inhibitory activities [10]. Therefore synthesis of bis (indolyl) moiety has gained immense biological and pharmaceutical interest.

Owing to the great importance of bis(indolyl)methanes there are various reports on the synthesis of these derivatives. Different catalysts and reagents have been used to achieve this transformation, including $InCl_3$ [11], AcOH [12], $In(OTf)_3$ [13], InF_3 [14], $Dy(OTf)_3$ [15], $Ln(OTf)_3$ [16], $LiClO_4$ [17], $FeCl_3$ [18], I_2 [19], N-bromosuccinimide (NBS) [20], $KHSO_4$ [21], $NaHSO_4.SiO_2$ [22], silica supported sulfuric acid [23], ceric ammonium nitrate (CAN) [24], zeolites [25], clay [26], 1-buty-l-3-methylimidazolium tetrafluoroborate ionic liquid [27], $H_3PW_{12}O_{40}$ [28], antimony(III) sulfate [29], diammonium hydrogen phosphate [30], $SbCl_3$ [31], polystyrene supported aluminium chloride [32], $CuSO_4.5H_2O$ [33], Lanthanum(III) nitrate hexahydrate [34], ammonium niobium oxalate

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RESEARCH ARTICLE

Letters in Organic Chemistry, 2018, 15, 766-772

BENTHAM SCIENCE

Synthesis and Cytotoxic Evaluation of Novel 3-*O* and 2, 3-Di-*O*-alkyl Derivatives of L-Ascorbic Acid

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Abstract: A series of protected and unprotected 3-*O* and 2, 3-di-*O*-alkyl derivatives of L-ascorbic acid were synthesized and their cytotoxic activity against metastatic breast epithelial carcinoma (MCF-7) cell line was evaluated. Cytotoxic activity evaluation indicated that compounds show moderate cytotoxic effects on tested cell line. Some of the 2, 3-di-*O*-alkyl derivatives of L-ascorbic acid exhibited potent inhibiting activity against MCF-7 cell line at micromolar concentrations. 2,3-di-*O*-4-chlorobenzyl-L-ascorbic acid exhibited 4 fold more cytotoxic activity (IC_{50} = 34.09 µM) against MCF-7 cell line than L-ascorbic acid. 2, 3-di-*O*-alkyl derivatives exhibited more inhibition against MCF-7 cell line as compared to the 3-*O*-alkyl derivatives of L-Ascorbic acid.

Keywords: L-Ascorbic acid, 2, 3-di-*O*-alkyl derivatives of L-ascorbic acid, 3-*O*-alkyl derivatives of L-ascorbic acid, cytotoxicity, vitamin, ROS.

1. INTRODUCTION

Ever since its discovery, L-ascorbic acid (Vitamin C, AsA) has always been a compound of essential importance in the living beings. The brain sustains a high rate of oxidative metabolism in the mitochondria in order to meet its energy demand, utilizing approximately 20% of all oxygen used in the body [1], during which a significant amount of reactive oxygen species (ROS) is generated. To prevent harm from this process, a defense system against ROS exists in the brain. Specifically, it is believed that L-ascorbic acid, an antioxidant found in the brain at a high concentration, plays an important role in the ROS defense system [2, 3]. Among the antioxidants, vitamin C plays an important role in the defense against free radical induced cellular damage [4]. It is able to react with and reduce all physiologically relevant ROS and reactive nitrogen species (RNS) [5]. It is now generally accepted that oxygen radicals play a vital role in vivo not only as a mediator of signal transduction but also as causative species for oxidative damage of membranes and tissues, eventually resulting in a variety of diseases, cancer, aging, etc. [6, 7]. Epidemiologic studies have concluded that lifestyle characterized by a high consumption of fruit and vegetables are associated with lower incidences of cancer [8]. Vitamin C is one of the few vitamins for which evidence exists for a protective role against some types of cancer [9]. It is a biological cofactor that plays a role in numerous biological pathways, fundamental to cellular function [10]. Being a strong reducing agent at physiological pH, ascorbate anion acts as radical quencher directly or by recycling other antioxidants such as α-tocopherol or glutathione. In the presence of traces of metals, it reacts with O_2 to form H_2O_2 and dehydroascorbic acid, *via* the formation of $O_2^{\cdot-}$ and hence exhibits prooxidant effects [11]. For this reason, high doses of intravenous ascorbate have been recently proven to deliver hydrogen peroxide to tissue fluids and to retard tumor growth in numerous animal models [12, 13]. These protective compounds block oxidative DNA damage by eliminating free radicals and carcinogen-derived electrophiles, which frequently form DNA adducts [14]. Hydroxyl radical (•OH) is formed from H_2O_2 and it is the most harmful ROS, due to its high interaction with nucleic acids, proteins and lipids. AsA can terminate these chain radical reactions by transferring a single electron, due to the stability of its own radical ion called semidehydroascorbate [15, 16]. Thus, AsA is able to suppress ROS efficiently by reducing DNA damage [17]. AsA quenches free radicals by providing hydrogen atoms that can pair with unpaired electrons in free radicals. In this process, ascorbic acid becomes an ascorbyl radical, which is relatively unreactive toward biomolecules [6, 18]. Additional authentication of antitumor potential of ascorbic acid came from the fact that pharmacological doses of ascorbic acid suppress tumour growth and metastases in hormone-refractory prostate cancer [19]. This role of AsA in cancer might be utilizable for the development of cancer chemotherapeutic agents.

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RESEARCH ARTICLE

Ultrasonically Assisted Efficient and Green Protocol for the Synthesis of Bisindolylmethanes Using Malic Acid as a Homogeneous and Reusable Organocatalyst

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Abstract: ***Background***: Bis(indolyl)methane, indole and their derivatives are known as vital intermediates in the pharmaceutical chemistry and organic synthesis which exhibits a range of physiological properties. Bis(indolyl)methanes are found in cruciferous plants and are well known to promote beneficial estrogen metabolism and induce apoptosis in human cancer cells. Bis(indolyl)methanes have received much attention in recent years. A major source of waste in the (fine) chemicals industry is derived from the widespread use of liquid mineral acids (HF, H_2SO_4) and a variety of Lewis acids. They cannot be easily recycled and generally end up as waste containing large amounts of inorganic salts. Their widespread replacement by recyclable solid acids such as malic acid, tartaric acid and malonic acid *etc*., which are naturally occurring, would afford a dramatic reduction in waste. Thus there is need to find out green protocols for the synthesis of bioactive molecules.

Objective: To develop green protocol for the synthesis of bisindolylmethane derivatives.

Methods: Bisindolylmethane derivatives were synthesized in 85-95 % by using ultrasonication technique in presence of malic acid as an organocatalyst in water as a green solvent at ambient reaction condition.

Results: We have demonstrated that malic acid can be used as a benign organocatalyst for organic transformations with high efficacy and excellent reusability.

Conclusions: In conclusion, we have developed ultrasonically assisted malic acid catalyzed metal free green protocol for the bis(indolyl)methanes under homogenous conditions. The notable advantages of this method are the use of water as a green solvent, efficient eco-friendly and inexpensive catalyst, ambient temperature and high reusability of the catalyst. Therefore, this protocol can be a promising alternative to the use of Lewis and mineral acid catalysed organic reactions. Further studies of exploiting the efficiency of naturally occurring acids as a green catalyst in synthesis of various heterocyclic compounds are in progress.

Keywords: Bis(indolyl)methanes, aldehyde, malic acid, ultrasound, homogenous, reusable organocatalyst.

1. INTRODUCTION

Use of ultrasound irradiation technique is successfully used in green chemistry and particularly for the synthesis of heterocyclic compounds. Ultrasound irradiation technique for the synthesis of organic compounds has attracted attention during the past few decades. In probe sonicator, powerful sound waves are generated in the solution which produces microscopic bubbles which gives rise to a phenomenon called as cavitation. According to the hot spot theory, each microbubble acts as a small reactor which generates localized hot temperature (5000 K) and high pressure (500atm) during final collapse of cavitation [1]. Ultrasound promoted synthesis is considered as a clean and green protocol as compared to traditional methods [2].

Bis(indolyl)methane, indole and their derivatives are key intermediates in the pharmaceutical chemistry and organic synthesis which bear a range of physiological properties. Indole ring is one of the important scaffolds available in natural compounds. Due to structural diversity of biologically active indoles, bis(indolyl)methane has become an important structural motif in many pharmaceutical agents. Indole and its derivatives show their presence in over 3000 naturally occurring compounds [3] which are known for their biological activities and pharmaceutical applications [4].

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RESEARCH ARTICLE

Fly Ash Catalyzed Microwave Assisted Multicomponent Synthesis of Trisubstituted Imidazole Derivatives

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Abstract: *Background*: Imidazoles are important class of heterocyclic compounds showing biological activities. Several methods have been investigated till today for the synthesis of triaryl imidazoles. Some of these classical as well as nonclassical methods experiences drawbacks for instance elongated reaction time, expensive catalyst, low yield of product *etc*. Hence improvement of a competent method is still necessary. This paper reveals greener protocol for the synthesis of triaryl imidazoles by cyclocondensation of aromatic aldehydes, benzil and ammonium acetate in existence of fly ash as an efficient heterogeneous catalyst by means of microwaves.

Methods: Heterogeneous catalyst fly ash was prepared by simple thermal activation method. The catalyst was systematically characterized through wet chemical analysis, XRD, FT-IR, SEM and EDS. The structural analysis was done using XRD and IR. Morphological study was performed using SEM and elemental composition studied by EDS technique. This activated fly ash catalyst was applied in the synthesis of trisubstituted imidazoles. The progress of reaction was checked by TLC and the synthesized compounds were further confirmed by FT-IR, ^{1}H-NMR and ^{13}C-NMR spectroscopy.

Results: To check feasibility of activated fly ash for trisubstituted imidazole synthesis, reactions under microwave irradiation employed. The products were obtained in higher yield (92-98%).

Conclusion: The fly ash was found to be highly effective in the synthesis of trisubstituted imidazoles under microwave irradiation. The significant features of this protocol are rate enhancement, uncomplicated work up process, high yields and employ of ecofriendly catalyst.

Keywords: Wet chemical analysis, microwave, fly ash, heterogeneous, catalyst, imidazole.

1. INTRODUCTION

Role of heterocyclic compounds is significant in biological processes and broadly extends as natural products. Heterocyclic compounds originate in nature, mainly in the form of plant alkaloids, chlorophyll, nucleic acids, anthocyanins and flavones. Imidazoles are important class of heterocyclic compounds showing diversified biological activities [1]. Imidazole exhibits basic as well as weak acidic properties [2].

Literature assessment shows that copious methods have been investigated till today for the synthesis of triaryl imidazoles. Heinrich Debus first discovered synthesis of imidazole in 1858 [3]. 2,4,5 triphenyl imidazoles were synthesized by the cyclocondensation of α-dicarbonyl compounds such as benzil, α-ketoaldehyde in the existence of ammonia [4]. Synthesis of imidazoles by four component condensation using diketones, aromatic/heteroaromatic aldehydes, primary amines and ammonium acetate in acidic media has been reported in the literature [5-9]. The cyclocondensation of aromatic aldehydes, benzoin or benzil and ammonium acetate using various catalysts like zeolites, HY/silica gel [10], Al_2O_3 [11], AcOH [12], NH_4OAc [13], CAN [14], L-proline [15], Scolecite [16], boric acid [17], $NiCl_2$ $6H_2O/Al_2O_3$ [18], MoO_3/SiO_2 [19], magnetic Fe_3O_4 nanoparticles, Europium triflate [20], ionic liquid (EMIM)OAc [21], $TiCl_4.SiO_2$ [22], Alum [23] and $InCl_3.3H_2O$ [24] have been reported.

Literature review also reveals that the nonclassical way of synthesis of imidazoles by microwave irradiation using zeolite HY, silica gel [25], glyoxalic acid [26], Well Dawson heteropolyacid ($H_6P_2W_{18}O_{62}\cdot24H_2O$) [27], $SbCl_3$ supported on silica [28, 29] as catalyst and by ultrasonication using nanocrystalline $MgAl_2O_4$ [30], CAN [31], nano copper ferrite [32], as a catalyst.

Some of these classical as well as nonclassical methods experience drawbacks for instance elongated reaction time,

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ORIGINAL ARTICLE

Synthesis and characterization of nanostructured Cu-ZnO: An efficient catalyst for the preparation of (*E*)-3-styrylchromones

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KEYWORDS

Heterogeneous catalysis;
ZnO nano flakes;
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3-Styrylchromone

Abstract We have explored nanocrystalline ZnO and Cu-ZnO catalyst for the preparation of 3-styrylchromones with trans selectivity derived from 3-formylchromones. Synthesis of ZnO and Cu-ZnO nano flakes (NFs) was carried by precipitation technique. The analytical techniques such as UV-Visible spectroscopy, X-ray diffraction (XRD), Brunauer-Emmett-Teller (BET), field emission scanning electron microscopy (FESEM) and energy-dispersive analysis X-ray spectroscopy (EDAX) were used to characterize the catalysts. The XRD pattern showed highly pure wurtzite ZnO and Cu-ZnO. The FESEM images showed nano flakes such as sunflower seed morphology in the range width of 9–34 nm and length 90–180 nm. Doping of copper in ZnO was employed to study the selectivity of Knoevenagel and Knoevenagel-Doebner reactions. Knoevenagel condensation was catalyzed efficiently by pure ZnO nano flakes, whereas the Cu-ZnO nano flakes facilitate the Knoevenagel-Doebner reaction. Present synthetic protocols are novel, very clean and high yielding for synthesis of 3-styrylchromones. Almost same yield was observed to the recycled catalyst up to four runs.

1. Introduction

Chromone derivatives are of great interest for chemists and biochemists, owing to their potential biological activities and natural occurrence (Faridoon et al., 2016). Styrylchromones are small group of natural flavonoids which have shown anticancer (Maicheen et al., 2013), antiviral (Vints and Rozen, 2014), antibacterial (Ghani et al., 2013) and antiallergic (Velema et al., 2013) activities. Natural 2-styrylchromone hormothamnione and 6-desmethoxyormothamnione were isolated from marine cryophyte *Chrysophaeum taylori* exhibited potent cytotoxic activity (Gerwick, 1989). The synthesis, reactivity and biological evaluation of styrylchromone derivatives become an

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Synthesis, characterization and antibacterial screening of fluorinated benzofuran containing heterocycles

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2-(4-Fluorophenyl)-5-phenylbenzofuran-3-carboxylic acid **1** when treated with substituted 2-hydroxyacetophenones **2** in dry pyridine and $POCl_3$ affords compound **3** which when reacted with pyridine/KOH by B. V. transformation gives **4**. Compound **4** on refluxing with different reagents Ac_2O in presence of sodium acetate, acetic acid in HCl, and hydrazinehydrate in alcohol gives **5**, **6** and **7** respectively. The structures of all synthesized compounds have been confirmed by spectroscopic techniques. All the synthesized compounds have been screened for their antibacterial activity.

Keywords: Benzofuran, chromones, pyrazoles, antibacterial activity

Benzofuran is considered as an important class of heterocyclic compound present in numerous bioactive natural products as well as pharmaceuticals and polymers[1]. Many of the clinically approved drugs are synthetic containing mono and fused benzofuran ring in conjunction with other heterocycles. They possess wide spectrum of biological activities such as TGR5 agonists[2], antimicrobial[3], antibacterial[4], anticoagulator[5], MAO-B enzyme inhibitor[6] and antioxidant[7].

Due to presence of two carbonyl groups, β-diketones are valueable substrates in many chemical syntheses. The functionalized derivatives of β-diketone are clinically important molecules and widely used due to their antibacterial[8], anti-HIV-1[9], insecticidal[10] and antiviral[11] activities.

Chromone and its derivatives have been studied for over century or more due to important biological activities such as cholesterol acyltransferase[12], antitumour[13], anticancer[14], topoisomerase II inhibitor[15], antioxidant[16] and antifungal[17]. Pyrazole derivatives occupy an important position in medicinal[18] and pesticide chemistry with having a wide range of bioactivities such as cytotoxic[19], analgesic[20], antibacterial[21] and urease inhibitors[22].

In view of biological activities associated with benzofuran, chromones and pyrazoles we decided to synthesize series of benzofuran containing different heterocycles and screened them for their antibacterial activity (Scheme I).

Experimental Section

Melting points were determined in open capillaries in liquid paraffin bath and are uncorrected. Mass spectra were recorded on Waters Acquity TQD mass spectrometer. ^{1}H NMR spectra were recorded on Bruker Avance II 400 MHz NMR spectrometer in DMSO-d_6 as a solvent and TMS as an internal standard. Peak values are shown in δ (ppm). IR spectra were recorded on Shimadzu IR Affinity-1S spectrophotometer.

2-Acetylphenyl-2-(4-fluorophenyl)-5-phenylbenzo furan-3-carboxylate, 3a-g

Equimolar mixture of 2-(4-fluorophenyl)-5-phenylbenzofuran-3-carboxylic acid **1** (0.003M) and substituted 2-hydroxyacetophenone **2** (0.003M) was dissolved in pyridine (15 mL) taken in dry beaker maintained at about 0°C. To this reaction mixture $POCl_3$ (0.003 M) was slowly added maintaining the temperature below 4°C. After complete addition the reaction mixture was kept overnight, then the resulting reaction mixture was poured over crushed ice. The product thus obtained was separated by filtration and crystallized from ethanol to afford **3**.

2-Acetylphenyl-2-(4-fluorophenyl)-5-phenylbenzo furan-3-carboxylate, 3a: m.p.176°C. Yield 76%. IR: 3080, 1748, 1686, 1604, 1504, 1165 cm^{-1}; ^{1}H NMR: δ 2.49 (s, 3H), 7.22 (s, 1H), 6.90-6.98 (m, 1H), 7.33-7.42 (m, 4H), 7.44-7.53 (m, 2H), 7.58-7.90 (m, 5H), 8.00 (dd, 1H), 8.10 (dd, 1H), 8.23 (d, 1H); MS: *m/z*

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Synthesis and Characterization of Chlorinated Thiophene Based Flavones

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Abstract

(E)-3 -(3- (2,5-dichlorothiophen-3-yl) -1- (2,3-dimethylphenyl) -1H-pyrazol-4-yl) -1-(2-hydroxyphenyl)prop-2-en-1-ones were synthesized by Claisen-Schmidt condensation reaction between 3-(2,5-dichlorothiophen-3-yl)-1-(2,3-dimethylphenyl)-1H-pyrazole-4-carbaldehyde and substituted 2-hydroxy acetophenones. 2-(3-(2,5-Dichlorothiophen-3-yl)-1-(2,3-dimethylphenyl)-1H-pyrazol-4-yl)-4H-chromen-4-ones were synthesized by oxidative cyclization of corresponding chalcones using DMSO/I_2.The structures of newly synthesized compounds were confirmed by some spectral analysis methods like, IR, NMR and Mass.

Keywords: Chlorinated thiophene, oxidative cyclization,Claisen-Schmidt condensation.

Introduction

Thiophene is a five membered heteroaromatic compound with sulfur as a heteroatom. Thiophene and its derivatives exist in petroleum or coal. Thiophene moiety is found in certain natural products. It is also incorporated in several pharmacologically active compounds. The compounds containing thiophene moiety are reported to have antiproliferative [1], antibacterial [2], anticonvulsant [3] and antiprotozoal [4].

Chalcones are organic compounds possessing an enone moiety between two aromatic or heteroaromatic rings. These are the building blocks for the synthesis of various heterocyclic compounds like flavones, hydroxyl flavones, aurones and pyrazolines. Some chalcones are natural products found in various plant species around the world.Chalcones possess pharmacological activities like anticancer [5], anticancer [6] and antioxidant [6].

Flavones are group of naturally occurring oxygen containing heterocyclic compounds. They found in cereals and herbs. Flavones possess the activities such as antioxidant [7], antibacterial [8], antifungal [9] and antiviral [9].

Considering the biological importance of thiophene based heterocyclic compounds and in continuation of our work it was planned to synthesize chalcones and flavones containing chlorinated thiophene moiety.

Experimental

Melting points were recorded in open capillaries in liquid paraffin bath and are uncorrected. IR spectra were recorded on Perkin-Elmer FTIR spectrophotometer.^{1}H NMR spectra were recorded on Bruker Avance 400 MHz NMR spectrometer in DMSO as a solvent and TMS as an internal standard. Peak values are shown in σ (ppm). Mass spectra were recorded on Finnigan mass spectrometer.

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Synthesis of Enaminones by Conventional and Microwave Irradiation Methods

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ABSTRACT

Microwaves have become an important source of energy in many laboratory procedures as green approach. We followed the microwave assisted organic reactions using solvents. The chief goal of this work was to observe the reaction of secondary amine with 3-formylchromones using conventional and microwave assisted reactions.

Keywords: Conventional method, Microwave irradiation method, Green reaction

Introduction

3-Formylchromones have noticed as of influence of their biological activity and organic synthesis. 3-formylchromones are a group of naturally occurring compounds that are universal in nature predominantly in plants and helpful for use as precursor as green approach. They give versatile condensation reactions because of 3 electron deficient sites. A number of condensation reactions represent the ability of 3-formylchromones to give out as an excellent precursor for the synthesis. They are synthesized by the well-known procedure of Vilsmeyer Haak reaction[1, 2].

Since a couple of decades before, scores of major advances in practical aspects of organic chemistry have built-in novel synthetic strategies and methods as well as the commencement of an immense set of analytical techniques. In these environmentally vigilant days, the development in the technologies is focussed towards environmental sound and cleaner procedures.

With rising complexity of the problems and the accessibility of newer methods of creations of chemical reactions, researchers have reinstated to use wide diversity of techniques with ultrasound and microwave origin; their utility in chemistry has expanded thrust recently[3]. Microwaves have been employed to accelerate the chemical reaction in laboratories. On the electromagnetic spectrum the microwave radiation part is placed between infrared radiation and radio waves.

Microwaves directly couples with molecules of the whole reaction mixture with rapid rise in temperature. In microwave assisted reactions, using organic solvents, the reactants are usually dissolved in solvents, which are often coupled effectively with microwaves and thus acts as the energy transfer medium. Microwaves have become an important source of energy in many laboratory procedures[4-9]. We followed the microwave assisted organic reactions using solvents[10-11]. The chief target of this work was to observe the reaction of secondary amine with 3-formylchromones using conventional and microwave assisted reactions respectively. Synthesis under microwave irradiation keeps on extensively faster. The reaction time dropped down to 20-50 min under exposure to microwave at 500 to 700W and produced clean products in high yields.

(8)

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Iron Oxide–Cobalt Nanocatalyst for *O*– *tert*–Boc Protection and *O*– Arylation of Phenols

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Abstract

Efficient and general protocols for the *O*-*tert*-boc protection and *O*-arylation of phenols were developed in this paper using a recyclable magnetic Fe_3O_4-Co_3O_4 nanocatalyst (Nano-Fe-Co), which is easily accessible via simple wet impregnation techniques in aqueous mediums from inexpensive precursors. The results showed the catalysts were well characterized by XRD (X-ray Diffraction), ICP-AES (Inductive Coupled Plasma Atomic Emission Spectroscopy), TEM (Transmission Electron Microscopy), TOF-SIMS (Time-Of-Flight Secondary Ion Mass Spectrometry) and XPS (X-ray Photoelectron Spectroscopy). The *O*-*tert*-boc protection and *O*-arylation of phenols was accomplished in good to excellent yields (85–95%) and the catalyst was reusable and recyclable with no loss of catalytic activity for at least six repetitions.

Keywords: Fe3O4-Co3O4; O-arylation; O-tert-butoxycarbonylation; ethers; magnetic nanocatalysts; phenols.

Figures

Figure 1 Schematic illustration for the formation...

Figure 2 (**A**) TEM image...

Figure 3 Elemental mapping (**A** –...

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A Brief Review on Microwave Assisted Synthesis of Pyrazole Derivatives

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ABSTRACT: Pyrazoles have played an important part in the progression of theory in heterocyclic chemistry and also used extensively in organic synthesis. Pyrazoles are five membered heterocyclic compounds. Compounds which containing pyrazole derivatives are well-known and important nitrogen-containing five-membered heterocyclic compounds. Among the two nitrogen atoms; one is basic and the other is neutral in nature. Pyrazole and its derivatives have displayed broad spectrum of pharmacological important active scaffold that possesses almost all types of pharmacological activities and biological activities such as antimicrobial, antitumor, antiviral, antidepressant, anticonvulsant, antihyperglycemic, and enzymes inhibitory activities. Present paper is emphasizes on microwave assisted synthesis of some schemes Pyrazole Derivatives.

