



Contents lists available at ScienceDirect

European Journal of Medicinal Chemistry

Journal homepage: <http://www.elsevier.com/locate/ejmech>

Research paper

Natural product-inspired esters and amides of ferulic and caffeic acid as dual inhibitors of HIV-1 reverse transcriptase



Vijay P. Sonar^a, Angela Corona^b, Simona Distinto^a, Elias Maccioni^a, Rita Meleddu^a,
Benedetta Fois^a, Costantino Floris^c, Nilesh V. Malpure^d, Stefano Alcaro^e,
Enzo Tramontano^b, Filippo Cottiglia^{a,*}

^a Department of Life and Environmental Sciences, Drug Sciences Section, University of Cagliari, via Ospedale 72, 09124 Cagliari, Italy^b Department of Life and Environmental Sciences, University of Cagliari, Cittadella di Monserrato SSS54, 09042, Monserrato, Cagliari, Italy^c Dipartimento di Scienze Chimiche, University of Cagliari, Cittadella di Monserrato, 09042, Monserrato, Cagliari, Italy^d Department of Botany, S. S. G. M. College, IN-423601 Kopargaon, District Ahmednagar, MS, India^e Dipartimento di Scienze della Salute, Università "Magna Graecia" di Catanzaro, Campus "S. Venuta", Viale Europa, 88100 Catanzaro, Italy

ARTICLE INFO

Article history:

Received 7 December 2016

Received in revised form

20 February 2017

Accepted 21 February 2017

Available online 24 February 2017

Keywords:

Ocimum sanctum

HIV-1

RNase H

Reverse transcriptase

Triterpenes

Ferulic acid derivatives

ABSTRACT

Using an HIV-1 Reverse Transcriptase (RT)-associated RNase H inhibition assay as lead, bioguided fractionation of the dichloromethane extract of the *Ocimum sanctum* leaves led to the isolation of five triterpenes (1–5) along with three 3-methoxy-4-hydroxy phenyl derivatives (6–8). The structure of these isolates were determined by 1D and 2D NMR experiments as well as ESI-MS. Tetradecyl ferulate (8) showed an interesting RNase H IC₅₀ value of 12.4 μM and due to the synthetic accessibility of this secondary metabolite, a structure-activity relationship study was carried out. A series of esters and amides of ferulic and caffeic acids were synthesized and, among all, the most active was N-oleylcaffeamide displaying a strong inhibitory activity towards both RT-associated functions, ribonuclease H and DNA polymerase. Molecular modeling studies together with Yonetani-Theorell analysis, demonstrated that N-oleylcaffeamide is able to bind both two allosteric sites located one close to the NNRTI binding pocket and the other close to RNase H catalytic site.

© 2017 Elsevier Masson SAS. All rights reserved.

1. Introduction

Acquired immunodeficiency syndrome (AIDS), caused by human immunodeficiency virus type 1 (HIV-1), represents the second most important cause of mortality in low-income countries and one of the ten leading cause of death worldwide. Although anti-retroviral therapy has dramatically improved the outcome of HIV infection, it is not curative. Currently, the approved treatment of

HIV infection and prevention on its progression towards AIDS is based on the highly active antiretroviral therapy (HAART) which combine at least two, and preferably three, antiviral agents, targeting different steps of the virus replication cycle [1]. Although the therapy has had considerable success in controlling HIV diffusion, there are associated adverse effects and emergence of multi-drug resistance [1,2]. The majority of the 30 approved anti-AIDS drugs is represented by reverse transcriptase (RT) inhibitors. RT is the enzyme responsible for the conversion of the single-stranded RNA genome into a double-stranded DNA via the formation of a RNA-DNA hybrid. The RT is a multifunctional enzyme with DNA polymerase (DP) and ribonuclease H (RNase H) activities [3]. Despite the fact that both RT associated RNA-dependent DNA polymerase (RDDP) and RNase H functions are essential for viral replication [4,5] and have been explored as drug targets, all of the RT-targeting clinical approved drugs inhibit the polymerase activity [6]. Clearly, the development of compounds inhibiting both RT activities would have several advantages, leading to a complete block of RT functions, new favourable drug resistance profiles, reduction of

Abbreviations: AIDS, Acquired Immunodeficiency Syndrome; DCM, dichloromethane; DMAP, 4-dimethylaminopyridine; DP, DNA polymerase; DQF-COSY, Double Quantum Filtered-Correlation Spectroscopy; HAART, Highly Active Antiretroviral Therapy; HIV-1, human immunodeficiency virus type 1; HMBC, Heteronuclear Multiple Bond Correlation; HSQC, Heteronuclear Single Quantum Coherence spectroscopy; NNRTI, Non-Nucleoside RT Inhibitor; QMPL, Quantum Mechanic-Polarized Ligand; RDDP, RNA-dependent DNA polymerase; RNase H, ribonuclease H; RT, reverse transcriptase; TEA, triethylamine; VLC, vacuum-liquid chromatography.

* Corresponding author.

E-mail address: cottigf@unica.it (F. Cottiglia).<http://dx.doi.org/10.1016/j.ejmech.2017.02.054>

0223-5234/© 2017 Elsevier Masson SAS. All rights reserved.

[Signature]
Principal
S.S.G.M. College
Kopargaon

Systematic Studies on *Galactia tenuiflora* var. Minor Baker (Leguminosae)

Bhalerao VU¹, Arangale KB^{2*}, Shinde YP³, Malpure NV⁴

¹⁻³Department of Botany, Sanjivani Arts, Commerce and Science College, Kopergaon, India

⁴Department of Botany, SSGM College, Kopergaon, India

*Address for Correspondence: Mr. Arangale K.B, Assistant Professor, Department of Botany, Sanjivani Arts Commerce and Science College, Kopergaon, India

Received: 26 Oct 2017/Revised: 23 Nov 2017/Accepted: 24 Dec 2017

ABSTRACT- The present investigation deals with the karyological study of *Galactia tenuiflora* var. Minor Baker from Vikhare gothane, Rajapur tehsil, Ratnagiri District, Maharashtra. It is the endemic species varieties. There reported 20 chromosomes which are of median region centromeres type. The characterization of chromosome was done with the help of available literature from department of Botany, Shivaji University Kolhapur. This is the first work on this species and it certainly help to add more information about these species varieties.

Key-words- *Galactia tenuiflora*, Karyology, Taxonomic description

INTRODUCTION

The genus *Galactia* P. Browne (Dioecleinae: Phaseoleae: Papilionoideae: Leguminosae) is represented by 111 species in the World [1]. The name *Galactia* is derived from the Greek word *galacto* referring to the milky sap found in some species [2]. *Galactia* encompasses a wide diversity of habit, root and rhizome structure, leaf venation, inflorescence structure, and floral morphology. It is used as wild life forage and milkpeas [*Galactia volubilis* (L.) Britton] often host butterflies [2]. Most of the species of the genus are found in South America and USA while four species are native to Asia, Australia and Africa. In India, there are only two species, viz. *Galactia longifolia* Benth. and *Galactia tenuiflora* (Klein ex Willd.) Wight & Arn. [3]. *Galactia longifolia* is endemic to Peninsular India [3]. *Galactia tenuiflora* has five varieties, viz. *G. tenuiflora* var. *tenuiflora* (Klein ex Willd.) Wight and Arn., *G. tenuiflora* var. *latifolia* Baker, *G. tenuiflora* var. *lucida* Baker, *G. tenuiflora* var. *minor* Baker and *Galactia tenuiflora* var. *villosa* (Wight and Arn.) Benth [3]. *Galactia tenuiflora* var. *tenuiflora* is distributed throughout India while *G. tenuiflora* var. *lucida* is endemic to the Western Peninsula. *Galactia tenuiflora* var. *latifolia* is reported from Maharashtra, Karnataka, and Vietnam. *Galactia tenuiflora* var. *minor* is endemic to Maharashtra (Konkan region) and *G. tenuiflora* var. *villosa* is distributed in south India, Bihar and Uttar Pradesh and other countries. Details of the geographical distribution of the five varieties are given below in Table 1.

Table 1: Geographical distribution of five varieties of *Galactia tenuiflora* (modified after Sanjappa and Nayar et al. [3-4])

Taxa	Geographical distribution
<i>Galactia tenuiflora</i> var. <i>latifolia</i>	India (Maharashtra, Karnataka), Vietnam
* <i>Galactia tenuiflora</i> var. <i>lucida</i>	India (Western Peninsula)
* <i>Galactia tenuiflora</i> var. <i>minor</i>	India (Maharashtra)
<i>Galactia tenuiflora</i> var. <i>tenuiflora</i> India	(Western Ghats, Maharashtra, Karnataka, Tamil Nadu, Kerala), Sri Lanka, Nepal, China, South East Asia, tropical Africa, Australia
<i>Galactia tenuiflora</i> var. <i>villosa</i> India	(Western Ghats, South India, Uttar Pradesh, Bihar), Burma, China, Mascarene Islands, tropical East Africa, South Africa, central African republic, Ghana

*endemic taxa

Galactia tenuiflora var. *minor* grows on low altitude lateritic plateaus in Konkan region of Maharashtra. The species was first described by Dalzell and Gibson in their Flora of The Presidency of Bombay in 1865. There is no detailed data on the systematics of *Galactia tenuiflora* var. *minor*. Hence, in the present work, I have studied the detailed morphology of the taxon which includes description and illustration. In addition, I have carried out mitotic studies for the first time in this taxon.

MATERIALS AND METHODS

The plant material (*Galactia tenuiflora* var. *minor*) was collected from Vikhare gothane, (N 16035.694' E073032.386', 200 m), Rajapur tehsil, Ratnagiri district, Maharashtra, India. The voucher specimens (SUK 3156) are deposited in the Herbarium of the Department of

Access this article online

Quick Response Code

Website:

www.ijlssr.com



DOI: 10.21276/ijlssr.2018.4.1.11

Principal
S.S.G.S.College
Kopergaon

ORIGINAL ARTICLE

Effect of Sodium Chloride on Seed Germination and Seedling Growth of Some Fruit Vegetables

Shingare R. M., Mohite A.K.

Department of Botany, R.B.N.B. College, Shirampur, Tal-Shrirampur, Dist-Ahmednagar, Maharashtra, India.

*Corresponding author: ranishingare15@gmail.com

ABSTRACT

Soil salinity can lead to reduced emergence and poor seedling growth. A study was conducted to investigate on the effect of salinity treatment on seed germination and seedling growth of four different plants under different NaCl concentrations 0 (control), 0.1, 0.4, 0.7, 1.0%. Forty seeds of each species were germinated at room temperature in petri dishes lined with two layers of blotting paper, moistened with 5 ml of each contain NaCl solution (0 (control), 0.1, 0.4, 0.7, 1.0% and ten seeds per species of crop vegetables were germinated at room temperature in germination paper, placed in solutions of different concentrated NaCl beaker (for 24 hrs) and forty seeds of each species were germinated at room temperature in soil tray each contain different concentration of NaCl solution. Salinity had significant affect on germination percentage, index of germination, primary root-shoot length and fresh and dry weight biomass. Number of seeds germinating every day after the initiation of the NaCl treatment was counted, and final germination percentage established. The shoot and root length and fresh dry weight biomass was determined at the end of the experiment. Sodium chloride solution reduced germination percentage fruit vegetables. Growth of seedlings and fresh dry weight there was less or no germination percent at NaCl concentration levels 0.7 and 1.0%. The control treatment had higher germination percentage as well as seedling growth and fresh dry weight as compare to 0.1 and 0.4%. The findings from the study indicate that seeds of fruit vegetables are sensitive to salt stress. It is recommended that cultivars should not use to grown salt sensitive crops in saline environment since it will give poor germination and seedling growth.

Keywords: *Capsicum annum*, chlorophyll, *Cucumis sativus*, germination percentage, *Lycopersicon esculentum*, NaCl Salinity, *Solanum melongena*.

Received 03/02/2017

Revised 10/03/2017

Accepted 07/04/2017

How to cite this article:

Shingare R. M., Mohite A.K. Effect of Sodium Chloride on Seed Germination and Seedling Growth of Some Fruit Vegetables. Adv. Biore., Vol 8 [4] July 2017: 132-139.

INTRODUCTION

Salinity is one of the most important abiotic stresses limiting crop production in arid and semiarid regions, where soil salt content is high and precipitation is low [1]. Salt load in irrigation of water is due to over use of fertilizers and lack of proper drainage can be the main factors that contribute to this problem of salinity. Around 930 million ha land of world-wide, 20% of total agriculture land, are affected by salinity [2]. Salinity limits crops production, especially the sensitive species and reduces the yield of major crops by more than 50% [9]. It affects morphological, and biochemical processes, including seed germination, plant growth and water and nutrient uptake plant [28]. The ability of seeds to germinate at high salt concentration in the soil is therefore of crucial importance for the survival and prolong the life of these species. In saline habitats, seed germination takes place after high precipitation, i.e., under condition of reduced soil salinity [16]. The ability of the soil seed bank to obtained quiescent at a high salt level and to germinate immediately after salinity reduction [5]. Although salinity stress mostly reduces the germination percentage and delays the onset of germination, its effects are modified by interactions with other environmental factor such as temperature [19] and light [15]. Salinity can affect germination by affecting the osmotic component, which influences water uptake, and by interfering with the ionic component i.e. Na⁺ and Cl⁻ accumulation, nutritional imbalance or a combined effect. Reduction in osmotic

CYTOLOGICAL EFFECT OF SOFT DRINK AND PESTICIDE ON ROOT TIP OF *ALLIUM CEPA*.

SHINGARE R. M. AND MOHITE A. K.

Department of Botany
R. B. N. B. College, Shrirampur
Dist- Ahmednagar, Maharashtra, India

ABSTRACT

The aim of present investigation is to check the clastogenic effects of soft drink at different concentrations on mitosis of *Allium cepa* L. In the present study 50% and 100% concentrations of soft drink was used as the treatment to the *Allium cepa* root tip for time exposure (2 hrs, 4 hrs, and 6 hrs). It was found that concentration of soft drink and time exposure affect the chromosomal structure of *Allium cepa*. The result showed that cytological abnormalities occurred in 50% concentration treatment of soft drink but treatment of 100% concentration of soft drink affected the growth of onion roots as well as some roots were destroyed. The effects of pesticide (Nuvan) on the mitosis of *Allium cepa* L. was investigated with a view to ascertaining its mutagenic effects on onion roots using treatment of 0.1%, 0.3%, 0.7% and 1% concentration of Nuvan at 2 hour, 4 hour and 6 hours duration respectively with distilled water as control. The result showed that chromosomal abnormalities increase with concentration gradient and time. The abnormalities observed including sticky metaphase, C-metaphase, Chromosome bridge and laggards.

Figure: 08

References: 18

Table: 00

KEYWORDS: *Allium cepa*, Chromosomal aberration, Pesticide, Mitotic index (MI), Genotoxic.

Introduction

The plant's name comes from the Latin unio, or annianus, and is associated with the Welsh enion, meaning "anvil." ("Onion" online Etymology Dictionary November 2001. 28 February, 2008). It has been shown that plant meristem have a well regulated structure of mitotic cycle. The onion is a sub-species and primary member of the genus *Allium*. Because many *Allium* species share the common name onion, the "garden onion"-also known as the "bulb onion" and "shallot" is referred to as *Allium cepa*. (Jones, et.al., 1963). The mechanism leading to the formation of daughter cells and the retention of identical chromosome numbers and other hereditary factors in the newly formed cells, treatments with various reagents have been studied by several workers

such as (Shanthamurthy et. al., 1979; Okon et. al., 1987; Okagbue, 1990 and Umar, 2004).

SOFT DRINK

Soft drinks are non-alcoholic water based flavored drinks that are optional sweetened, acidulated, carbonated and may contain fruit, fruit juice and/or salts. The flavor may derive from vegetable extracts or other aromatic substances. They constitute a defined and homogenous range, designated by generic domination and utilizing a standard common list of additives, such as fruit juices, nectars, dairy drinks, mineral waters. (Mathur et. al., 2003). Globally, carbonated drinks are third most consumed beverage.

CLASTOGENIC EFFECT OF SOFT DRINK AND PESTICIDE ON ROOT TIPS OF *ALLIUM SATIVUM* L.

SHINGARE, R. M.*, VARPE, B. D., MOHITE, A. K. AND PAWAR, K. W.

R. B. N. B. College, SHIRAMPUR,
Dist. Ahmednagar.

*Email: ranishingare15@gmail.com

ABSTRACT

The present investigation was carried out to know the clastogenic effects of soft drink at different concentrations, on the stages in mitosis of *Allium sativum* L. The 50% and 100% concentrations of soft drink were used as the treatment to the root tips for time exposure (2, 4 hrs, and 6 hrs). It was found that concentration of soft drink and time exposure affects the chromosomal structure. The result showed that cytological abnormalities occurred in 50% concentration treatment of soft drink, but treatment of 100% concentration of soft drink affected the growth of roots as well as roots were destroyed. The effects of pesticide (Karate) on the mitosis was investigated with a view to ascertaining its mutagenic effects on garlic using treatment of 0.1%, 0.3%, 0.7% and 1% concentration of Karate and soft drink at 2 hour, 4 hour and 6 hours duration respectively comparing with distilled water as a control. The result showed that chromosomal abnormalities increase with concentration and time. The abnormalities noticed were including chromosomal fragmentation, lagness, displacement of metaphase and anaphase, formation of laggards, C- metaphase, bipolarization, binucleate and multinucleate cells and constriction of cells.

Pages: 08

References: 20

Table: 00

KEY WORDS: *Allium sativum* L., Clastogenic effect, Mitotic index (MI), Pesticide.

Introduction

The genus *Allium* belongs to the Alliaceae of family Liliaceae². These bulbous biennial or perennial herbs, are distinctive and pungent odour when they are crushed. A colourless water-soluble compound known as allein is present in uninjured garlic. It is rich in phosphorus, potassium, calcium magnesium and also rich in carbohydrates. Also contains fat, vitamin sulphur. The flavour of garlic is due to presence of the chemical allein (allyl disulphide). Allicin and allein have been considered as important components for the evaluation of garlic³. Allein is unstable and sensitive to acid and alkali. Although Garlic (*Allium sativum*) originated in China, due to its

numerous benefits it has been cultivated throughout the world for more than 5,000 years.