Keywords: Pyrazole, heterocyclic, derivatives, pharmacological, activity.

INTRODUCTION: The use of microwave irradiation in organic synthesis has become increasingly popular within the pharmaceutical and academic arenas, because it is a new enabling technology for drug discovery and development.[1]By taking advantage of this efficient source of energy, compound libraries for lead generation and optimization can be assembled in a fraction of the time required by classical thermal methods. Presently, thermally driven organic transformations take place by either of two ways: conventional heating or microwave-accelerated heating. In the first way, reactants are slowly activated by a conventional external heat source. Heat is driven into the substance, passing first through the walls of the vessel in order toreach the solvent and reactants. This is a slow and inefficient method for transferring energy into the reacting system. In the second way, microwaves couple directly with the molecules of theentire reaction mixture, leading to a rapid rise in temperature.Since the process is not limited by the thermal conductivity of the vessel, the result is an instantaneous localized superheating of any substance that will respond to either dipole rotation or ionic conduction—the two fundamental mechanisms for transferring energy from microwaves to the substance(s) being heated.[2]

For instance, solvent free heterocyclic compound synthesis includes ultrasound and microwave irradiation[3, 4]. Microwave (MW) irradiation has been widely exploited in the last decades to run various number of organic synthesis. Usually three types of solvent-free procedures can be coupled with dielectric heating provided by a microwave source: reactions among neat reagents, reactions among supported reagents on mineral solid supports and phase transfer catalysis reactions. Among the three types of solvent-free procedures, the neat reagent one is the most routinely employed due to its easy work-up and negligible use of solvents [5]. In particular, applying Microwave Assisted Organic Synthesis (MAOS) becomes more common in heterocyclic chemistry and especially in pyrazole derivative synthesis. [6,7]

Different Approaches in Synthesis: A series of five 5-trichloromethyl-1-phenyl-1*H*-pyrazoles and six 5-trichloromethyl-1,2-dimethylpyrazolium chlorides have been synthesized in 80–98% yield by environmentally benign microwave induced techniques involving the cyclocondensation of 4-alkoxy-1,1,1-trichloro-3-alken-2-ones $[Cl_3C(O)C(R^2)=C(R^1)OR$, where R^2=H, Me; R^1=H, alkyl, phenyl and R=Me, Et] with phenyl hydrazine and 1,2-dimethylhydrazine dihydrochloride, respectively, using toluene as sol-

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RESEARCH ARTICLE

DABCO Catalyzed Green and Efficient Synthesis of 2-Amino-4*H*-Pyrans and Their Biological Evaluation as Antimicrobial and Anticancer Agents

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Abstract: ***Aim and Objective:*** 4*H*-pyran is one of the most well-known groups of synthetic heterocyclic compounds and it has attracted considerable attention of chemists in recent years because of their extensive range of biological and pharmaceutical activities. These compounds are used as antibacterial, anticancer agents, anti-coagulants, spasmolytics and anti-anaphylactic. 4*H*-pyran derivatives are utilized in cosmetics, pigments, biodegradable agrochemicals as well as photoactive materials. In addition, 4*H*-pyrans are also helpful as cognitive enhancers for the treatment of neuro degenerative diseases, including Alzheimer's disease, as well as for the treatment of schizophrenia and myoclonus. 4*H*-pyran derivatives are also potential calcium channel antagonists [8] which are structurally similar to biologically active 1,4-dihydropyridines. Therefore, the synthesis of 2-amino-4*H*-pyrans and their derivatives has attracted much attention in organic synthesis.

Materials and Methods: Some of the synthesized compounds were screened for their antimicrobial activity in vitro by broth dilution method with two gram negative bacteria (*Escherichia coli* MTCC 442, *Pseudomonas aeruginosa* MTCC 441), two gram positive bacteria (*Staphylococcus aureus* MTCC 96, *Streptococcus pyogenes* MTCC 443) and two fungal strains (*Candida albicans* MTCC 227, *Aspergillus niger* MTCC 282) using gentamycin, ampicillin, chloramphenicol, ciprofloxacin, norfloxacin, nystatin and greseofulvin as standard drugs. Eight of the synthesized compounds (**4b, 4c, 4k, 4l, 4m, 4n, 4p,** and **4u**) were selected for screening of their anticancer activity against human astrocytoma-glioblastoma cell line (U373MG).

Results: Antimicrobial study revealed that Compound **4p** showed moderate activity against *P. aeruginosa*. Compounds **4c** showed highest activity against *S. pyogenes*. Also anticancer activity showed that compound **4k** is more active against human astrocytoma-glioblastoma cell line (U373MG) as compared to other compounds. Table **4** also shows that, among the tested compounds **4k** has good GI_{50} value than other compounds.

Conclusion: We have developed a simple, rapid, and most efficient green protocol for the synthesis of 2-amino-4*H*-pyran derivatives using highly inexpensive and easily available DABCO as an efficient catalyst under grinding and solvent free condition at room temperature. Some of the synthesized compounds show good antimicrobial and anticancer activity.

Keywords: DABCO, 2-amino-4*H*-pyrans, multi-component reaction, solvent-free, antimicrobial activity, anticancer activity.

1. INTRODUCTION

The multi-component reactions (MCRs) have emerged as a great tool for synthetic transformations due to their operational simplicity with higher yields of desired products. These reactions are less hazardous and result in minimum undesired side products. Synthetic methods consisting MCRs have established themselves as an important tool for the construction of drug-like molecules having heterocyclic scaffolds [1]. They increase the efficiency of reaction by combining several operational steps in one step, without isolation of intermediates or changing the reaction conditions. Besides this, they have flexibility, high atom economy, high product yield as well as time and energy saving features [2]. The MCRs have also attracted noticeable attention from the combinatorial chemistry community due to their convergence and productivity [3].

4*H*-pyran is one of the most well-known groups of synthetic heterocyclic compounds and it has attracted the considerable attention of chemists in recent years because of their extensive range of biological and pharmaceutical activities [4]. These compounds are used as antibacterial, anticancer agents, anti-coagulants, spasmolytics and anti-

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Research Article

Synthesis and spectral characterization of tetrahydropyrazolo pyridine analogous by a one-pot tandem MCRs using Zn-O nanocatalyst.

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ABSTRACT

A various substituted aromatic aldehydes are treated with hydrazine hydrate/phenyl hydrazine, EAA, ammonium acetate results in formation of different Tetrahydropyrazolo pyridine derivatives. The conventional and non-conventional methods are used for synthesis. These derivatives are further characterized by various techniques such as NMR, IR etc. We were successfully accomplished 'Green' synthesis of tetrahydropyrazolo pyridine derivatives. Use of Zn-O nanocatalyst was found to be an efficient catalyst for heterogeneous multicomponent reaction. The catalyst was used environmentally free and yield of product is also increased. Finely catalyst is recovered. We were reused the catalysts for next reactions.

KEYWORDS

Phenyl hydrazine, EAA, Tetrahydropyrazolo pyridine, Zn-O nanocatalysts

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Studies on Physicochemical Parameters of Soil from Shrirampur Tehsil Area and Nearby Villages, Ahmednagar District, Maharashtra, India.

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Research Article

Studies on Physicochemical Parameters of Soil from Shrirampur Tehsil Area and Nearby Villages, Ahmednagar District, Maharashtra, India.

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ABSTRACT

The present study was conducted in order to know the role of various climates, geomorphologic and manmade practices in agricultural farming in Shrirampur Tehsil of Ahmednagar district in Maharashtra State. A simple random sampling technique was used for the selection of soil samples from various villages located in the study area .The total 15 soil samples from 05 villages of Shrirampur Tehsil and were selected. The study shows that textural profile and water holding capacities of all the soil samples were moderate and to certain extent needs change in cropping pattern and irrigation practices. Chemical parameter analyzed such as pH shows acidic soil & some shows alkaline soil, Electrical Conductance, Nitrogen, Phosphorous, Potassium, Sulphur, Boron, Calcium, were in few cases shows alarming, which needs proper utilization of manures, control chemical fertilizers and reinvestigation in their farming practices.

KEYWORDS

Soil, Geomorphology, irrigation practices, water holding capacity (WHC), Electrical Conductance.

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Nanocat-MgO-ZrO_2 Mixed Metal Oxides: A Sustainable Approach towards Solvent-free Synthesis of Benzo-[d]-thiazole Derivatives

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Abstract

In the present research article, a nano-sized Magnesia-Zirconia catalyst was well prepared by a simple ultradilution co-precipitation method in a benign media. The synthesized nanocat-MgO-ZrO_2 was extensively characterized by analytical techniques such as X-ray diffraction (XRD) and transmission electron microscopy (TEM). The functionalized nano-MgO-ZrO_2 catalyst proved to be very efficient for the synthesis of benzo-[d]-thiazole derivatives under microwave irradiation method. The proposed method were afford the advantages like solvent free approach, good reaction yield, short process time, simple work-up and recycling of the catalyst which thoroughly touch the sustainable transformation.

Keywords: Nanocat-MgO-ZrO_2, Mixed metal oxides, Nanoparticles, Microwave irradiation, Benzo[d]thiazole

1. INTRODUCTION

Literature survey reveals that, mixed metal oxides (MMOs) signify one of the most important and widely employed categories of solid catalysts, either as active phases or supports. MMOs may be used either by their acid/base or their redox properties and constitute the largest family of heterogeneous catalysts. [1-4]. In the past few decades, nano-sized MMOs are attractive for a range of applications due to their excellent chemical and thermal stability, high porosity and large surface area. Therefore, great efforts are dedicated to the optimization of new procedures able to synthesize pure and mixed nano-sized metal oxides. [5-7]. Recent investigation suggest that, a MgO–ZrO_2 catalyst has applicability in various important organic reactions such as cross-aldol condensation, *N*-benzyloxy carbonylation of amines, reduction of aromatic nitro compounds, and synthesis of 1,5-benzodiazepines and *N*-benzyloxycarbonylation of alcohols. Engaged with the development of sustainable protocols, heterogeneous catalysis and nanomaterial's. [8-11]

The benzothiazole and their derivatives are an important class of heterocyclic compounds in medicinal, industrial, agricultural and synthetic organic chemistry. They are widely found in bioorganic and medicinal chemistry with applications in drug discovery such as antitumor, anticonvulsant, and antiviral applications [12-13]. They also found applications in industry as antioxidants, vulcanization accelerators, and as a dopant in a light-emitting organic electroluminescent device. In continuation of our efforts for greener organic transformations and design of heterogeneous catalysts for important organic raw materials, [14] we present herein an eco-friendly, green method for the synthesis of benzothiazole derivatives under solvent free condition.

2. EXPERIMENTAL

2.1 Materials and Methods

All reaction ware carried out using a laboratory microwave oven (RAGA'S Scientific Microwave System-700W). All the noted melting points were determined on Melting Point apparatus Model: KI-11

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Practical Synthesis Of *N*-Protected Heterocycles Using Heterogeneous Metal Oxide Catalyst

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Abstract

In the present research article, a heterogeneous metal oxide (ZnO) catalyst proved to be very efficient for the synthesis of N-protected 2-iodoanilne derivatives at room temperature. The proposed method was afforded the advantages like good reaction yield, simple work-up and recycling of the catalyst which thoroughly touch the green transformation.

Keywords: Heterogeneous catalyst, Metal oxide, ZnO, *N*-protected heterocycles, 2-iodoaniline

1. INTRODUCTION

Catalysts are materials that change the rate of a chemical reaction but do not change the thermodynamics of the reaction, without undergoing any change in itself. Nano-sized catalyst for organic synthesis is expected to bridge the gap between homogenous and heterogeneous catalysis 9 Heterogeneous catalysts cover almost 90% of the industrial catalytic processes. Due to its definite technical advantages, like transformation process, competitiveness and atom economy, heterogeneous catalysts are gaining more and more importance to the world's economy, to convert the inexpensive raw materials into value added fine chemicals and fuel in an economic, environmental efficient manner and also in the production of pharmaceuticals and alkylation *etc.* [1-3]

Literature survey revealed that among the transition metal oxides, superior actions could be obtained from the catalysts where metal ion species are relatively easy to interchange between two different valence states. This can involve two different oxidation states under reaction conditions as can be found in Fe_2O_3, V_2O_5, TiO_2, CuO or NiO, or the inter conversion between the positive ion and neutral metal, with the more easily reduced oxides such as ZnO and CdO. Hence, metal oxide catalysts are important from commercial point of view and have been used for manufacturing many valuable products. [4-6]

Recent investigation suggest that ZnO is a highly efficient catalyst for the Friedel-Crafts acylation reaction of activated and inactivated aromatic compounds including variety of alcohols, phenols and amines with acid chlorides or acid anhydrides. It gives high yields at room temperature under very mild reaction condition. Metal oxides represent one of the most important and widely employed categories of heterogeneous catalysts either as active phases or as support. The versatility of the use of oxide systems can be seen in many organic reactions like oxidation, hydrogenation, dehydrogenation, condensation, cracking, and isomerisation.[7-8]

N-Heterocycles are key building blocks in natural products, bioactive compounds and materials. Amongst the variety of heterocycles, indoles and benzofurans have emerged as privileged structures, especially in medicinal chemistry. [9-10] This great interest stimulated organic chemists to design efficient and diverse synthetic accesses, abundantly reviewed in the past few years. [11] Many efficient

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Synthesis of 1-(5-bromo-2-hydroxyphenyl)-3-(4-fluorophenyl) Propane-1, 3-Dione with their Metal Complexes Act as Antimicrobial Agents

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ABSTRACT

The newly synthesized 1-(5-bromo-2-hydroxyphenyl)-3-(4-fluorophenyl) propane-1, 3-dione with their transition metal (II) complexes have been spectroscopically characterized and their in vitro efficacies were evaluated. The simple substitution reactions between the metal nitrate and ligands yielded the titled complexes. However, in situ procedure gives high yield with formation of single products as evident by TLC. Elemental analysis, IR, ^{1}H and ^{13}C-NMR, Mass Spectra, UV-Vis., magnetic susceptibility and conductance measurements were done to characterize the ligands and their metal complexes. All the evidences suggested that the complexes have octahedral geometry. The stoichiometries of the complexes were found to be 1:2 (metal: ligand). The conductivity data show that the complexes are non-electrolyte in nature. The antibacterial and antifungal activities of the ligands and their complexes have been carried out.

Keywords: 1, 3-diones, Metal complexes, magnetic susceptibility and Antimicrobial screening.

1. INTRODUCTION

The coordination chemistry of transition metal (II) complexes with 1, 3-diones as ligands is of current interest because they can provide new materials with useful properties such as antifungal, antibacterial, anticancer [1,2], antisecticidal [3], antioxidant [4], potential prophylactic antitumor activity [5,6], magnetic exchange [7,8], electrical conductivity [9]. The biological importance of metal (II) complexes is that they are sometimes highly effective than the free ligands [10]. Metal complexes containing pyridine and derivatives have aroused considerable interest in view of their industrial and biological importance [11, 12]. They have also been found to be active against influenza and have been suggested as possible pesticides and fungicides. Their activity has been thought to be ability to chelate trade metals [13, 15].

Recently, applications of these transition metal complexes in the design and development of synthetic restriction enzymes, new drugs and stereo selective probes of nucleic acids structure have been explored extensively [16]. Transition metal complexes offer two peculiar advantages as DNA-binding agents [17] and functionality of the binding agent [18] these characteristics have promoted metal complexes used in a wide range of applications [19-21].

In continuation of our interest in the functionalized 1, 3-diones and their metal (II) complexes, we, herein report the synthesis, spectral characterization, antimicrobial studies of a bidentate ligands containing O, O pharmacophores. The antibacterial and antifungal activities of ligands and their metal (II) complexes observed that, metal complexes showed highest activity than the free ligands.

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Synthesis and Characteristic Properties of Perovskite-type $NdMnO_3$ Nanocrystal materials via a Co-Precipitation Method

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ABSTRACT

The synthesis of well-dispersed $NdMnO_3$ nanocrystals is developed in the presence of octanoic acid as surfactant by using Co-Precipitation method. By using this method can produce fine, high-purity, stoichiometric particles of single and multicomponent metal oxides. The prepared sample is characterized by X-ray diffraction (XRD), Fourier transform infrared spectroscopy (FT-IR), scanning electron microscopy (SEM), and energy dispersive X-ray spectrometer (EDX). The XRD analysis shows only the pattern corresponding to perovskite-type $NdMnO_3$ which crystallizes in the single phasic orthorhombic system. The spherical $NdMnO_3$ nanocrystals with an average particle size of about 69 nm can be obtained at a relatively high calcining temperature of 850°C. By using SEM it shows sphere-like $NdMnO_3$ nanocrystals obtained by this method are uniform in both morphology and particle size. The results indicate that the amount of surfactant, pH and rate of stirring have an important role in the homogeneity and size of product. The preparation process can be also applied to synthesize other metal oxides.

KEYWORDS: *Octanoic acid, Co-precipitation, Perovskite-type, Nanocrystals*

INTRODUCTION

The size less than 100 nm in metal particle considered as a nanoparticles. It is interesting in chemical, Electronic, magnetic and optical properties[1]. The majority of catalysts used in modern chemical industry are based on mixed metal oxides including perovskite-type oxides ABO3, where A is a rare-earth element, and B is 3d transition metal[2]. The perovskite-type oxides crystals can have most of the applications in advanced technologies such as solid oxide fuel cells, catalysts and chemical sensors, magnetic materials, electrode materials, etc [3-5]. NdMnO3 prefer to be orthorhombic ally distorted perovskite-type structure [6]. In $NdMnO_33$, there are three major magnetic interactions: Mn-Mn, Nd–Mn and Nd–Nd [7]. These interactions determine their structure and magnetic properties and also shows number of applications.One application of $NdMnO_3$ nanopowders is in efficient gas sensors for H2S [8] and C_2H_5OH [9]detection. The preparation of rare earth orthomagnetites have been prepared by many methods, including hydrothermal, combustion, sol-gel, precipitation methods and sonication assisted precipitation[10]. A simple co-precipitation procedure to prepare orthomagnetite neodymium nanocrystals($NdMnO_3$) in aqueous solution at relatively high temperature. The perovskite-type structure can be obtained by Calcining the precursor at 850 ^{0}C. The Co-precipitation can produce fine, high-purity, stoichiometric particles of single and multicomponent metal oxides. If the conditions of this process, such as solution pH, reaction temperature, stirring rate, metal salts concentration and surfactant concentration are Controlled, oxide particles of the desired shape and sizes can be produce

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Research Article

Studies on Physicochemical Parameters of Soil from Shrirampur Tehsil Area and Nearby Villages, Ahmednagar District, Maharashtra, India.

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ABSTRACT

The present study was conducted in order to know the role of various climates, geomorphologic and manmade practices in agricultural farming in Shrirampur Tehsil of Ahmednagar district in Maharashtra State. A simple random sampling technique was used for the selection of soil samples from various villages located in the study area .The total 15 soil samples from 05 villages of Shrirampur Tehsil and were selected. The study shows that textural profile and water holding capacities of all the soil samples were moderate and to certain extent needs change in cropping pattern and irrigation practices. Chemical parameter analyzed such as pH shows acidic soil & some shows alkaline soil, Electrical Conductance, Nitrogen, Phosphorous, Potassium, Sulphur, Boron, Calcium, were in few cases shows alarming, which needs proper utilization of manures, control chemical fertilizers and reinvestigation in their farming practices.

KEYWORDS

Soil, Geomorphology, irrigation practices, water holding capacity (WHC), Electrical Conductance.

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Synthesis and Spectral Analysis of Some Representative Pyrazoline Derivatives

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ABSTRACT: In the present investigation, we designed and synthesized a series of (*E*)-1-(2-hydroxyphenyl)-3-(1,3-diphenyl-1*H*-*pyrazol*-4-*yl*)prop-2-en-1-one derivatives by aldol condensation followed by the reaction of hydrazine hydrate. The entire synthesized compound have been Characterized by ^{1}HNMR, Mass and IR spectral studies.

Keywords: Pyrazoline, Hydrazine hydrate, Spectral, derivatives.

INTRODUCTION: Pyrazoline[1] were well known and important nitrogen containing five membered heterocyclic compound and several method have been work out for its preparation. Following pyrazoline derivative have been found to posses considerable biological activities. It has several prominent effects, such as antimicrobial, anti-microbacterial, anti-inflammatory, anti-analgesic and antidepressant activities[2]. A huge number of 2-pyrazoline using various synthetic method for its preparation have been described in the chemistry literature. Most widely used procedure were based on the reaction of α,β- unsaturated aldehyde and ketone with hydrazine. However a series of specially substituted representatives have been synthesized rarely. For this reason the aim of our present study was to synthesized systematically substituted 2-pyrazoline derivative for the study of its antimicrobial activity in future.[3, 4] Among the method used for preparation of pyrazolines condensation of substituted chalcones[4] with hydrazine and its derivatives were commonly employed. 2-pyrazolenes conveniently prepared by treatment of α β unsaturated carbonyl compounds with hydrazine reagents in acidic medium. Pyrazole moiety containing compounds are associated with bactericidal[5], antiinflammatory[6] and hepatoprotective[7] activities. 2-(1,3-Diphenyl-1*H*-pyrazol-4-yl)-3-chlorochromones[8] reported by us earlier were found to be associated with excellent antibacterial and antifungal activities. Nitrogen containing heterocyclic compounds[9] like pyrazolines have received considerable attention in recent years due to their biological activities like anti- inflammatory,[10] analgesic, anticonvulsant,[11] and antidiabetic.[12] Pyrazolines and their derivatives are also reported to possess antiprotcolytic,[13] antibacterial, antifungal and antiviral[14] activities. Many substituted pyrazolines are known to possess acaricidal[15] activities and are used in the treatment of cerebral edema.[16] 1-Phenyl-2-pyrazolines are found to be useful as antioxidants.[17]

MATERIALS AND METHODS:

Preparation of ester: 1 mole of phenol and 1.2 mole of Ac_2O were taken in dry conical flask; add 15 ml of dry pyridine. Keep it for overnight at room temperature, then poured the content over crushed ice containing 5-10 drop of conc. HCl. Separated organic layer from separating funnel wash with 1% ice cold solution of NaOH again wash with water for 2-3 time then dry over sodium sulphate, purify by distillation pure ester was collected.

Preparation of O-Hydroxy acetophenone: Take (1.25 mole) of anhydrous $AlCl_3$ in dry RBF equipped with air condenser then add (1 mole) above ester to the flask, within few minute vigorous reaction will set up. After few minute HCl fumes formation will take place then heat the reaction mixture in oil bath at 130-150^0 c. Then keep the flask in ice bath add to it water containing ice product will separate in 1-2 hrs. Filter the product recrystallized from aq. alcohol.

Preparation of Chalcone: Equimolar amount of (0.005 mole) O-hydroxy-acetophenone and (0.005 mole) pyrazole aldehyde were taken in 100 mL RBF

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One Pot Synthesis 1,4 Dihydropyridines Catalyzed by Cu-doped ZnO Nanocatalyst

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Abstract

Cu-doped ZnO catalyst was used for convenient and efficient synthesis of 1, 4-dihydropyrine (DHP) derivatives under solvent free conditions. The main advantages of these protocol includes short reaction time, high yields, recyclable catalyst, selectivity towards 1,4-dihydropyridine derivatives, practical simplicity and work up free reaction conditions.

Keywords: Cu-doped ZnO, Nano catalyst, 1,4dihydropyridines, solvent free, nonconventional.

INTRODUCTION

Recently 1, 4-dihydropyridines prepared by direct condensation of aldehydes, malononitrile and barbituric acid in aqueous media has been reported under ultrasound irradiation, [1] or catalyzed by diammonium hydrogen phosphate.[2]1, 4-dihydropyridines compounds are most important classes of drug molecules and were introduced for medical use in 1911.[3] They have attracted much attention due to their antiviral,[4] antibiotic,[5] anti-inflammatory,[6] and antitumor[7,8] activities.

Heterogeneous catalysis for organic synthesis has gained popularity due to desirable separation of product and eco-friendly nature. Nanosized catalyst for organic synthesis is expected to bridge the gap between homogenous and heterogeneous catalysis [9]. Heterogeneous nanocatalysis has advantages due to ecofriendly aspect, economical nature [10], easy handling, greater selectivity and reusability of the catalyst [11]. Furthermore, the nano-catalyzed reactions offer the benefits of high atomic efficiency, simplified isolation of product, easy recovery and recyclability of the catalysts. Synthesis of dihydropyrimidin-2(1H)-ones/thiones derivatives has been carried out using various nanostructure metal oxides such as TiO2 [12], Fe2O3 [13], ZrO2-Al2O3-Fe2O3 [14] and ZnO [15]. However, all these synthesis require the solvents and support of homogenous organic acids.

Experimental:

Solvents, reagents and chemicals were purchased from Sd-fine Chemicals and Process Chemicals generally used without further purification. IR spectra were recorded on a Perkin FT-IR spectrometer.The NMR spectra were measured with a 400 MHz Bruker Avance spectrometer at 400 and 100 MHz, for ^{1}H for ^{13}C, respectively, in $CDCl_3$ solution with TMS as an internal standard. Chemical shifts are given in ppm (δ) and are referenced to the residual proton resonances of the solvents.

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Synthesis and Characterization of MgO Nanoparticles by Using Sol-Gel Method

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Abstract

Nanaparticles of mgo is formed by successive sol-gel method. Nanaparticles are obtained by dissolving solid mgso$_4$ aqueous medium with 0.1M solution of acetic acid. The crystals of mgo were obtained by addition of 1 M naoh. The precipitate is dried at 60^0 C temperature for 12 hours to get the final growth of mgo nanoparticles. The structural morphology, optical property of particles were studied by X-ray diffraction (XRD), Scanning electron microscop (SEM), UV spectrophotometer and furrier transformer infra-red spectroscopy (FTIR). The study of surface morphology reveals that mgo nanoparticles shows nanorods, niddle and spindles like shapes. The obtained nanoparticles of mgo shows optical band gap of 5.17 ev.

Keywords: MgO nanoparticles, Characterization: SEM, XRD, UV and FTIR.

Introduction

Nanoscience is the study of phenomena on a nanometre scale. Atoms are a few tenths of a nanometre in diameter and molecules are typically a few nanometres in size. The smallest structures humans have made have dimensions of a few nanometres and the smallest structures we will ever make will have the dimensions of a few nanometres. This is because as soon as a few atoms are placed next to each other, the resulting structure is a few nanometres in size [1]. The smallest transistors, memory elements, light sources, motors, sensors, lasers, and pumps are all just a few nanometres in size. Nanoscience is the study of phenomena and manipulation of materials at atomic, molecular and macromolecular scales, where properties differ significantly from those at a larger scale. Besides the technological relevance of nanoscience, there is an enormous hype associated with it. Fantastic claims have been made about faster computers, cheap production of goods, and medical breakthroughs. Nanotechnology is expected to appear in products such as tennis rackets, self-cleaning cars, paint, food, cosmetics, and thermal underwear. The European Union is has identified nanotechnology as an important research area [2]. The goal of this study is to introduce the concepts of nanoscience so that the issues can be understood and a constructive contribution to the debates can be made. Nanoscience is a science that describes manipulation of chemical and biological architectures with dimensions in the range from 1 to 100 nanometers. Nanoscience is about developing new chemical and biological nanostructures, uncovering and understanding their characteristics, and ultimately about learning how to organize and join these new nanostructures into larger and more complex functional architectures [3]. It is integrated with nanotechnology because both of them are almost same in use. Nanoscience building blocks ranges from 100 to millions of atoms in a single block.There are different methods are discovered for synthesis

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Environmentally Benign Synthesis and Characterization of Some Novel Pyridine anchored Triazole Derivatives

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Abstract

In the present work, we herein report the differently substituted, pyridine incorporated Triazoles from Thiosemicarbazide (2) as a precursor. Thiosemicarbazides (2) were prepared from methyl 5-bromonicotinate. We have used conventional as well as non-conventional methods for the synthesis of title compounds. Ultrasonic and Microwave mediated synthetic methodology has been showed better yield of the synthesized compounds as compared to conventional method. The formation of the Triazoles has been established by spectral tools.

Keywords: Triazole, Thiadiazole, Thiosemicarbazide, Nicotinic Acid, Ultrasonic, Microwave

Introduction

Among the various N-containing heterocycles azoles are synthetically important class of heterocycles because of broad spectrum of biological activities associated with them[1]. 1,2,4-triazole ring have relevance to the properties such as antitumor[2], anti-inflammatory[3], antibacterial[4], antimycobacterial[5], antifungal[6], anticonvulsant[7], antidepressant[8], antihypertensive[9], antioxidant[10], antiviral[11] and analgesic[12] activities. Thiosemicarbazides are important intermediates in the synthesis of azoles. Thiosemicarbazides were reported to possess activities as antibacterial[13], antimalarial[14], antitubercular[15].

The advantages of non-conventional methods for motivating different reactions are sound described in the literature[16]. Ultrasound and microwave assisted synthesis is a green synthetic approach used to aecelerate rate of reaction. This approach is pollution free, environment friendly, safe,rapid and with higher chemical yields[17,18]. These properties make nonconventional methods superior to conventional one. With considering various biological activities associated with triazole nucleus and advantages of non-conventional methods in synthesis prompted us to study the synthesis of triazoles and thiadiazole.

Experimental Work

All melting points were recorded in an open capillary tube in liquid paraffin bath and are uncorrected (Table-1). The purity and the progress of the reaction were routinely monitored by TLC. The product was purified by recrystallization technique. IR spectra were recorded on Perkin-Elmer FTIR spectrum-2 with ATR-single Refl. ZnSe technology. ^{1}HNMR spectra were recorded on BRUKER-ADVANCE II 400 MHz spectrometer in $CDCl_3$ and DMSO-d_6 as solvent and TMS as internal standard. Peak values are shown in δ ppm. Mass spectra were obtained by Finnegan mass spectrometer. TLC was

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Applicability of Magnetically Recyclable Ferrite-L-Cysteine Nanocatalyst for the Green Synthesis of Quinoline and Pyrazole derivatives under Microwave Irradiation

July 2017 · Current Catalysis 06

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Authors:

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Rayat shikshan sanstha's, Shri sadguru gangagir maharaj science gautam arts sanjivani commerce college , kopargaon, Dist-aheme...

Abstract and Figures

Abstract: Background: Recently sustainable transformations are a challenge for the researchers in are-as like health, social sector and environment. To overcome these troubles, it has been planned to pro-duce simple and facile methods to carry organic reaction under mild & eco-friendly conditions. Nano magnetite supported catalysis is a very significant and growing field in catalytic science with applica-tion in organic synthesis. Therefore, this research article focuses on the synthesis of nano-magnetite supported cysteine organocatalyst and its application in catalysis and synthetic organic chemistry. Methods: Magnetically recyclable heterogeneous catalyst ferrite-L-cysteine was prepared by simple stirring method in distilled water media without any other reagent followed by dehydration technique. The synthesized catalyst is well characterized by FT-IR, TEM and FEG-SEM-EDS spectroscopy. This functionalised nanocat- Fe-cys was employed in the synthesis of quinolines under Friedlander reaction and also pyrazole derivative under Knoevenagel condensation reaction. The % conversion of products was checked by thin layer chromatography and the synthesized compounds were further confirmed by NMR techniques. Results: To check the competency of synthesized nanocat-Fe-cys for Friedlander & Knoevenagel rac-tion under solvent free conditions, microwave irradiation method employed superiorly over convention-al oil bath method. The products were obtained in very clean & noticeably higher yield (81-94%). The catalyst ferrite cysteine was found to be recyclable for ten consecutive run with no significant loss in catalytic activity. Conclusion: In the present research article, the synthesis of highly active, recyclable & versatile organo nanocatlyst ferrite-cysteine using easily available precursor via the simple impregnation procedure is presented. The MNPs was found to be stable under investigated conditions & highly effective in the synthesis of substituted quinolines and pyrazole derivatives. The simple eco-friendly method, mild reac-tion conditions, economically affordable and good product yields make it an attractive sustainable pro-tocol.

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Nanomagnetite-supported molybdenum oxide (nanocat-Fe-Mo): an efficient green catalyst for multicomponent synthesis of amidoalkyl naphthols

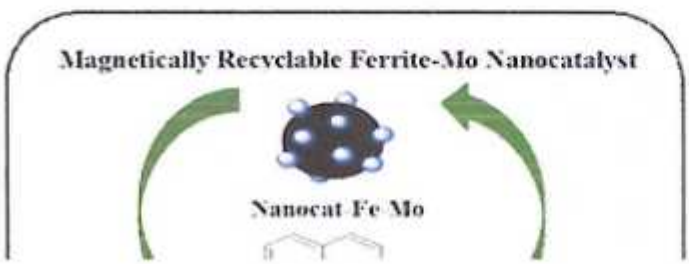
Swapnil R. Bankar & Sharad N. Shelke

Research on Chemical Intermediates **44**, 3507–3521 (2018)

Abstract

Magnetite (Fe_3O_4)-supported molybdenum oxide (MoO_3) was synthesized from simple starting precursors in aqueous medium. The synthesized nanocat-Fe-Mo was analyzed using several techniques such as X-ray diffraction (XRD) analysis, X-ray photoelectron spectroscopy (XPS), scanning electron microscopy (SEM), transmission electron microscopy (TEM), and vibrating-sample magnetometry (VSM). The catalytic activity of the synthesized nanocat-Fe-Mo was studied in a benign one-pot multicomponent transformation for synthesis of amidoalkyl naphthol derivatives under solvent-free condition using both conventional and microwave irradiation methods. Nanocat-Fe-Mo was found to be highly active and could be reused seven times without notable loss in catalytic activity. The proposed method offers advantages such as good reaction yield (80–95%), short process time, simple workup, and recycling of the catalyst, representing important green chemistry principles.

Graphical Abstract



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Article

Synthesis of 1-(5-bromo-2-hydroxyphenyl)-3-(4-fluorophenyl) Propane-1, 3-Dione with their Metal Complexes Act as Antimicrobial Agents

February 2018

Authors:

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Show all 5 authors

References (28)

Abstract

The newly synthesized 1-(5-bromo-2-hydroxyphenyl)-3-(4-fluorophenyl) propane-1, 3-dione with their transition metal (II) complexes have been spectroscopically characterized and their in vitro efficacies were evaluated. The simple substitution reactions between the metal nitrate and ligands yielded the titled complexes. However, in situ procedure gives high yield with formation of single products as evident by TLC. Elemental analysis, IR, 1 H and 13 C-NMR, Mass Spectra, UV-Vis., magnetic susceptibility and conductance measurements were done to characterize the ligands and their metal complexes. All the evidences suggested that the complexes have octahedral geometry. The stoichiometries of the complexes were found to be 1:2 (metal: ligand). The conductivity data show that the complexes are non-electrolyte in nature. The antibacterial and antifungal activities of the ligands and their complexes have been carried out.

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STUDY OF STRUCTURAL AND MAGNETIC PROPERTIES OF SOL- GEL AUTO COMBUSTIONALLY PREPARED NZF AT DIFFERENT PH VALUES

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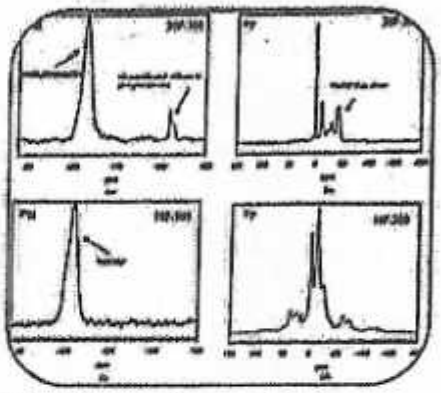
ABSTRACT :

Nickel – Zinc ferrite particles ($Ni_{0.65}Zn_{0.35}Fe_2O_4$) were prepared at pH values 7,8,9 and10 by using AR grades with high purity (99.99%) nitrates of respective metal ions and L-ascorbic acid as a fuel by sol –gel auto combustion method .The molar ratio of fuel (L-ascorbic acid)to metal nitrates was taken as 1:3.Thes synthesized samples were calcined at 500°C for 6 hrs. These synthesized powder have been characterized by XRD, SEM and impact pH values on the properties of samples were studied. The XRD pattern confirmed that samples were crystalline in nature at pH values 7, 8, 9 and 10 .The crystalline size was found to be 22, 24, 28 and 32nm respectively. The saturation magnetization of samples prepared at pH values 7, 8, 9 and 10 were found 68.74, 71.53, 77.31 and 81.53 a.m.u./g respectively.



KEYWORDS : *pH of sol-gel, NZF ferrite, XRD, Crystallite size, Magnetic properties.*

1. INTRODUCTION

Spinel ferrite is a kind of soft magnetic material are one of the most attracting class of material due to their interesting electric and magnetic properties. Ni-Zn ferrite is more stable, easily processable ,inexpensive and have wide technological applications[1,2].These are commercially used in the transformer cores, read/write heads for high speed digital tapes and operating devices [3-6].Nickel ferrite is an inverse ferrite whereas zinc ferrite is normal so it is interesting to study their magnetic properties .Magnetic properties of these ferrite are highly sensitive to preparation technique, sintering condition and amount of constitutes metal oxides, impurities or doping level [7].Generally Ni-Zn ferrites are synthesized using conventional solid state reaction i.e. ceramic method [8-11] which involves direct mixing of oxides, prolonged heating at high temperature is mainly disadvantage of this method giving rise the vitalization of some constituents and non-stoichiometric product. The particles obtained by this method are large and non-uniform in size which results in the formation of voids on compacting. A variety of methods have been proposed for the synthesis of Ni-Zn ferrite nanoparticles with control size, shape, and chemical stability such as sol-gel method12],thermal combustion method[13],citrate precursor route[14],co-precipitation method[15], thermal plasma synthesis,[16], reverse micelle [17,18],hydrothermal[19],micro-emulsion[20],and sonochemical reaction [21]. Sol-gel method, which is one of the most useful and attractive technique for the synthesis of nanosized ferrites because of its advantages such as; good stoichiometric control and the production of ultrafine particles, with a narrow size distribution in a relatively short

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MORPHOLOGICAL AND ELECTRICAL STUDIES OF SPINEL FERRITE PREPARED AT DIFFERENT SINTERING TEMPERATURE

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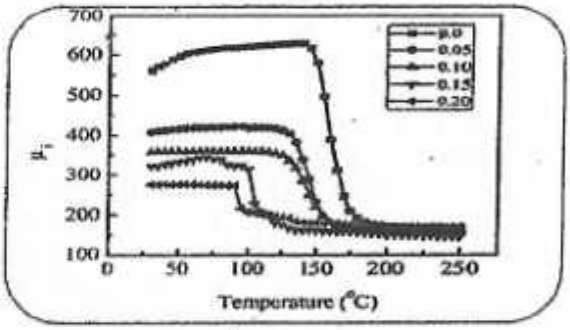
ABSTRACT :



High temperature properties in nanocomposite have received significant attention in the recent year due to its widespread application. Several synthesis methods have been used to prepared spinel ferrite nanoparticles. Sol-gel auto combustion technique have shown promising result in controlling the particle morphology and their size distribution, gives better homogeneity and gives high quality powder. In this work sol-gel autocombution method was used for preparation of mixed NZP powder using L-Ascorbic acid as fuel. The prepared powder is sintered at three temperatures 500°C, 700°C, and 900°C for 6 hrs and its influence on morphological and electrical properties is studied and results obtained are presented in this paper.

KEYWORDS : *High temperature properties , Several synthesis methods.*

1. INTRODUCTION

The spinel ferrites with formula MFe_2O_4 are technologically important magnetic materials from the point of view of their potential applications and novel properties. Recently, there has been an increase interest in these magnetic nanoparticles because of their unique physiochemical, electrical, magnetic, dielectric and optical properties [1-4]. Many researchers have studied magnetic nanoparticle for various applications. The most conventional magnetic nanoparticles are iron oxide, γ-Fe_2O_3 and spinel ferrites. In the nano region spinel ferrite nanoparticles exhibit interesting, unusual and superior properties as compare to their bulk counterpart. Crystallite size and specific surface area of spinel ferrites are responsible for their superior properties. Nanoparticles of spinel ferrites have great potential for catalytic degradation of organic and inorganic pollutants, as a catalyst and as a sensor [5, 6]. Recently, they have also attracted considerably for biomedical applications such as contrast agents for magnetic resonance imaging (MRI), hyperthermia applications and in drug delivery system, microwave absorbance, magnetic fuel, Catalyst, multilayer chip inductor (MLCI), electromagnetic interference (EMI), suppression, gas sensing, transformer cores, antenna rods, inductors, recording heads etc. [7-11]. The high electrical resistivity, low eddy current and dielectric losses, moderate saturated magnetization and high Curie temperature are the important properties of Nickel ferrite. These properties are sensitive to various parameters like method of preparation, preparative parameters and conditions, nature of dopant and cation distribution. Due to their comparatively low losses at high frequencies, they are extensively used in specific applications such as switch mode power supply (SMPS). They are also used in high frequency circuits, high quality filters, read and write etc. [12-13].

Artificial intelligence in medicine

*Prof. Joshi P. D.
**Prof.Mahale S. A.

Introduction

Driven by the economic benefits of tireless labour, machines have been replacing human workers since the industrial revolution. Historically, tasks such as manufacturing have been most susceptible to automation. However, due to recent advances in computing, such as machine learning, cognitive tasks, such as decision-making, are becoming increasingly susceptible to automation through AI. A range of industries are being overblown by AI, from technologies such as self-driving cars, through to software that writes plain English news stories from arranged data.

Artificial intelligence in medicine: automated diagnosis and treatment decisions

Turning to the healthcare industry, The British Medical Association states that diagnosis "largely differentiates doctors from other health experts." However, this 'unique' role of analysis is ultimately a pattern-recognition algorithm. Information is gathered and compared with predefined categories we call diseases. If a patient's pattern of symptoms, signs and test results match that of a known disease, then we categorise and treat them accordingly. Clearly, this process could be performed by an appropriate AI. Indeed, IBM have already created an AI known as Watson, that is able to perceive, 'understand', and make decisions based on usual language. In addition to defeat the champions of Jeopardy! (Jeopardy is an American television game show competition.In this, the contestants are presented with over-all knowledge clues in the form of responses, and must phrase their answers in the form of questions), it is used at Memorial Sloan Kettering Cancer Centre to aid diagnosis and produce management plans to study and treatment of tumours ofpatients. In disparity to humans, who can only learn from personal experience, Watson synthesises information from thousands of medical reports, patient records, clinical trials and medical journals. Furthermore, Watson does not eat, sleep, takes holiday, or get sick. According to principal investigator, David Ferrucci, Watson is already "out-diagnosing" medical residents in certain situations. Similarly, Isabel—a web-based clinical decision support system (CDSS)— suggested the correct diagnosis in 96% of 50 consecutive cases published in the New England Journal of Medicine. This is comparable with human doctors, who have been shown to make the correct diagnosis in 95% of outpatients. Notably, specialties that use images for diagnosis are mainly amenable to appropriation by AI. This is exemplified by an algorithm that 'learned' from a database of normal and abnormal images to diagnose and classify diabetic retinopathy as accurately as human doctors. Similarly, when applied to following diagnosis, the doctor and patient must decide on appropriate treatment. This process relies on the doctor applying their clinical acumen to a particular problem, in combination with available evidence and patient preferences. As a result, there is emergent use of treatment CDSSs that range from simple information resources, to 'intelligent' algorithms that suggest detailed evidence-based treatment recommendations. An 'intelligent' antibiotic CDSS is fully integrated with the electronic health record. In a recent prospective cohort study in Singapore, use of ARUSC halved mortality rates in patients who were initially started on empiric antibiotics. Similarly, Watson is currently making useful patient-specific treatment. Clearly, when making treatment decisions, humans and machines combined are superior to humans alone. A dataset of 340 brain magnetic resonance images, an algorithm developed at the University of Malaya classified images as either 'healthy' or 'diseased' with 100% accuracy. Even aspects of the physical examination can be performed by AI, with a computer-vision algorithm classifying a group of 55 patients as either 'healthy' or 'Parkinson's disease' based on automated analysis of handwriting with 79% accuracy. Although these solutions are intended to be physician assistants as opposed to physician substitutes, these findings have huge implications for us because diagnosis, our defining role, could be performed better, faster and more inexpensively by AI in the near future.

Where does this leave the doctor?

As these systems become smarter, diagnosis and routine treatment decisions could, in principle, be performed independently by AI. As a result, the social clinician would only need to perform tasks that are beyond the ability of AI, such as communicating with patients, performing procedures, or making the final treatment decision in combination with the patient. Therefore, the clinician does not need to be a doctor.

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The Study of Warehouse Management – Challenges and Smart Ways

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**Prof. Shaikh Shoukat Dadamiya

Introduction: -

When most people think of warehousing, they think of big structures that contain products, people, racking and equipment all focused on receiving, storing and shipping inventory. For those of who live, breathe and continuously try to improve all aspects of warehousing and distribution, these structures represent exciting chances for optimization. Businessman constantly work to improve how tasks, resources, kit and infrastructure are leveraged based on today's information and constraints. With the support of comprehensive warehouse services, organizations can better and more quickly respond to client demands. Personnel can open and stock new and fast-selling items so they're easy to find and package for customers. Since warehouses essentially manage inventory, they can connect with company leaders about products that need reordering or aren't selling as effectively as others.A major reason behind this growth is the changing perception of companies. An increasingly mature Indian industry is viewing supply chain not as a cost centre, but as a profit centre–a strategic arm which could be leveraged to increase revenue and the overall profitability of a company. Modern logistics centres require better processes, technology, equipment, a trained workforce and of course, better infrastructure.

Objectives of the study: -

1. To study the concept of warehouse management.
2. To understand challenges of warehouse management.
3. To study the smart way of warehouse management.

Concept of warehouse management: -

Warehouseas partof the supplychaincangenerateboth good and waste for the company. Does it mean that companies have begun to revamp their entire supply chain and do away with all the inefficiencies that resided in the form of stock. A very critical, if not the most critical decision, taken by a customer company during setting up or contracting a warehouse is the location of the warehouse. A poorly chosen warehouse location can result in very high losses due to missed tax benefits, missed shipment deadlines on account of poor connectivity, unavailability of skilled workforce in a particular area or traffic bottlenecks, such as truck bans. In the coming decade, this industry is poised to provide high and stable returns to the investors and developers who could provide the most required smart warehouses to customers. Simultaneously, investors and developers need to look beyond the four walls of the warehouse, and develop integrated logistics facilities. The organized warehousing market is set to grow threefold in size in the next five years. The business opportunity is not just in terms of the share of the total area covered by warehouses, but it is in terms of the share of overall revenue from the market. From a 15 percent share of warehousing revenues, the organized market now commands 30 percent of the revenues from this industry, and that is a key driving factor which is influencing many investors towards investing in this market.

Challenges facing the warehousing industry: -

The warehousing industry is not without its share of challenges. Some of the key challenges that are handled by the industry as a whole are:

1. Availability of skilled workforce:

The industry lacks trained personnel who can function sophisticated material handling systems and warehouse management systems. Further, under the present working conditions, the job in a warehouse is not very attractive for skilled people. Although with the changing attitude about the design of logistics centres and logistics parks it is becoming more attractive, there is still a long way to go.

2. Availability of land:

Procurement of land for warehousing is a difficult task, with the increase in real estate prices of land in and around major cities, most of which also happen to be mainly operative logistics hubs. Additionally, reclassification of land becomes a major worry when it comes to development of warehousing zones. Many industry players have raised a demand of relaxing land prices for logistics purposes and ease the rules on land arrangement for warehousing.

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LANGUAGE LABORATORIES IN ELLT

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INTRODUCTION

English Teacher nowadays give preference to Audio visual aids for teach various topics in language and literature. Language Lab seems like rainbow which useful for teacher in teaching Teacher can improve 7 precious skills of students with the help of language lab which fill colors in teaching learning activity these 7 skills are vocabulary, grammar, pronunciation, intonation, modulation, Phonetics and syllabic description.

Aim and Objective

1. To study role of Lab in ELLT
2. To study Impact of Audio visual aids in teaching
3. To study development of basic skills in student
4. To study effect of ICT and CALL on learning

Tools used in Language Lab

1. Computer

Teachers in present time use computer screen as blackboard in digital class room. They type words with the help of keyboard which nowadays works like Chock. Computer becomes basic tool in E class.