"Pesticide product" as including chemicals which are used to destroy insect, fungus, bacterium, virus or rodent or act as a plant growth regulator and desiccant⁴. For practical purposes, all type of chemicals used in industrial and agricultural prospects can be considered as pesticides. In recent years, there are increasing use of chemical pesticides which lead to many effects including reduced fertility in soil and productivity in birds, fishes, reptiles and many other organisms. Therefore, it is an intensive search for alternative strategies of plant protection that can be used safely to control pests. Some of chemical pesticides


Principal
S.S.G.M.College
Kopergaon

ADVERTISEMENT





RETURN TO ISSUE


< PREV RESEARCH ARTICLE NEXT >



Get e-Alerts

Iron-Oxide-Supported Ultrasmall ZnO Nanoparticles: Applications for Transesterification, Amidation, and O-Acylation Reactions

Vilas B. Gade^{†§}, Anuj K. Rathi^{†§}, Sujit B. Bhalekar[†], Jiri Tucek[†], Ondrej Tomanec[†],
Rajender S. Varma[†], Radek Zboril^{†*}, Sharad N. Shelke^{†*}, and Manoj B. Gawande^{†*}

View Author Information Cite this: *ACS Sustainable Chem. Eng.* 2017, 5, 4, 3314–3320Publication Date: February 23, 2017 <https://doi.org/10.1021/acssuschemeng.6b03167>

Copyright © 2017 American Chemical Society

[RIGHTS & PERMISSIONS](#)

Article Views Altmetric Citations

1245 11 19

[LEARN ABOUT THESE METRICS](#)

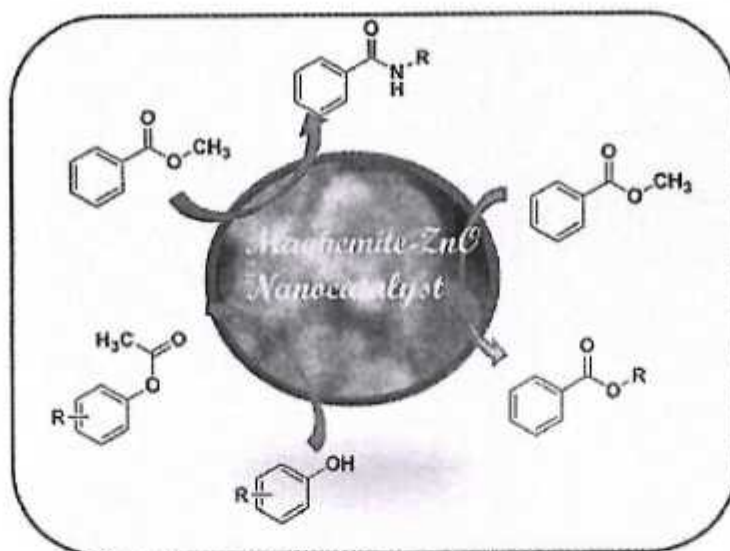
Share Add to Export



Read Online

This website uses cookies to improve your user experience. By continuing to use the site, you are accepting our use of cookies. Read the ACS privacy policy.

CONTINUE



An efficient maghemite–ZnO nanocatalyst has been synthesized via a simple coprecipitation method, where ZnO nanoparticles are uniformly decorated on the maghemite core and characterized by XRD, SEM-EDS, ICP-AES, XPS, TEM, HRTEM, and Mössbauer spectroscopy; maghemite nanoparticles are in the typical size range 10–30 nm with ultrasmall (3–5 nm) ZnO nanoparticles. A competent and benign protocol is reported for various organic transformations, namely, transesterification, amidation, and O-acylation reaction in good to excellent yields (75–97%) using magnetically separable and reusable maghemite–ZnO nanocatalyst.

KEYWORDS: Maghemite–ZnO nanoparticles, Magnetic cleansing, Transesterification, Acylation, Sustainable protocol

Supporting Information

The Supporting Information is available free of charge on the ACS Publications website at DOI: 10.1021/acssuschemeng.6b03167.

- Detailed information about instrument and characterization techniques, relevant images, and optimization tables of reactions and additional table of data (PDF)

This website uses cookies to improve your user experience. By continuing to use the site, you are accepting our use of cookies. Read the ACS privacy policy.

CONTINUE



Article

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

Vilas B. Gade ¹, Anandarup Goswami ^{2,*}, Rajender S. Varma ³, Sharad N. Shelke ^{1,*} and Manoj B. Gawande ^{3,*}

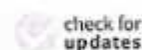
¹ P. G. & Research Center, Department of Chemistry, S. S. G. M. College, Kopergaon, Dist., Ahmednagar 423601, India; anant.gade1985@gmail.com

² Division of Chemistry, Department of Sciences and Humanities, Vignan's Foundation for Science, Technology and Research Vadlamudi, Guntur 522213, India

³ Regional Centre of Advanced Technologies and Materials, Faculty of Science, Department of Physical Chemistry, Palacky University, Šlechtitelů 27, 78371 Olomouc, Czech Republic; Varma.Rajender@epa.gov

* Correspondence: ananda1911@gmail.com (A.G.); snshelke@yahoo.co.in (S.N.S.); manoj.gawande@upol.cz (M.B.G.); Tel.: +420-58-563-4544 (M.B.G.)

Received: 24 February 2018; Accepted: 12 April 2018; Published: 17 April 2018



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

1. Introduction

Significant research efforts have been devoted to the development of sustainable/greener organic transformations, which are either catalyst-free, solvent-free or performed in an aqueous medium [1,2]. Pollution preventive green and sustainable approaches protect the environment by reducing or eliminating the use of hazardous substances, and avoid by product formation and the generation of unwanted materials. Despite considerable success [3], these protocols, especially those that are catalyst- and solvent-free, are not suitable for all types of reactions and often an efficient and selective catalyst is required to bring out the intended outputs competently. However, in that respect, homogeneous catalysts often face problems of poor stability and recyclability compared to their heterogeneous counterparts. Hence, the design of economical, greener, and recyclable nanocatalysts is highly desirable [4–7].

In recent years, magnetic supported nanocatalysts have emerged as one of the realistic alternatives to several organic transformations [8–14], as they are inexpensive, easy to prepare and can be separated (via magnetic decantation) and recycled several times [15]. Using Fe₃O₄ as a magnetic support has been popular for the immobilization of diverse metals, namely ruthenium [16,17], palladium [18] and nickel [19]. Such Fe₃O₄ supported nanocatalysts are known to catalyze numerous reactions, namely asymmetric Michael additions in aqueous mediums [20]; Suzuki-, Sonogashira-, and

Synthesis, Spectral Characterization, Molecular Docking, Antimicrobial And Antioxidant Evaluation Of Pharmacophores 1, 3-Diones with Their Transition Metal Complexes

Dayanand M. Suryawanshi

PG & Research Centre of Chemistry, Rayat Shikshan Sanstha's S.S.G.M. College, Kopergaon, Maharashtra, India

ABSTRACT

Three series of 1, 3-diones 4(LA- LC) and their transition metal (II) complexes 5LA (a-e), 5LB (a-e) and 5LC (a-e) have been synthesized, spectroscopically characterized and their in vitro efficacies were evaluated. Bidentate ligands were derived from substituted aromatic acids and substituted ortho hydroxy acetophenone under ultrasound irradiation methods at low temperature. 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, ¹H and ¹³C-NMR, Mass spectra, UV-Vis., magnetic susceptibility and conductance measurements were done to characterize the ligands and their metal complexes [where, M= Mn (II), Fe (III), Co (II), Ni (II) and Cu (II)]. All the evidences suggested that the complexes have octahedral geometry. The stoichiometry of the complexes was found to be 1:2 (metal: ligand). The conductivity data show that the complexes are non-electrolyte in nature. The antioxidants activity of the ligands and their metal (II) complexes have been carried out using DPPH free radical scavenging activity and found to be most effective. The antibacterial and antifungal activity of the ligands and their complexes have been carried out and on the basis the molecular docking study against the peptide deformylase of the most effective complexes has been reported.

Keywords: 1, 3-diones, Metal complexes, Antimicrobial, Antioxidants and Molecular docking.

I. 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], antisepticidal [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 trace 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].

In continuation of our interest in the functionalized 1, 3-diones and their metal (II) complexes, we, herein report the synthesis, spectral characterization, antimicrobial, antioxidants studies of a bidentate ligands containing O, O pharmacophores. The molecular docking study of ligands and their metal complexes has been reported [20-21]. The antibacterial and antifungal activities of ligands and their metal (II) complexes observed that, metal complexes showed highest activity than the free ligands.



Principal
S.S.G.M. College
Kopergaon

Journal of Chemical, Biological and Physical Sciences



An International Peer Review E-3 Journal of Sciences

Available online at www.jcbpsc.org

Section A: Chemical Sciences

CODEN (USA): JCBPAT

Research Article

Synthesis, spectral characterization and antimicrobial activity of selected transition metal (II) Complexes using Salicylaldehyde with 4-methoxyaniline moiety

Vishal G. Shinde¹, Vijayanand D. Ingale², Dayanand M. Suryawanshi³,
Anjali S. Rajbhoj⁴, Suresh T. Gaikwad^{5*}

Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
(M.S.) India

Received: 15 March 2017; Revised: 05 April 2017; Accepted: 12 April 2017

Abstract: The synthesis of new divalent Schiff base on the transition metal (II) complexes like Mn(II), Co(II), Ni(II), Cu(II) and Zn(II) were derived by the condensation of Salicylaldehyde with 4-methoxyaniline in alcoholic medium with forming 2-(E)-(4-methoxyphenylimino) methyl phenol. The structures of the Schiff base ligands and transition (II) metal complexes have been proposed by the analytical and spectral data by FTIR, ¹H-NMR, X-ray diffraction and Magnetic studies. The XRD studies indicate that monoclinic crystal system for Ni (II) complex. Antifungal activity was found for Mn(II) and Zn(II) Schiff base complex against the species *Aspergillus niger* higher activity than that of Schiff base ligand and standard drug like *Fluconazole* at the same concentration 500 ppm.

Key words: TGA, DTA, Powder X-ray diffraction, Antimicrobial activity studies.

INTRODUCTION

The coordination chemistry of free Schiff base ligands has been the main subject of great interest. The free Schiff bases are capable of forming coordinate bonds with many metal ion via azomethine and other

2017-18 263

(62)



Journal Homepage: www.ijar.com
**INTERNATIONAL JOURNAL OF
 ADVANCED RESEARCH (IJAR)**

Article DOI: 10.21474/IJAR01/3872
 DOI URL: <http://dx.doi.org/10.21474/IJAR01/3872>



RESEARCH ARTICLE

STUDY OF MOLAR REFRACTION AND POLARIZABILITY CONSTANT OF AQUEOUS SOLUTIONS OF KNO₃ AND KBrO₃ AT DIFFERENT TEMPERATURES.

Arun B. Nikumbh¹ and Meenakshi V. Rathi².

1. P.G. and Research Department of Chemistry, S. S. G. M. College, Kopargaon (M. S.), India-423601.
2. P.G. Department of Chemistry, RNC Arts, JDB Commerce, NSC Science College, Nasik Road, Nasik.

Manuscript Info

Manuscript History

Received: 14 February 2017
 Final Accepted: 10 March 2017
 Published: April 2017

Key words:-

Refractive index, Molar Refraction and Molar Polarizability.

Abstract

Densities and Refractive Indices of solutions of potassium bromate (KBrO₃) have been studied in water and 0.1%, 0.2%, 0.3%, 0.4% and 0.5% (w/v) aqueous solution of KNO₃ with temperature in the range T = 298.15°K- 313.15°K. The data obtained is utilized to determine Specific Refraction (R_D) and Molar Refraction (R_M) of solutions. The values of Refractive indices, Molar Refraction (R_M) and Molar Polarizability (α) constant are found to be decreased with decreasing concentration of solute in solvent and these results are also interpreted in terms of interaction in salt solution. It has been verified that Molar Refraction is additive and constitutive property.

Copy Right, IJAR, 2017.. All rights reserved.

Introduction:-

The molar refractivity is a measure of the polarizability of the molecule [1]. The study of specific refractivity, molar refractivity and polarizability of salt solutions plays a vital role not only in chemical but also in engineering, medical and biotechnical field. The best part with measurement of refractive index is that it can be measured easily with a high degree of accuracy.

Potassium bromate has been widely used in the oxidation of many organic compounds in acidic medium. Idris S.O. et al.[2] describe the kinetics of the oxidation of L- Methionine by potassium bromate in hydrochloric acid medium. The kinetics and mechanism of the oxidation of Tartaric acid by potassium bromate in perchloric acidic medium was also studied[3]. A combination of sulfuric acid and potassium bromate in the presence of SiO₂ were used as effective oxidizing agent for the oxidation of alcohol to its corresponding aldehyde and ketone derivatives in various organic solvents with good yield[4]. Potassium bromate as an oxidizing agent in a Titania-based Ru CMP slurry was studied by S. Noyel Victoria[5]. The toxic effect of KBrO₃ on vestibuloocular reflex system of human was studied[6]. Optical dispersion and Molar refractivities of Alkali Halide crystals and aqueous solutions were studied by A. Penzkofer, H. Glas[7]

Measurement of refractive index is an essential and important work to study the thermodynamic and other physical properties such as specific refractivity, molar refractivity and polarizability of solutions which provide information about the molecular structure of the components used in the solutions. The molar refractivity reflects arrangements of the electron shells of ions in molecule and yields information about the electronic polarization of ions.

Corresponding Author:- Arun B. Nikumbh.

Address:- P.G. and Research Department of Chemistry, S. S. G. M. College, Kopargaon (M. S.), India-423601.

749

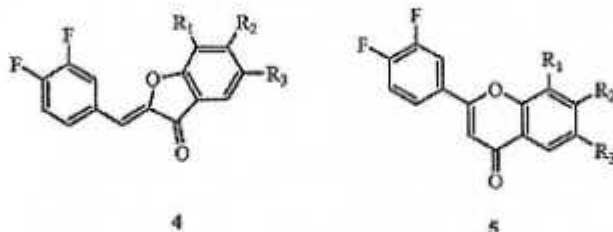

 S.S.G.M. College
 Kopargaon

Synthesis of Some Fluorinated Aurones and Chromones

Sarita G. Kundlikar, Pratibha V. Randhavane, Hemantkumar N. Akolkar, and Bhausaheb K. Karale*

Department of Chemistry, Radhabai Kale Mahila Mahavidyalaya, Ahmednagar, Maharashtra, India

ABSTRACT 3,4-Difluorobenzaldehyde **1** when reacted with substituted 2-hydroxyacetophenone **2** gave corresponding chalcone **3**, which when treated with mercuric acetate in dry pyridine gave compound **4** and with dimethyl sulfoxide/ I_2 gave compound **5**. The structures of all the synthesized compounds were confirmed by spectroscopic techniques.



KEYWORDS Fluorine, Aurone, Chromone.

INTRODUCTION

Incorporation of fluorine in drug discovery has become an essential tool because fluorine influences a variety of dramatic effects on the molecule's properties such as better bioavailability, longer biological half-life,^[1] and hydrogen bonding^[2] making them more selective and increasing their efficacy. Various biological activities associated with fluorine-containing molecules are anticancer,^[3] antibacterial,^[4] antifungal,^[5] and phosphodiesterase inhibitors.^[6]

Chalcones are the intermediates for the preparation of different compounds. They consist of open-chain flavonoids in which the two aromatic rings are joined by a three-carbon α,β -unsaturated carbonyl system, associated with various biological activities such as cytotoxic,^[7] antibacterial,^[8] HIF-1 inhibitor,^[9] antitubulin,^[10] human P-glycoprotein,^[11] and anticancer.^[12]

Aurones are a family of natural compounds particularly found in the coloring of fruits and flowers. Aurones are synthesized in plants by oxidation, cyclization,

and rearrangement of chalcones by an enzyme called aureusidin synthase.^[13] Aurones exhibits broad spectrum of biological activities as anticancer,^[14] antimalarial,^[15] antimicrobial,^[16] tyrosine phosphatase 1B inhibitors,^[17] and antiproliferative.^[18]

Chromones are the oxygen-containing heterocyclic compounds with benzo-annulated γ -pyrone ring, with the parent compound being chromone (4*H*-chromene-4-one, 4*H*-1-benzopyran-4-one). Chromone derivatives have a wide range of biological activities such as antiproliferative,^[19] insecticidal,^[20] antifungal,^[21] β amyloid imaging agent,^[22] antitumor, and antibacterial.^[23]

Biological activities associated with aurones and chromones, and we intend to synthesize fluorinated chromones and aurones.

RESULTS AND DISCUSSION

The starting material 2-hydroxyacetophenone **2** was synthesized by Fries rearrangement. Equimolar

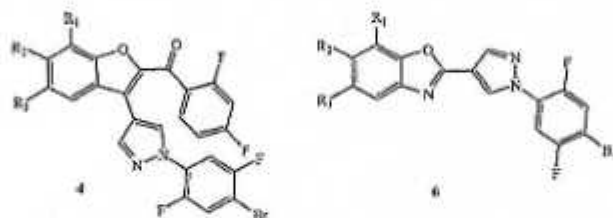
*Corresponding author: Email: bkkarale@yahoo.com

Synthesis of Some Multihalogenated Pyrazolyl Benzofurans and Benzoxazoles

Sarita G. Kundlikar, Pratibha V. Randhavane, Hemantkumar N. Akolkar and Bhausaheb K. Karale*

Department of Chemistry, Radhabai Kale Mahila Mahavidyalaya, Ahmednagar, Maharashtra, India

ABSTRACT 1-(4-Bromo-2,5-difluorophenyl)hydrazine **1**, when reacted with substituted 3-formylchromone **2** in alkaline medium, gave methanone **3**. Compound **3** was treated with 2-chloro-1-(2,4-difluorophenyl)ethanone in DMF/ K_2CO_3 to yield benzofuran **4** and when treated with hydroxylamine hydrochloride in alcohol gave oxime **5**. Compound **5** which on refluxing with $POCl_3$ cyclized to form benzoxazole **6**. The structures of all the synthesized compounds were confirmed with the help of spectral techniques.