2. fast-speed Internet connections

Internet become essential in teaching and learning, Teachers busy in search knowledge related teaching material from websites and search engines these impossible without internet connection.

3. LCD Projector

Teachers create Power Point presentation on their own computer based on their subject which they choose for teach in class at that time they use another tool from language lab called LCD Projector which helpful for create large image on plane surface like wall. Teachers can use here wall as blackboard because screen of computer reflect on that wall.

4. Sound Recorder

Teacher use mike for pronounce sounds at that time students listen it carefully and tried their best to create same pronunciation for check their mistake teacher advice students to use tool available in language lab that is sound recorder.

5. Tape Recorder

Teacher inform students about role of tool from language lab called Tape recorder in learning, Teacher can introduce them how to use it for listen their clips of pronunciation and give

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1. Chetan Bhagat's Five Point Someone: A Campus Novel

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Abstract

All kinds of fiction reflect reality in detail and is a lighthouse to the society. It is called a pocket theatre. 'Campus' is a Latin word which means 'field'. First, the word is used for Princeton University during the early decades of 18th century. In the 19th century, the Americans used the term about physical space occupied by college or university. In the present scenario, it is applied to any educational institution. 'The Oxford Companion to Twentieth-Century Literature in English' (1996) elaborates 'Campus' or 'Academic Fiction' is a genre of novel, usually comic or satirical, which has a university setting and academics like students, faculty, administrators are as principal characters and highlights the follies and foibles of academic life. The novels satirize the glorified image of academicians, generally faculty is shown as comic and ridiculous figures that have less interest in education. Thus some novels depict intellectual pretensions and human weaknesses while some attempt a serious treatment of university life. In the Western countries there is a robust tradition of this type most of the campus novels are written by the faculties or who have had a first-hand experience of having teaching experience in some educational institution.

Key Words: *- 'field', 'Academic setting, physical space, follies and foibles glorified image, robust tradition.*

Introduction

Having close connection with society, literature is the inseparable part of human life, through which we can communicate and comprehend diverse cultures, philosophies, feelings, ideas, civilizations in different ages and regions. It is the national asset through which we contribute values of human lives and has no precincts of gender, religion, caste, creed or nation. Several forms, styles, genres and registers of it cultivates, expands and enriches the readers' horizon of knowledge and experience of human mind. It is neither only a replica nor a mere

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3. Socio - Psychological Crises in 'Kamala'

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Abstract

Socio-psychology is a combination of two disciplines as the term denotes. To understand the concept, it is necessary to think of these two terms in the conditions of a social life of a person and second term includes human feelings, thoughts, actions, and beliefs. What a person feels, what are his/her thoughts, what are his/her beliefs can be shaped by social aspects. Social is related to the external environment, not necessarily physical, of a person and psychological is related to changes occurring in a person internally. According to social- psychology, an individual's personality is shaped by social aspects of his life and not an only biological factor. Vijay Tendulkar's Kamala is based on true events. Delhi based journalist Ashwin Sarin bought a woman from the flesh market. This play depicts corporate work culture, patriarchy, and male chauvinism present in domestic sphere of life. The play depicts how modern-day journalism has changed its motives. It's more concerned of fame, glamour, sensations, connections rather than truth, kindness and humanity.

Keywords: *Socio-psychology, identity, male chauvinism, journalism, culture*

Introduction

Vijay Tendulkar's *Kamala* depicts how modern-day journalism has changed and more concerned of fame, glamour, sensations, connections rather than truth, kindness, and humanity. Events are more important rather than lessons, values behind it. The modern day journalism has become a race. Every news channel, newspaper is always in search of a story, which would create a sensation and popularize them. Kakasaheb is not wrong in saying that modern-day journalism is a business. Media is much more interested in profit and sales and money rather than the truth. So it can twist the facts, bury the truth, sell lies for money. It is a bloodshed also as lives are lost in the pursuit of truth. This modern day journalism doesn't treat people as

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ROLE OF WEB RESOURCES IN ELLT

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INTRODUCTION

Information and Communication Technologies nowadays becomes lifeline in every field its impact seen in the field of education. ICT plays vital role in the education. It is need of present time that students must know how these technologies work, Students eager to use ICT and the new technology surrounding them.Students aware the fact that in twenty first century blackboards, textbooks and students' workbooks are not the only sources of knowledge its place acquired by screen of computer EBook and Pen drive.It is observed that lot of digital resources are available on the internet those used frequently in English language teaching, These resources include many links and websites., Teachers collect important information from these sites. The following Aims and Objectives of the research have been focused in this article.

- To importance of ICT in ELLT
- To developedifferent skills through ICT
- How ICT develop students' interest in English
- The use of ICT as one of the main objectives in English teaching.
- Website as root of knowledge
- Various web resources for teaching English

Students use ICT which makes it possible for them to receive information, they now got wider range of options that allows for their team work and for autonomous and active learning. It is true that ICT are very useful in ELLT.

CALL Computer Assisted Language learningthis term first used in the 1980s and was used for refer learning a language by using computer technology. Its key feature is audiovisual media which helpful for students in learning and teachers in teaching. It is well known fact that internet brought revolution in CALL. Internet introduce world root of knowledge in the form of web-based tools,these links changed the process of learning and teaching, they now got opportunity for go beyond the use of physical media.

Features of Web based Teaching

1. interactivity,Web based teaching encourage teacher to develop communication among students and them, its impact seen in the form of ideal interaction between teacher and students which makes teaching simple and effective.
2. innovation, Web based teaching enrich teachers imagination power resulted in they develop new ideas for teaching English language and literature.
3. Interconnection, Web based teaching not only impress teacher for teach literary work but also attract students towards story resulted in they began to take interest in learning. thus webs

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13. The Zoo Story: An Explosion of Hollow Men in a Commercial World

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Abstract

The world of twenty first century is at the edge of havoc because of self-centered nature of human being. Today, it seems, we are completely incomplete though we have 'Everything' in the form of material comfort. In short, 'Being EVERYTHING, there is nothing'. The universe sounds meaningless and insecure place for an individual to survive which cause the instability of human being. *'The Zoo Story'*, a play by the American well-known prolific playwright, Edward Albee, explores the themes such as instability, isolation, loneliness (alienation) , lack of communication, schizophrenia, socio-psychological chaos, political disorder, hollowness of men in a commercial world. The present paper highlights the worst condition of 'human' in the postmodern society through his first written, performed and published play *'The Zoo Story'(1958)*. In this play the playwright depicts the harsh reality as resulted by an emotional and abnormal state of mind. The issues like man's existential isolation and need for communication are focused in the present play. The play was originally titled 'Petre and Jerry,' which was based on the names of concerned two characters, who have been suffering from the problems of their futile, barren and meaningless lives. Petre and Jerry, typical representative men from the different parts of the American society, reveal the hollowness through their talk and behaviour. These two can be perfectly compared to Vladimir and Estragon of Beckett's *'Waiting for Godot'* who remain representative of every individual.

Keywords: instability, isolation, loneliness, alienation, existential, explosion, commercial

Albee portrays the picture of two hollow men, Petre and Jerry with symbolical meaning in his *'The Zoo Story'*. Though the play sounds a comic on the surface level, but in a true sense, it is a parody of traditional culture and a reflection of meaningless surrounding for being and dangerous situation for existence for an individual. It is a one-act play, set in the New York's

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12. Reflection of Social Evil Sati in Bhishma Sahani's Novel Tamas

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Introduction

Indian society is mine of diamonds like unity, friendship, brotherhood, neighborhood, truth and tolerance. It is origin of social evils like child marriage, Dowry, Sacrifice and Sati. It is observed that today also social evil named sati practiced in rural parts of India so it is neeessary to study this social evil and find out solutions on it as early as possible.

Sati and its meaning

Sati was a woman stood ready in her best clothes and ornaments to mount the pyre with a pleasant expressions on her face .we can listen continues breathing due to fear of upcoming death she accept it as her fate and wish of the god. she was prepare herself for death among the enjoying crowd gathered and the rhythmic recital of mantras,– Until the loud cry come out of the blazing(hot) pyre when the fire starts to eat (burn) her body, she was seem us as Buddha who sit in his meditation in deep silence and remains insensitive to the activities around.

Women go to the banks of the Indus For a death by fire,They go with their husbands, in their youth,Without hesitation and without song,Adorned (beautiful) in finery (impressive clothes and jeweler),As .n bridal costumeThe custom understood the meaning of love relapsed them from the harsh (unpleasant) hesitation of separation:They consecrated (holy) death itself as their priest.

And gave immortality to their marriage bonds.Even separation did not threaten (harm) such a union.Since the previously disunited flames of loveFail together ardent1y (strong feeling of love) into one.Death becomes a sweet festival of love;It unites the separated elements.The end of existence becomes the pinnacle (highest point) of life

Dubois was American historian who witnessed a *sati* during his travel in the Tanjore District, He was keen observer of the behavior of the '-would be" *sati.* Sati was a very long process; she was calm in nature and behavior. Her looks were quiet, even smiling; but when she

Macronutrient and Micronutrient Soil Status in Bauxite Mining Affected Areas of Western Maharashtra, India

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Abstract

Forty five surface soil samples representing three open cast bauxite mining affected areas of western Maharashtra were analyzed for the distribution of basic soil parameters viz., pH, EC, OC, $CaCo_3$ and macronutrients nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg) and sulfur (S) using standard method. The available micronutrients (DTPA extractable) iron(Fe), manganese (Mn),copper (Cu), zinc (Zn) were investigated by absorption spectrophotometer (ECIL,AAS-4129) the macronutrients and micronutrients status and their relationship with soil properties also studied. Comparative study of soil properties with the help of correlation matrix of Mine Land (ML) to Agricultural Land (AL) and Forest Land (FL) also studied

For study area pH indicates soils are moderately acidic in AL, FL and ML. EC shows normal range in AL, FL and ML. OC found Low in AL, FL and ML. $CaCO_3$ also shows normal category in AL, FL and ML. These basic soil parameters (pH, EC, OC and $CaCO_3$) of ML value are less than the AL and FL. It means mining affects the basic soil parameters of ML soil. Macronutrient status of N, P, K, Ca, Mg and S of ML was less than the AL and FL soil. Micronutrient Cu, Fe, Mn and Zn of ML are also lower than the AL and FL soil. ML soil basic parameters as well as macronutrients and micronutrients average result values are lower than the AL and FL, it indicates that the mining activity of bauxite mining areas of western Maharashtra affects the soil nutrients property. This study will helpful for mine land reclamation for future sustainable development. Result of chemical properties of AL, FL and ML are indicator that whether the ML will converted under AL or FL.

KEYWORDS: Macronutrients, Micronutrients, Soil properties, Soil Quality, Bauxite mining

INTRODUCTION

Bauxite mining is important activity in Kolhapur, Raigad and Ratnagiri districts of western Maharashtra (Table 2). Bauxite ore extracted through opencast mining. After excavation of bauxite ore mine land is totally degraded. Sahu and Dash (2011) recommended the impact of mining activities on pollution of air, water, land, soil quality, vegetation including forest ecosystems, and on human health and habitation has become a matter of serious concern. Banerjee (2012) Examined that Opencast mining is more damaging to the environment as it causes deforestation and creates big holes and large overburden dumps on the earth's surface. Mining can also lead to air, water and noise pollution, hydrologic disturbance, involuntary displacement of persons, disturbance to wildlife, and can pose a hazard to the public during and after mining unless adequate precautions are taken. Schoenholtz, et al. (2000) examined that Foresters have always relied on knowledge of chemical and physical properties of soils to assess capacity of sites to support productive forests. Maintenance or enhancement of soil quality is a common criterion when assessing long-term sustainability of forest ecosystems. Soil quality has been defined as "the capacity of a reference soil to function, within natural or managed ecosystem boundaries, to sustain plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation." (Karlen et al., 1997)

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12. Impact of Opencast Mining Activity on Forest (A Study of Bauxite Mining Affected Areas of Western Maharashtra)

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Abstract

Mining of minerals are environmentally unfriendly activity, has attracted attention from the stand point of environmental impacts and their mitigation. For opencast as well as underground mining it is required to clear the surface along with the vegetation not only in the area designated for mining purposes but also in a large area nearby which is required for making outside dumps and placing associated activities. In the Western Maharashtra, the government has sanctioned 4,784.13 hectors of land for bauxite mining projects. Out of this area 1,496.88 hector land (31.29%) is under forest. Forest fragmentation takes place in bauxite mining affected areas of Western Maharashtra because of villagers use wood as a fuel. People use edible items which get from the forest. People were not aware of richness of bio-diversity, there is deforestation for bauxite mines, less deforestation rather than bauxite mining purpose, there is loss of biodiversity, Growth of trees affect due to dust accumulation on the leaves of trees, Plant growth made by mining companies does not find.

Keywords: Opencast Mining, Forest Fragmentation, Bauxite Mining

1. Introduction

Opencast bauxite mining is one of the important economic activities of western Maharashtra. Bauxite deposits are found western part of Maharashtra; it includes Kolhapur, Raigad, Ratnagiri, Sindhudurg, Thane and Satara districts (IBM). Government has given the leases of mining to few companies. Opencast mining means totally degradation of Land. Land is not use for any purpose. Mining and its subsequent activities have been found to degrade the land to a significant extent and overburden removal from the mine area results in a very significant loss of rain forest and the rich top soil (Anon, 2006). Mining and quarrying, either open cast or underground, destroys landscape and forest ecosystem. The waste materials that remain after the extraction of usable ores are dumped on the surrounding land, thus causing loss of topsoil, nutrients and supportive micro flora and vegetation (SER, 2003). Open cast mining

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14. Chives Production of Greenhouse Farming

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Abstract

Kolhapur district of South Maharashtra has emerged out as the progressive district for construction of greenhouses. Kolhapur district in Maharashtra has also emerged as a major flower and vegetables growing area. The Ghodawat Agro and Shrivardhan Biotech in the Shirol and Hatkanangale tahsil, accounts for a largest of chives exports from India. Kolhapur, Pune, Nashik and Ahmednagar are the largest flower producer district in Maharashtra, at present Kolhapur district 222 greenhouse units operating.

Floriculture is a vibrant source of income. Indian floriculture industry has inherent strengths such as favorable geographical condition, soil and environment, labour cost and the positive investment sentiments of Indian farmers. (Masood Raza, 2014) Rising of greenhouse is quite difficult due to the huge investment Government of India has been providing subsidy @ 50 per cent of the total cost of greenhouse construction. Farmers construct greenhouse agriculture technology with a maximum area up to 4000 sq.meters per beneficiary under National Horticulture Mission (NHM). Suitability of the comparative analysis of input/output cost (Rs.) for chives in the greenhouse, benefit cost ratio were calculated for chives farming. It would be pertinent to examine and to assess the distributional patterns of greenhouse in the study area. Besides, it is also proposed to examine the input output analysis regarding crops grow.

Present paper explains the economic importance of chives greenhouse cultivation in Kolhapur district.

Key Words: Greenhouse, Floriculture, Horticulture, Cut flowers, Net Return, Benefit cost ratio, Comparative analysis

Introduction

In Kolhapur district chives greenhouses increasing continuously because of chives vegetables used daily in kitchen in Europe. People paid 250 to 500 rupees for 1kg. Chives greenhouse is more profitable as compare to open field. A greenhouse also extends the growing season and used for year round production of this high value plants. Greenhouse farming gives more income with less effort. It means the greenhouse technology is very useful technology in

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२७. समाजसुधारक महर्षी विठ्ठल रामजी शिंदे यांचे कार्य एक अभ्यास

प्रा. झरेकर रमेश सोनू
संशोधक विद्यार्थी, टिळक महाराष्ट्र विद्यापीठ, पुणे.

प्रस्तावना

महर्षी विठ्ठल रामजी शिंदे हे महाराष्ट्रातील समाजसुधारक होते. त्यांना कर्मवीर, महर्षी, धर्मवीर, समाजसेवक, देशभक्त अशा नावांनी ओळखले जाते. त्याग, सदाचार आणि निर्भयता इ.गुणांचा समन्वय त्यांच्यामध्ये होता. महाराष्ट्रात हिमालयासारखे नेतृत्व त्यांनी निर्माण केले; मानवतेला त्यांनी जवळ केले; अस्पृश्यतेचा कलंक धुवून काढण्याचा प्रयत्न केला आणि शिक्षणाला त्यांनी गौरव प्राप्त करून दिला. त्यांनी स्वातंत्र्य, समता व बंधुत्व या तत्वांसाठी माणसातला माणूस जागविला. विद्वता, संयम, सेवावृत्ती या महान आदर्शाचे महामानव म्हणजे कर्मवीर शिंदे होय. एक सुधारक अस्पृश्यता निवारणाचे खंदे पुरस्कर्ते वेगवेगळ्या धर्मातील तत्वांचे संशोधक आणि ध्येयवादी विद्वान म्हणून त्यांना ओळखले जाते.

कर्मवीर विठ्ठल रामजी शिंदे यांचे प्रारंभिक जीवन व शिक्षण

कर्मवीर विठ्ठल रामजी शिंदे यांचा जन्म २४ एप्रिल १८७३ रोजी कर्नाटकातील जमखंडी येथे एका सधन कुटुंबात झाला. त्यांच्या वडिलांचे नाव रामजी व आईचे नाव यमुनाबाई असे होते. विठ्ठल रामजी शिंदे यांचे नाव तुकाराम होते. परंतु त्यांचे वडील पंढरपूरच्या विठ्ठलाचे भक्त असल्याने त्यांनी आपल्या मुलाचे नाव विठ्ठल असे ठेवले. विठ्ठल रामजी शिंदे यांचे प्राथमिक व माध्यमिक शिक्षण जमखंडीतच झाले. शाळेत एक हुशार विद्यार्थी म्हणून ते ओळखले जात होते. कर्मवीर विठ्ठल रामजी शिंदे यांनी १८ व्या वर्षे मॅट्रीकची परीक्षा उत्तीर्ण झाल्यावर काही काळ जमखंडीच्या हायस्कूलमध्ये शिक्षकाची नोकरी केली. १८९३ मध्ये ते उच्च शिक्षणासाठी जमखंडीहून पुण्यास आले. तेथे त्यांनी फर्ग्युसन महाविद्यालयात प्रवेश घेतला. पुण्याच्या डेक्कन मराठा एज्युकेशन असोसिएशनने त्यांना दरमहा दहा रूपये स्कॉलरशिप दिली. पुढे बडोद्याचे सयाजीराव गायकवाड महाराजांनीही त्यांना पंचवीस रूपये स्कॉलरशिप सुरू केली. त्यामुळे त्यांना उच्च शिक्षण घेता आले. १८९८ मध्ये त्यांनी बी.ए.ची पदवी संपादन केली. त्यानंतर विठ्ठल रामजी शिंदे मुंबईला आले. तेथे त्यांनी वकिलाचा अभ्यासक्रम पूर्ण केला. याच सुमारास त्यांचा प्रार्थना समाजाशी संबंध आला. प्रार्थना समाजाने केलेल्या आर्थिक सहाय्यामुळे कर्मवीरांना १९०१ मध्ये उच्च शिक्षण घेण्यासाठी इंग्लंडला जाण्याची संधी मिळाली. तेथील दोन वर्षाच्या वास्तव्यामध्ये त्यांनी इंग्लंडमधील तसेच इतर युरोपिय देशांमधील सामाजिक स्थितीचा आणि लोकांच्या सांस्कृतिक जीवनाचा बारकाईने अभ्यास केला. १९०३ मध्ये ते मायदेशी परत आले. इंग्लंडहून भारतात परत येत असतांना कर्मवीर शिंदे यांनी ॲमस्टरडॅम येथे भरलेल्या उदारधर्म परिषदेत भाग घेतला. त्या ठिकाणी त्यांनी 'हिंदुस्थानातील उदारधर्म' या विषयावर एक प्रबंध वाचला. त्यानंतर

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५. १९व्या शतकातील इंग्रजांचे महाराष्ट्रातील शिक्षण विषयक धोरण

प्रा. झरेकर रमेश सोनू
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प्रस्तावना

महाराष्ट्रात इंग्रजी सत्ता स्थापन झाल्यानंतर येथील समाजजीवनामध्ये परिवर्तन घडून आले. त्यामध्ये शिक्षण पध्दतीत झालेला बदल विशेष महत्त्वाचा आहे. या बदलामुळे सामाजिक व धार्मिक विचारांची परंपरा महाराष्ट्रात निर्माण झाली. पाश्चात्य विचारांच्या प्रभावामुळे शैक्षणिक क्षेत्रात महाराष्ट्रात शिक्षण तज्ञांची व विचारवंतांची एक अखंड मालिका निर्माण झाली. १९ व्या शतकाच्या सुरूवातीस ब्रिटीशांनी नवा शैक्षणिक विचार देशाला आणि महाराष्ट्राला दिला.

ब्रिटिशपूर्व काळातील शिक्षण पध्दती

ब्रिटीशपूर्व काळात महाराष्ट्रात दिले जाणारे शिक्षण हे प्रामुख्याने पारंपारीक व धार्मिक स्वरूपाचे होते. त्यात मानवी मूल्ये, विज्ञान निष्ठा, ऐहिकता इ.गोष्टींचा अभाव होता. पेशवे काळात शिक्षणामध्ये लष्करी शिक्षण, व्यावहारीक शिक्षण व धार्मिक शिक्षण दिले जात होते.[१] लष्करी शिक्षण देणाऱ्या शाळा नव्हत्या. त्याबाबत ज्ञान देणारी क्रमिक पुस्तके नव्हती. लष्करी शिक्षणात मल्ल विद्या व युध्दोपयोगी शस्त्रे वापरण्याची कला असे. व्यावहारीक अथवा पुस्तकी शिक्षणामध्ये बाळबोध मोडी लेखन, वाचन, उजळणी व हिशेब यांचा समावेश होता. धार्मिक शिक्षणात पुराणे, शास्त्रे, ज्योतिष विद्या व पौरोहित्याचे शिक्षण दिले जात होते. हे शिक्षण फक्त ब्राह्मणांच्या मुलांनाच दिले जात होते.[२] शहरांमध्ये व खेड्यामध्ये शिक्षण देणाऱ्या खाजगी शाळा असत. त्या शाळांमधून ब्राह्मण, प्रभू व सोनार अशा वरिष्ठ जातींची मुले, तसेच व्यापाऱ्यांची व श्रीमंतांची मुले यांना शिक्षण दिले जात होते. ब्रिटीशपूर्व काळात शिक्षण हे वरिष्ठ वर्गाची मिरासदारी होती. बहुजन समाज व स्त्रियांना शिक्षणाची व्यवस्था नव्हती. ज्ञानाच्या परंपरा, उच्च शिक्षण व संशोधन यांना त्या काळात महत्व दिले जात नव्हते. त्यामुळे बहुजन समाजाची फारशी प्रगती झालेली नव्हती.

आधुनिक शिक्षणास सुरूवात

इंग्रजांची सत्ता महाराष्ट्रात स्थापन झाल्यानंतर पारंपारीक शिक्षण पध्दतीत आमूलाग्र परिवर्तन घडून आले. इंग्रज राज्यकर्त्यांनी शिक्षणातील उच्चवर्णियांची मक्तेदारी संपुष्टात आणली. शिक्षण घेण्याचा सर्वांना समान अधिकार आहे असे त्यांनी जाहीर केले. त्यामुळे बहुजन समाजातील मुलांना शिक्षणाची संधी प्राप्त झाली. शिक्षणाची सार्वत्रिक जबाबदारी सरकारने आपल्या अंगावर घेतली. त्यामुळे शिक्षण प्रसारासाठी सरकारी पातळीवरून प्रयत्न केले जाऊ लागले. इस्ट इंडिया कंपनीने ख्रिस्ती मिशनऱ्यांना भारतात पाठवून त्यांच्याकडून शिक्षण प्रसाराचे कार्य सुरू केले.[३]

ख्रिश्चन मिशनऱ्यांचे कार्य

ख्रिश्चन मिशनऱ्यांनी भारतात सेवाभाव व शिक्षण प्रसार या दोन साधनांच्या मदतीने समाजात मान्यता मिळविली. सर्वात प्रथम अमेरिकन मिशनऱ्यांनी मुंबईत सन १८१५ मध्ये पाश्चात्य धर्तीवर शाळा सुरू केली.

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२५. शोध निबंधकाचे शीर्षक : अहमदनगर जिल्ह्यातील सत्यशोधक चळवळ

प्रा. विघाटे गणेश शंकर
इतिहास विभाग, एस. एस. जी. एम. कॉलेज, कोपरगाव, जि. अहमदनगर.

महत्वाचे शब्द : सत्यशोधक समाज, सेंद्रिय बुध्दिमंत, दीनबंधू सार्वजनिक सभा, सुशिक्षण गृह, दीनमित्र.

१. कृष्णराव भालेकर यांचे नगर जिल्हयातील सत्यशोधक चळवळीमधील कार्य अभ्यासणे.
२. दीनबंधू व दीनमित्र वृत्तपत्रांचे समाजप्रबोधनातील योगदानाचा आढावा घेणे.
३. मुकुंदराव पाटील यांचे नगर जिल्हयातील सत्यशोधक चळवळीतील योगदानाचा आढावा घेणे.

प्रस्तावना

अहमदनगर जिल्हा हा चळवळीचा जिल्हा म्हणून ओळखला जातो. राजकीय दृष्टया हा जिल्हा पुढारलेला असून जनता जागृत असलेली दिसून येते. या जिल्हयात शेतकरी, कामगार, आदिवासी, भूमिहीन शेतमजुरांच्या चळवळीबरोबर सत्यशोधक चळवळीचा मोठा प्रभाव पडलेला दिसून येतो. सत्यशोधक समाजाच्या माध्यमातून नगर जिल्हयात सामाजिक जागृती व जनकल्याणकारी कार्याची बीजे रोवण्याचे कार्य कृष्णराव भालेकर व मुकुंदराव पाटील यांनी केलेले दिसून येते. 'दीनबंधू', 'दीनमित्र' या वृत्तपत्राच्या माध्यमातून व आपल्या प्रबोधनात्मक व्याख्यानातून त्यांनी शिक्षणाचे महत्व सांगून अज्ञान, अंधश्रध्दा, शोषण यांविरुध्द सत्यशोधक समाजाच्या माध्यमातून प्रभावी कार्य केले. सत्यशोधक समाजाच्या चळवळीमुळे नगर जिल्हयातील अनेक कार्यकर्त्यांनी स्वयंस्फूर्तीने बहुजन समाजाच्या उध्दारासाठी वाहून घेतले होते. या कार्यकर्त्यांचा त्याग, परिश्रम, जनसामान्यांबद्दलची कणव, भूतदया इत्यादींमुळे दुष्काळी नगर जिल्हयात वैचारिक परिवर्तनाच्या चळवळी गतिमान बनल्या होत्या.

ब्रिटिशांच्या काळात महाराष्ट्रात वर्णाश्रमयुक्त बेगडी धर्माच्या जोखडात अडकलेल्या बहुजन समाजाची जातीभेद, अस्पृश्यता, सामाजिक व धार्मिक गुलामगिरी यातून मुक्तता करुन समता, बंधुता व स्वातंत्र्याची प्रस्थापना करण्याकरिता महात्मा जोतीराव फुले यांनी २४ सप्टेंबर १८७३ रोजी पुणे येथे 'सत्यशोधक' समाजाची स्थापना केली.[१] सत्यशोधक समाजाची चळवळ हा एक खांबी तंबू नव्हता तर ती एक बहुजनवादी आशय लाभलेली सेंद्रिय बुध्दिमंतांची चळवळ होती. म. फुले हे भारतीय लोकशाही क्रांतीचे जनक होते. भारतातील शेतकरी क्रांतीचे रणशिंग फुंकताना जुनाट व सडलेल्या वर्णाश्रमयुक्त सामंती शेती व्यवस्था, ग्रामव्यवस्थेविरुध्द फुल्यांनी शेतकऱ्यांचा आसूड ओढला.[२] पुरोगामी विचारांचा वारसा लाभलेला अहमदनगर जिल्हा सत्यशोधक चळवळीतही अग्रेसर होता. दिनबंधुकार कृष्णराव भालेकर यांनी इ.स. १८९० साली नगर

समीक्षक वा.ल.कुलकर्णी यांची सैध्दांतिक कथासमीक्षा

डॉ.कैलास महाले
पदव्युत्तर मराठी अध्ययन व संशोधन केंद्र ,
स.ब.नारायणराव बोरावके महाविदयालय,
श्रीरामपूर जि.अहमदनगर
चलभाष:९४०५५५३५१२

वा.ल.कुलकर्णी हे १९५५ नंतरच्या मराठी कथासमीक्षेतील एक महत्वाचे नावह गेली अनेक वर्षे मराठी समीक्षेवर आणि मराठी वाङ्मयाच्या अध्ययन अध्यापनावर त्यांचा प्रभाव पडलेला दिसतोह्१९४५ नंतर मराठीत जी समीक्षा लिहिली गेली तिची मूळ वैचारिक चौकट आणि पध्दती प्राधान्याने वा.लं.नी घडविली आहे. समीक्षक या नात्याने वाङ्मयविचारापासून ते विशिष्ट सहित्यकृतीच्या विश्लेषणापर्यंत त्यांनी सर्व प्रकारची समीक्षा लिहिली. मराठी लघुकथेच्या संदर्भात त्यांनी वेळोवेळी बराच विचार करुन या वाङ्मयप्रकाराच्या स्वरुपासंबंधी स्वत:चे असे चिंतन मांडले आहे. आपल्या या चिंतनातून गवसलेल्या निष्कर्षाच्या आधारे त्यांनी मराठी कथेची चर्चाचिकित्साही केलेली आहे. विशेषत: मराठी नवकथेविषयीच्या आपल्या निरीक्षणातून या कथेविषयीची काही घटकवैशिष्टये, मर्यादा व सामर्थ्य विशद करण्याचा महत्वपूर्ण प्रयत्न त्यांनी केला आहे. 'वाङ्मयीन दृष्टी आणि दृष्टिकोण' (१९५९)या टीकात्मक लेखसंग्रहात समाविष्ट असलेल्या 'लघुकथेचा उत्क्रांतीमार्ग', 'मराठी नवकथेचे सामर्थ्य' आणि 'मराठी नवकथेच्या मर्यादा' या लेखातून वा.लं.चा कथेविषयीचा निर्दोष, ऐतिहासिक व काहीसा टीकात्मक तत्वविचार स्पष्ट झाला आहे.

'मराठी लघुकथेचा उत्क्रांतिमार्ग' या लेखात ते, दिवाकर कृष्णांच्या 'समाधी व इतर गोष्टी' या कथासंग्रहामुळेच मराठी गोष्टीचे लघुकथेत रुपांतर होऊन ती वाचनीय बनली, तिची गोष्टीपासून मुक्तता झाली, तिच्या ठिकाणी असलेले अप्रकट जीवनदर्शनाचे सामर्थ्य प्रकट झाले,मनोदर्शनास महत्व आले व एक कलाप्रकार म्हणून कथेला स्वतंत्र अस्तित्व असल्याची बीजे पेरली गेल्याचे प्रारंभीच नमूद करतात. येथूनच मराठी लघुकथा उत्क्रांत झाल्याचे त्यांचे मत असावे असे दिसते. कथात्मक साहित्यात येथून पुढे कथेला स्वतंत्र स्थान निर्माण झाले. तिला एक प्रकारची पृथगात्मता आली. कथा या वाङ्मयप्रकाराची पृथगात्मता अनेकांच्या लक्षात न आल्यानेच तिला यापूर्वी कादंबरीच्या सावटाखाली राहावे लागल्याचा निष्कर्ष येथे त्यांनी नोंदविला आहे. दिवाकरांच्या प्रभावातून कथेला नवा आकार येण्याची चिन्हे दिसू लागताच १९४० च्या जवळपास तिची प्रगती एकाएकी मंदावली, तिच्यात एक प्रकारचा साचेबंदपणा आला व आशय अभिव्यक्तीचे आवर्त निर्माण झाले याचे कारण, या काळात ललित लेखनप्रकारांच्या पृथगात्मतेची जाणीव सारखी टीकात्मक लेखनातून व्यक्त झाल्याने वाचक–लेखक व टीकाकार यांच्यावर परिणाम होऊन ते कलाकृतीच्या घाटाबददल दक्ष राहू लागले हे असावे असे त्यांना वाटत होते. फडके यांच्या 'प्रतिभासाधन' ग्रंथामधून ही घाटदारपणाची जाणीव व्यक्त झाली. त्यामुळेच इतर वाङ्मयप्रकारांप्रमाणे लघुकथेच्या प्रांतातही आदि, मध्य, अंत, निरगाठ व उकल ही भाषा आली व लघुकथेच्या विकासाला मारक असा विचार बळावू लागला म्हणजे फडकेप्रणीत तंत्राच्या फॉर्म्युल्याचा कथेवर विघातक परिणाम झाल्याचे वा.लं.ना वाटते. तद्नंतर ही लघुकथा पाश्चात्य अनुकरणात रमली, तंत्राच्या कसबाच्या चौकटीत अडकली. या अनिष्ट प्रवृत्तींना आळा घालण्याचे प्रयत्न य.गो.जोशी, वामन चोरघडे व कुसुमावती देशपांडे यांनी केले पण त्यांचे हे प्रयत्नही अल्पजीवी ठरले.

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त्यामुळे भारतातील इतरत्र ठिकाणी झालेल्या उठावाची जी स्थिती झाली तीच स्थिती कोल्हापूर संस्थानातील उठावाची झाली व उठाव पूर्णत्वास गेला नाही.

समारोप

प्रारंभी कोल्हापूर संस्थान हे स्वतंत्र व सार्वभौम असे होते. भारतात ब्रिटिश सत्तेचा उदय झाला आणि भारतातील इतर संस्थानाप्रमाणे कोल्हापूर हे संस्थानसुद्धा ब्रिटिशांचे मांडलिक संस्थान बनले. १९ व्या शतकात या ब्रिटिश सत्तेविरोधी उठावाचे लोण संपूर्ण भारतभर पसरले आणि काही कालावधीतच हे कोल्हापूर संस्थानात देखील ब्रिटिश सत्तेविरोधी मोठ्या स्वरूपाचा उठाव घडून आला.

संदर्भ सूची

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स्त्रीवादी चळवळ व स्त्रीवादी साहित्य

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पार्श्वभूमी-

स्वातंत्र्यप्राप्तीनंतर देशासंबंधीचे, समाजासंबंधीचे सर्व प्रकारचे निर्णय घेण्याचे अधिकार आपल्याला प्राप्त झाले. भारतीय समाज आणि माणसांच्या मनातील राजकीय आकांक्षा वाढल्या. एका नव्या भारताच्या उभारणीचे स्वप्न आपण पाहिले. यातच पुढे १९५० साली आपण आपल्या देशाची राज्यघटना स्वीकारली. भारतीय इतिहासातील ही एक मौलिक घटना आहे. भारतीय राज्यघटनेने सर्वांना समान अधिकार दिले. स्त्री-पुरुष, उच्च-नीच असे भेद मानायचे नाहीत ही शिकवण दिली, त्यामुळे स्वातंत्र्य, समता, बंधुता आणि सामाजिक न्याय या गोष्टी या काळात महत्त्वाच्या ठरल्या. लोकशाही शासनपद्धतीमुळे सर्वसामान्य माणसाला हक्क अधिकाराची भाषा कळायला लागली. स्वातंत्र्यप्राप्तीनंतर आपले सर्व प्रश्न सुटतील ही अपेक्षा ते बाळगुन होते. पण काळाबरोबर अनेक समस्या वाढत गेल्या. दारिद्र्य, बेकारी, लोकसंख्येचा विस्फोट, भ्रष्टाचार, दुष्काळ, जातीय राजकारण यामुळे सामान्य माणसाचा स्वातंत्र्य आणि लोकशाहीवरील विश्वास उडाला. आपल्या विविध प्रश्नांच्या सोडवणुकीसाठी ते चळवळीच्या रुपाने एकत्रित येऊन संघर्ष करु लागले. शिक्षण आणि लोकाशाहीचा विचार अनेक सामाजिक घटकांपर्यंत पोहचल्यामुळे शहराबरोबर खेड्यापाड्यातील दलित, भटके-विमुक्त, आदिवासी आणि शेतकरी तसेच स्त्रिया व कामगार जागृत झाले. शैक्षणिक विकासामुळे जनमानसात माणुसकीची भावना रुजलेली असली तरी दुसरीकडे सामाजिक क्षेत्रातील

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हिंदी विज्ञापन के प्रयोजन एवं विशेषताएँ

डॉ.राजाराम दादा कानडे
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सारांश :–(Abstract)

सारा विश्व एक मंडी अथवा बाजार के रूप में प्रतित होता है और उसमें उपभोक्तावादी संस्कृति विज्ञापन पर बल दे रही है तथा दुनिया को नवीनतम वस्तुओं से वाकिफ कर रही है। यही मानव सभ्यता के अब तक के प्रयास, निवेश की चरम उपलब्धि है। हम क्या कर करे हैं? इससे ज्यादा अनिवार्य यह हो गया है कि हम उत्पादित वस्तु को लोगों तक पहुँचाने में कहाँ तक सफल हुए या नहीं हुए? इसी सवाल के साथ कटिबद्ध है। आज की उपभोक्ता संस्कृति और विज्ञापन इसे चरमसीमा तक पहुँचाने का कार्य करता है। इस अर्थ में विज्ञापन एक ओर कला है, तो दूसरी ओर वह क्रांति का साधन है।

शब्दसंकेत :–(Keywords)

आधुनिक युग 'विज्ञापन' का है। 'विज्ञापन' ही मूल संस्कृति में परिवर्तन हेतु आस्था जताने में, मनुष्य को बाध्य करता है। विज्ञापन नये युग के साथ–साथ चलने वाला एक मानवी आविष्कार है।

शोध पध्दति :–

उपलब्ध साहित्य सामग्री, औद्योगिक क्रांति के परिणाम स्वरूप उन्नत विज्ञापनयुग के प्रति चिंतन–विश्लेषण एवं निष्कर्ष–

प्रस्तावना :–

आजादी के पूर्व आम आदमी को यथायोग्य निर्देश देने हेतु उपयोगी सूचनाएँ तथा खबरे देने के वास्ते हिंदी भाषा प्रयुक्त थी। आज आजादी के दिनों में भाषिक अस्मिता, स्वाभिमान ने अपना रंग जमाना शुरू कर दिया है। एक ओर अंग्रेजी हमारी मानसिक हीनता ग्रंथी को पल्लवित कर रही है, तो दूसरी ओर प्रादेशिक भाषाओं के प्रति बढ़ते स्वाभिमान के कारण हिंदी भाषा के विकास में कई रुकावटें नजर आती है। इस वास्तविकता के खयाल में विज्ञापन और हिंदी इस विषय के प्रति मंतव्य प्रस्तुत करने का प्रयोजन सबको आज के युग की दौड में शामिल होने के लिए और हिंदी व्यावहारिक पक्ष से छात्रों को अवगत करने हेतु है।

१:१ विज्ञापन का अर्थ :–

हिंदी के रोजगार परक स्वरूप को, समझने हेतु उसके 'विज्ञापन' की तकनीकी, पर बहस होना अनिवार्य हैं। विज्ञापन के अर्थ तथा स्वरूप को समझना अनिवार्य है। 'विज्ञापन' शब्द दो शब्दों के योग से बना है। 'वि' और 'ज्ञापन'। 'वि' का अर्थ विशेष रूप से तथा ज्ञापन का 'अर्थ' जानकारी देना है। लिहाजा, किसी वस्तु का विशेष रूप से जानकारी देना ही 'विज्ञापन' है। 'विज्ञापन' के लिए लैटिन भाषा में 'Adverter' यह शब्द प्रयुक्त है। 'Ad' और 'verter' से बना यह शब्द 'अपनी तरफ मोडना' का अर्थ देता है। ग्राह्य या उपभोक्ता को अपनी तरफ आकृष्ट करना या निर्मित वस्तु की ओर ग्राहक का ध्यान मोडना ही 'विज्ञापन' है। वाणिज्य की शब्दावली में उसका का अर्थ –"किसी वस्तु के विक्रय के लिए ग्राहकों का ध्यान खींचना अथवा उनको आकर्षित करना है। दूसरे शब्दों में कहा जा सकता है कि विज्ञापन विक्रय कला का मौखिक अथवा मुद्रित रूप है।"[१] अर्थात 'विज्ञापन' का उद्देश्य किसी उत्पादन को अधिकाधिक बाजार दिलाना, इसके प्रति ग्राहक के मन में दिलचस्पी जगाना और वस्तु को खरेदने के लिए उन्हें प्रेरित अथवा उत्तेजित करना है।

१:२ विज्ञापन का स्वरूप :–

जनसंचार एक निरंतर प्रक्रिया का नाम है। इसमें आकाशवाणी, दूरदर्शन, फिल्म तथा समाचार पत्र, विज्ञापन के साथ ही नवइलेक्ट्रॉनिक माध्यमों का समावेश होता है। इनमें 'विज्ञापन' को विशेष महत्व

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जनकृति [बहुभाषी अंतरराष्ट्रीय मासिक पत्रिका] ISSN: 2454-2725 IMPACT FACTOR: 2.0202 [GIF]

भाषिक कौशल स्वरूप एवं संकल्पना

प्रा. डॉ. योगेश व्ही दाणे

सहा. प्राध्यापक (हिंदी विभाग),

एस.एस.जी.एम. कॉलेज, कोपरगाँव (शिरडी)

तहसील : कोपरगाँव, जिला : अहमदनगर (महाराष्ट्र)

दूरभाष ९०४९८६६८६१

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प्रस्तावना :

'भाषा' मानव व्यवहार का महत्पूर्ण अंग है। मानव जीवन में भाषा के उपयोग की इतनी अधिकता है कि, साँस लेने के पश्चात् भाषा के प्रयोग की ही गणना की जा सकती है। भाषा मानव जीवन के लिए अनिवार्य उपकरण है, उसके अभाव में मानव जीवन की प्रक्रिया अपूर्ण है। मनुष्य समाज से ही भाषा सीखता है और समाज के परिप्रेक्ष्य में भाषा सीखता है। साथ ही भाषा का प्रयोग भी समाज के संदर्भ के भीतर रहकर ही करता है। यही कारण है कि भाषा का अध्ययन समाज के संदर्भ के बिना अधूरा है। वस्तुतः भाषा ही मनुष्य के सामाजिक प्राणी होने का सबसे बडा प्रमाण है और भाषा की सहायता से ही समाज बनता है। भाषा रूपी सूत्र न हो तो व्यक्ति और समाज विशृंखल हो जाएँगे। कामताप्रसाद गुरु के अनुसार - ``भाषा वह साधन है, जिसके द्वारा मनुष्य अपने विचार दूसरों को भली भाँति प्रकट करता है, और दूसरों के विचार आप स्पष्टतः समझ सकता है।''[1] दूसरे शब्दों में हम यह भी कह सकते हैं कि भाषा समाज सापेक्ष वस्तु हैं, अतः मानव जीवन से उसका घनिष्ठ संबंध है। यह निर्विवाद है कि मनुष्य मुलतः सामाजिक प्राणी है। समाज के अभाव में उसके व्यक्तित्व का पूर्ण विकास असंभव है। व्यक्ति के सामाजिक जीवन का मुख्य आधार भाषा है। भाषा के अभाव में सामाजिक जीवन की कल्पना संभव नहीं है।

*** भाषिक कौशल और व्यक्तित्व विकास :**

भाषा यह भावना, विचार प्रकट करने का प्रभावी माध्यम है। अपने व्यक्तित्व के विकास के लिए भाषा बोलना एवं लिखना दोनों जरुरी है। इन दोनों साधनों द्वारा ही मुनष्य के व्यक्तित्व में कुंदन की भाँति निखार आता है, उच्चारण से संस्कार एवं लेखन से विद्वत्ता प्रकट होती है। मौखिक अभिव्यक्ति यह समृद्ध व्यक्ति की निशाणी है। विचार-भावना, क्रिया-प्रतिक्रिया इनका पहले प्रकटन होता है, वह भाषा के माध्यम से। मौखिक अभिव्यक्ति का अर्थ 'भाषा बोलना' भी है। पहले भाषा बोली गयी बाद में लिपि का उद्भव हुआ। इसका अर्थ यह हुआ कि, सबसे पहले भाषा अभिव्यक्ति का प्रथम माध्यम 'बोलना' वाणी है। भाषा यह संवाद का प्रथम माध्यम है, इसलिए 'भाषिक कौशल' का स्वरूप एवं मनुष्य के व्यक्तित्व से उसका संबंध समझना जरुरी है।

भाषिक कौशल :

'कौशल' को अंग्रेजी में 'स्किल' (Skill) कहा जाता है। उसे स्वीकारने एवं आत्मसात करने के लिए मन से तय किया जाता है। अंतः प्रेरणा से ही 'स्किल' या कौशलों का विकास होता है। जीवन जीने के लिए जो कला चाहिए, वह भी कौशलों पर आधारित होती है। 'कौशल' की व्याप्ति सृष्टि के कण-कण में है। 'मयूर' के पंख में भी विधाता ने जो रंग भरे है, उसे भी कौशल ही कहा जाएगा। संक्षेप में कोई भी शास्त्र, कला या हस्तकला का प्रस्तुतीकरण एवं दैनिक जीवन में उपयोग लाने की क्षमता कौशल कहा जाएगा। मराठी शब्दकोश में कौशल का अर्थ - ``कसब, कारागिरी, खुबी, चातुर्य,तरबेजपणा, नैपुण्य, पारंगत, हातोटी आदि दिया है।''[2]

भाषा शिक्षा के प्रमुख कौशल :

भाषा के दो रूप होते है - मौखिक और लिखित। मनुष्य इन दोनों रूपों का प्रयोग अपनी सोच-विचार का, एक-दूसरे का, एक-दूसरे के साथ विचारों

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८. ब्रिक्स संघटना आणि भारताची भूमिका

प्रा. सौ. सुपेकर व्हि. पी.
विभागप्रमुख, राज्यशास्त्र विभाग, अण्णासाहेब आवटे कॉलजे, मंचर.

प्रस्तावना

जगातील प्रत्येक राष्ट्राला आपला विकास करण्यासाठी दुसऱ्या राष्ट्रांची गरज असते कारण कोणतेही राष्ट्र स्वावलंबी नसते.प्रत्येक राष्ट्राला आपले हित साध्य करण्यासाठी उत्तम परराष्ट्र धोरणाची गरज असते.भारताने सुद्धा विशिष्ट अशा धोरणाचा विकास केला आहे. भारताच्या परराष्ट्र धोरणाचा विकास साधारणपणे तीन टप्प्यांमध्ये झालेला दिसून येतो.यातील १८८५ ते १९४७ हा पहिला टप्पा मानता येईल कि जो स्वांतत्र्यापूर्वीचा मानता येईल.दुसऱ्या टप्प्यात पंडित नेहरू यांनी स्वतंत्र भारताचे नेतृत्व केले आणि भारताच्या परराष्ट्र धोरणात लोकशाही,,उदारमतवाद, मिश्र अर्थव्यवस्था या तत्वांचा स्वीकार केला.रशिया आणि अमेरीका या दोन्ही महासत्तांपासून दूर ठेवून दोन्ही देशांशी मैत्री ठेवून अलिप्ततावादाचा पुरस्कार केला.१९९०-१९९१ पर्यंत भारताचे परराष्ट्र धोरण स्थिर होते.,मात्र जागतिकीकरणामुळे त्याचे स्वरूप मात्र बदलत गेलेले दिसते.भारताने आपल्या राजनैतिक हितसंबंध जपण्याबरोबरच आर्थिक हितसंबंधाना प्राधान्य देण्यास सुरुवात केली, हे धोरण अधिक वास्तववादी बनले. राष्ट्राराष्ट्रातील आर्थिक सहकार्य आणि संवाद वाढावा यासाठी आंतरराष्ट्रीय पातळीवर अनेक संघटना देखील जागतिकीकरणाच्या नंतरच्या काळात निर्माण झालेल्या दिसून येतात, 'ब्रिक्स' हि संघटना देखील अशीच एक संघटना आहे कि ज्याच्या माध्यमातून भारत आणि चीन सारखे देश,ज्या दोन्ही देशांमध्ये १९६२ च्या युद्धानंतर संवाद नव्हता,त्या दोन देशांमध्ये केवळ 'ब्रिक्स' सारखे व्यासपीठ उपलब्ध झाले. या संघटनेमुळे भारताला अतिशय व्यापक अशा संधी प्राप्त होत गेल्या त्याचाच अभ्यास या पेपर मध्ये करण्याचा प्रयत्न झाला आहे.