KEY WORDS Fluorine, Benzofuran, Benzoxazole.

INTRODUCTION

Fluorinated molecules have higher bioavailability than nonfluorinated molecules. They also have a knock-on effect on the stability and reactivity of other functional groups in the compound. Some of the fluorine-containing molecules exhibit DNA photocleavers^[1] and insecticidal^[2] activities.

3-Formylchromone is a versatile intermediate for synthesis of different heterocycles depending on which type of nucleophile used. Some of the methanone derivatives synthesized from 3-formylchromone exhibits cytotoxic as well as antiviral^[3] activity. Pyrazole derivatives are known to possess a wide spectrum of biological activities such as antiviral,^[4] anti-angiogenesis,^[5] and selective CB_1 receptor ligands.^[6]

Benzofuran and its derivatives constitute a major group of naturally-occurring compounds that are of particular interest due to their biological activity and role in plant defense systems. These are associated with broad spectrum

of biological activities such as selective adenosine A_{2A} receptor antagonists,^[7] nerve growth factor,^[8] cytotoxic,^[9] insecticidal,^[10] antimitotic,^[11] and antifungal^[12].

Oximes are the chemical compounds belonging to imine class and are the derivatives of carbonyl group. Various biological activities associated with oxime derivatives are anti-inflammatory^[13], antitumor,^[14] and antimicrobial.^[15]

Benzoxazole is benzo-fused oxazole compound having 1,3-azole in which oxygen atom has position 1 and nitrogen atom at the position 3. Recent observations showed that benzoxazole derivatives have remarkable biological activities such as anti-inflammatory,^[16] antitumor,^[17] antimicrobial,^[18] antiviral,^[19] herbicidal,^[20] anticancer,^[21] and elastase inhibitors.^[22]

Biological activities associated with benzofuran and benzoxazole moieties prompted us to synthesize series of these compounds.

*Corresponding author: Email: bkkarale@yahoo.com

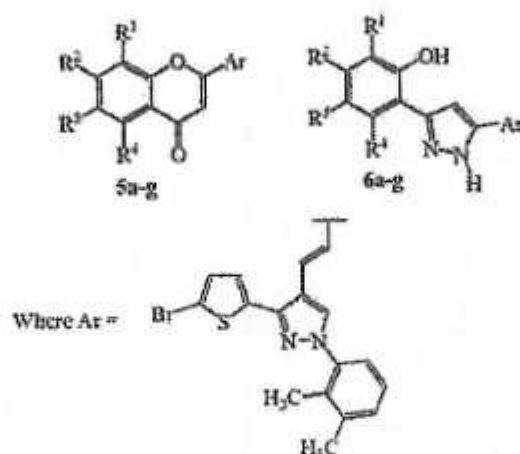
SYNTHESIS AND BIOLOGICAL SCREENING OF SOME NEW THIOPHENE AND PYRAZOLE CONTAINING STYRYLCHROMONES AND PYRAZOLES

Sadhana D. Mhaske¹, Sushama J. Takate², Rhushikesh N. Dhawale², Hemantkumar N. Akolkar¹,
Pratibha V. Randhavane¹, Bhausaheb K. Karale^{1*}

¹Department of Chemistry, Radhabai Kale Mahila Mahavidyalaya, Ahmednagar, Maharashtra, India

²Department of Chemistry, New Arts, Commerce Science College, Ahmednagar, Maharashtra, India

ABSTRACT Series of brominated thiophene anchored 2-styrylchromones and styrylpyrazoles were synthesized using Baker-Venkataraman transformation. The structures of newly synthesized compounds were confirmed by spectral techniques such as infrared, ¹H nuclear magnetic resonance, and mass spectrometry. These compounds were screened for their antibacterial and antifungal activities.



KEYWORDS β -Diketones, Styrylchromones, Pyrazoles, Antibacterial activity, Antifungal activity.

INTRODUCTION

The need of potential therapeutic agents is the basis for current research in synthetic organic chemistry. Nature contains widespread molecules with rings containing heteroatoms. There is absolutely no doubt that natural products have provided key leads for drug discovery.^[1] The lead modification is an important step in current drug design and development.

Chromones and their derivatives are well known naturally occurring oxygen-containing heterocyclic compounds

which perform important biological functions in nature. It is known that certain natural and synthetic derivatives possess important biological activities^[2] including anti-tumor, anti-inflammatory, antioxidant, anti-hepatotoxic, anti-spasmodic, estrogenic, and antibacterial activities.^[3-5]

Styrylchromones are a small group of chromones with two natural 2-styrylchromones, hormothamnione and 6-desmethoxyhormothamnione which are known for their anticancer properties. Many synthetic 2-styrylchromones have exhibited bioactivities such as antiallergic,^[6]

*Corresponding author: Email: bkkarale@yahoo.com

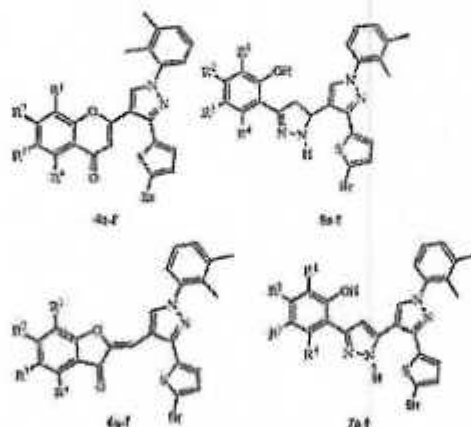
SYNTHESIS AND BIOLOGICAL SCREENING OF SOME NOVEL THIOPHENE ANCHORED HETEROCYCLES

Sadhana D. Mhaske¹, Sushama J. Takate², Rhushikesh N. Dhawale², Hemantkumar N. Akolkar¹,
 Pratibha V. Randhavane¹, Bhausaheb K. Karale^{1*}

¹Department of Chemistry, Radhabai Kale Mahila Mahavidyalaya, Ahmednagar, Maharashtra, India

²Department of Chemistry, New Arts, Commerce & Science College, Ahmednagar, Maharashtra, India

ABSTRACT A series of novel thiophene containing 2'-hydroxychalcones (**3a-f**) was synthesized by the Claisen-Schmidt condensation. Compounds **3a-f** on reaction with dimethyl sulfoxide/I₂ and Hg(OAc)₂ gave chromones (**4a-f**) and aurones (**6a-f**), respectively. Chalcones on reaction with hydrazine hydrate in ethanol gave pyrazolines (**5a-f**). Chromones on reaction with hydrazine hydrate in ethanol gave pyrazoles (**7a-f**). Newly synthesized compounds have been characterized by spectral methods and screened for their antibacterial and antifungal activity.



KEYWORDS Chromones, Aurones, Pyrazolines, Antibacterial activity.

INTRODUCTION

Heterocyclic compounds containing sulfur and nitrogen are the focus of interest among researchers because of their biological activities. Although numerous antibiotic agents are available, the antimicrobial resistance to available drugs produced a need for newer antimicrobial agents.^[1]

Chalcone is the major class of natural products possesses potential biological activities and is of great synthetic utility. The biological activities linked with them consist of anti-inflammatory,^[2] antimitotic,^[3] antituberculosis,^[4] antifungal,^[5] antimalarial,^[6] and antitumor^[7] properties.

Chromones are biologically active agents.^[8] Various biological properties recognized to chromones include

*Corresponding author: Email: bkkarale@yahoo.com



Effect of Cd-doping on the catalytic activity of ZnO nanoflakes in the synthesis of benzimidazoles

Sachin P. Kunde¹ · Kaluram G. Kanade^{1,2} · Bhausaheb K. Karale¹ · Hemantkumar N. Akolkar¹ · Pratibha V. Randhavane¹ · Santosh T. Shinde¹

Received: 15 May 2017 / Accepted: 12 July 2017
© Springer Science+Business Media B.V. 2017

Abstract A set of hierarchical Cd_xZn_{1-x}O nanoflakes ($x = 0, 0.01$ and 0.03) was prepared by the co-precipitation method using methanol as solvent. The prepared samples were characterized by UV-visible, X-ray diffraction, field emission scanning electron microscopy and energy-dispersive X-ray analysis techniques. The slight red shift in the Cd-doped ZnO confirms the doping of Cd²⁺ ions into ZnO lattices. The average crystallite size of Cd-doped ZnO nanoflakes was found to be in the range of 10–28 nm. The catalytic activity of Cd-ZnO nanoflakes in conjunction with microwave irradiation was investigated for reactions between *o*-phenylenediamine with aldehydes. It was found that the presence of Cd content in ZnO promotes rapid and selective synthesis of 2-substituted benzimidazoles under solvent-free conditions. The improvement of the catalytic activity by Cd doping is discussed in the light of the Brunauer–Emmet–Teller method. The catalyst could be reused up to five cycles without any significant loss of catalytic activity.

✉ Kaluram G. Kanade
kgkanade@yahoo.co.in

¹ PG and Research Centre, Radhabai Kale Mahila Mahavidyalaya, Ahmednagar 414 001, India

² PG and Research Centre, Yashwantrao Chavan Institute of Science, Satara 415 001, India

Principal
S.S.G.M. College
Kopergaon



Synthesis and Antimicrobial Activity of Some Novel Pyrazolones

S. D. MHASKE¹, S. J. TAKATE², R. N. DHAWALE²,
H. N. AKOLKAR¹, P. V. RANDHAVANE¹ and B. K. KARALE^{1*}

¹Department of Chemistry, Radhabai Kale Mahila Mahavidyalaya, Ahmednagar, 414001, India.

²Department of Chemistry, New Arts, Commerce & Science College, Ahmednagar, 414001, India.

*Corresponding author E-mail: bkkarale@yahoo.com

<http://dx.doi.org/10.13005/ojc/330330>

(Received: February 28, 2017; Accepted: April 16, 2017)

ABSTRACT

Knoevenagel condensation was carried out using heterocyclic aldehydes and pyrazolone derivatives. The structure elucidation of condensation products 1, 2, 3 and 4 was done using spectral methods like IR, ¹H NMR and mass spectrometry. These novel compounds were screened for antimicrobial activity.

Keywords: Pyrazolone, Knoevenagel condensation, Antimicrobial activity.

INTRODUCTION

Multi drug resistant micro-organisms and increased systemic as well as infectious diseases are the two major challenges for scientific world. Development of newer synthetic entities can offer a major solution for these problems.

Pyrazolone containing compounds are associated with antimicrobial¹, antiviral², antifungal³, antioxidant⁴, cytotoxic⁵, analgesic⁶, anti-inflammatory⁷ activities. Thiophene derivatives have found very important place in the field of drug discovery because of their potential biological activities⁸.

Thiazoles have found applications in drug development for treatment of HIV infections⁹, hypertension¹⁰ and as inhibitors of bacterial gyrase B¹¹. Moreover pyrazole containing compounds are reported to have good biological activities like antimicrobial¹², antifungal¹³, antiviral¹⁴, analgesic¹⁵, anti parasitic¹⁶ and antineoplastic¹⁷.

Pyridine nucleus is important nitrogen heterocycle which exhibits antimicrobial¹⁸, anticancer¹⁹ and antioxidant²⁰ activities. Imidazole derivatives have been shown to exhibit antibacterial²¹, antifungal and antioxidant²² activity.


Principal
S.S.G.M. College
Kopergaon

Optimization of Sensing Length of Modified Cladding Optical Fiber Sensor for Toxic gas sensing Application

Dr. K. P. Kakde*

*Department of Electronic Science, SSGM College Kopergaon,
Ahmednagar, 423601, Maharashtra, India*

Abstract

In this paper, work carried out on the development of the fiber optic chemical sensor is presented. The sensor is based on the change of optical power or optical intensity modulation induced within modified multimode optical fibers. The sensor design is based on modified cladding technique; the conducting polymer film of the polyaniline doped with (Acrylic acid) AA, and Hydrochloric acid HCl sensitive to ammonia gas with optimized synthesis parameters was coated on a small section of the uncladded fiber. The sensing properties of the optical fiber sensor for ammonia vapors at room temperature have been studied. These experimental results have demonstrated that a sensing length optimization is important parameter in the design of optical fiber sensor

Keywords: Fiber-optic chemical sensor, modified cladding, sensor technology, sensing length

INTRODUCTION

Optical fiber sensors are being used to sense the chemical species. The optical fiber sensors have found many application in chemical [1-5], biochemical and biomedical [6-8], and environmental sensing[9-10]. There are several advantages of optical fiber sensor in chemical sensing such as suitability for in-situ measurement, free from electro-magnetic interference and potential for distributed sensing. Optical fiber evanescent wave chemical sensor uses a light modulation, i.e. one of the light parameter changes according to the analytes presence. Organic conducting polymer such as polypyrrole, polyaniline, polythiophene shows a reversible change in their

* Corresponding Author e-mail: * kpkakde@yahoo.in

Chemical Synthesis and Characterization of Poly (aniline) Film doped with p-toluene sulphonic acid for Ammonia gas Sensing

Dr. K.P. Kakde*

*Department of Electronic Science,
Rayat Shikshan Sanstha's SSGM College Kopargaon,
Ahemadnagar- 423601, Maharashtra, India.*

Abstract

The Polyaniline films were synthesized by oxidative polymerization of aniline using ammonium peroxydisulfate on poly (methyl methacrylate) substrate in the presence of p-toluene sulphonic acid for the development of ammonia sensor. The synthesized polyaniline films were characterized by using UV-visible, FTIR, SEM and the electrical conductivity. The ammonia sensing behavior of the synthesized film was studied by indigenously developed computer controlled gas chamber. The synthesized PANI film shows excellent sensing behavior for 20, 100 and 250 ppm of ammonia.

Keywords: Polymer composite, polyaniline, chemical polymerization, p-toluene sulphonic acid, PMMA substrate, gas sensing.

1. INTRODUCTION

In recent years conducting polymers have attracted the interest of scientific and technological researchers. These materials have widespread applications, such as electronics, energy storage, chemical sensing etc. [1-6]. The interest of these materials has been recognized by the awarding of the Nobel Prize in Chemistry in 2000 to

*Corresponding Author e-mail: kpkakde@yahoo.in

Development of AVR Based Embedded System to Control Light Intensity of the Polyhouse

G. B. Bhagat¹, P. V. Mane Deshmukh^{*2}, S. K. Tilekar³ and S. A. Pawar⁴

¹Department of Electronics, KBP Mahavidyalaya, Pandharpur, MS, India

²Department of Electronics, Jayawantrao Sawant College of Commerce and Science, Pune, MS, India

³PG Department of Electronics, S. M. Mahavidyalaya, Akluj, MS, India

⁴Department of Electronics, Shri Shivaji Mahavidyalaya, Barshi, MS, India

ABSTRACT

In agricultural sector, the crop yield depends on various parameters such as light, temperature, humidity, water, soil moisture, pH and some other parameters. The light intensity is one of the most important parameter for the proper crop yield. The photosynthesis of crops depends upon the light intensity. As per the type of crop, it requires different amount of light. Low light intensity slows the crop growth whereas excessive light intensity can damage the crops. Therefore the crops should get sufficient light for its growth. It is possible to provide the controlled light intensity to the crops above certain value in the greenhouse instead of open environment by using an electronic system. Therefore, an attempt has been made to design an electronic system to control the light intensity in a greenhouse according to the requirement of various crops. The system is designed by using AVR Microcontroller ATmega32 and the light sensor BPW34. The analog signal resulted from data acquisition system is digitized by using on chip ADC of microcontroller ATmega32. To ensure the digital readout the LCD is interfaced with microcontroller. An embedded firmware is developed to control the light intensity of green house above optimum level. The incandescent lamps are employed to increase the light intensity in the greenhouse. The results regarding implementation of the system are interpreted in this paper.

Keywords: Light sensor, AVR Microcontroller, LCD display, Control unit.

I. INTRODUCTION

An electronic agricultural instrumentation plays a vital role in today's agriculture field for the measurement and control of many agricultural parameters. It makes tremendous revolutionary changes in the design and development of embedded devices. The literature survey shows that in case of polyhouse applications the measurement and control of various parameters such as humidity, temperature, soil moisture, light intensity, salinity and pH of water etc. have an important role in the growth of crop [1, 2]. Moreover, the modern agriculture can better yield any seasonal crop in any season due to controlling of environmental parameters of polyhouse by using electronic technology. Therefore, most of the researchers are showing more interest in designing of various embedded systems for

measurement and controlling of polyhouse parameters [3, 4, 5]. The light intensity is one of the essential parameter responsible for crop growth. When the sunlight falls on the plant, the photosynthesis process gets stimulated. Thus, plants generate the food required for their growth during day time. The precision agriculturists prefer the house of polythene paper for cultivation of the crops [6-9]. As a result of this, the needful components of suns radiation are penetrated through this paper and rest of the components gets absorbed into it. Thus, the polythene paper of Polyhouse filters the radiations of sun and reduces the light intensity. However, some of the typical crop requires more amount of light intensity. To fulfil this requirement, fluorescent lamps can be employed. Therefore, the light intensity within the greenhouse environment should be monitored and controlled.

Distribution and Diversity of Mosquito Larvae from Kopargaon Teshil, Dist. Ahmednagar (M.S.) India

Ramdas Gokul Pawar¹, Kisan Dnyandeo Thete^{2*}, Laxmikant Vitthalrao Shinde³

¹Associate Professor, Department of Zoology, S. S. G. M. College, Kopargaon, India

²Assistant Professor, Department of Zoology, Padmashree Vikhe Patil College, Pravaranagar, Tal- Rahata, Ahmednagar, India

³Associate Professor, Department of Zoology, J. E. S. College, Jalna, India

*Address for Correspondence: Dr. Kisan Dnyandeo Thete, Assistant Professor, Department of Zoology Padmashree Vikhe Patil College, Pravaranagar, Tal- Rahata, Dist- Ahmednagar, India

Received: 13 June 2017/Revised: 21 July 2017/Accepted: 28 August 2017

ABSTRACT- Mosquitoes are important groups of arthropods that inhabit freshwater habitats. The distribution pattern of adult mosquitoes is related to habitat preference of the immature stages. These habitats may be natural or man-made and temporary or permanent. Mosquitoes are carriers of number of diseases; mostly in the tropics, causing illness and death on a large scale. The survey was carried out during June 2015 to May 2016 from different ten villages of Kopargaon teshil (M.S.). Mosquito larvae were collected at different habitats, these are temporary and permanent, larvae collections were carried out regular month wise. A total 3627 mosquito larvae were collected of which were density of Culicinae were 90.21% and Anophelinae were 9.79%. During the study period seven mosquito species were identified, which are *Anopheles stephensi*, *Culex vishnui*, *C. pseudovishnui*, *C. quinquefasciatus*, *Aedes aegypti*, *A. albopictus* and *Armigeres subalbatus*. Their densities are *Anopheles stephensi* 9.79%, *C. vishnui* 13.51%, *Culex pseudovishnui* 10.34%, *Culex quinquefasciatus* 7.2%, *Aedes aegypti* 26.16%, *Aedes albopictus* 15.08% and *Armigeres subalbatus* 17.92% respectively. The mosquito larval fauna providing primary checklist of mosquito vector diversity from the study area.