उद्दिष्टे

१) भारताच्या बदलत्या परराष्ट्र धोरणाचा अभ्यास करणे.

२) आंतरराष्ट्रीय राजकारणातील संघटनाचे महत्व जाणून घेणे.

३) भारताचे शेजारील देशांशी असलेले संबंध अभ्यासणे.

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27. Skill Development in India - Opportunities and Challenges

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Introduction

India is one of the youngest nations in the world with more than 54 of the total population below 25 years of age.India's workforce is the second largest in the world after china's demographic dividend is expected to strat tapering off by 2015,India will continue to enjoy it till 2040.However,India's formally skilled workforce os approximately 2% -which is dismally low compared to china (47%),Japan (80%), and south Korea(96%). To leverage our demographic dividend more substantially and meaningfully, the Government launched the :Skill India" campaign along with "Make in India" The Indian economy has fastest growing major economy. Through the skill development campaign the government hasmake a policy for skilled man power. The objective of this paper is analyzing the current skill gaps in India and the areas where there is a huge scope of supply of skilled workforce.

Keywords: Challenges, Skill Development, India, oppournities.

Most of the economies in the world are ageing fast,their contributions adding to the global workforce will be reduced to a great extent while, India will be an exception to it, with a major dominance in the global workforce by being the biggest provider skilled labour to the world. Boston Consulting Group,in its study disused the workforce demand and supply challenges faced in ntheworld.It stated that by 2020 the world may expect a shortage of 47 million people. India will have a surplus of 56 million working people.So our country will able to gain advantage of the increased working population if they able to equip its workforce with appropriate skills.

Objectives of the study

1) To study the challenges in skill development in India.
2) To access the oppournities available for skill development in India.

Skill India campaign launched by Prime Minister NarendraModiji in 15th July 2014.The ministry of skill development and Entrepreneurship was formed. It focused on working in close collaboration with other ministries to meet the huge demand of skilled workforce. It also focuses

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२१. महाराष्ट्रातील शिक्षण आणि आधुनिकीकरण

प्रा. महेश वसंत कुलकर्णी
एस. एस. जी. एम. महाविद्यालय, कोपरगांव, ता. कोपरगांव, जि. अहमदनगर.

प्रास्ताविक

कोणत्याही आधुनिक समाजाच्या जडणघडणीत शिक्षणाचा वाटा फार मोठा असतो. शिक्षणाला तरूणोपाय नाही हे महात्मा फुले यांनी महाराष्ट्रात सिध्द केले. १९ व्या शतकातील शिक्षणविषयक विचार विचारवंतांनी मांडले आहेत. याला दिशा देण्याचे काम एलफिन्स्टन आणि महात्मा फुले यांनी केले. महात्मा फुले यांच्या कार्याचा प्रभाव राजर्षी शाहू महाराज, डॉ.बाबासाहेब आंबेडकर, कर्मवीर भाऊराव पाटील यांच्या शिक्षणविषयक कार्यावर झाल्याचे दिसून येते.

पाश्चात्य शिक्षण, राष्ट्रीय शिक्षणातील नवनवे प्रयोग, राष्ट्रील शाळा व महाविद्यालयाची स्थापना याच कालखंडात झाली. २० व्या शतकात स्वातंत्र्यपूर्व व स्वातंत्र्योत्तर कालखंडात जे विविध शिक्षणविषयक बदल झाले त्यातून ज्ञानगंगा घरोघरी जाण्यास मदत झाली. शिक्षण व्यवस्थेला नवा आयाम देण्याचा महात्मा गांधी यांचा प्रयत्न होता. वर्धा शिक्षण योजना किंवा नई तालीम या नावाने ओळखला जातो. १९ व्या व २० व्या ब्रिटिशांनी व भारतीय शिक्षणात मोठा प्रचार व प्रसार या काळात केला.

ख्रिश्चन मिशनरी, खाजगी शिक्षण संस्था आणि सरकार यांनी आधुनिक शिक्षणाचा प्रवाह इंग्रजी शिक्षणाद्वारे सर्वसामान्य जनतेसमोर ठेवला. पाश्चात्य जगातील बुध्दिवाद–विज्ञान–तंत्रज्ञानाची माहिती इत्यादीमुळे ज्यांच्यापर्यंत पाश्चात्य शिक्षण आणि इंग्रजी भाषेचे ज्ञान पोहोचले त्यांच्यात आधुनिक ज्ञानाची उत्कट जिज्ञासा निर्माण झाली. सामाजिक आणि आर्थिक मागासलेपणा नष्ट करण्यासाठी व्यक्तीस्वातंत्र्य, विचारस्वातंत्र्य, धार्मिक सहिष्णुता, लोकशाही इत्यादीसाठी सामाजिक, आर्थिक, धार्मिक सुधारणा घडवून आणणे अत्यंत निकड आहे. असे नवशिक्षित लोकांना वाटूल लागले. अनेक विचारवंतांनी महाराष्ट्रातील आधुनिकीकरण घडवून आणण्यासाठी प्रयत्न केले. तसे प्रयत्न समाजसुधारकांनी देखील केलेले दिसून येतात.

१९ व्या शतकातील महाराष्ट्राचे शिक्षण आणि आधुनिकीकरण

१. पारंपरिक शिक्षण पध्दतीत झालेला बदल

महाराष्ट्रात १९ व्या शतकात इंग्रजी सत्तेच अंमलाखाली पारंपरिक शिक्षण पध्दतीत मोठा बदल झाला. आधुनिकीकरणामुळे मोठया प्रमाणावर महाराष्ट्रात शिक्षणाचा प्रचार–प्रसार झाला. सर्व जाती धर्मातील लोकांना शिक्षणाची दारे खुली झाली. देशातील, राज्यातील साक्षरतेचे प्रमाण मोठया प्रमाणावर वाढले. सर्वांना शिक्षणाची समान संधी निर्माण झाली. वरिष्ठ वर्गाची शिक्षण क्षेत्रातील मक्तेदारी संपुष्टात आली. समाजात मोठे बदल घडून आले. हे सर्व शिक्षणातील आधुनिकरणामुळे शक्य झाले.

२. सर्वांना शिक्षणाची समान संधी

सर्व जाती–धर्मातील लोकांना शिक्षणामध्ये समान संधी देण्यात आली. त्यामुळे मोठया प्रमाणावर, सामाजिक सुधारणा घडवून आल्या. श्रेष्ठ–कनिष्ठ, गरीब–श्रीमंत वर्ग संपुष्टात आले.

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Micelle Catalyzed Synthesis of 3-Methyl-4-arylmethylene-isoxazol-5(4H)-ones in Aqueous media: A green approach

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ABSTRACT:

A greener, simple and more efficient method has been developed for the synthesis of 3-Methyl-4-arylmethylene-isoxazol-5(4H)-ones by using aqueous media of nano-size micelle catalyst. 10mole% SDS and SLES are found to be more effective for the synthesis of desired products. The present method is found to be more efficient, easier, and environmentally benign. The main advantages of method are greener, atom efficient, simple reaction condition.

KEYWORDS: 3-Methyl-4-arylmethylene-isoxazol-5(4H)-ones, aromatic aldehydes, ethyl acetoacetate, hydroxylamine hydrochloride, micelle, water.

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Research Article

Synthesis of various substituted benzimidazole derivatives using various solvents used for reaction

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ABSTRACT
Benzimidazole is the heterocyclic compound formed from benzene and imidazole ring containing nitrogen, oxygen sulphur and its derivatives are of wide interest because of their diverse biological activity. A new method for synthesis of 2-(substituted phenyl)-1H-benzo[d]imidazole (3a-k) are developed by using simple method, green approach in good yields. We have synthesized 33 molecules in gram scale. This method is extremely useful for the synthesis of benzimidazole derivatives in excellent yields.

KEYWORDS
Green approach, benzimidazole, aldehydes

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Research Article

Studies on Physicochemical Parameters of Soil from Shrirampur Tehsil Area and Nearby Villages, Ahmednagar District, Maharashtra, India.

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ABSTRACT

The present study was conducted in order to know the role of various climates, geomorphologic and manmade practices in agricultural farming in Shrirampur Tehsil of Ahmednagar district in Maharashtra State. A simple random sampling technique was used for the selection of soil samples from various villages located in the study area .The total 15 soil samples from 05 villages of Shrirampur Tehsil and were selected. The study shows that textural profile and water holding capacities of all the soil samples were moderate and to certain extent needs change in cropping pattern and irrigation practices. Chemical parameter analyzed such as pH shows acidic soil & some shows alkaline soil, Electrical Conductance, Nitrogen, Phosphorous, Potassium, Sulphur, Boron, Calcium, were in few cases shows alarming, which needs proper utilization of manures, control chemical fertilizers and reinvestigation in their farming practices.

KEYWORDS

Soil, Geomorphology, irrigation practices, water holding capacity (WHC), Electrical Conductance.

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Research Article

Synthesis of some benzothiazole derivatives by using zinc oxide nanoparticles.

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ABSTRACT

Benzothiazole is the heterocyclic compound formed from 2-aminothiophenol substituted aromatic aldehyde by using zinc oxide nanoparticles and because of their diverse biological activity. A new method for synthesis of 2-(substituted phenyl)benzo[d]thiazole (3a-i) are developed by using simple method and good yields. We have synthesized more than thirty molecules in gram scale. This method is extremely useful for the synthesis of Benzothiazole derivatives in excellent yields.

KEYWORDS

2-aminothiophenol, Benzothiazole, aldehydes, zinc oxide nanoparticles

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Study Physicho Chemical Parameters of Soil in Shrirampur Tehsil Area and Nearby Villages (M.S.)

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ABSTRACT: The present study was conducted in order to know the role of various climates, geomorphologic and manmade practices in agricultural farming in Shrirampur tehsil of Ahmednagar district in Maharashtra State. A simple random sampling technique was used for the selection of soil samples from various villages located in the study area .The total 15 soil samples from 05 villages of Shrirampur Tehsil and were selected. The study shows that textural profile and water holding capacities of all the soil samples were moderate and to certain extent needs change in cropping pattern and irrigation practices. Chemical parameter analyzed such as pH shows acidic soil & some shows alkaline soil, Electrical Conductance, Nitrogen, Phosphorous, Potassium, Sulphur, Boron, Calcium, were in few cases shows alarming, which needs proper utilization of manures, control chemical fertilizers and reinvestigation in their farming practices.

Keywords: Soil; Geomorphology; irrigation practices; water holding capacity (WHC); Electrical Conductance.

INTRODUCTION: Environment consists of everything that surrounds us and supports human lives. The air which we breathe, the soil on which we stand water that every creature need, living and non living things influence human lives. In modern era in the eyes of the majority of peoples there is greediness for various earth resources than the need. In this context there is eternal search for improvement in the quality of life style and satisfying peoples growing needs which harmed to environment. There are three types of components of environment include physical, biological and social facets which are of interdisciplinary relevance. Environmental geological cycle deals with the inter relations of various earth processes, their consequences and various human activities. It includes coordinated and integrated studies and application of geology for betterment and preservation of environment through more cautious use of natural resources as well as by ensuing safeguards against contamination of land, air and water. Environmental geology is thus a mission oriented and crisis solving discipline.

Ahmednagar district is located in the western part of Maharashtra and Shrirampur are in northern part of Ahmednagar district bound by four villages are Kamalpur, Goverdhanpur, Belapur Budruk and Belapur Khurd, Pravara River in the entire western part Based on the geomorphic setting and drainage pattern, the district is divided into different watersheds. The subdued basin of the Pravara river in Belapur Shrirampur tehsil with the average height of about 534 meter above mean sea level. The climate ranges from very average rainfall in region, which has an average annual all of over 540 mm to the driest in Man and where the average the temperature varies from minimum 20°C to 40°C. Ahmednagar district forms a part of the tropical monsoon land and therefore shows a significant seasonal variation in temperature as well as rainfall conditions. Shrirampur tehsil from Kamalpur, Goverdhanpur. Belapur Khurd & Belapur Budruk from Ahmednagar district comes under drought prone zone where Wheat, Onion and Sugarcane were major grown crops

About 85% of Shrirampur tehsil population is rural and majority of them are farmers and agriculture laborers which clearly indicates that, agriculture is the dominant activity in Ahmednagar district [1]. Over 73 % of cropped area is cultivated under rained condition in the district, therefore no [illegible]

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BANKING AND TECHNOLOGY IN INDIA

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Abstract

In India, from the early 1990's, electronic banking is gaining in popularity as an important distribution channel to provide banking services. This direction is being taken by the batiks to differentiate their services to the consumers to gain their loyalty. The strategies adopted by the Indian banks to survive the increased competition are the focus of this study.

Keywords: *E-Banking, M-Banking, EFT, Debit Card, Credit Card*

Introduction :

A sound and effective banking system is the backbone of an economy. The economy of a country can function smoothly and without many hassles if the banking system backing it is not only flexible but also capable of meeting the new challenges posed by the technology and other external as well as internal factors. The importance and role of information technology for achieving this benign objective cannot be undermined. There is an urgent need for not only technology up gradation but also its integration with the general way of functioning of banks to give them an edge in respect of services provided to the customers, better housekeeping, optimizing the use of funds and building up of management information system for decision making. The technology has the potential to change methods of marketing, advertising, designing, pricing and distributing financial products and services and cost savings in the form of an electronic, self-service product-delivery channel. The technology holds the key to the future success of Indian Banks. Thus, "Electronic Banking" is the need of the hour, which cannot be lost sight of except at the cost of elimination from the competition. The existence of Electronic banking also becomes inevitable due to the standards required to be matched at the international level. Thus, the domestic as well as the international standards mandates the adoption of Electronic banking at the earliest possible moment.

In India, from the early 1990's, electronic banking is gaining in popularity as an important distribution channel to provide banking services. This direction is being taken by the batiks to differentiate their services to the consumers to gain their loyalty. The strategies adopted by the Indian banks to survive the increased competition are the focus of this study.

Technology is enabling banks to provide the convenience of anytime-anywhere-banking. Banks are now reengineering the way in which their services can be reached to their customers by bringing in flexibility in their "distribution channels". The earlier brick-and-monar branch is no longer sufficient; technology is now taking banks to the homes or offices, 24 hours a day, 365 days a year through ATMs, phone banking and PC banking. The financial supply chain is undergoing a fundamental strategic change.

Definition of E-Banking : E-Banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels, E-banking includes the systems that enable financial institution customers, individuals of businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. 3 Customers access e-banking services using an intelligent electronic device, such as a personal computer, personal digital assistant, automated teller machine, Touch tone telephone. While the risks and controls are similar for the various e-banking access channels, this booklet focuses specifically on Internet-based services.

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Synthesis and Spectral Analysis of Some Representative Pyrazoline Derivatives

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ABSTRACT: In the present investigation, we designed and synthesized a series of (*E*)-1-(2-hydroxyphenyl)-3-(1,3-diphenyl-1*H-pyrazol-4-yl*)prop-2-en-1-one derivatives by aldol condensation followed by the reaction of hydrazine hydrate. The entire synthesized compound have been Characterized by ^{1}HNMR, Mass and IR spectral studies.

Keywords: Pyrazoline, Hydrazine hydrate, Spectral, derivatives.

INTRODUCTION: Pyrazoline[1] were well known and important nitrogen containing five membered heterocyclic compound and several method have been work out for its preparation. Following pyrazoline derivative have been found to posses considerable biological activities. It has several prominent effects, such as antimicrobial, anti-microbacterial, anti-inflammatory, anti-analgesic and antidepressant activities[2]. A huge number of 2-pyrazoline using various synthetic method for its preparation have been described in the chemistry literature. Most widely used procedure were based on the reaction of α,β- unsaturated aldehyde and ketone with hydrazine. However a series of specially substituted representatives have been synthesized rarely. For this reason the aim of our present study was to synthesized systematically substituted 2-pyrazoline derivative for the study of its antimicrobial activity in future.[3, 4]Among the method used for preparation of pyrazolines condensation of substituted chalcones[4] with hydrazine and its derivatives were commonly employed. 2-pyrazolenes conveniently prepared by treatment of α β unsaturated carbonyl compounds with hydrazine reagents in acidic medium. Pyrazole moiety containing compounds are associated with bactericidal[5], antiinflammatory[6] and hepatoprotective[7] activities. 2-(1,3-Diphenyl-1*H*-pyrazol-4-yl)-3-chlorochromones[8] reported by us earlier were found to be associated with excellent antibacterial and antifungal activities. Nitrogen containing heterocyclic compounds[9] like pyrazolines have received considerable attention in recent years due to their biological activities like anti- inflammatory,[10] analgesic, anticonvulsant,[11] and antidiabetic.[12] Pyrazolines and their derivatives are also reported to possess antiproteolytic,[13] antibacterial, antifungal and antiviral[14] activities. Many substituted pyrazolines are known to possess acaricidal[15] activities and are used in the treatment of cerebral edema.[16] 1-Phenyl-2-pyrazolines are found to be useful as antioxidants.[17]

MATERIALS AND METHODS:

Preparation of ester: 1 mole of phenol and 1.2 mole of Ac_2O were taken in dry conical flask; add 15 ml of dry pyridine. Keep it for overnight at room temperature, then poured the content over crushed ice containing 5-10 drop of conc. HCl. Separated organic layer from separating funnel wash with 1% ice cold solution of NaOH again wash with water for 2-3 time then dry over sodium sulphate, purify by distillation pure ester was collected.

Preparation of O-Hydroxy acetophenone: Take (1.25 mole) of anhydrous $AlCl_3$ in dry RBF equipped with air condenser then add (1 mole) above ester to the flask, within few minute vigorous reaction will set up. After few minute HCl fumes formation will take place then heat the reaction mixture in oil bath at 130-150^0 c. Then keep the flask in ice bath add to it water containing ice product will separate in 1-2 hrs. Filter the product recrystallized from aq. alcohol.

Preparation of Chalcone: Equimolar amount of (0.005 mole) O-hydroxy-acetophenone and (0.005 mole) pyrazole aldehyde were taken in 100 mL RBF

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मराठी नियतकालिक: संकल्पना आणि कार्य-एक आढावा

सुवर्णा दत्तात्रय खोडद[1] व बाबासाहेब शेंडगे [2]

[1] संशोधक, श्री बाल मुकुंद लोहिया संस्कृत बभारतीय विद्या अद्ययन केंद्र,
टिळक महाराष्ट्र विद्यापीठ, पुणे
मोबा.नं. ८२७५१४१४७९

[2] मार्गदर्शक

सार : इंग्रजांच्या आगमनानंतर सुरू झालेली मराठी वाङ्मयीन नियतकालिके आणि त्यांची कार्ये अभ्यासणे हा प्रस्तुत शोध निबंधाचा हेतू आहे. मराठी भाषेत वाङ्मयीन नियतकालिकांना प्रदीर्घ अशी परंपरा असून आज ही अनेक दर्जेदार वाङ्मयीन नियतकालिके प्रकाशित होतात. या वाङ्मयीन नियतकालिकांनी मराठी साहित्याच्या आकलन आणि अभिरूचीसाठी मोलाची कामगिरी बजावली आहे. वाचकांची अभिरूची वृद्धींगत करण्यापासून ते नवोदित लेखकांना लिहिण्यासाठी प्रोत्साहन देणे. दर्जेदार लेखनाचा सन्मान करणे, नव्याने प्रकाशित होणा-या पुस्तकांना प्रसिध्दी देणे, वाचन संस्कार घडविणे असे महत्वाचे कार्य आणि योगदान वाङ्मयीन नियतकालिकांचेआहे. प्रस्तुत शोध निबंधात या विषयावर दृष्टीक्षेप टाकला आहे.

किवर्ड – मराठी नियतकालक, नियतकालिक

मराठी नियतकालिकांचा उदय इंग्रजीच्या नियतकालिकांच्या धरतीवर झालेला असून मुद्रण तंत्रज्ञानाचे अपत्य म्हणूनही नियतकालिकांकडे पहाता येईल. पहिला मराठी नियतकालिकांची सुरूवात अठराव्या शतकाच्या काळातली असली तरी त्यांचे दालन मात्र विस्तारलेले दिसते. नियतकालिकांनी बदलत्या सामाजिक परिस्थितीला अत्यंत संयमाने हाताळण्याचे कार्य अविरतपणे केलेले दिसत. समाजाच्या जडणघडणीत नियतकालिकांचा मोठा वाटा आहे. नियतकालिकांनी वैचारिक, ललित साहित्याची निर्मिती करण्याचा सातत्याने प्रयत्न झालेला आहे. वाङ्मयीन संस्कृती रूजविण्यात नियतकालिकांचा मोठा वाटा आहे.

'नियतकालिक' संज्ञा :

"जे प्रकाशन एकाच शिर्षकाखाली किमान एक आठवड्याच्या किंवा त्याहून अधिक कालावधीने सामान्यत: नियमितपणे प्रसिद्ध होते. त्यात अनेक लेखकाचे विविध विषयावरचे साहित्य संकलित केलेले असते ते नियतकालिक"[1] अशी व्याख्या साधारणपणे आढळते तर पुढील व्याख्येमधून नियतकालिक या संज्ञेवर अधिक प्रकाश पडण्यास मदत होते. "नियतकालिक म्हणजे ठराविक अंतराने उपलब्ध केले जाणारे वाङ्मय त्यात तत्कालिन महत्त्वाचे तपशिल असतात. लैंगिक घटना आणि त्यावरील भाष्य, काही स्फट जीवनविचार, व्यवहारोपयोगी शास्त्र आणि विद्या यांची माहिती इत्यादींनी या नियतकालिकांची जागा व्यापलेली असते, असाही एक मजकुर त्या संज्ञेने ठराविक वेळी आपल्या वाचकांना सादर करता येतो. हे नियतकालिकाचे मुख्य काम असते. "[2]

यावरून नियतकालिकांचा अर्थ स्पष्ट होतो आणि त्याच्या स्वरूपावरही प्रकाश पडतो. नियतकालिकामध्ये ठराविक स्वरूपाचा मजकुर, ठराविक अंतराने सातत्याने प्रकाशित होत असतो. त्यात अनेक विषय असतात. वाचकांची पत्रे, व्यवहारोपयोगी भाषेचे ज्ञान आदिंवरही प्रकाश टाकला जातो.