Key-words- *Anopheles stephensi*, *Aedes aegypti*, *Aedes albopictus*, *Culex quinquefasciatus*, Density, Vector mosquitoes, Larval habitat

INTRODUCTION

The distribution pattern of adult mosquitoes is related to habitat preference of the immature stages. These habitats may be natural and man-made, temporary or permanent. More ever each species has specific needs and habitats [1]. The most important group of biting insects is mosquitoes. Their biting is a considerable nuisance in many parts of the world. More importantly, mosquitoes are carriers of number of diseases like malaria, dengue, chikungunya, elephantiasis etc, in study area, mostly in the tropics, causing illness and death on a large scale [2]. As per WHO, near about 500 million cases per year globally and in India with same. The world health organization estimates that 2000 million people at risk each year there are millions of infections and thousands of deaths [2]. Understanding the factors that regulate the size of mosquito populations is considered fundamental to the

ability to predict transmission rates and for vector population control [3]. Larval habitats are important determinants of adult distribution and abundance [4]. Recent days developmental activities, especially in urban area associated with the rapid growth of townships have accentuated the problem of vector borne diseases, but now a day it migrated towards a rural area. With regards to vector proliferation, human ecology is responsible for the creation of a mosquitogenic environment; man is directly or indirectly creating such a situation [5]. During the rainy season, agricultural areas depending on rain have provision of ideal aquatic habitats that support high density of diverse mosquito species including vectors of malaria, filariasis, dengue etc. Thus, there is a need to address the problem of mosquito borne diseases in this area in order to reduce the risk of massive public health problems and economic loss due to sickness. Now a day's Indian scenario of all regions are epidemic for mosquito borne diseases like malaria and dengue, which are regulated by climate. Dengue and chikungunya are the most common, widespread diseases in Marathwada and also Maharashtra since 2005-2006 [6]. The objective of this study was to describe mosquito aquatic habitats to determine larval abundance, density and habitat types of Kopargaon teshil. Larval control

Access this article online

Quick Response Code



Website:

www.ijlssr.com



DOI: 10.21276/ijlssr.2017.3.5.7

5

The Study of Various aspect of Green Marketing & Indian Companies Who Adopt Green Marketing

Dr. Gadhe Dattatraya Punjaji
S. S. G. M. College, Kopargaon,

Abstract

This paper argues that as people are become more concerned about the environment, the demands for green products also have increased. Green products usually define as products that are environmental friendly and can be recycled. However, different people may have different opinions towards the meaning of green products. People are purchasing more green products because they have start taking consideration for impacts that may cause to the environment. As a consequence, appearances of green products have created a new market known as green market. It is the market where selling and purchasing of green products taking place. Moreover, this paper also argues that whether it is an advantages or disadvantages for green products in market. Besides that, this paper also explains the reasons that consumer willingness to buy or not to buy green products. Furthermore, this paper then discusses the reasons that made the sellers willing to sell green products in market. Lastly, this paper also explains why all this aspects are important for green products because it may occur the situation where people misunderstanding the appearances of green products and misuse it. As a result, the purpose of appearances of green products in market may not achieve.

Introduction

Although environmental issues influence all human activities, few academic disciplines have integrated green issues into their literature. This is especially true of marketing. As society becomes more concerned with the natural environment, businesses have begun to modify their behavior in an attempt to address society's "new" concerns. Some businesses have been quick to accept concepts like environmental management systems and waste minimization, and have integrated environmental issues into all organizational activities. Some evidence of this is the development of journals such as "Business Strategy and the Environment" and "Greener Management International," which are specifically designed to disseminate research relating to business' environmental behavior.

Keywords- Green Marketing, Advantages, Green Market Practice.

2017-18
(45)

Dr. Gadhe Dattatray Punjabi (991-996)

E-COMMERCE: SOCIAL & ECONOMICAL IMPACT OF E-COMMERCE

Dr. Gadhe Dattatray Punjabi

S.S.G.College, Kopergaon

B. Introduction-

The revolution in computing and communications of the past few decades, indicate that technological progress and use of information technology will continue at a rapid pace. The Internet's growth and e-commerce has begun to create fundamental change in government, societies, and economics with social, economic and political implications. These advances present many significant opportunities but also are having wide-ranging effects across numerous domains of society, and for policy makers. Issues involve economic productivity, intellectual property rights, privacy protection, and affordability of and access to information, among other concern. Electronic commerce promises to be the momentum behind a new wave of economic growth. E-commerce has already improved business value by fundamentally changing the ways products are conceived, marketed, delivered, and supported. The relationship and interaction of various stakeholders such as customers, suppliers, strategic partners, agents, and distributors is entirely changed. On the positive side, e-commerce has been creating opportunities for individuals and businesses in the new economy. E-commerce is helping organizations to reduce transaction, sales, marketing, and advertising costs. E-commerce is also helping businesses to reach global markets efficiently 24 hours per day, seven days per week, 365 days per year. Many of the benefits come from improved consumer convenience, expanded choices, lower prices, and the opportunity for better interactions with partners, suppliers and targeted customers for service and relationships. E-commerce has also improved product promotion through mass-customization and one-to-one marketing. Adoption of new information technologies, particularly e-commerce, is expected to result.

C. Objectives of the study-

- 1) To Study the Concept of E-Commerce.
- 2) To know the positive & negative consequences of E-commerce.
- 3) To Analyze the Social & Economical Impact of E-commerce.

D. Hypothesis of the study-

- 1) E-commerce Travelled Positively in Economy with some negative footprints.
- 2) Society is becoming habitual with the Digital Economy(E-Commerce).

In the early days of the internet it was only used by those who could, not necessarily for a purpose, but to see what could be done. As the Internet's popularity grew, business's caught onto the potential market that the internet provided and the early adopters of e-commerce are now among some of the biggest e-commerce websites in the world, for example Amazon and eBay.

E. Advantages & Disadvantages-

There are both advantages and disadvantages to e-commerce for both the business and the customers. Bricks and mortar is a traditional method of going about commerce. You will have the costs of a building and the resources to run it. Also staff to manage & run the premises. With this the potential market is significantly lower than an online business. It is physically impossible to target China if your premises was situated in the UK. With e-commerce you get the benefit of being able to target the entire world and not just a specific area. This means there is a much higher chance of being able to sell your products/services as the potential market is far greater. This has an advantage for the consumer as well, the ability to potentially find products that may

Principal
S.S.G.M.College
Kopergaon

निवडणुकीतील दक्ष जागृत मतदार राजा

प्रा. डॉ. दत्तात्रेय पुंजाजी गाढे
सहसंघटक, अखिल भारतीय ग्राहक पंचायत, अहमदनगर.
प्रमुख, वाणिज्य विभाग,
एस.एस.जी.एम. कॉलेज, कोपरगांव.
मो. ८०८७५२४१००

आपल्या देशात वर्षभर कोठे न कोठे निवडणुकीचे वारे वहात असतात. या वा-याबरोबरच असंख्य आश्वासने, प्रलोभने जन्माला येत असतात. उदा. जेवणावळी, मोफत घरे, वीज, कांही किलो धान्य २०, ३०, ४० किलो धान्य, विद्यार्थ्यांना मोफत लॅपटॉप, गणवेश, बूट, सायकल, पंखा, मिक्सर, ग्राईंडर, मिनरल वॉटर, महिलांना बाळांतपणाचा भत्ता, सहा महिने बाळांतपणाची रजा, मंगळसूत्रासाठी काही ग्रॅम सोनं, ज्येष्ठाना मोफत पास, सवलतीच्या दरात केबल टी.व्ही., रंगीत टी.व्ही., विमा, भ्रमोस निवृत्ती वेतन, महिलांना विवाहासाठी कांही हजारत रक्कम, मोटारसायकल, सोन्याचे दागिने, आरक्षण, शेतकऱ्यांना पेन्शन, मोफत वीज, पाणी, कमी दराने कृषी कर्ज वगैरे. निवडणुकीच्या दिवशी किंवा निवडणुकीच्या अगोदर कांही रक्कम उदा.रू १००, २००, ५००, १०००, मतदारांना मत देण्यासाठी दिली जाते. पाच वर्षांचा कालावधी विचारात घेता त्याची किंमत प्रत्येक दिवसाला अनुक्रमे ०.०५, ०.१०, ०.२७, ०.५४ पैसे एवढी होते. आपणच आपली किंमत एवढ्या कमी किंमतीला केलेली असते. नाही का?

धनशक्तीच्या जोरावर निवडणुका जिंकणार वर्ग सध्या प्रभावी आहे. मते विकत घेता आली किंवा मतदारांचीही ती विकण्याची तयारी असली की मग लोकप्रतिनिधींना सामान्य जनतेच्या, मतदारांच्या प्रश्नावर काम करण्याची गरज नसते. मतदारही त्यांना विकासाचे कोणतेही काम सांगू शकत नाही. पाच वर्षांतून सुरूवातीला एकदा एवढा मोठा खर्च केला की उरलेल्या कालावधीत कैकपटींनी तो खर्च वसूल केला जातो. जनतेचे, देशापुढील, राज्यापुढील प्रश्नांचे गांभीर्य कमी आणि पैशाची उधळपट्टी (अनेक कोटी रूपये) अधिक असते.

निवडणूक व्यक्तिगत आरोपाभोवती न घोटाळता विकासाच्या मुद्यावर केंद्रीत व्हायला हवी. यासाठी मतदारांनी उमेदवारांवर दबाव वाढविण्याची आवश्यकता आहे. अन्यथा पुढील पाच वर्षे विकासाच्या नावाने ओरडण्याचा हक्क मतदार गमावून बसतील.

निवडणुकीत उमेदवार कोणत्याही पक्षाचे, गटाचे असोत, विकासाची तळमळ व दृष्टी असणा-या उमेदवारांनाच निवडून देणे सर्वांच्या हिताचे असते. निवडणुकीत मतदारांनी व्यक्तिगत संबंधाच्या चौईसकडे न बघता जबाबदारीच्या जाणीवेतून बघावे, त्यासाठी मतदारांनी सध्या मिळत असलेल्या तात्पुरत्या सन्मानाने हुरळून न जाता सार्वजनिक हिताचाच विचार केला पाहिजे. जाब विचारण्याचा हक्क शाबूत ठेवण्यासाठी स्वाभीमानाने मत देतांना त्यांना देऊ केलेल्या विविध प्रलोभनांचा त्याग करावा लागेल.

दर्जेदार शाळा, महाविद्यालये, वसतीगृहे, सुसज्ज हॉस्पिटल्स, खेळाची मैदाने (क्रिडा संकूल), बालेघान, बगीचा, उद्याने, ज्येष्ठ नागरीकांसाठी आधार केंद्रे, क्लब्स, स्पर्धा परीक्षा मार्गदर्शन केंद्रे, स्वच्छतागृहे वेळेत व पुरेशा दाबाने स्वच्छ पाणीपुरवठा, वीजपुरवठा, माहितीकेंद्रे, नोकरी मार्गदर्शन केंद्रे, अघावत वाहनतळ, बाजारतळ, उड्डाण पुले, अंडरग्राऊंड ड्रेनेज व्यवस्था, बायपास, उत्कृष्ट रस्ते, चालण्यासाठी फूटपाथ, पथदिवे, आधुनिक



A STUDY ON THE FUNCTIONING OF HOUSING LOAN DEPARTMENT OF SBI

Dr. Nighot B. B.

Department of Commerce, S.S.G.M.College,
 Kopargon.

ABSTRACT

Home loan is basic requirement of most of the people who wish to buy a house in the city. Almost all the commercial banks give home loans to the customers. SBI is a leading bank in disbursing housing loans to the customers in India. The present paper is a comparative study of various aspects of housing loan facilities of various banks operating in Navi Mumbai with special reference to State Bank of India (SBI). The present paper also focuses on various unique features of housing loan facility like processing fees, insurance, no guarantor etc. provided by SBI to attract more customers and their Debt management policy.

KEYWORDS: Housing loan, Debt Management, processing fees.

INTRODUCTION (SBI)

State Bank of India (SBI) is an Indian multinational, public sector banking and financial services company. It is owned by government of India and has its headquarters in Mumbai, Maharashtra. As of 2016-17,

it had assets of Rs.30.72 trillion (US\$460 billion) and more than 14,000 branches, including 191 foreign offices spread across 36 countries, making it the largest banking and financial services company in India by assets. State Bank of India has 20% market share in deposits and loans among Indian commercial banks. The company is ranked 232nd on the Fortune Global 500 list of the world's biggest corporations as of 2016.

The bank traces its origin in British India, through the Imperial Bank of India in 1806, of the Bank of Calcutta, making it the oldest commercial bank in the Indian subcontinent. Bank of Madras merged into the other two "Presidency Banks" in British India, Bank of Calcutta and Bank of Bombay, to form the Imperial Bank of India, which in turn became the State Bank of India in 1955. The Central Bank of India that is 'Reserve Bank of India' purchased 60% of the stake of Imperial Bank of India and renamed it as the State Bank of India in 1955. In 2008, the government took over the stake held by the Reserve Bank of India.

OBJECTIVES OF THE STUDY

- To gain knowledge of banking structure in India
- To study the organizational structure of SBI
- To understand the process of loan disbursement
- To compare the interest rate of SBI with other banks
- To study the debt management policy of SBI

RESEARCH METHODOLOGY

The research is based on- primary as well as secondary data. Primary data is collected from 100 people. 50 of them were SBI customers who have availed loan facility from SBI and remaining 50 are customers of other bank than SBI who have taken loan from other banks.

Primary data is also collected from various branches of SBI bank in Navi Mumbai

The secondary data is collected from various web sites.





292
2017
-18
46

Effective Communication and Co-operation for Development of Business

Dr. B. B. Nighot

Vice Principal, S. S. G. M. College,
Kopargoon

Abstract:

The new information and communication technologies (ICT) support the exchange of information and ideas not only between consumers but also between consumers and producers while the consumers are not only a channel for information but also a supplier for ideas and information. Digital technologies offer both a way to establish a dialogue and the convenience of co-operation between consumers and producers during the processes of developing, distribution, exchange and consumption. They create preconditions for the consumers to organize themselves in groups of citizens (Hermes 2009) and to share control over the access and the contents of the message. Structure of society including the producer-consumer relation cannot develop freely from the impact of the new ICT. The aim of this paper is to study the way communication technologies like Internet, TV, mobile devices and social networks affect the co-operation between consumers and producers.

Introduction:

Development of new communication technologies is on different levels around the world which determines the different possibilities for consumers to act as citizens. Thus we subscribe to Beynon-Davies' and Hill's opinion that increased usage of ICT in the private and public enterprise can be considered as potentially creating a "digital divide" between those who have access to technology and those who do not. For the purpose of surveying the differences in gaining access, calculating a "digital divide index" (DDIX) is offered, based on gender, age, education and income segmentation of citizens (Beynon-Davies and Hill 2007).

Internet Personal TV (IPTV) integrates the best between Internet and TV. Two-thirds of IPTV subscribers in the world are European. Personalized TV allows the producers to view statistics of consumers' behaviour when they are watching advertising, to choose target groups, to set limitation of advertise frequency, to view requests for more information, etc. The consumer chooses what and when to view. This way they can quickly multiply the effect of what has caught their attention. Digital TV implication changes the consumption framework.

The penetration of mobile TV is currently small for Europe but it is more advanced in Asia. The causes are the limited number of available channels on mobile TV networks, the debate over technological standards and the search for a good business model, etc. Mobile TV may be watched not only on mobile phones, but also on other portable devices.

Social Networks appear around 2002-2003 year to allow users to make personalized profiles and organize their friends' connections. They are centered on a person and his/her friends. (Examples: LinkedIn (US), Viadeo (Fr), Xing (G).) In 2004-2005 year they turned into advanced socializing tools such as social media sites. They allow multi-dimensional on-line connections between users.

Social networks are radically different from traditional media. They are private environments and require communication through relevant to users services and content. It is

GRT

ICT ADVANTAGES & DISADVANTAGES IN TEACHING & LEARNING PROCESS

Dr. Seema R. Chavan

Assistant Professor of Economics, Department of Economics,
R.B.NarayanraoBorawakeCollege, Shrirampur,Dist-Ahmednagar.



ABSTRACT

This paper mainly focused on teacher has to keep himself up-date, fresh and attentive in the process of teaching learning. In the first part of the paper focused on the definition of ICT then in the next part of paper researcher gives the uses of ICT's in teaching and learning. They also studied the Effectiveness of ICTs in Education. In the study researcher has studied advantages & disadvantages of the of ICT's teaching & learning Process.

Teaching , information communication technology.

KEYWORDS :ICT Advantages , Disadvantages in

INTRODUCTION :

21st century is primarily known as an era of information communication technology (ICT). Every sphere of human life is greatly influenced by it. One may notice the impact of ICT in medical science, law, humanities, industry, commerce, international relations, administration, defiance, education and many other sectors. Education system in 21st century cannot be isolated from ICT. Education, training, research and extension are major goals of higher education in our country. Learner is at the center in teaching learning process. In order to impart efferent more live, natural, informative an student centered, ICT has great significance. No doubt, traditional teaching learning methods and approaches have played good job in the previous decades. But taking into account the changing need of the time, only chalk, duster and black board are not sufficient enough to make students aware about the world around them.