एकंदरीत मराठी नियतकालिकांनी भाषेच्या आणि साहित्याच्या अंगाने मोलाचे कार्य केलेले दिसते. त्या-त्या काळातला महत्त्वाचा दस्तऐवज म्हणून नियतकालिकाकडे पहावे लागते. त्या-त्या काळाचे प्रतिबिंब नियतकालिकात उतरत असल्याने तटस्थ लिहिणारा विचार चिंतन करणारा लेखक आणि वाचक वर्ग असतो. त्यामुळे एका अर्थाने गतजीवनाचा इतिहास आणि ऐतिहासिक सामाजिक, राजकीय, सांस्कृतिक संदर्भाचा

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डॉ. बाबासाहेब आंबेडकर यांचे शिक्षण विषयक विचार

प्रा. मेघराज एकनाथ आौटी
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प्रास्ताविक:

डॉ. बाबासाहेब आंबडे कर हे एक लोकोत्तर पुरुष होते यात शंकाच नाही. समाजातील उपेक्षितांच्या जीवनात नवा सुर्य उगवण्यासाठी त्यांनी अथक परिश्रम घेतले. त्याचा आत्मविश्वास दांडगा होता. त्यांच्या मोठेपणाची इमारत त्यांनी स्वत: आपल्या अलौकीक कार्याने रचली होती. त्यांच्या जीवनाचा मार्ग त्यांनी आपल्या आत्मप्रकाशाने प्रकाशित केला होता. अस्पृश्यांत त्यांनी आत्मविश्वास उत्पन्न केला. त्यासाठी त्यांनी शिक्षणाचे महत्व विषद केले. त्यांचे शिक्षण विषयक विचार आपणाला पुढील प्रमाणे बघता येतील

शिक्षण हे समाज परिवर्तनाचे महत्वाचे साधन:

शिक्षणातूनच समाजाचे सर्वांगीन परिवर्तन होऊ शकते, यावर डॉ. बाबासाहेब आंबेडकर यांचा ठाम विश्वास होता. समाजाचा विकास करायचा असेल तर शिक्षणापेक्षा दुसरे मोठे साधन नाही, कारण शिक्षण हे सामाजिक परिवर्तनाचे साधन आहे यावर त्यांची गाढ श्रध्दा होती. स्वातंत्र्य, समता, बधुंत्व, न्याय या मुल्यांवर अधारित समाज घडविण्यासाठी शैक्षणीक क्रांतीची आवश्यकता असल्याची जाणीवही त्यांना होती. उपासमारीने शरीराचे पोषण कमी झाल्यास माणूस हीनयल होऊन अल्पायुषी होतो, तसेच शिक्षणाच्या अभावी तो निर्बुध्द राहिल्यास जिवंतपणीच दुसऱ्यांचा गुलाम होते असे गुलामीचे कारण डॉ. बाबासाहेब आंबडे कर यांनी सांगीतले आहे. शिक्षणाच्या अभावाने माणसाच्या आयुष्यात गेलामी प्रवेश करते म्हणून स्वाभिमानाने, स्वावलंबनाने जीवन जगण्यासाठी शिक्षणाचे अत्यंत महत्व आहे. ज्ञान म्हणजे व्यक्तीच्या जीवनाचा पाया होय. डॉ. बाबासाहेब आंबेडकरांचे मत होते. बुध्दीचा विकास करणे हा प्रत्येकाचा मुलभूत हक्क आहे. शिक्षणामुळे तो विकास साधता येतो, म्हणून त्यांनी आयुष्यभर देशातील शुद्र अतिशुद्रांच्या शिक्षणासाठी लढा दिला. शिक्षणामुळे त्यांचे व्यक्तिमत्व विकसित होईल, त्यांच्या मानसिक, बौध्दिक क्षमतांची वाढ होईल. प्रस्थापित विव्दनांच्या विचारांचे टीकात्मक परीक्षण करण्यास ते समर्थ होतील. प्रथम सूत्राचा शोध घेऊन ते आवश्यक माहिती मिळविण्याचा प्रयत्न करतील. त्यांच्या मनात कोणत्याही विषयाची जिज्ञासा निर्माण होईल. त्यामुळे समाज परिवर्तन घडवून आणवायचे असेल तर शिक्षण खुप महत्वाचे असे साधन आहे, हे त्यांचे स्पष्ट मत होते

उच्च शिक्षण विषयक विचार:

उच्च शिक्षणाचे महत्त्व सांगताना ते म्हणतात उच्च शिक्षणाचे मानवी आयुष्यात अत्यंत महत्त्व आहे. हिंदू समाजाच्या अगदी खालच्या थरातून आल्यामुळे शिक्षणाचे महत्त्व किती आहे हे मी जाणतो. खालच्या समाजाची उन्नती करण्याचा प्रश्न आर्थिक असल्याचे सांगण्यात येते, पण ही मोठी चूक आहे. हिंदुस्थानातील दलित समाजाची प्रगती करणे म्हणजे त्यांच्या अन्न, वस्त्र, निवारा यांची सोय करुन त्यांना पूर्वीप्रमाणे उच्च वर्गाची सेवा करायला लावणे नव्हे. खलच्या वर्गाची ज्यांची मुले प्रगती खुंटून त्यांना दुसऱ्यांचे गुलाम व्हावे लागते तो न्यूनगंड त्यांच्यातून नाहीसा करने, चालू समाज पध्दतीमुळे जे त्यांचे जीवन निर्दयीपणे लुबाडण्यात आले आहे, त्याचे त्यांच्या स्वत:च्या दृष्टीने काय महत्त्व आहे, याची जाणीव करुन देणे हाच खालच्या वर्गाचा प्रश्न आहेउच्च शिक्षणाच्या पस्र राखेरीज हे कशानेच साध्य होणार नाही. प्रस्थापित समाज व्यवस्थेमुळे विकृतपणे लुबाडण्यात आलेल्यांच्या जीवनात उच्च शिक्षणाचे महत्त्व, तसेच राष्ट्राच्या उभारणीसाठी त्याची आवश्यकता

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भांषातर आणि इतर सामाजिक क्षेत्रे

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भाषांतर, अनुवाद, रुपांतर, वेगवेगळया क्षेत्रात होणारे भाषांतर हयांचा विचार :–

ललित साहित्य व ललितेतर वाङ्मयाचे भाषांतर कोणत्या वाचकांकरिता होते आहे. धर्मग्रथांचे भाषांतर करताना वाचनासाठी म्हणून रचना करावी लागेल वैचारिक, वैज्ञानिक, प्रशासकाची, कायदयाचे क्षेत्र, तात्विक क्षेत्र,,अविष्काराच्या वेगवेगळया परंपरा निर्माण झालेल्या असतात.

ललित साहित्य, वैज्ञानिक वाङ्मय, कायदा, प्रशासन, धार्मिक, तात्विक क्षेत्रात आशयानुसार फरक पडतो ललित साहित्यात भावनाविष्काराला महत्त्व आहे. वैज्ञानिक वाङ्मय व तात्विक असे दोन भाग पडतात म्हणजेच तर्कनिष्ठता व वस्तुनिष्ठता यामध्ये प्रामुख्याने दिसून येते. त्याचप्रमाणे कायदा व प्रशासनाचेही असेच असते. धार्मिक वाङ्मयात आचरणाचा भाग येतो. धार्मिक वाङ्मयात भावनानिष्ठतेबरोबर वैचारिकताही असते. सर्व धार्मिक वाङ्मय एक प्रकारचे नसते. हेही लक्षात घ्यायला हवे (धार्मिक वाङ्मय = भावना + वैचारिकता व वस्तुनिष्ठता दिसुन येते) तात्विक क्षेत्र = तात्विक मांडणी + तर्क निष्ठता

ललित साहित्याचे भाषांतर करताना संदिग्धता येते, सुचकता येते, तर वैज्ञानिक वाङ्मयात नेमकेपणा व स्पष्टता लागते. कायदे व प्रशासनांच्या क्षेत्रात नेमकेपणा व स्पष्टतेबरोबर नि:संदिग्धता येणे आवश्यक असते धार्मिक वाङ्मयात तर्काच्या जोरावर आकलन होत नाही तर भावनेच्या जोरावर समजून घ्यावे लागते. त्यामध्ये संदिधता, सुचकताही असु शकते. आचाराविषयक असेल तर वस्तुनिष्ठताही तिथे येवु शकते. धार्मिक वाङ्मयाच्या संदर्भात पारंपारिक चौकट ओलांडता येत नाही. भाषांतर करताना वैज्ञानिक वाङ्मयात तर्कशुध्द अशी मांडणी असते त्यामध्ये काही एक युक्तीवाद असतो भाषेचे सौदर्य काय आहे हे वाचकाला समजणे अपेक्षित असते तर आशयानुसार भाषांतर झाले पाहिजे.

कशासाठी भाषांतर करायचे आहे. हा ही मुद्दा महत्वाचा असतो. एखादया सहिंतेची अनेक भाषांतरे असतात. मुळ सहिंतेचा उद्देश अनेक भाषा मध्ये सहिंता पोहचविणे हा आसायला हवा, तसेच भाषांतराचे काळानुसार ही स्वरुप बदलत जाते. उदा: आगरकरांनी केलेले 'हॅम्लेट' चे भाषांतर आज ही उपयोगी आहे.

वैचारिक किंवा वैज्ञानिक वाङ्मयाचे भाषांतर करताना वस्तुनिष्ठता लक्षात घ्यावी लागते. मौखिक वाङ्मयात सांस्कृतिक भाग मोठ्या प्रमाणात असतो. ललित साहित्याच्या बाबतीत असा युक्तीवाद नसतो. तर्कशुध्द मांडणी व युक्तीवादाचा तयार झालेला असतो. सांस्कृतिक संदर्भाचा ही मोठा भाग त्यात असतो. अनिष्ठ वाटणाऱ्या गोष्टीवर कायदे होतात कायदा हा मानवी व्यवहाराशी निगडीत अशी गोष्टी आहे, तर वैज्ञानिक क्षेत्र मात्र तसे नसते. धार्मिक क्षेत्रात, ललित साहित्यात काही गुणधर्म असतात मुळात त्या धार्मिक संहिताना मंत्रालयाचा दर्जा साहित्यात आणता येत नाही. उदा : वेदग्रंथ, बायबल, भाषेत वैशिष्टयेपुर्ण आहे. तात्विक वाङ्मय भाषांतरासंबधी आधीच्या काय परंपरा होत्या हे ध्यानात घ्यावे लागते. ललित साहित्यामध्ये सत्याचा अविष्कार झालेला असतो असे म्हणतो तर वैज्ञानिक क्षेत्रात वस्तुनिष्ठ प्रकारचे सत्य असते. वैश्विक सत्य असते तात्विक क्षेत्रातही फरक पडत गेलेला दिसतो.

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पर्यावरण आणि शाश्वत विकास

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प्रास्ताविक :-

संयुक्त राष्ट्रसंघाने ५ जून १९७२ साली स्विडन देशाची राजधानी स्टॉकहोम येथे जगातील सर्व राष्ट्रप्रमुखांची 'मानव व पर्यावरण' यावर परिषद आयोजीत केली होती. या परिषदेत सर्व प्रथम पर्यावरण शिक्षणाचा विचार झाला. म्हणून ५ जून हा जागतिक पर्यावरण दिन म्हणून साजरा करण्यात येतो. या परिषदेत मानवी पर्यावरणाचा जाहीरनामा संमत करण्यात आला आणि जागतिक स्तरावर पर्यावरणाविषयी मंथन सुरू झाले. या परिषदेत भारताच्या वतीने दिवंगत पंतप्रधान श्रीमती इंदिरा गांधींनी देशाचे प्रतिनिधीत्व केले होते.

'पर्यावरण' ची संकल्पना व व्याख्या विविध ज्ञानशाखात विविध पध्दतीने केली जाते. मानवाभोवतालची परिस्थिती म्हणजे पर्यावरण अशी ढोबळ व्याख्या केली जाते. आपल्या सभोवार जे जे काही दिसते ते ते सर्व म्हणजे पर्यावरण होय. जॉन टर्क यांनी सांगितले आहे की, पृथ्वीवरील पर्यावरणाचे आकलन व 'मानवी जीवनाचा पर्यावरणावर पडणारा परिणाम यांचा अभ्यास म्हणजे पर्यावरणशास्त्र होय. व्यापकार्थात पर्यावरणात सर्व सजीव, निर्जीव, नैसर्गिक किंवा मानवनिर्मित अशा घटकांचा समावेश होतो.

पर्यावरण ही संकल्पना केवळ प्राकृतिक व जैविक घटकांपुरती सिमित नसून यामध्ये मानवाच्या सामाजिक, सांस्कृतिक, आर्थिक, राजकीय, बौध्दिक कार्याचा व कार्याच्या परिणामांचाही समावेश होतो.

पर्यावरण आणि मानव यांचा संबंध मानवाच्या अस्तित्वापासूनच आहे. पृथ्वीवर मानवाचे पाऊल पृथ्वी निर्मितीनंतर बऱ्याच कालावधीनंतर पडले. मानवाने पृथ्वीवर वावरत असताना आपली बुध्दिमत्ता, स्मरणशक्ती, कल्पना शक्ती या गुणांच्या आधारावर इतर सजीवांपेक्षा आपले स्थान महत्त्वपूर्ण ठरविले. आपल्या गुणाच्या आधारावर इतर सजीवांपेक्षा आपले स्थान महत्त्वपूर्ण ठरविले. आपल्या गुणांच्या आधारावर त्याने निसर्गावर प्रभुत्त्व निर्माण केले. निसर्गाने मानवाला जी वेगवेगळया प्रकारची साधनसंपत्ती दिली, त्या साधन संपत्तीचा त्याने पुरेपूर वापर करून घेतला. या साधनाचा वापर करून त्याने आपले जीवन सुखी-समाधानी केले. सुखी समाधानी जीवन जगण्याच्या ओघात/प्रवाहात त्यात निसर्गाकडून जेवढे घेता येईल तेवढे घेतच राहिला. आपला विकास, प्रगती करत गेला. या विकास प्रक्रियेत नैसर्गिक पर्यावरणाची हानी होण्यास सुरूवात झाली आणि यातूनच पर्यावरणीय समस्या वाढत गेल्या. या पर्यावरणीय समस्यांनी २१ व्या शतकाच्या सुरूवातीस अनेक प्रश्न निर्माण केले आहेत.

पर्यावरणाची व्याख्या :

पर्यावरण म्हणजे = व्यक्ती, जीव अथवा समूह यांचे अस्तित्त्व व विकास यांच्यावर परिणाम करणारी बाहय स्थिती घटक किंवा वस्तू म्हणजेच पर्यावरण होय.

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भारताच्या विकास प्रक्रियेत प्रसार माध्यमांचे योगदान

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प्रास्ताविक :–

प्रसारमाध्यमाला लोकशाहीचा चौथा आधारस्तंभ म्हणून ओळखले जाते. प्रसारमाध्यमाचे दोन प्रकार पडतात. १) मुद्रित माध्यम व २) दृकश्राव्य माध्यम स्वातंत्र्यपूर्वी व स्वातंत्र्यनंतरचा भारत पाहिल्यास खूप मोठा फरक आपणास झालेला दिसून येतो. हे सर्व प्रसारमाध्यमांमुळे शक्य झाले. निरक्षरांचे प्रमाण कमी झाले, साक्षरतेचे प्रमाण वाढले. त्यामुळे खूप मोठया प्रमाणावर सामाजिक, राजकीय, आर्थिक, शैक्षणिक, सांस्कृतिक विकास झालेला दिसून येतो. वेगवेगळी वृत्तपत्रे, आकाशवाणी, दूरदर्शन, वेगवेगळी चॅनेल (वृत्तवाहिन्या), टेलिफोन, मोबाईल फेसबुक, व्हॉटस्ॲप, ट्विटर यासारख्या आधुनिक प्रसार माध्यमांमुळे सोशल साईटवरून त्वरीत माहिती एका ठिकाणावरून दुसऱ्या ठिकाणी पाठविता येते. त्यामुळे मोठया प्रमाणावर याचा उपयोग माहितीचे प्रसारण करण्यासाठी होतो. म्हणजेच विकासाच्या या प्रक्रियेत त्यांचे योगदान अत्यंत महत्वाचे आहे. माध्यमांना प्रवाह असेही म्हणतात. आज भारताचा जो विकास झाला आहे त्यामध्ये प्रसारमाध्यमांची भूमिका अत्यंत महत्वाची असल्याचे दिसून येते. सामाजिक, राजकीय, आर्थिक, सांस्कृतिक विकासासाठी प्रसारमाध्यमांचे खूप मोठे योगदान आहे.

मोठया प्रमाणावर विकसित होत असलेल्या भारत देशामध्ये सध्या माहितीचे आणि संदेश वहन जलदगतीने होत आहे.

प्रसारमाध्यमे–लोकशाहीचा चौथा स्तंभ :–

सामान्य माणसाचे आचार–विचार आणि अभिव्यक्तीचे स्वातंत्र्य अबाधित राहावे म्हणून लोकशाही व्यवस्थेचा उदय झाला. या लोकशाहीचे चार आधारस्तंभ मानले जातात. त्यात संसद, न्यायालये, प्रशासन यांच्या बरोबरीने वृत्तपत्रे आणि आजच्या भाषेत प्रसारमाध्यमे हा एक स्तंभ मानला जातो.

चार स्तंभांपैकी कोणताही स्तंभ दुर्बल अगर दुर्लक्षित झाला तर त्याचा परिणाम थेट लोकशाही व्यवस्थेवरच होतो, ज्याची विखुरलेली उदाहरणे आपल्याला जगभरात पाहावयास मिळतात. म्हणूनच लोकशाहीत 'वृत्तपत्रे' आणि 'प्रसारमाध्यमे' या शब्दांना अनन्यसाधारण महत्व आहे.

'प्रसारमाध्यमे'आणि इंग्रजीत 'मीडिया अगर प्रेस' या नावाने केला जातो; त्याचा प्रारंभ आकाशवाणी आणि दूरदर्शनचा प्रारंभ होण्यापूर्वी किंबहुना त्यांची कल्पना सुचण्याआधी मुद्रणाच्या साहाय्याने झाला असल्याने, जे 'प्रेस' करून अगर खिळयावर दाबून कागदावर प्रकटते, त्या प्रक्रियेला 'प्रेस' या तांत्रिक नावाने संबोधले जाऊ लागले.

माहितीचे युग :–

सध्याच्या विज्ञान युगात माहितीचा स्फोट होत आहे. म्हणूनच आजच्या युगाला 'माहिती युग' म्हटले जाते. वर्तमानपत्र, आकाशवाणी, दूरदर्शन यावरील दैनंदिन कार्यक्रम हे आपल्या जीवनातील एक अविभाज्य घटक बनले आहेत. जगात कोठेही घडणाऱ्या घटनेचे फार जलदरीत्या प्रसारण ही वरील प्रसारमाध्यमे करीत

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भारत काल, आज आणि उदया...

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प्रास्ताविक:

आज देशाला स्वांतत्र्य मिळून ७५ वर्षे पुर्ण होण्याच्या मार्गावर आहेत. आज आपला देश एक भावी महासत्ता म्हणून वाटचाल करत आहे. सामाजिक, राजकीय,आर्थिक, शैक्षणीक, कृषी, विज्ञान व तंत्रज्ञान, लष्करी क्षमता यासर्व आघाडयांवरती देशाची वेगाने घौडदौड सुरु आहे.असे असले तरी पुढे मार्गक्रमण करत असताना आपणाला आपल्या इतिहासातही डोकावून बघावे लागते. कारण आपला ,भुतकाळ हा आपल्या वर्तमानकाळातील प्रगती व भविष्यकाळातील यशस्वी वाटचालीशी इतका निगडीत आहे की, त्याला दुर्लक्षुण आपण पुढे वाटचालच करु शकत नाही.त्यामुळे या तीन्हींची फारकत करणे केवळ आशक्यच आहे.

प्रत्येक युगातील आणि समाजातील स्त्री–पुरुष आपला स्वत:चा एक इतिहास घडवित असतात. मात्र तो अगदी नव्याने किंवा ऐतिहासिक शुन्यातून घडवितायेत नाही. वर्तमानातील समस्यांवर तोडगा काढण्याचे आणि भविष्यकालीन योजना करण्याचे त्यांचे प्रयत्न कितीही नावीन्यपुर्ण असले तरी त्यांचा इतिहास आणि त्यांना मिळालेला आर्थिक, राजकीय आणि वैचारीक वारसा हेच त्यांच्या योजनांचे संकल्पनांचे मुलस्त्रोत असतात.त्यांचे कार्य इतिहासाने विहित केलेल्या या परिघापर्यंतच सीमित वा विस्तारीत असते. त्यामुळे **भारत काल, आज आणि उद्दया** या विषयाच्या अनुषंगाने भारताचा इ. स. १९४७ पासून विचार केला तर, भारताच्या आजच्या वाटचालीवर स्वांतत्र्य चळवळीतील मुल्यांचा, राजकीय व तात्विक वैशिष्टयांचा प्रभाव पडलेला प्रकर्षाने दिसतो. स्वांतत्र्यापासून ते आजपर्यंतच्या देशाच्या वाटचालीवर नजर टाकली तर आपणाला भारताच्या विकासप्रकीयेतील विविध प्रवाह, टप्पे, वैचारिक जडणघडण या सर्वांची माहिती मिळते.म्हणूनच आजचा भारत समजावून घेण्यासाठी आपणाला इतिहासाची पाने चाळावी लागतात.त्यातून बोध घेवूनच आजची धोरणे ठरवावी लागतात व भविष्यकाळासाठीच्या योजना तयार कराव्या लागतात.

स्वातंत्र्यप्राप्ती पासून भारताच्या विकास प्रकीयेचा अभ्यास केला तर आपणाला पुढीलप्रमाणे भारताच्या **जडणघडणीचे विविध टप्पे बघायला मिळतात.**

भारतीय स्वातंत्र्यास आणि स्वातंत्र्यानंतर आलेल्या लोकशाही व्यवस्थेस आज जवळपास ७५ वर्षे पुर्ण होण्याच्या मार्गावर आहेत. या सात दशकांच्या काळात देशातीललोकशाही राजकीय प्रकीयेत काही चांगल्या तर काही वाईट गोष्टी घडून आलेल्या बघायला मिळतात. गतकाळात मागे वळून पाहून विचार करण्याची आणि गतकाळाचा इतिहासात नविन पिढी समोर येण्यासाठी आपणाला आपला इतिहास व्यवस्थीत समजावून घ्यावा लागतो.इतिहासाचे महत्व सांगताना प्रसिध्द तत्ववेत्ता 'जॉर्ज संतायना' यांनी पूढील विधान केले आहे.श्जीवेम ूिव वितहमज जीमपत ीपेजवतल ंतम बवदकमउदमक जव तमचमंज पजर्ध्यिामुळे आपणाला आपला इतिहास व्यवस्थीत समजावून घेवूनच वर्तमानकालीन धोरणे आखता येतात व भविष्याकडे यशस्वी वाटचाल करता येते. भारताच्या स्वातंत्र्यानंतरच्या वाटचालीतील टप्प्यांचा पुढील प्रमाणे थोडक्यात आढावा घेता येईल.

स्वातंत्र्यानंतरचे पहिले दशक म्हणजे १९५०–६० चे दशक होय. हे दशक लोकशाही प्रजासत्ताकाच्या पायाभरणीच व देश उभारणीच दशक होते. संविधानानुसार लोकशाही प्रजासत्ताकाची व्यवस्था टिकाऊ स्वरुपात

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राजर्षी शाहू महाराजांचे ब्राम्हणेत्तर चळवळीतील योगदान

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प्रास्ताविक :–

अनिष्ठ सामाजिक व धार्मिक परंपरावर टीका करून समाजात परिवर्तन घडवून आणण्यास सुरूवात केली ती बाळशास्त्री जांभेकर, भाऊ महाजन, जगन्नाथ शंकरशेठ, दादोबा पांडुरंग तर्खडकर, डॉ.भाऊ दाजी लाड इत्यादींनी अगदी सुरूवातीच्या काळात मुहर्तमेढ रोवली. न्यायमूर्ती म.गो.रानडे यांनी त्याला तात्विक बळकटी दिली. पुढे परमहंस सभा, प्रार्थना सभा व आर्य समाजाने सामाजिक परिवर्तनाचा वसा घालून दिला. महर्षी कर्वे, विट्ठल रामजी शिंदे, राजर्षी शाहू महाराज, ज्योतिबा फुले, डॉ.बाबासाहेब आंबेडकर यांनीही या चळवळीचा वारसा महाराष्ट्रात तेवत ठेवला. या प्रक्रियेमधून आधुनिक महाराष्ट्राचा पाया घातला गेला.

आधुनिक महाराष्ट्राच्या प्रबोधनाच्या दृष्टीने सामाजिक व धार्मिक संघटनांनी महत्वपूर्ण योगदान दिलेले आहे. यामुळे १९ व्या शतकात महाराष्ट्रात नवे प्रबोधन युग अवतरले. या प्रबोधनातूनच महाराष्ट्रात ब्राह्मणेतर चळवळ, दलित चळवळ व शैक्षणिक चळवळीचा उदय घडून आला. या चळवळीमुळे सामाजिक समतारूपी परिसाचा स्पर्श होऊन आचार, विचार व उच्चार यात बदल होऊ लागले. राजर्षी शाहूंच्या नेतृत्वाखाली सुरू झालेली ब्राह्मणेतर चळवळी ही बहुजनांच्या सर्वांगीण प्रगतीचा उत्तरार्ध होता, हे सहज लक्षात येते. ब्रिटिश राजवटीत मुंबई व चेन्नई प्रांतात ब्राह्मणेतर जातींना एकत्र येऊन ब्राह्मण जातीच्या धार्मिक, शैक्षणिक, प्रशासकीय, राजकीय व आर्थिक वर्चस्वाविरूध्द जो लढा पुकारला त्यास ब्राह्मणेतर चळवळ म्हणतात. ब्राह्मणेतर चळवळीचे उद्गाते राजर्षी शाहू महाराज होत. ब्राह्मणेतर समाजात वर्षानुवर्षे चालत आलेली धार्मिक गुलामगिरीचे जोखड ब्राह्मणेतर समाजाने मुलासकट फेकून देण्याबरोबरच ब्राह्मणेतर समाजात स्वाभिमान जागृत करण्याचे कार्य ब्राह्मणेतर चळवळीने केले. ब्राह्मणेतर चळवळीचा कालखंड इ.स. १९१७ ते इ.स.१९३८ हा आहे. समान संधीसाठी सामाजिक, आर्थिक व शैक्षणिक हक्क बहुजन समाजाला मिळवून देणे हे या चळवळीचे प्रमुख सूत्र होते.