Globalization privatization and liberalization have widened the horizons of our knowledge. Books are our friends guide and source of information. Besides, one has to refer other multimedia devices in 21st century to obtain knowledge. The role of teacher is also changing in this rapidly rowing world scenario from Provider of information to the facilitator of the knowledge. Teacher has to keep himself up-date, fresh and attentive in the process of teaching learning.

OBJECTIVE OF THE STUDY

- 1.To Study the definition of ICT.
- 2.To Study the most common uses of ICT in teaching and learning.
- 3.To Study the Effectiveness of ICTs in Education.
- 4.To Study the ICT'S Advantages & Disadvantages.

RESEARCH METHODOLOGY

The Study mainly based on secondary data which is collected from different sources like journals,


Principal
S.S.G.M.College
Kopergaon

View article



Dr. Sanjay Baburao
Sangale

ECONOMIC EVALUATION OF GREENHOUSE FOR ROSE CULTIVATION IN KOLHAPUR DISTRICT

Authors SB Sangale, PV Patil

Publication date 2018

Journal AGRICULTURAL TRANSFORMATION IN INDIA SINCE INDEPENDENCE

Pages 95

Publisher Lulu.com

Description Floriculture is a vibrant source of income. The 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. Adoption of agriculture technology by farmers with a maximum ceiling up to 4000 sq. mt. per beneficiary under National Horticulture Mission (NHM). Suitability of the comparative analysis of input/output cost (Rs.) for rose inside and outside of the greenhouse, analysis of economic viability, benefit cost ratio were calculated for Rose farming. Present paper explains the economic importance of rose greenhouse cultivation in Kolhapur district.

Scholar articles [ECONOMIC EVALUATION OF GREENHOUSE FOR ROSE CULTIVATION IN KOLHAPUR DISTRICT](#)
SB Sangale, PV Patil - AGRICULTURAL TRANSFORMATION IN INDIA SINCE ..., 2017
[Related articles](#)



'दलित साहित्य में सम्यक क्रांति की प्रेरणा : डॉ. बी.आर.अंबेडकर'

प्रा. कानडे राजाराम दादा

एस.एस.जी.एम. कॉलेज, कोपरगांव, जि. अहमदनगर

प्रस्तावना :-

डॉ. बी. आर. अंबेडकर जी ने भारतवर्ष की सामाजिक, आर्थिक, धार्मिक तथा राजनीतिक परिवेश का गहन अध्ययन करके दलितों के आत्मबल को जगाया है। उनमें मानव अस्मिता जगाने हेतु मानवमुक्ति के लिए अर्थात् दलितत्त्व से मुक्ति के लिए काफी प्रयास किया है। डॉ. अंबेडकर जी के व्यक्तित्व तथा कृतित्व का दलितों पर अमोघ प्रभाव होना स्वाभाविक प्रतीत होता है। दलित साहित्य की वैचारिक का आधार 'अंबेडकरी विचार' है जिसमें ना केवल दलित का हित ही नहीं बल्कि देशहित के लिए आवश्यक सम्यक क्रांति की पहल है। समाज, राजनीति, धर्म, अर्थ, विज्ञान, कृषि, जल कोई ऐसा क्षेत्र नहीं जिसमें डॉ. बी. आर. अंबेडकर जी ने विचार एवं कार्य न किया हो अर्थात् ये ही दलित चेतना तथा दलित साहित्य के प्रेरणा स्रोत है।

'दलित साहित्य' भारतीय वर्ण तथा जाति व्यवस्था के प्रति क्रांति का विगुल बनाने वाली दलितों की मर्यादित वेदना, विद्रोह, नकार तथा विज्ञान निष्ठा की ओर सबका ध्यान आकृष्ट करने वाली नई साहित्यधारा है। यह अंबेडकरी विचारों से प्रस्फुटित होकर दलित साहित्यकारों को उचित दिशा की ओर कूच कर रही एक ऐसा प्रकाश पुंज है जो अंधेरे में उतरकर गुमराह हुए भारतीयों को उजाले, सत्यप्रियता, मानवता की ओर आकृष्ट कर रहा है। लिहाजा 'दलित साहित्य' एक सम्यक परिवर्तन की धारा है जिसका मूलस्रोत डॉ. बी. आर. अंबेडकर जी है। इस बात को निम्नांकित आधार बिंदुओं की जरिए विशद किया है।



1.1 : सम्यक क्रांति के प्रेरक डॉ. अंबेडकर जी :-

हिंदू धर्म की वर्ण व्यवस्था ने गाँव की सीमा से बाहर रखे इस समाज का अनुभव विश्व कलुषा और वेदना से भरा हुआ था। ऐसे समाज को जागृत करते हुए उनके आत्मसम्मान को जगाने का कार्य डॉ. बी. आर. अंबेडकर जी ने किया है। उनकी क्रांति सब क्रांतियों में महान इसलिए है कि डॉ. अंबेडकर जी ने मूलतः, मूकसमाज को शिक्षा-संगठन तथा संघर्ष के मौलिक नारे का अपने कृतित्व के द्वारा परिचय देकर दलित साहित्यकारों को यथायोग्य प्रेरणा दी है। डॉ. बी. आर. अंबेडकर जी की आत्मकथा 'मी कसा झालो' से प्रेरणा लेकर मराठी दलित साहित्यकारों ने दलित साहित्य का सृजन किया है। "आज भारतीय व्यवस्था में जो परिवर्तन दिखाई दे रहा है, वह अपने आप नहीं आया है। बल्कि इसमें 'दलित आंदोलन और दलित साहित्य की महत्वपूर्ण भूमिका' है। अंबेडकरवाद के बगैर दलित साहित्य का कोई मतलब नहीं है। दलित साहित्य केवल दलितों के दर्दों का दस्तावेज नहीं बल्कि इस सनातनी कुव्यवस्था को बदलने का साहित्य है, अभियान है। इसलिए समाज क्रांति की दृष्टि से दलित साहित्य का बड़ा महत्त्व है।"¹

दलित साहित्य ने अमानवीय, अमानुष, गुलामी - दलितत्त्व या दासत्त्व को नकारा है तो मानवता, वैज्ञानिकता, शिक्षा-संगठन-संघर्ष, इन अंबेडकरी चेतना को स्वीकारा है। प्रा. दामोदर मोरे जी ने इस दृष्टि से अंबेडकरी क्रांति की चिंगारी को इन शब्दों में अभिव्यक्त किया है -

"हमारे दिल की धड़कन है जयभीम । हमारे कलेजे का टुकड़ा है, जयभीम।

तुम चाहो तो जयभीम क्रांति है, तुम चाहो तो जयभीम शांति है।

जयभीम इन्सानियत से महकती बाग है। तुम चाहो तो जयभीम न बुझनेवाली आग है।"²

डॉ. बी. आर. अंबेडकर जी ने विषम परिवेश का सामना करके अथक अध्ययन के बल पर अपने असरदार व्यक्तित्व में आत्मविश्वास, स्वाभिमान, प्रामाणिकता, कार्यमुश्तैदी एवं देशप्रेम फल्लवित किया है। 'अंबेडकरी लड़ाई की फलश्रुति' इस शोधलेख में ताराचंद्र खांडेकर जी की राय द्रष्टव्य है, "कुछ विद्वान बाबासाहेब अंबेडकर के नाम के साथ बुद्ध, फुले व कबीर इनका भी गिन्न करते हैं तो कुछ इन नामों की तरह डॉ. अंबेडकर के साथ आगरकर, लोकहितवादी, केशवसुत, मावर्स, चार्वाक इनके साथ नाता स्थापित करते हैं। मैं कई दफा यह विचार करता हूँ कि बाबासाहेब अंबेडकर यदि न होते तो दलित साहित्य का जन्म होता ? दलित साहित्य का जन्म होने के लिए डॉ. बाबासाहेब को एक सम्यक सांस्कृतिक क्रांति को जन्म देना पड़ा। वह सम्यक क्रांति बाबासाहेब ने न की होती तो दलित साहित्य अथवा आज के दलित साहित्यकार भी मशहूर न हुए होते।"³ इस उद्धरण से यह स्पष्ट होता है कि दलित साहित्य के बीनांकुर तथा सम्यक क्रांति के प्रेरणास्रोत है, 'डॉ. बी. आर. अंबेडकर जी'।

कन्हैयालाल माणिकलाल मुंशी के 'युधिष्ठिर' उपन्यास में प्रतिबिंबित धार्मिक एवं न्यायिक यथार्थता

शोध छात्र : देवकाते भागवत भगवान
मु.पो.निरावागज, तहसिल बागमती, जि.पुणे
इ-मेल bhagavat1683gmail.com

प्रस्तावना :

मनुष्य यह एक सामाजिक प्राणि है। वह समाज में रहकर अपना सर्वांगीण विकास करता रहता है। मानव का जन्म जब से हुआ है तब से निरंतर मानव एवं समाज का बहुआयामी विकास होता रहा है। समाज मानव को विविध विचारों में परिपूर्ण एवं संस्कारित बनाने के लिए उसकी मदद करता रहता है। इस प्रकृति में मानव की संख्या भी बढ़ती गई। व्यक्ति एवं समाज का अनेक गुठों में बँटवारा हो गया। इसी कारण व्यक्ति की पहचान भी बहुआयामी बनी। इस बहुआयामीत्व के कारण कुछ जगह सकारात्मकता के विचार बढ़ने लगे तो कुछ जगह नकारात्मक विचारों ने भी अपना अस्तित्व समाज में बनाए रखा। समाज में की नकारात्मकता दूर करने के लिए समाज में वात्सल्य, आदर, प्रेम तथा सगतामूलक दृष्टि और संवेदनशीलता आदि विचारों की जरूरत है। इसलिए प्रत्येक मानव ने अपने धर्म के अनुसार योग्य आचरण करना जरूरी है।

भारतीय संस्कृति में अर्थ, धर्म, कर्म और मोक्ष इन पुरुषार्थों का बड़ा महत्त्व है। समाज में स्थित प्रत्येक व्यक्ति ने अपने कर्म योग्य विचारणा से करना जरूरी है। कर्म और अर्थ इन पुरुषार्थों का पालन 'धर्म' इस संज्ञा पर आधारित है। धर्म का संबंध मानव के आंतराहय मन के व्यवहार से स्पष्ट होता है। जिसके माध्यम से मनुष्य कर्तव्य पालन के पथ पर प्रवृत्त होकर आनंदोपलब्धि की दिशा में अग्रसर होता है। जिससे इस लोक में अदभूत हो तथा परलोक में मोक्ष प्राप्ति हो उसे 'धर्म' कहते हैं। धर्म यह सार्वभौम संकल्पना है। इस संकल्पना का योग्य पालन करने में ही सजीव की भलाई है। इसके योग्य पालन के कारण ही अहिंसक, संतुलित एवं समृद्ध समाज की स्थापना हो सकती है। जिसके कारण मानव-मानव को समानता एवं न्याय की दृष्टि से एक दुसरे को देखेगा। धर्म का योग्य आचरण होने से सुष्टि के सब सजिवों को योग्य न्याय मिलेगा। समाज में आदर, प्रेम, वात्सल्य, अहिंसा, आदि भाशाओं को विकसित करना हो तो धर्म और न्याय इन तत्त्वों का योग्य पालन होना जरूरी है। के.एम. मुंशीजी ने अपने 'युधिष्ठिर' इस उपन्यास के जरिए संपूर्ण मानव जाति को धर्म और न्याय का आचरण किस प्रकार करना है। इसका अंकन किया है। धर्म की परिभाषा देते हुए डॉ. वाय. पी. आनंदजी ने अपने आलेख में लिखा है "जो सब जीवों का सदा सदृढ़ है, मन, वाणी और क्रिया द्वारा सबका हित में लगा हो वह ही धर्म समझता है।" १ इससे यह प्रतीत होता है कि मनुष्य ने आज सब जीवों के हित का विचार करना चाहिए। यह चाहते वक्त यह भाव वाणी एवं स्वयं की कृति में होना जरूरी है। ऐसा वर्तन ही धर्म माना जाता है।

योग्य धर्म आचरण के कारण समाज में या विश्व में सुख शांति छा सकती है। इसलिए धर्म का योग्य आचरण करना जरूरी है। इसके बारे में के. एम्. मुंशीजी अपने 'युधिष्ठिर' इस उपन्यास में अंकित करते हुए भीम इस पात्र के द्वारा कहते हैं कि "धर्म की रक्षा करनी हो तो अधर्मियों का नाश करना चाहिए और कुछ व्यंग पुट देते हुए भीम युधिष्ठिर से कहता है कि आपका तो धर्म और शांति चाहिए ना बडे भैया ! इसके लिए कोई भी मूल्य क्यों न चुकाना पडे शांति के लिए आप तो हमे और इंद्रप्रस्थ को भी दुर्योधन के हवाले कर दो" २ इस संदर्भ से यह ज्ञात होता है की आर्यावत में कौरवों और पांडवों की सत्ता संघर्षों के कारण अराजकता मच गई है। इस अराजकता को दूर करना और अपने राज्य में सुख शांति लाना यह युवराज का आद्य कर्तव्य है। या वह उसका धर्म है। इसलिए युधिष्ठिर आर्यावत में शांति लाने के लिए अपना राज्य दुर्योधन को देने के लिए तयार हो जाते हैं इसका चित्रण उपर्युक्त संदर्भ से समझ में आता है। धर्म का रचना चुनने के बाद जब उस पर चलते हैं तो कुछ भी त्याग देने की प्रवृत्ति निर्माण

नामदेव ढसाळ: बाधित कविता

भारती जिजाराम कदम
संशोधक विद्यार्थीनी (पीएच. डी.)
मराठी विभाग,
सावित्रीबाई फुले पुणे विद्यापीठ, गणेशखिंड, पुणे.

डॉ.बाबासाहेब शेंडगे
संशोधन मार्गदर्शक,
मराठी विभाग प्रमुख,
रयत शिक्षण संस्थेचे, महात्मा फुले महाविद्यालय, पिंपरी, पुणे. ४११०१७

कविता ही मानवी मनातील भावनेचा स्वाभाविक अविष्कार होय. इतिहासाच्या सुरुवातीपासून माणसाने सुख-दुःख सहजपणे व समर्थपणे व्यक्त करण्याचे महत्त्वपूर्ण काम कवितेने केले. त्यामुळे कविता सगळ्यांना आवडू लागली कारण कवितेमधून भावनांना वाट मिळू लागल्याने वाचकांना ती जास्तच आपली वाटू लागली.

दलित साहित्यातील महत्त्वाचा आणि प्रभावी वाङ्मय प्रकार म्हणजे 'दलित कविता' आहे. दलित लेखकांनी आपले दुःख थोडक्या शब्दात मार्मिकपणे स्पष्ट करण्यासाठी कवितेसारख्या वाचकांच्या डोळ्यात चटकन भरणारा वाङ्मय प्रकार निवडून मराठी काव्य वाङ्मयाला समृद्ध केले. दलित साहित्याला प्रतिष्ठा मिळवून दिली.

दलितांच्या दुःखाचा पहिला हुंकार हा कवितेतून प्रकट झाला. प्रस्थापित मराठी कवितेला गावकुसाबाहेरचे जीवन दिसले नाही. दलितांची दुःखे जाणवली नाहीत आणि म्हणून दलित कवी जागा झाला. आपली दुःखे त्यांनी वेशीवर टांगली. सोवळेपणा, ईश्वरनिष्ठा, प्रतिष्ठा, लाज लज्जा वाजूला सारून दलित कवी आपली दुःखे परखडपणे मांडू लागला. आंबेडकरांचे विचार खेडांपाडी पोहचवू लागला. त्यामध्ये सर्वश्री नामदेव ढसाळ यांनी आपल्या विद्रोही कवितेतून दलित कविता समृद्ध करण्याचा प्रयत्न केला आहे.

नामदेव ढसाळ यांची कविता प्रारंभापासून अखेरपर्यंत वेगवेगळ्या दिशेने वाटचाल करतांना दिसते. नामदेव ढसाळांची 'गोलपिठा' (१९७२) या संग्रहातील कविता ही एक सुन्न करणारा अनुभव देऊन जाणारी कविता आहे. शिष्टसम्मत मराठी काव्यभिरूचीला जबरदस्त धक्के देऊन औचित्यविचाराची ऐशी-तैशी करणाऱ्या या कवितेने मराठी वाङ्मयात स्वतःचे स्वतंत्र अस्तित्व निर्माण केले आहे. या शोषित-पीडित जनांच्या दुःख दैन्याच्या मुळांचा त्यांची कविता वेध घेते व त्यावर निष्ठुर घाव घालते. अत्यंत विद्रोही भाषा आणि रक्त उसळून टाकेन अशी त्यांची शब्दरचना, भाषाशैली कवितेच्या माध्यमातून आपल्याला पाहायला मिळते. ढसाळांच्या कवितेमध्ये अन्याय, अत्याचार या बरोबरच विद्रोह, अन्यायाविषयी पेढून उठण्याची जिद्द आणि व्यवस्थेला छेद घालण्याचा प्रयत्न केलेला दिसतो.

नामदेव ढसाळ यांची कविता आंबेडकरवादी क्रांतिकारी बाण्याची कविता आहे. ती समूह व समूहमनाची कविता आहे. ढसाळांच्या कवितेला समाजपरिवर्तन घडवून आणून नवसमाज निर्मितीची आस आहे. मात्र त्यांच्या कवितेमध्ये रागडेपणा आणि अश्लील शब्द यामुळे काही प्रमाणात ढसाळांच्या कवितांना पूर्णपणे खऱ्या अर्थाने न्याय मिळालेला नाही कारण समाज त्यांना मान्यताच

प्रसारमाध्यमांचे बाजारीकरण

डॉ. शीला दत्तात्रेय गाडे

मराठी विभाग प्रमुख., एस.एस.जी.एम.कॉलेज,

कोपरगाव, ता. कोपरगाव, जि.अहमदनगर,

भ्रमणध्वनी :- ८०८७८९९१२५

ई-मेल - sheelagadhe10@yahoo.com

प्रस्तावना :-

प्रसारमाध्यमांचे बदलते स्वरूप बघतांना, आदीम काळापासून विविध रुपात मानव प्रसार माध्यमांचा वापर करित होता. त्यात पुराणकाळातील संदर्भानुसार सर्वात आधी प्रसाराचे काम नारदमुनींनी केले असे म्हटले तर वावगे ठरणार नाही. त्यानंतर आकाशवाणी देव-देवतांच्या रुपाने होत होत्या, ही कवी कल्पना मानली तरी हे शब्द प्राचीनकाळात अस्तित्वात होते हे नाकारता येणार नाही. गुरुकुल पध्दतीत प्रसाराचे काम ऋषीमुनी करित होते. त्यानंतर अनेक संत-महंतांनी समाजाचे प्रबोधन-प्रसाराचे काम केलेले दिसून येते. अनेक समाजसुधारकांनी आपल्या नवविचारांचा प्रभाव समाजावर टांकण्याचा प्रयत्न केला. इंग्रज पूर्व कालखंडात वर्तमानपत्रे, नियतकालिकांनी आपली महत्त्वाची भूमिका पार पाडली. त्यात बाळशास्त्री जांभेकरांनी ६ जानेवाी १८३२ मध्ये दर्पण नावाचे पहिले नियतकालिक मराठी आणि इंग्रजी भाषेत काढले. दर्पणनंतर पंधरा वर्षांनी केसरी या वृत्तपत्राची सुरुवात झाली. त्यानंतर सुधारक, काळ, भाला यासारखी आक्रमक व समाजप्रबोधन करणारी वृत्तपत्रे जन्माला आली आणि इंग्रज राजवटीला त्यांनी हादरवून टाकले. महत्त्वाचे म्हणजे ही सर्व वृत्तपत्रे मराठी या एका प्रादेशिक भाषेत निघत असतांनाही ही ब्रिटिशांना त्यांची भीती वाटत होती, त्यांचा दरारा वाटत होता.

प्रसारमाध्यमांचे बदलते स्वरूप :-

कीर्तन, प्रवचन, मौखिक परंपरा यातून पूर्वीच्या काळात प्रसार आणि प्रचार, समाजप्रबोधन, जागृती इत्यादी कार्य या माध्यमांनी केलेले दिसून येते. आज मात्र या प्रसारमाध्यमांमध्ये अमुलाग्र बदल झालेला दिसून येतो. वृत्तपत्र, नभोवाणी आकाशवाणी, दूरदर्शन ही तीन प्रभावी प्रसारमाध्यमे वेगाने पुढे आली. दूरदर्शनचा प्रभाव तर जनमतावर एक प्रकारे भुरळ पाडत गेलेला दिसून येतो. त्यात भर की काय इलेक्ट्रॉनिक मिडीयाने तर आजच्या तरुण पिढीला नक्कीच वेड लावलेले दिसून येते. उदा. जी मेल, फेसबुक, व्हाट्सअप, ई-मेल, व्बिटर इत्यादी.

प्रसारमाध्यमांची जबाबदारी :-

प्रसारमाध्यमे तीन प्रकारांच्या भूमिकेतून काम करतांना साधारणतः दिसते. त्यात मनोरंजन, शिक्षण आणि समाजात घडणा-या घडामोडींचा पाठपुरावा करणे. खरे तर पूर्वी ही सर्व प्रसारमाध्यमे आपापल्या जबाबदा-या खुबीने, प्रामाणिकपणे पार पाडतांना दिसत होत्या. उदा. माहितीपट दाखविणे, कृषीविषयक माहिती, विज्ञानावर आधारित माहिती, शिक्षणातील बदल इत्यादी. मूल्यशिक्षणावर भर देणारे कार्यक्रम दाखविले जात होते. सुरभिसारखा कार्यक्रम लोकांच्या मनोरंजनाबरोबर ज्ञानात भर टाकणारा होता. थोडक्यात वृत्तपत्र, दूरदर्शन यांनी जनतेच्या समस्या, प्रश्न तत्कालीन परिस्थितीत गाभीयांने बघावे अशी आमची आग्रही भूमिका घेवून सल्ला देणा-या वडील-भावाची भूमिका पार पाडण्याचे काम केले. अलीकडच्या काळात मात्र अनेक लोकप्रतिनिधींनी, उद्योगसमुहांनी स्वतःचीच प्रसारमाध्यमे खास करून वृत्तपत्रे काढून आपणच कसे चांगले काम करित आहोत, करणार आहोत असे भासवायला सुरुवात केली, आणि इतर माध्यमांनी खोट्या, भूलविणा-या जाहिराती दाखवून

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal

Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)

Special Issue 21 : _____

UGC Approved No. 40705 & 44117

ISSN :

2348-7143

December

2017

78 Website - www.researchjourney.net Email -

researchjourney2014gmail.com

एक अजरामर अनुवाद - एक हातेते । कार्हरर
प्रा.डॉ.षीला दत्तात्रयेये गाढे,
मराठी विभाग प्रमुख,
एस.एस.जी.एम.कॉलेज, कोपरगांव, जि.अहमदनगरमोबाईल
नं.8087899125

'एक होता कार्हर' ही वीणा गवाणकर यांनी अनुवादित केलेली अतिषय भारावून टाकणारजीवाची घालमले करणारी साहित्यकृती आहे. एका निग्रा' पास्त्रज्ञाच मूळ चरित्र षर्ली ग्रेयम आणि जॉर्जलिप्स्कम यांनी जॉर्ज वॉशिंग्टन कार्वर या नावाने इंग्रजी भाशेत लिहिले. ही अजरामरसाहित्यकृती मराठीभाशकांना वाचायला मिळाली. याचे सर्व श्रेय वीणा गवाणकरांना जाते. त्या आपल्या मनोगतात म्हणतात,

'आपण आजवर किती वाचलय या भ्रमाचा निचरा झाला. ही ओळख झाली नसती तर केवढीपोकळीराहून गले' असती ! काही नवीन, अपूर्व गवसल' हया आनंदात तरंगत होत मी'जगातील सर्व भाशांमधीलदर्जदे'र साहित्य भाशांतर कौषल्याने' सर्वापर्यंत (वाचक)जाण्यास फार मोठी मदत झाली आहे.'एक होता कार्हर' वाचतांना संवेदनशील वाचकाच्या डोळ्यात पाणी आल्याषिवाय राहत नाहीतसेच

जॉर्जच्या आयुश्यातील धडपड, जिद्द, चिकाटी, अतोनात कश्ट करण्याची वृत्ती वाचकाला बरेच काही

सांगून जाते. प्रतिकूलतवे र मात कषी करावी? तर जॉर्जपन्न'ण, असे' उत्तर आपल्या मनात येऊन जाते. परंतू

प्रत्यक्ष कृतीत आणणे' किती कठीण आहे' याचे भानही येते. मग मात्र आपल्यालाच आपली लाज वाटते.

आयुश्यात सर्वकाही मिळवणाऱ्या, सुखोपभोग घेणाऱ्यांना जरूर अषी साहित्यकृती वाचायला द्यावी. सर्व

मिळून आयुश्यात रडणारी माणसे' खूप भटे तात. अषांना सांगावे' वाटते' की, बाबांना' जॉर्ज कार्हर वाचातरूप

ांना दिषाहीन करणाऱ्या आमच्या समाजव्यवस्थेतील राजकारण्यांनी तर जरूर कार्हरचे चरित्र

1

Role of Women in Agriculture

Dr. Gadhe Sheela Dattatraya

S. S. G. M. College, Kopargaon, Dist- Ahmednagar.

Abstract

India has a predominantly agrarian economy. 70% of her population is rural; of those households, 60% engage in agriculture as their main source of income. It has always been India's most important economic sector. In this important agricultural sector woman plays a vital role, because it is largely a household enterprise. Women in India are major producers of food in terms of value, volume and number of hours worked. Nearly 63 percent of all economically active men are engaged in agriculture as compared to 78 per cent of women. Almost 50 percent of rural female workers are classified as agricultural labourers and 37% as cultivators. About 70 percent of farm work was performed by women. It is observed that women play a significant and crucial role in agricultural development and allied fields including, main crop production, livestock production, horticulture, post-harvesting operations, agro/social forestry, fishing etc.

Key words: Women, gender, agriculture, labour force, employment, production, time-use, demographics, market access

Introduction

The international development community has recognized that agriculture is an engine of growth and poverty reduction in countries where it is the main occupation of the poor.³ Women make essential contributions to the agricultural and rural economies in all developing countries. Their roles vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector. Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes. Many of these activities are not defined as "economically active employment" in national accounts but they are essential to the wellbeing of rural households. This paper contributes to the gender debate in agriculture by assessing the empirical evidence in three areas that has received

भारुडाची वाटचाल

डॉ. शीला दत्तात्रेय गाडे

मराठी विभाग प्रमुख., एस.एस.जी.एम.कॉलेज,
कोपरगाव, ता. कोपरगाव, जि.अ.नगर,
भ्रमणध्वनी :- 8087899125
ई-मेल - sheelagadhe10@yahoo.com

'भारुड' या शब्दाची व्युत्पत्ती : महाराष्ट्र भाषेचा कोश, मोल्सवर्थचा शब्दकोश, बाबा पदमनजी शब्दकोश, हंसकोश यात 'बहुरुड' म्हणजे 'भारुड'. ज्यात नृत्य व नाटयानुभव व्यक्त केला जातो. म्हणून कीर्तन करणारा गोसावी असे त्याला म्हटले जाते. ल.रा.पांगारकर म्हणतात, बहुरुड म्हणजे लोकप्रिय. भार म्हणजे जनसमुदाय. जनसमुदायावर आरुढ होणारा. 'भा' म्हणजे 'प्रतिभा' तिच्यावर आरुढ ते भारुड. भारुडाचे द्विमुखी/द्विविध स्वरूप लक्षात घेवून 'भिरुंड' किंवा 'भारुंड' या द्विमुखी पक्ष्याच्या नावाशी त्याचा संबंध जोडला जातो. बहुदा भारुडाला दोन अर्थ असतात. एक वाच्यार्थ (व्यावहारिक) दुसरा लक्ष्यार्थ (पारमार्थिक) होय. भारुड गायन ही सौंगसंपादणी असल्याने त्याचे नाटयीकरण श्रोत्यांना आकर्षित करते.

भारुड म्हणजे गारुडगीत (चमत्कृतीजन्य अद्भूत काव्य). इ.स.1909 मध्ये गोविंद मोरोबा यांनी 'भारुड' शब्दाचा पहिला प्रयोग त्यांच्या ग्रंथात केला आहे. मात्र फार पूर्वी मौखिक रूपात 'भारुड' असले पाहिजे. मात्र 19 व्या शतकाच्या प्रारंभी 'भारुड' हा शब्द सदृश काव्याच्या संदर्भात लोकांच्या बोलण्यात प्रचलित होता असे म्हणता येईल. भारुडाला सांप्रदायिक लोकांनी, काही भक्त वर्गाने, तसेच काही संतवाङ्मयाच्या प्रेमींनी काही पर्यायी शब्द वापरलेले दिसतात. त्याची विभागणी पुढीलप्रमाणे सांगता येईल. संस्कृत रूपकातील नाट्य व रूपकातील नृत्याचा समावेश भारुडात झाला. म्हणून त्याच्यात नाटयाधिष्ठितता दिसून येते. तसेच वीर, शैव, लिंगायत पंथांच्या लोकांनी भारुडाला गबाळ अशी संज्ञा वापरली. त्यात विविध विषय आणि अभिव्यक्तीच्या विविध त-हा पाहून बहुदा हा शब्द वापरला असावा. भारुडावर अभंग, ओवी, पद यांचीच नावे लिहिलेली असतात. असे अभंगगाथ्यावरून दिसून येते. भारुडाची रचना ही पदस्वरूपाची अधिक असते म्हणून गेयता हे भारुडाचे वैशिष्ट्यपूर्ण आणि महत्वाचे अंग आहे. भारुडासाठी काही आवश्यक गुण लागतात. त्यात आध्यात्मिक प्रेरणा, रूपकांची योजना, नाटयात्मकता आणि उपदेश.

मुकुंदराज हे पहिले भारुडाकार म्हटले पाहिजे. गोरखनाथांच्या 'गाई'वरील भारुड सर्वात जुने म्हणजे 11 व्या शतकाच्या उत्तरार्धातील आहे. ज्ञानेश्वर, जोगा परमानंद, मुक्ताबाई, नरहरी सोनार, जनाबाई, सेना न्हावी, गोरा कुंभार यांनीही भारुडे लिहिली. तसेच महानुभावांच्या लीळा चरित्रात भारुडे दिसून येतात. थोडक्यात सहाव्या शतकापासून उगम पावलेल्या भारुडाची वाटचाल अकराव्या शतकात झाली. तेराव्या-चौदाव्या शतकात भारुडांना उर्जितावस्था आली. पंधराव्या शतकात मात्र एकाही मराठी संताचे एकही भारुड दिसत नाही. मात्र सोळाव्या शतकात भारुडांच्या विस्ताराला बहर आला. याचे सर्व श्रेय एकनाथांकडे जाते.

भारुडाविषयी व्यवहारात काही गैरसमज आहेत. उदा. अर्थ थोडा आणि पात्हाळ जास्त अशा बोलण्याला आपण 'भारुड' असा शब्द वापरला जातो. तसेच लांबच लांब हकीकत कोणी सांगायला लागला तर आपण त्याला म्हणतो की, बस कर तुझे भारुड किंवा शब्दांचा ळंटाळवाणा वाद भारुड या नावाने ओळखला जातो. परंतु

Dr. Gadhe Sheela Dattatray (1039-1042)

MICRO FINANCE

Dr. Gadhe Sheela Dattatray

Head Marathi Department, S.S.G.M. College, Kopargaon, Dist-Ahmednagar (MS), India.

INTRODUCTION:

In early 1980's, the existing banking policies, procedures and systems were not suited to meet the requirements of poor. For borrowings poor people usually resort to unorganised sector, NABARD recommended that alternative policies, systems and procedures should be put in use to save the poor from the clutches of moneylenders. Thus microfinance was introduced in banking sector. Microfinance is a programme which includes a broad range of financial services such as deposits, loans, payment services, money transfers, insurance, savings, micro-credit etc. to support the poor people and low income individuals. Mohammed Yunus was awarded the Noble Prize for application of the concept of microfinance, with setting up of the Grameen Bank in Bangladesh.

C.OBJECTIVES OF THE STUDY:

1. To understand the concept of microfinance, evolution and delivery models of microfinance in India.
2. To examine the role and importance of microfinance in India.
3. To examine the current status and growth of microfinance in India.

D. Concept of Microfinance: The concept of microfinance was created by Professor Muhammad Yunus founder of Grameen bank in Bangladesh and noble price winner in 2006. Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to the poor and low income households and their microenterprises. Microfinance is defined as Financial Services (savings, insurance, fund, credit etc.) provided to poor and low income clients so as to help them raise their income, thereby improving their standard of living. The Asian Development Bank (2000) defines microfinance as the provision of broad range of services such as savings, deposits, loans, payment services, money transfers and insurance to poor and low income households and their micro-enterprises. This definition of microfinance is not restricted to the below poverty line people but it includes low income households also. The taskforce on Supportive Policy and Regulatory Framework for Microfinance

E. Evolution of Microfinance in India: The evolution of Indian Microfinance sector can be broadly divided into four distinct phases:

Phase 1: The Cooperative Movement (1900-1960) During this phase, credit cooperatives were vehicles to extend subsidized credit to villages under government sponsorship.

Phase 2: Subsidized Social Banking (1960s - 1990) With failure of cooperatives, the government focused on measures such as nationalization of Banks, expansion of rural branch networks, establishment of Regional Rural Banks (RRBs) and the setting up of apex institutions such as the National Bank for Agriculture and Rural Development (NABARD) and the Small Scale Industries Development Bank of India (SIDBI), including initiation of a government sponsored Integrated Rural Development Programme (IRDP). While these steps led to reaching a large population, the period was characterized by large-scale misuse of credit, creating a negative perception about the credibility of micro borrowers among bankers, thus further hindering access to banking services for the low-income people.

Phase 3: SHG-Bank Linkage Program and Growth of NGO-MFIs (1990 - 2000) The failure of subsidized social banking triggered a paradigm shift in delivery of rural credit with NABARD initiating

संतांचे सामाजिक, सांस्कृतिक आणि वाङ्मयीन कार्य

डॉ. शीला दत्तात्रेय गाडे

मराठी विभाग प्रमुख., एस.एस.जी.एम.कॉलेज,

कोपरगाव, ता. कोपरगाव, जि.अ.नगर,

भ्रमणध्वनी :- 8087899125

ई-मेल - sheelagadhe10@yahoo.com

महाराष्ट्राच्या सामाजिक, सांस्कृतिक आणि वाङ्मयीन क्षेत्रात संत महंतांनी महत्वाची भर घातली. इतिहासातील यादवकाळ हा मध्ययुगीन मराठी साहित्याचा उगमकाळ तसाच सुवर्णकाळही म्हणावा असा कालखंड आहे. या काळात महाराष्ट्रात नाथ, वारकरी, महानुभाव, लिंगायत इत्यादी धार्मिक संप्रदायांचा उगम झाला. महाराष्ट्राच्या सांस्कृतिक वैभवात अनेक सत्पुरुषांनी मोलाची भर घातली.

संत नामदेव 1270 ते 1350 -

वारकरी संप्रदायातील श्रेष्ठ संतकवी. त्यांचे कर्तृत्व महाराष्ट्राच्या सीमा ओलांडून उत्तर वायव्य हिंदुस्थानापर्यंत आपला ठसा उमटवून गेले. महत्वाचे म्हणजे नामदेवांनी भाषा, प्रांत, धर्म, जातपात या पलिकडे जावून जीवनाचा विचार केला. त्यामुळे नामदेव फक्त महाराष्ट्रापुरते मर्यादित न राहता पंजाबातील शिखांनाही तितकेच महत्वाचे वाटतात. प्रतिकूल राजकीय, सामाजिक आणि धार्मिक वातावरणात मराठी आणि अन्य प्रादेशिक जीवनाला नवं वळण लावण्याचं कार्य ज्या काही थोर संतांनी केले त्यांचे अग्रणी संत नामदेव आहेत.