छत्रपती राजर्षी शाहू महाराज (१८७४–१९२२) :–

१९ व्या शतकाच्या अखेरीस सामाजिक चळवळीची पताका महाराष्ट्रात फडकविणारा एक तेजस्वी पुरूष महाराष्ट्राच्या सामाजिक क्रांतीच्या क्षितिजावर तळपू लागला. तो पुरूष म्हणजे कोल्हापूराचा राजर्षी शाहू महाराज होय. इतिहास काळात जी थोर माणसे होऊन गेली, त्या थोर पुरूषांच्या मालिकेमध्ये शाहू महाराजांचे स्थान अतिशय महत्वाचे आहे. त्यांनी अज्ञान, अंधश्रध्दा आणि अनारोग्याने ग्रासलेल्या समाजाला सज्ञानी करण्यासाठी बंडाचे निशाण घेतले. पिढयानूपिढया अज्ञानाची कुंभकर्णासारखा झोपलेला समाज त्यांनी जागा केला. पददलितांच्या जीवनात शिक्षणाच्या साधनातून सुबत्तसमृध्दीची कायमची सावली निर्माण करण्याचे ऐतिहासिक कार्य त्यांनी पार पाडले. त्यांच्या कार्यामुळेच त्यांचे व्यक्तिमत्व केवळ कोल्हापूर संस्थानापुरते मर्यादित न राहता, संपूर्ण महाराष्ट्रातच नव्हे तर भारतातही लोकप्रिय झाले. थोडक्यात त्यांच्या रूपाने महाराष्ट्राला समाजपरिवर्तन करणारे

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पोलादी पुरूष सरदार वल्लभभाई पटेल

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प्रास्ताविक :—

स्वतंत्र भारताचे पहिले गृहमंत्री आणि कराची कॉग्रेस अधिवेशनाचे (१९३१) ते अध्यक्षही होते. पोलादी (लोहपुरूष) अशी त्यांची ओळख होती. त्यांचा जन्म गुजरात राज्यात झाला. सामाजिक, राजकीय व स्वातंत्र्य चळवळीत त्यांनी मोलाची कामगिरी केली होती. त्याचप्रमाणे भारताचे उपपंतप्रधानपद देखील त्यांनी भूषविले.

जीवन परिचय :—

सरदार वल्लभभाई पटेल यांचा जन्म करमसद, खेडा, नडियाद (गुजरात) येथे झाला. वल्लभभाईचे वकिलीपर्यंतचे शिक्षण झाले. गोधरा, बोरसद व आणंद या भागात त्यांनी वकिली सुरू केली. सरदार वल्लभभाई पटेल वकिली करत असतांना ते महात्मा गांधींच्या प्रभावाखाली आले. गुजरातच्या खेडा, बोरसद आणि बारडोली गावाच्या खेडूतांना संघटित करून त्यांनी इंग्रजी अत्याचाराविरूध्द सत्याग्रह केला. या सत्याग्रहानंतर त्यांची गणना गुजरातच्या प्रभावशाली नेत्यांमध्ये होऊ लागली. भारतीय राष्ट्रीय कॉग्रेसचे ते एक महत्वाचे नेते १९३४ व १९३७ च्या निवडणुकांमध्ये त्यांनी पक्षाची चांगली बांधणी व संघटन केले. तसेच भारत छोडो आंदोलनातही ते आघाडीवर होते. भारताला स्वातंत्र्य मिळाल्यानंतर देशाचे पहिले गृहमंत्री व उपपंतप्रधान झाले. त्यांनी पाकिस्तानातून आलेल्या आणि पंजाब व दिल्ली येथे राहणाऱ्या निर्वासितांच्या मदतीसाठी खूप मोठे काम सरदारजींनी केले. फाळणीनंतर उफाळलेल्या हिंसाचारानंतर शांती स्थापनेकरीताही त्यांनी कार्य केले. सरदारांनी हिंदुस्थानातील ५६५ अर्थस्वायत्त संस्थानाचे भारतात विलिनीकरण केले. हे सर्वात मोठे कार्य केले. मुत्सद्देगिरी व वेळ पडल्यास सैन्यबळ वापरून सरदारांनी संस्थाने भारतात विलीन केली आणि म्हणूनच ते भारताचे लोहपुरूष म्हणून ओळखले जातात. सरदार वल्लभभाई पटेल हे मुक्त व्यापार व खाजगी मालकी हक्कांचे समर्थक होते. भारतीय महिलांनी त्यांना 'सरदार' पदवीने संबोधित केले.

पोलादी पुरूष :—

सरदार वल्लभभाई पटेल या खंबीर व्यक्तिमत्त्वाच्या कणखर नेतृत्वाची नोंद इतिहासानेही घेतलेली आहे. सरदार वल्लभभाई पटेल यांना देशाच्या स्वातंत्र्य चळवळीच्या इतिहासात 'पोलादी पुरूष' म्हणून अत्यंत आदराने गौरविले गेले आहे. महात्मा गांधी यांच्या जवळचे सहकारी म्हणून सरदार पटेल स्वातंत्र्य चळवळीत अग्रेसर होते. त्यांचे व्यक्तिमत्त्व वैशिष्टयपूर्ण होते. चाणक्याची मुत्सद्दी नीती त्यांच्याजवळ होती. आपल्या कामावर त्यांची प्रचंड निष्ठा होती. त्यांच्याकडे उत्तम संघटनकौशल्य होते. ते खंबीर प्रशासक होते.

शेतकरी चळवळीचे नेतृत्व :—

१९१७ मध्ये खेडा जिल्हयात प्रचंड पाऊस झाला. त्यामुळे खरिपाचे पीक पूर्णपणे गेले. पुढे उंदरांचा सुळसुळाट तसेच अन्य कीटकांमुळे रब्बीचेही पीक गेले होते. २५ टक्क्यांपेक्षाही पीक उत्पादन कमी येईल, अशी परिस्थिती होती. या दुष्काळामुळे शेतसाऱ्याची वसुली पुढे ढकलावी, अशी शेतकऱ्यांची मागणी होती.

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डॉ.बाबासाहेब आंबेडकरांचे शिक्षण विषयक विचार

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प्रास्ताविक :–

डॉ.बाबासाहेब आंबेडकर हे थोर विचारवंत दलित, शोषीत, पिडीतांचे कैवारी होते. दलितात स्वत्वाची जाणीव निर्माण करणारे क्रांतिकारक महापुरूष समाजसुधारक व थोर शिक्षणतज्ञ होते. ते भारतीय राज्य घटनेचे शिल्पकार होते.

आयुष्यभर खडतर ज्ञानसाधना करून विधिशास्त्र अर्थशास्त्र, राज्यशास्त्र, समाजशास्त्र यात प्रभुत्व संपादन केले होते. ते पत्रकार, शिक्षण संस्थापक, ज्ञानपिपासू, प्रज्ञासूर्य होते. त्यांनी लोकशिक्षक या अर्थने अनेक शैक्षणिक कार्य करून आपले शिक्षणविषयक विचार मांडले. न्याय, स्वातंत्र्य, समता आणि बंधुता या चार आधारभूत तत्वांचे ते पुरस्कर्ते होते. त्यांनी गौतम बुध्द संत कबीर व महात्मा फुले यांना गुरू मानले होते. शिका, संघटित व्हा आणि संघर्ष करा, हा विचारच डॉ.बाबासाहेबांच्या शैक्षणिक तत्वज्ञानाचा पाया आहे. ज्यातून माणूस घडतो ते शिक्षण होय,असे डॉ.बाबासाहेबांचे मत होते. व्यक्तीला जाणीव देते ते शिक्षण होय.

शिक्षण हे समाजोन्नतीचे एक प्रभावी साधन आहे. समाजसुधारणेच्या कार्यातील एक महत्वाचा घटक म्हणून शिक्षणाला अत्यंत मानाचे स्थान आहे. शिक्षणातून व्यक्तीचा मानसिक आणि बौध्दिक विकास करता येतो. सामाजिक गुलामगिरी नष्ट करतो येते. आर्थिक विकास साध्य करता येतो. राजकीय स्वातंत्र्यही मिळविता येते. डॉ.बाबासाहेब आंबेडकरांना नवमानवतावादाचा संस्कार करणारे शिक्षण पाहिजे होते. म्हणून डॉ.बाबासाहेब स्वाभिमान, स्वावलंबन आणि आत्मोद्धार हे खरेखरे शिक्षणाचे ध्येय होय असे मानतात. व्यक्तिमत्वाचा शोध घ्यायला लावून त्या व्यक्तिमत्वाचा सर्वांगीण विकास करायला लावणारे बीज शिक्षणात असावे ही डॉ. बाबासाहेबांची अपेक्षा होती. अस्पृश्यता, गुलामगिरी आणि अप्रतिष्ठेच्या दाहक काटयांचा बाबासाहेबांनी अनुभव घेतला होता. त्यामुळे सर्वांगीण विकासासाठी त्यांनी सर्वांच्या शिक्षणाचा आग्रह धरला होता.

शैक्षणिक तत्वज्ञान :–

निरक्षर जनतेला नवी जाग यावी, त्यांनी आपली योग्यता शिक्षणातून प्राप्त करून घ्यावी, त्यांनी आपल्या जीवनाला शिक्षणातून नवा अर्थ प्राप्त करून घ्यावा आणि आपले जीवन सार्थकी लावावे यासाठी डॉ. बाबासाहेबांनी आत्मसहाय्य, आत्मावलंबन आणि आत्मसन्मान या त्रिवेणी विचारांच्या प्रसाराची नवी चळवळ सुरू केली. त्यांनी सर्व अस्पृश्यांना ठणकावून सांगितले की, "तुमची गुलामगिरी तुम्ही स्वत: नष्ट केली पाहिजे. आत्मसन्मान हरवून जगणे लांछनास्पद आहे." डॉ.बाबासाहेबांना माणसांना पशुतुल्य अस्तित्वाच्या पातळीवरून सद्गुण आणि सात्विकतेच्या पातळीपर्यंत उन्नत करायचे होते. माणसांचे डोके, हृदय आणि हात यांच्या अंतर्गत असणाऱ्या गुणवत्तेची जोपासना करायची होती. शिक्षण म्हणजे परिवर्तन होय, हे डॉ.बाबासाहेबांच्या शैक्षणिक तत्वज्ञानाचे मुख्य सूत्र होते.

प्राथमिक शिक्षण :–

प्राथमिक शिक्षण हे एक पायाभूत शिक्षण आहे. खऱ्या शिक्षणाचे बीजारोपण याच कालखंडात होते. सद्गुण, समता, सहानुभूती, सहकार्य आणि संस्कार या वृत्तींचे बालमनात बीजारोपण व्हावे हाच प्राथमिक

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केदारनाथ अग्रवाल जी के निबंधों में सामाजिक सोउद्देशता

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'ललित' निबंध हिंदी साहित्य में आधुनिक युग की ही देन है । आज हिंदी निबंध विधा में ललित निबंध के प्रति आकर्षण निर्माण हुआ है । इन निबंधों में मुख्यतः स्थित लालित्य के कारण ही ये ललित निबंध की संज्ञा सार्थक कर रहे है । यदि निबंध में 'लालित्य' नहीं है तो ऐसे निबंध को ललित–निबंध की कोटि में कदापि नहीं रखा जा सकता । वास्तव में निबंध का चरम उत्कर्ष ललित निबंधों में ही पाया जाता है । 'ललित' शब्द लल् विलास से लल् ईप्सायाम में 'क्त' प्रत्यय के योग से निष्पन्न है । निबंध के साथ 'ललित' विशेषण लगाकर 'ललित निबंध' शब्द की निर्मिति हुई है । 'ललित' से अभिप्राय विदग्धता और रसप्रवणता से है । अर्थात, यह रस–साहित्य की श्रेणी के अंतर्गत आता है, जिसका धर्म है मानसिक उल्लास और उत्तेजना उत्पन्न करने की क्षमता रखना लेखक के व्यक्तित्व का यह एक लालित्यमय आलेख ही हैं ।

'ललित निबंध' शब्द में 'ललित' के अनेक अर्थ निहित है । सामान्यतः सुन्दर एवं मनोहर वस्तु के संदर्भ में 'ललित' शब्द का प्रयोग होता है । कोमल, सुहावना, प्रिय प्रांजल, ललित के लिए ही प्रयुक्त होनेवाले शब्द है । **"नालंदा विशाल शब्द सागर में ललित शब्द के पाँच अर्थ है–1) सुंदर, मनोहर, 2) अभिलषित, मनचाहा, 3) हिलता–डुलता हुआ, 4) एक अलंकार जिसमें वर्ज्य वस्तु के स्थान पर उसके प्रतिबिम्ब का वर्णन किया जाता है । 5) षाडव जाति का एक राग जो प्रायः गाया जाता था ।"**[1],उपर्युक्त कोश परक अर्थो पर दृष्टिपात करने से ज्ञात होता है कि ललित शब्द का प्रयोग सुंदर, मनोहर, लावण्यमय, सुहावना आदि के लिए ही किया जाता है । ललित निबंध को विभिन्न विद्वानों ने अलग–अलग नामों से अभिहित किया है । जैसे डॉ.विश्वनाथ प्रसाद तिवारी ने इसे 'ललित' या आत्मपरक निबंध माना है । जैसे–डॉ. विद्यानिवास मिश्र भी 'ललित निबंध' को व्यक्तिव्यंजक निबंध कहना अधिक पसंद करते है । **डॉ.कुबेरनाथ राय लिखते है कि,–"ललित निबंध एक स्वयंपूर्ण एवं सम्पुर्ण वाङ्मय है । इसमें व्यक्त दृष्टिकोण की युक्ति युक्तता इसी के अंतर्गत निहित रहती है । यही इसकी सम्पूर्णता एवं स्वयंपूर्णता है ।"**[2] डॉ.विजयेन्द्र स्नातक के अनुसार भी आत्मव्यंजक निबंधों का एक रूप ही ललित निबंध होते है । **"यह ललित निबंध शब्द हिंदी के व्यक्तिव्यंजक निबंधों के लिए रूढ–सा हो गया । ललित निबंध वस्तुनिष्ठ या विवेचनात्मक न होकर अपने परिवेश से, अपने आपसे पाठक का साक्षात्कार है । ललित निबंध में स्वच्छद मनतरंग तथा रंगारंग रूचियों की रमणीय धारा विद्यमान रहती है । इस प्रकार से वह आत्मालाप जैसा है ।"**[3] उपर्युक्त चर्चा से एक बात ध्यान में आती है कि लगभग सभी विद्वानों ने ललित निबंध के लिए आत्मपरकता वैयक्तिकता या व्यक्ति व्यंजकता को ही प्रधान माना है । इस प्रकार हम देखते है कि, 'ललित निबंध' विभिन्न विद्वानों द्वारा विभिन्न नामों से संज्ञापित किया गया है । ऐसी दशा में कोई भी परिभाषा ललित निबंध की पुर्ण व्याख्या नहीं करती । जिसे सर्वमान्य कहा जाए । हाँ, एक तत्व अवश्य है जिस पर सभी विद्वान एकमत है और वह है इस निबंध में लालित्य की विद्यमानता । ललित निबंधों में लालित्य के

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गार्गी, मैत्रेयी, वृषाली या स्त्रियांच्या आधी दक्षिण भारतातील आलवार संप्रदायाची पहिली स्त्री संत अण्डालाचे योगदान न विसरता येणारे आहे. म्हणूनच संत साहित्यात आपला मुक्त आविष्कार दाखविणाऱ्या स्त्रिया वरील विदुषींच्या पावलावर पाऊल टाकून पुढे जातांना दिसतात.

आदिम काळात मुक्त असणारी स्त्री हळूहळू परंपरांच्या जोखडात कधी अडकवली गेली ते तिचं तिलाही समजल नाही. ज्ञानदेवांच्या–चक्रधरांच्या काळात चातुर्वण्य व्यवस्था नाकारून स्त्रियांना व शूद्रांना आपापल्या संप्रदायात स्थान दिले. त्यातून संत साहित्यातील काही स्त्रिया काव्यरचनेतून व्यक्त व्हायला लागल्या. काहींनी थोडं घाबरत तर काहींनी त्या घाबरण्यापलिकडे जाऊन धीटपणे आपले भाव व्यक्त केले. त्यात प्रामुख्याने मुक्ताबाई, जनाबाई, बहिणाबाई, कान्होपात्रा इत्यादी संत कवियित्रींचा उल्लेख करता येईल.

लौकिकातील मर्यादा बाजूला सारून आपल्या मनातील भाव–भावना त्यांनी एकट्या विठ्ठलाजवळ व्यक्त केल्या. त्यामुळे विठ्ठलाला त्यांनी कधी माऊली म्हटले कधी जीवलग म्हटले तर कधी सखा, मित्र, वैरीण सुध्दा संबोधले. आपल्या मनातील घुसमट बाजूला सारून या कवयित्री मुक्तपणे स्वत:चा भाव व्यक्त करू लागल्या. मुक्ताबाई समाजाने बहिष्कृत केल्याचे दु:ख न बाळगता पुढे जाते. जनाबाई नामदेवाची दासी बनून त्या घरात कष्ट उपसते. आपल्या भावनांना गाडून टाकते. पण काही काळानंतर स्वत:ला धीटपणे व्यक्त करते. बहिणाबाई तर गृहीणी पण नवऱ्याच्या सततच्या संशयाला कंटाळून घरादाराचा त्याग करते व विठ्ठलालाच जवळ करते. कान्होपात्राची कहाणी आणखी वेगळी. समाजानेच दिलेलं गणिकेच आयुष्य ती जगते. तिची घुसमट होऊ लागल्यावर विठ्ठलाच्या पायी शरण जाते. मात्र समाजाच्या भोगवादाला नाकारणारी कान्होपात्रा प्रत्यक्ष विठ्ठलालाच आव्हान देते; त्यावेळी कान्होपात्रेचा धीटपणा शब्दात व्यक्त होतो.

लौकिक जगाच्या काचणाऱ्या बंधनांना तोडून स्वत:च्या मनाला पटणारी कोणतीही गोष्ट करण्यासाठी प्रत्यक्षात कोणताही कृतिशील मार्ग तत्कालिन स्त्रियांजवळ नव्हता. परंतु तरीही भक्तिपरंपरेतील संतकवयित्रींनी धाडसाने परंपरेच्या दडपणातून बाहेर पडून खुल्या भावनांचे प्रामाणिक उद्‌गार व्यक्त केलेले आहेत. विशेषत: स्त्रियांवर लादलेल्या कुलीनतेच्या बंधनांना झुगारून मुक्ताबाई, जनाबाई, बहिणाबाई या संतकवयित्री त्या स्वैरिणीच्या प्रतिमेत स्वत:ला व्यक्त करतात तेव्हा वाचकाचे मन अवाक होऊन जाते.

मुक्ताबाई ही तर जगावेगळीच जन्मलेली. विरक्ती ही तिच्या भावंडांप्रमाणे तिच्या रक्ततूनच वाहत होती. पण समाजाच्या चौकटीबाहेरचे जीवन जगत असताना भोवतालच्या लौकिक जीवनातील सामान्यजन त्यांच्याकडे उपहासाच्या नजरेने बघत होते. आपण घरंदाज, कुलीन स्त्रीच्या चौकटीत बसूच शकणार नाही आणि असले जखडलेले जीवन जगूच शकत नाही. म्हणून परमार्थाचे अलौकिक जीवनच जगण्याचा निर्धार तिने केलेला. ती म्हणते–

"बाई मी नि:संग धांगडी । फेकिली प्रपंच लुगडी।।"
नाकी नाही नखकडी ।। (पृ.१७२–१७५)

परमार्थ मार्गाची वाट चालणाऱ्या मुक्ताबाईला इतके बळ आलेले होते की तिला लौकिक जगाची पर्वाच उरली नव्हती. 'बाई मी नि:संग धांगडी'हा स्वैरिणीसाठी असणारा शब्द मुक्ताबाईने अगदी सहजपणे स्वत:साठी वापरलेला

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बखर वाङ्मयाचे स्वरूप

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प्रास्ताविक :-

शके १३०० मध्ये काही भागाची रचना झालेली "महिकावतीची बखर" ही बखर वाङ्मयातील पहिली बखर मानली जाते. पण शिवकाळात व नंतर पेशव्यांच्या काळात हा वाङ्मय प्रकार खऱ्या अर्थाने बहरलेला दिसतो. शाहिरी वाङ्मयाप्रमाणे 'बखर' हा प्रकारही यवनी संस्कृतीतून झालेला आहे. तरी नंतरच्या काळात त्यावर मराठमोळा साज चढविण्यात आला व मराठी इतिहास, मराठी वाङ्मय विशेष यांचे खरेखुरे दर्शन याच प्रकारातून घडतांना दिसून येते.

मुळ 'खबर' या शब्दाचा वर्णविपर्यास होऊन 'बखर' हा शब्द तयार झाला आहे. "चिटणीस कारकून वगैरे मंडळींनी मुस्लीमांचे तवारिखा, शाहनामे, फेरिस्ते वगैरे साधनांचे कित्ते पुढे ठेऊनच मराठी बखरी लिहिल्या." असे इतिहासाचार्य वि.का.राजवाडे यांनी आपल्या 'ऐतिहासिक प्रस्तावना' मध्ये लिहून खबरचीच बखर झाली या व्युत्ततीला हिरवी झेंडी दाखविल्यानंतरही बखरीचा उगम संस्कृतात दाखविण्याचा मोह त्यांना आवरला नाही.[१] (पृ.३५२) 'बखर' हा प्रकार फारसी तवारिखा, शाहनामे, अखबार इत्यादी साहित्याशी साम्य सांगतो, पण फारसी अखबारनवीस आणि मराठी बखरकार यांच्या भूमिकेत मुलभूत फरक आहे. अखबारनवीस राजांचे आश्रित आणि नबाबांचे आश्रित होते तर बखरीचे लेखक दौलतीचे सेवक होते असे डॉ.श्री.रं.कुलकर्णी म्हणतात.[२], पृ.३५३.

बखरीचे स्वरूप:- 'बखर' हा शब्द महिकावतीच्या बखरीत बखरकाराने वापरलेला नाही, कृष्णाजी अनंत सभासदास 'चरित्र लेहून देणे' अशी आज्ञा झालेली आहे. 'जन्मापासून ते मृत्यूपर्यंतचा' कार्यकाळ त्यात समाविष्ट आहे. श्री छत्रपतींच्या सप्तप्रकरणात्मक चरित्रासाठी 'पूर्वीच्या दाखल्यांप्रमाणे' लिहून आणावे अशी आज्ञा दिसते. तात्पर्य चरित्र लेखनासाठी हा प्रकार हाताळलेला दिसतो. बखरीत ऐतिहासिक घटना,वार्ता,प्रसंगवर्णन,वंशावळी, राज्यकारभारविषयक उपदेश, चरित्रे अशा साधनांचा विचार केलेला दिसतो. या प्रकारास बखर म्हणावे याबद्दल एकमत आहे.

बखरींचे वर्गीकरण:-

लेखनाच्या स्वरूपावरून तिचे वर्गीकरण पुढीलप्रमाणे पाच प्रकारात करण्यात आले आहे.

१) बखरकारांनी प्रत्यक्ष पाहिलेल्या,ऐकलेल्या राजकीय घटनांवरील बखरी उदा.सभासदांची बखर, भाऊसाहेबांची बखर या बखरी ऐतिहासिक प्रामान्याच्या दृष्टीने विश्वसनीय आहेत.

२) आठवणी, दंतकथा, आख्यायिका पारंपरिक हकीकती यावरून नंतर रचलेल्या बखरी, उदा.कृ.वि.सोहनीविरचित पेशव्यांची बखर, दाभाडयांची हकीकत.

३) ऐतिहासिक कागदपत्र, जुने ग्रंथ, दप्तर या आधारे नंतरच्या बखरी उदा.मल्हार रामराव चिटणीस विरचित सप्तप्रकरणात्मक चरित्र.

४) बखरसदृश्य ऐतिहासिक स्वरूपाचे लेखन-वाका, कैफियत, हकीगत, चरित्र, आत्मचरित्र इ. स्वरूपाचे लेखन ऐतिहासिक प्रामान्य यातही आढळते. उदा.पटवर्धनी वाका, आंग्र्यांची हकीकत, भाऊसाहेबांची कैफियत.

3.3.1 (373)