मध्ययुगीन सामान्यांचे जीवन प्रामुख्याने धर्मप्रधान होते, पण पुरोहितांच्या वर्चस्वामुळे त्यात कर्मकांड आणि विधीनिषेध यांचे स्तोम फार माजलेलं होतं. वर्णाश्रमामुळे उच्चवर्णीयांची मक्तेदारी समाजात निर्माण झाली होती. धार्मिक संस्कार तेच करायचे. ज्ञान अध्ययन, अध्यापन, संस्कृत ज्ञानग्रंथ, इतकंच नव्हे, तर मंदिर दर्शनाचा अधिकारही अंत्यजांना नव्हता. हळूहळू रुढीनाच धर्माचे महत्त्व प्राप्त होत गेले. त्यामुळे समाजातील अज्ञान आणि अंधश्रद्धा वाढल्या. अद्वैताचं ज्ञान आणि परब्रम्हाची सगुण रुपात आराधना असा समन्वयशील भागवतधर्मीय परंपरेचा समर्थ आणि समृद्ध वारसा घेवून नामदेव महाराष्ट्रात आणि महाराष्ट्राबाहेर वावरले. या अर्थाने ते वैष्णवांचे कुलपुरुष ठरतात. उत्तर भारतीय संत परंपरेचे प्रमुख कवी संत कबीर, व्दादूदयाल, मलूकदास, पटलूदास इ. संत नामदेवांचा आदरपूर्वक उल्लेख करतात. गुरुनानकदेव व त्यांच्या शिष्य परंपरेने तर संत नामदेवांविषयीच्या प्रीतीमुळे त्यांना आपल्या पूर्वपरंपरेतच सामावून घेतलं आहे.

जात कोणती? यावर जीवनातील प्रत्येक व्यवहार अवलंबून होता असे भयावह चित्र त्याकाळी सर्वत्र होते. भेदाभेदांनी विदीर्ण झालेल्या भारतीय समाजाच्या दुःखाचं मूळच त्यांनी अशा रीतीने हेरले होते. विसोबा खेचरांना गुरु करणारे नामदेव म्हणूनच कदाचित रडत रडत पंढरीच्या महाद्वारी उभं राहूनच स्वतः पांडुरंगाचं दर्शन घेत असतं. दासी जनार्जला प्रतिष्ठेने वागवत. संत चोरवोबांच्या परिवारावर जेव्हा संकट आली तेव्हा नामदेव त्यांच्यासाठी मंगळवेढ्याला धावले. त्यांच्या अस्थी त्यांनी स्वतः आणल्या. सनातन्यांच्याच नगरीत तिथल्या मक्तेदारांना न जुमानता त्यांनी चोरवोबांच्या स्मृतिमंदिराची उभारणी पंढरीच्या महाद्वारासमोरच केली. जातिनिरपेक्ष धार्मिक लोकशाहीचा पुरस्कार सर्वच मराठी संतांनी केला. त्यात संत नामदेवांचा अग्रक्रम वरचा आहे. कीर्तनकार, संत चरित्रकार, कुशल संघटक म्हणून ते दलितांचे कैवारी झाले.

चरित्र-आत्मचरित्र, व्यक्तिचित्र, आख्यानक रचना, प्रवासवर्णन काव्य, कूटरचना, लोककविता, भाव आणि भक्तिपर कविता, सथुक्कडी वाणीतील हिंदी पदरचना अशी त्यांची वैविध्यपूर्ण साहित्यसंपदा जनमनाशी नाना



शेतकरी-कामगार चळवळीतील स्त्रीयांचा सहभाग

प्रा. महेश दसंत कुलकर्णी,

राज्यशास्त्र विभाग,

एस.एस.जी.एम.महाविद्यालय,

कोपरगांव, ता. कोपरगांव, जि. अहमदनगर

maheshkulkarni824@gmail.com

Mobile-9730032754

प्रास्ताविक :

महाराष्ट्र हे कृषीप्रधान राज्य आहे. शेती हा मुख्य व्यवसायावरच उदरनिर्वाह चालतो. याचा अर्थ राज्यातील फार मोठी लोकसंख्या शेती या व्यवसायावर अवलंबून आहे. बहुतांश शेती कोरडवाहू व निसर्गाच्या लहरीवर अवलंबून असल्याने शेतीची उत्पादकता कमी होते. शेतीला सिंचन सुविधा व भांडवलाचा अभाव असल्याने शेती धंदा नेहमीच तोटयात आहे. शासनाची मदत मिळते, ती अपूरी पडते. शेतकऱ्यांच्या विविध प्रश्नांना वाचा फोडण्यासाठी शेतकऱ्यांच्या संघटना उभ्या राहिल्या.

शेतीमालाला रास्त भाव मिळाल्यानेच देशातील दारिद्र्याचे उच्चाटन होणार आहे. त्याचप्रमाणे संघटनेचा पाया बळकट करण्यासाठी संघटनेने महिला विभागाची स्थापना करून संघटनेचा विस्तार करण्याचे महत्त्वाचे पाऊल उचललेले दिसते. त्यामुळे जसा संघटनेचा विस्तार व विचाराचा प्रसार करण्याच्या उद्देशाला गती मिळाली तसे शेतकरी कष्टकरी महिलांच्या हक्कांबाबतचे प्रश्नही ऐरणीवर आले. संघटनेने प्रथमच ग्रामीण स्त्रियांचे सबलीकरणाचे उद्दिष्ट समोर ठेवून स्त्रीवादी राजकारणाला प्रारंभ केला. संघटनेने शहरी स्त्रीवादी चळवळ व राजकीय पक्षांच्या महिला आघाडयाबाहेर ग्रामीण शेतकरी महिलांच्या प्रश्नावर स्त्रीवादी आंदोलनाची उभारणी केली, म्हणून हे आंदोलन अभिनव स्वरूपाचे आहे.

श्री.शरद जोशींनी शेतकरी महिलांच्या प्रश्नावर निर्माण झालेल्या भूमिका घेतलेली आहे. शेतकरी व शेतकरी महिलांच्या हाती सत्ता देण्याचे प्रयत्न हे ग्रामीण भागाची शोषणाच्या विळख्यातून मुक्तता करण्याचे आयुध असल्याचे त्यांनी प्रतिपादन केले. स्त्रिया आणि शेतकरी संपत्ती व मालमत्तेच्या अभावी शोषणाचे बळी ठरले आहेत. शहरे, औद्योगिक नीति व राज्यसंस्था यांच्याकडून त्यांची लुट होत आहे. ती थांबविण्यासाठी शेतकरी संघटनेने गावपातळीवर सुरू केलेला लक्ष्मीमुक्तीचा कार्यक्रम स्त्री सबलीकरणाचा स्तुत्य उपक्रम आहे. जो शेतकरी महिलांना जमिनीत हिस्सेदारी देऊन त्यांना स्वावलंबी करण्याचा प्रयत्न करतो. कारण शेतकरी महिला कुटुंबाच्या गरजा पूर्ण करण्यासाठी परंपरागत पध्दतीने शेती कसीत उगतात. या विवेचनावरून नवे शेतकरी चळवळीच्या आर्थिक मागण्या आणि ग्रामीण विकासाचा गांधीवादी विचार यात बरेचसे साम्य आढळते.

शेतकरी संघटनेचा स्त्री सबलीकरणाचा दृष्टिकोण :

शेतकरी संघटनेने शेतकरी महिलांच्या प्रश्नावर शेतकरी महिलांना संघटित करून स्त्रीवादी राजकारणाचा पाया घातला. संघटना शेतीमालाच्या रास्त भावाच्या प्रश्नांबरोबरच शेतकरी महिलांच्या दुर्लक्षित प्रश्नांचा अभ्यास करून शेतकरी महिलांच्या सबलीकरणासाठी पुढे सरसावली. शेतकरी संघटनेच्या स्त्रीवादी राजकारणाने शहरी, सुशिक्षित, मध्यमवर्गीय महिलांनी चालविलेल्या स्त्रीवादी आंदोलनाच्या मर्यादा स्पष्ट झाल्या. कारण संघटनेने ग्रामीण महिलांच्या सबलीकरणासाठी व्यापक दृष्टिकोण स्वीकारला.

स्त्री सबलीकरणाचा अर्थ :

विसाव्या शतकाच्या उत्तरार्धात स्त्री सबलीकरणाचा विचार उदयास आला आहे. स्त्री सबलीकरण म्हणजे स्त्रियांच्या व्यक्तिमत्त्वाचा विकास होय. स्त्रियांना जीवनाच्या विविध क्षेत्रात विकासाची संधी उपलब्ध करून देणे,

A Simple Protocol for Oxidative Decarboxylation of Phenyl Acetic Acid using Oxone and Iodobenzene

K. A. SASANE^{*1}, N. A. SASANE², S. S. GAIKWAD³

¹Department of Chemistry, Dada Patil Mahavidyalaya, Karjat, Ahmednagar, Maharashtra, India

²Department of Chemistry, Mahatma Phule College, Panvel, Maharashtra, India,

³Department of Chemistry, Annasaheb Awate College, Manchar, Maharashtra, India

Corresponding Author email: kulsasane007@gmail.com

Abstract

A facile and novel protocol for the oxidative decarboxylation of phenyl acetic acid and α -substituted phenyl acetic acid by active hypervalent (III) Iodine species generated in situ, from Iodobenzene and Oxone, as a highly active reaction system was developed. The generated species exhibited remarkable activity and also used in oxidative decarboxylation of α -substituted phenyl acetic acid to obtainable product in good yield, the protocol was applicable for a variety functionalized phenyl acetic acid and afforded the desired benzaldehydes, ketones as products in good to excellent yield. Advantages of this system are short reaction time, easy work-up and good yields

Keywords: Oxidative decarboxylation, Oxone, Hypervalent iodine reagents.

Introduction:

Oxidative decarboxylation of carboxylic acids is a "classical" procedure in synthetic organic chemistry which is well known in scope and mechanism. It is one of the most significant protocols for synthesis of benzaldehydes, ketones and Nitriles rendering their applications in organic synthesis, biological systems, natural products and perfumery industry. Hypervalent iodine reagents have become increasingly popular for affecting a variety of synthetic transformations.^[1,2] as well as have wide application as versatile and environmentally benign oxidizing reagents in organic chemistry.^[3] The object of our present study is to investigate the possibility of oxidative decarboxylation by hypervalent iodine species generated in situ from Iodobenzene and a low-priced commercial oxone (2KHSO₅•KHSO₄•K₂SO₄). Viktor V. Zhdankin et al found that active iodine (III) species [i.e. (hydroxy (phenyl) iodonium ion,)]^[4] can be inventively generated in solution by treatment of Iodobenzene with oxone in aqueous acetonitrile at room temperature. There are several methods reported for oxidative decarboxylation of phenyl acetic acid to benzaldehyde and ketones by using oxidizing agents such as in recent years, transition-metal-catalysts are emerged. Generally, Mn (III) and Fe (III) Schiff base complexes,^[5] Iron and Manganese Porphyrin Periodate Systems,^[6] n-Bu₄NIO₄ and imidazole (ImH) manganese(III),^[7] polystyrene-bound Mn (III) catalyst complexes and Fe (III) complexes,^[8] are widely used for the oxidative decarboxylation of phenyl acetic acid. FSM-16/hv,^[9] pyridine N-Oxide,^[10] Further Akichika ITOH et al. use strategy of oxidative photodecarboxylation with the help of mesoporous silicas.^[11] In addition, Saeid Farhadi et al. also represented the applicability of their protocol for oxidative decarboxylation using HgF₂,^[12] Yong Hae Kim et al. were explore the scope of 2-nitrobenzenesulfonyl chloride with potassium superoxide,^[13] In case of α -hydroxyl phenyl acetic acid, bismuth-catalyzed oxidation system based on BiO/DMSO/O₂,^[14] chromic acid,^[15] MJJHYU9OKJO[Mnickel peroxide,^[16] sodium bismuthate,^[17] periodate, lead tetra acetate, N-iodosuccinamide,^[18] hypochlorite induced

Facile and Low Cost Synthesis of Iron Oxide Nanoparticle by Precipitation Method

D. N. GAIKWAD¹, D. V. SONAVANE¹, A. A. KALE^{1*}, S.S. GAIKWAD¹, R.K. MANJUL²

¹PG Department of Chemistry, Annasaheb Awate College, Manchar Dist. Pune, M.S., INDIA

²PG Department of Chemistry, S.S.G.M. College, Kopargaon Dist. A.Nagar, M.S., INDIA

Corresponding Author email: dn.gai008@gmail.com

Abstract

The aim of the study is to synthesis, characterization, optical properties and the types of bonding in iron oxide nanoparticles. The characterization was studied using XRD. The average grain size of the particle is studied using Scherer formula. The optical properties studied using UV-Vis and FT-IR spectra. The band gap energy of the iron oxide particle is 2.3eV.

Keyword: Iron Oxide, Nanoparticles, UV, XRD, FT-IR.

Introduction

Nano materials have accept significant attention due to their outstanding physico-chemical properties. Nano particles are sub-micron, made of inorganic and organic materials. Which have many novel properties. The preparation of Iron Oxide nanoparticles has attracted both fundamental and practical interest because interesting electronic, magnetic, catalytic and chemical or biological properties. Magnetic nanoparticles have many unique magnetic properties such as super paramagnetic, high coercivity, low Curie temperature, high magnetic susceptibility, etc. The ability to control the size, morphology and surface properties is very important because many of these applications depend on the properties. Magnetic nanoparticles are of great interest for researchers from a broad range of disciplines, including magnetic fluids, data storage, catalysis and bio applications. It is crucial to choose the material for construction of nanostructures material and device with adjustable physical and chemical properties. Iron oxides exist in a variety of structures and occur in a great variety of settings, from geological to nanoscale technological applications. Ferrous and ferric iron oxides present seven crystalline phase, the more common are α -Fe₂O₃(hematite), γ - Fe₂O₃ (maghemite), Fe₃O₄(magnetite) and Fe_{1-x}O (wustite); the less commonly found the β and ϵ - Fe₂O₃ phase and the low temperature rhombohedral structure of magnetite. Magnetic iron oxide nanoparticles consist of two major parts: preserved the magnetic property of magnetic iron oxides and preserved the other properties of iron oxides and preserved the other properties of organic molecules. Thanks to their fascinating properties, all of these oxides have been widely investigated by chemicals, engineers and physicists. These phase have been used successfully in many applications; e.g; magnetic nanoparticle have been used in a cancer diagnosis and therapy[1], drug delivery vehicles[2] and in water remediation[3]. Magnetic random - access memory devices[4]. Maghmite is used in magnetic resonance imaging [5], magnetic recording media [6], fabrication of biocompatible magnetic fluids [7], and electro chromatic devices[8], as cathodes in lithium batteries[9], and in the construction of photo electrochemical systems to produce hydrogen from water using solar radiation[10]. Varied method have been developed to synthesize iron oxide nanoparticle such as precipitation method, sol-gel method, emulsion technique, Mono chemical processing, Hydro thermal precipitation and thermal plasma arc method. Recent advances in nanoscience and nanotechnology have also led to the development of drug delivery. The synthesis of highly-crystalline nanoparticle synthesized

Green Approach towards Baylis Hillman Reaction using Grinding Technique

B. V. PAWAR*¹, S. S. GAIKWAD²

¹Department of Chemistry, Arts, Commerce and Science College, Jawhar, Maharashtra, India.

²PG Department of Chemistry, Annasaheb Awate College, Manchar, Maharashtra, India

*Corresponding author- balupawar146@gmail.com

Abstract

A simple and efficient method has been developed for the synthesis of β -hydroxy- α -methylene compounds in Baylis Hillman reactions using grinding technique. The present technique was found to be more efficient than the conventional one in the presence of tertiary amine (DABCO) at room temperature under solvent free conditions. A faster reaction and higher yields were obtained compared to the conventional methods are the advantages of present protocol.

Keywords: Baylis Hillman Reaction, Aldehydes, Olefins, DABCO, Grinding Technique

Introduction:

The adduct β -hydroxy- α -methylene compounds are the multi-functionalized product obtained in Baylis Hillman reactions. As it is commonly known as, an important C-C bond forming reaction between activated olefins and aldehydes in the presence of tertiary amine base catalyst DABCO¹⁻³. This reaction shows a classic example of preserving the atom economy⁴. Beside these significant advantages, the Baylis Hillman reactions have some disadvantages like slow rates and limited substrate scope but due to wide applicability of the β -hydroxy- α -methylene compounds into chemical transformations⁵⁻⁶, continuous efforts have been made to achieve the simple and efficient procedures for the synthesis of these compounds.

Therefore, several protocols have been proposed to improve their reaction rate, such as use of Ionic Liquids⁷, PEG-400⁸, Sulpholane⁹, supercritical CO₂¹⁰ ultrasound¹¹, high pressure¹², microwave irradiation¹³, aqueous acidic media¹⁴. In this connection some researchers have studied this reaction by using Lewis bases such as such as DBU¹⁵, DABCO, Ph₃P¹⁶, Imidazole¹⁷, Quinucidine¹⁸, heterocyclic azoles¹⁹ etc. Very recently, deSouza et al.²⁰ studied this reaction by mixing different solvents along with the effect of stoichiometry of reactants and the catalyst. Some of the above mentioned conditions possess shortcomings, such as slow rates and limited substrate scope and the combination of solvents and long reaction time makes this method environmentally hazardous. Now recently, Saikia et al.²¹ found a remarkable results in terms of rate acceleration and yield enhancement by using solvent free condition. But, still there is need of development of a simple, safe, environmentally benign, and more efficient method for Baylis Hillman reaction is a rewarding challenge.

Recently, the organic chemist has been attracted much attention towards the grindstone technique because of its green and rapid pathway to obtained organic compounds²²⁻²⁴. In grindstone technique, reactions occur through generation of local heat by grinding of crystals of substrate and reagent by mortar and pestle. Reactions are initiated by grinding, with the transfer of very small amount of energy through friction. In continuation to obtained the new methodology for Baylis Hillman reaction. Herein, we report that grindstone technique is more superior than the traditional one since it is eco-friendly,

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

S. S. GAIKWAD¹, B. V. PAWAR², M. D. SANGALE³, A. K. DESHMUKH³,
D. N. GAIKWAD¹, D. V. SONAWANE¹, A. A. KALE¹

¹PG Department of Chemistry, Amasaheb Awate College, Manchar, Maharashtra, India

²Department of Chemistry, Arts, Commerce and Science College, Jawhar, Maharashtra, India.

³PG Department of Chemistry, R. B. N. B. College, Shrirampur, Maharashtra, India

Corresponding author- ssgaikwad84@gmail.com

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 them¹. 1,2,4-triazole ring have relevance to the properties such as antitumor², anti-inflammatory³, antibacterial⁴, antimycobacterial⁵, antifungal⁶, anticonvulsant⁷, antidepressant⁸, antihypertensive⁹, antioxidant¹⁰, antiviral¹¹ and analgesic¹² activities. Thiosemicarbazides are important intermediates in the synthesis of azoles. Thiosemicarbazides were reported to possess activities as antibacterial¹³, antimalarial¹⁴, antitubercular¹⁵.

The advantages of non-conventional methods for motivating different reactions are sound described in the literature¹⁶. Ultrasound and microwave assisted synthesis is a green synthetic approach used to accelerate 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. ¹HNMR spectra were recorded on BRUKER-ADVANCE II 400 MHz spectrometer in CDCl₃ 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

Green synthesis, Characterization of Derivatives of 1, 1'-binaphthalene]-2, 2'-diol

A.A.KALE, D.N.GAIKWAD, D.V.SONAWANE,
D.B.BANKAR, S.S.GAIKWAD, S.T.SHINDE

P.G. Department of Chemistry, Annasaheb Awate College, Manchar, Maharashtra, India
Corresponding Author: anandraoakale@gmail.com

Abstract

BINOL (1, 1'-bi-2-naphthol) is used as a chiral ligand for many asymmetric reactions. In this a green chemistry approach was used for the preparation of BINOL by the oxidative coupling of 2-naphthol using Cu-Montmorillonite, a green material. Results obtained were compared with conventional method i.e., the FeCl₃ catalyzed oxidative coupling of 2-naphthol. The physical characterization includes % yield, M.P., etc. parameters were measure for newly synthesized derivative were characterized by FTIR and ¹HNMR¹³CNMR, XRD etc spectral methods and bioactivity of the newly synthesized derivatives will studied.

Keywords: BINOL, oxidative coupling, 2-naphthol, Cu- Montmorillonite.

Introduction:

Green Chemistry is defined as invention, design, development and application of chemical products and processes to reduce or to eliminate the use and generation of substances hazardous to human health and environment. Prime focus for chemists now is to develop synthetic methods that are less polluting i.e., to design green chemical transformation. The chemical process should be such that it doesn't cause permanent damage to the environment. Therefore ways to minimize the damage caused by raw materials and process should be done. Though it is expensive but it leads to environment friendly condition. Natural aluminosilicates like clays and zeolites are solid acids that are used to substitute liquid acids in chemical transformation. (Gates 2003) Among these clays and modified clays are gaining interest due to their versatile properties.(Balogh and Laszlo, 1993; Benesi and Winquest, 1978; Theng, 1974; Vaccari, 1999) The most common modified clays applied in organic synthesis are K-10 and KSF montmorillonites. Their physicochemical properties are same as that of the natural clays but their BET surface areas are different. Developments of clay catalyzed reactions are important in green chemistry point of view and they produce less hazardous waste products. Clay minerals as such or after modification/treatment can be used as solid acid catalyst. It exhibits both Bronsted as well as Lewis acidity, hence finds application in a wide range of organic transformations. (Cativiela et al. 1993; Cseri et al., 1995). Montmorillonite (MMT) having chemical formula Al₂Si₄O₁₀(OH)₂nH₂O and have variable moisture content. The crystalline structure of MMT consists of multiple layers and each layer made up of one octahedral alumina sheet sandwiched between two tetrahedral silica sheets. 1, 1'-bi-2-naphthol (BINOL) has become an important chiral auxiliary for asymmetric synthesis and due to its high degree of utility various synthetic approaches have been developed. Generally for BINOL synthesis transition metals have been used as catalysts or oxidants. For the transition metal-catalyzed and promoted reactions, the most frequently employed

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

D. V. SONAWANE¹, M. D. SANGALE², D. N. GAIKWAD¹,
S. S. GAIKWAD¹, A.A. KALE² and S. R. KUCHEKAR³

¹p. G. Department Of Chemistry, A. A. College, Manchar, Tal- Ambegaon, Dist- Pune (Ms), India.

²R. B. N. B. College, Shrirampur, Dist. A'nagar, (Ms), India.

³Pravara Womens College of Home Science, Pravaranagar, Tal-Rahata, Dist. A'nagar, (Ms), India.

Corresponding author email: drdvsonawane@rediffmail.com

Abstract

Nanoparticles of mgo is formed by successive sol-gel method. Nanoparticles are obtained by dissolving solid mgso, 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^o 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

Synthesis and characterization of Zinc Maleate Dihydrate and its thermal decomposition by the study of direct Current Electrical Conductivity

M. D. Sangale^{*1}, D. N. Gaikwad¹, D. V. Sonavane², S. S. Gaikwad²

¹ PG Department of Chemistry, R.B.N.B. College, Shrirampur, Ahmednagar, Maharashtra, India

² PG Department of Chemistry, Annasaheb Awate College, Manchar, Pune, Maharashtra, India

ABSTRACT

The possibility of using direct current electric conductivity measurement to study the solid state reactions involved in the preparation zinc oxide from zinc (II) maleate hydrated have been analyzed respectively. The study has been carried out in normal atmosphere. The steps corresponding to dehydration are well resolved in region from room temperature to 260 oC. The final product of decomposition in normal atmosphere was found to be ZnO from zinc maleate. The conductivity measurement was supplemented with the data obtained by chemical analysis; thermal analysis (TGA and DTG) and IR spectroscopy analysis.

Keywords : Thermal decomposition; Electric conductivity; Solid State; Maleate

I. INTRODUCTION

The decomposition characteristics of manganese, Iron, Cobalt, Zinc and Copper oxalates in the air and nitrogen atmospheres and reported a shift to lower temperature when oxygen is present for iron, manganese and cobalt oxalates but not for zinc and copper oxalates. The thermal, spectral and magnetic studies of compound of copper and zinc carboxylates have also been studied. nickel, copper and zinc with maleic acid was studied using thermo-gravimetry TG and differential thermal analysis DTA [1-2]. Thermal analysis of transition metal carboxylates [5] has been subject of recent interest due to technological importance[3].The maleates are of practical importance because of their use as coatings with specific properties, efficient catalysts and are also of medicinal significance. Dielectric characteristics of organo-metallic crystals are of increasing importance as the field of solid state electronics continues to expand rapidly. For these applications the properties of most concern are the dielectric constant, loss tangent and a.c. conductivity [4].

New devices and applications are continually increasing the frequency range and the range of environmental conditions, particularly temperature, that are of practical interest. The frequency dependent conductivity and dielectric constant provide important information on the ionic or electronic transport mechanism. It gives an

insight into the structure of the materials since the localized electronic states within the material are created due to the presence of disorder in the atomic configuration and/or the composition. The structure of MHMH crystal was studied by various investigators [5, 6].

The oxidative behavior of different oxalates was better understood from the study of temperature variation of d.c.electrical conductivity measurements (7).

Using the electrical conductivity techniques in the study of solid state decomposition reactions of different metal (II) carboxylates [8-10] has been carried out. Report the thermal decomposition of copper (II) oxalate monohydrate and Zinc (II) oxalate dihydrate have been studied using two-probe d.c.electrical conductivity measurements to study the progress of reaction. This study has been supplemented with TGA, DTG and DTA, X-ray diffraction and Infrared spectroscopy.

Use of measurement of direct current electric conductivity as probe for the study of progress of thermal decomposition of $\text{FeO}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$ in normal atmosphere and other atmosphere (11). This compound initially is an insulator and final and intermediate products during decomposition are semiconducting in nature. It would therefore profitable to use technique direct current of electric conductivity to investigate the

Synthesis and Characterization of Some Biologically Potent 2-(2-butyl-4-chloro-1H-imidazol-5-yl)-4H-chromen-4-one derivatives.

S. S. Gaikwad¹, M. D. Sangale², D. V. Sonawane¹, D. N. Gaikwad¹, Y. V. Bare³

¹P.G. Department of Chemistry, Annasaheb Awate Arts, Commerce, Hutatma Babu Genu Science College, Manchar, Tal.-Ambegaon, Pune, Maharashtra, India

²P.G. Department of Chemistry, R.B.N.B. College, Shirampur, Ahmednagar (MS), India

³Jubilant Chemsys Ltd., Noida, Uttar Pradesh, India

ABSTRACT

In the present investigation, a series of novel chromone derivatives containing imidazole moiety has been synthesized. The condensation of 2-butyl-4-chloro-1H-imidazole-5-carbaldehyde with various substituted o-hydroxy acetophenones in the presence of 40% KOH in PEG-400 gives the chalcones. Oxidative cyclisation of chalcones with catalytic amount of iodine in the presence of DMSO gives chromones. Chalcones and Chromones were obtained in satisfactory yield. The structure of intermediate and titled compounds was confirmed by spectral tools.

Keywords: Chalcones, Chromones, O-Hydroxyacetophenones, Imidazole, PEG-400

I. INTRODUCTION

Owing to interesting chemistry and various bioactivities, heterocycles are of prime importance for synthetic and medicinal chemists. Extensive studies are being carried out for designing potential pharmaceuticals. Chalcones are α,β -unsaturated carbonyl compounds and are used as intermediates for the synthesis of various heterocyclic compounds. Chalcones are well known precursor for the synthesis of various biologically important heterocycles¹⁻⁴. Chalcones belong to flavanoid family displayed an impressive array of biological activities⁵. Chalcones exhibit different biological activities such as anti-inflammatory, anti-invasive, antimalarial, antitumor, anti-diabetic, cytotoxic and chemoprotective⁶⁻¹⁰ etc. Imidazole is a part of essential amino acid histidine, biotin, and alkaloids. Recently, certain imidazole based compounds were reported to possess antimicrobial activities^{11,12}. It is also reported that, imidazole derivatives are gained synthetic interest in recent years due to their broad spectrum of biological properties¹³⁻¹⁶.

By the synthetic point of view chromones are important in the synthesis of the variety of heterocyclic compounds. Naturally, chromones are mostly in the form of 2-phenyl chromones called as iso-flavones those are found in fruits and vegetables^{17,18}. In the plant kingdom, Chromone-4-

ones, a class of naturally occurring compound, are widely distributed. Chromones and other related ring systems have plenty of interesting biological activities. Literature survey displayed that chromone compounds possess various physiological and biological properties and thus found use in medicine¹⁹. Chromone compounds have considerable interest in the past decades²⁰. A series of sulfonamide chromones are inhibitors of carbonic anhydrase, show in vitro antibacterial and antifungal activity²¹⁻²². During the last decades the 5-hydroxy-2-styrylchromone were derived from the green algae [Chrysothrix) against leukemia cells. Chromones substituted at 2-position has been shown to possess various activities. Few of the chromones have potential anti-rhythmic activity such as HIV-integrase inhibition²³. Few of them showed anti-cancer, anti-tumour, anti-ulcer activities²⁴⁻²⁵. Synthesis of flavones (Chromones) and their derivatives has considerable attention due to their significant biocidal and pharmaceutical effects.

A synthesis is termed ideal if it relies on use of a green solvent such as water, supercritical CO₂ or low-boiling liquid polymers such as polyethylene glycols (PEG's). Recently PEG-400 emerged as an alternative green solvent with unique properties such as thermal stability, commercial availability, nonvolatility, miscibility with a number of organic solvents, and recyclability²⁶. PEGs overcome the toxic effects of solvents on the

Physico-Chemical cum Biological Characteristics & Water Quality Index (WQI) of Dimbhe Dam in Pune District, Maharashtra State, India

D. V. Sonawane*, D. N. Gaikwad, S. S. Gaikwad, B. K. Jorvekar

P. G. Department of Chemistry, Annasaheb Awate College, Manchar, Ambegaon, Pune, Maharashtra, India

ABSTRACT

The present work is aimed at assessing the water quality index (WQI) for the surface water of Dimbhe Dam near Near Shinoli, village of Taluka Ambegaon, District Pune, Maharashtra State, India. Surface water samples were collected at three sampling points, S1 upstream of village Shinoli, S2 near village Shinoli, and S3 downstream of village Shinoli. The samples are subjected for comprehensive physical, chemical and biological analysis. For calculating the WQI, the following 14 parameters have been considered: pH, Total Dissolved Solids, Total Hardness, Calcium, Magnesium, Chloride, Nitrate, Sulphate, DO, BOD, Alkalinity, Sodium, Potassium and Fluoride. The high value of WQI has been found to be mainly from the higher values of TDS, Hardness, BOD and Nitrate. The analysis reveals that the surface water of the area needs some degree of treatment before consumption, and it also needs to be protected from the perils of contamination.

Keywords: Surface Water, Water Quality Standards, Water Quality Characteristics, Water Quality Index.

I. INTRODUCTION

Surface water is used for domestic, industrial, water supply and irrigation all over the world. In the last few decades, there has been a tremendous increase in the demand for fresh water due to rapid growth of population and the accelerated pace of industrialization. Human health is threatened by most of the agricultural development activities particularly in relation to excessive use of fertilizers¹. According to World Health Organization (WHO), about 80% of all the diseases in human beings are caused by water². Water Quality Index (WQI) is one of the most effective tools to communicate information on the quality of water to citizens. The formulation and use of indices has been strongly advocated by agencies responsible for water supply and control of water pollution³. Although any environmental impact could be either beneficial or adverse, in environmental analysis, impacts are historically considered only to be of adverse type caused by our developmental activities. Impacts can be generally categorized as primary, secondary or tertiary. Primary impacts are those caused directly by project inputs such as loss of forests, or changing of a river regime due to the construction of a dam. As such primary impacts can be attributed directly to a project activity. They are usually easy to measure. Secondary impacts are those caused by project outputs such as water flow regulation

and channelization. In other words, they are indirectly attributed to the project activity. If one of the project outputs is availability of irrigation water, secondary impacts could be more severe than primary impacts and unfortunately, often more difficult to predict and measure⁴. Secondary impacts in turn may lead to tertiary impacts. It should be noted that the distinction between primary, secondary and tertiary impacts could often be arbitrary. Various types of water related activities can cause beneficial or adverse impacts on the environment, water channelization, flood land alteration and changes in land use patterns. Water quality is a very important consideration for all water development projects as it affects all aspects of water use-for humans, for animals, for crops and even for industry. All natural waters containing soluble inorganic ions are mainly from the weathering of soil and rock minerals. The weathering products of the rock minerals are released and transported by the action of water. Hence the nature and concentration of an ion in water depends upon the nature of rock mineral, its solubility and its resistance to weathering in fresh water or carbonated water (due to dissolution of atmospheric carbon dioxide in rain water) climate and local topography. Apart from these major causes, solubility of minerals is influenced by pH, particularly of iron and manganese hydroxides that decreases and aluminium hydroxide, which increase with the increase of pH. In recent years continuous

Synthesis, Characterization and in vitro Antibacterial Studies of 1, 3-Diones with their Metal Complexes bearing Potential O, Opharmacophores Sites

D.M. Suryawanshi¹, A. A. Agale², A.S. Rajbhoj², S.T. Gaikwad^{2*}

¹RayatShikshan Sanstha's S.S.G.M.College, Kopargaon (M.S.), India 423 601

²Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Corresponding Author Email: gaikwadsuresh12@gmail.com

ABSTRACT

This research communication is toward the investigation of the in vitro antibacterial activity of the synthesized compound 4(L_A-L_B) bearing potential O, O pharmacophores. These compounds have been obtained by the interaction of substituted 2-hydroxyacetophenones I(A-B) and aromatic acids 2(A-B) under ultrasound irradiation method at low temperature. The newly synthesized 1, 3-diketone 4(L_A-L_B) and their metal complexes 5(a-e) were characterized by FT-IR, UV-Vis., ¹H-NMR, ¹³C-NMR, Mass Spectroscopy and Magnetic measurement. Further these compounds showed potent antibacterial activity. A good correlation was obtained between the theoretical predictions of bioavailability and experimental verification. Utilization of ultrasound irradiation, simple reaction conditions, isolation and purification makes manipulation very important for economic and environmental approaches.

KEYWORDS: 1,3-diketone, metal complexes, ultrasound irradiation, antibacterial screening.

INTRODUCTION

The 1,3-diones have broad spectrum of medicinal values which shown to have pharmacological activity like antibacterial [1], antiviral [2], insecticidal [3], antioxidant [4] and potential prophylactic antitumor activity [5-6]. It has also been used as in the anti-sunscreen agent [7]. In liquid solutions [8] as well as in the solid state [9], the 1,3-diketone exists almost exclusively as the keto-enol tautomer, which is stabilized by the intermolecular hydrogen bonding. Recently it is reported that 1, 3-diketone are important pharmacophores of HIV-1 integrase (IN) inhibitors [10]. It was also reported that a number of diketones has warrant examination as breast cancer chemo preventive blocking agent [11] anticarcinogenic agent [12] and antistereogenic agent [13].

1,3-diketone and its metal complexes appear very promising for potential use as antibacterial agents due to their other biological properties [14-17]. There is continues interest in synthesizing 1,3-diketone 4(L_A-L_B) and its metal complexes 5(a-e) because of their potential applications, applied sciences and importance area of coordination chemistry [18-21]. In view of the above applications in the present paper we report the synthesis, characterization and antibacterial studies of metal complexes 5(a-e) with 1,3-diketone 4(L_A-L_B).

INTERACTIONS OF KIO_3 IN AQUEOUS 0.1% SALT SOLUTIONS

Meenakshi V. Ratni *, Arun B. Nikumbh†

*P. G. Department of Chemistry, RNC Arts, JDB Commerce, NSC Science College, Nashik Road, Nashik.

†P. G. Department of Chemistry, S. S. G. M. College, Kopargaon-423601. (M. S.) India.

Affiliated to Savitribai Phule Pune University, Pune.

Abstract: The study of density, viscosity of KIO_3 in aqueous salt solution provides useful information to elucidate ion-ion, ion-solvent, and solvent-solvent interactions. Apparent molar volumes (ϕ_v) and viscosity B-coefficients for KIO_3 solutions in aqueous KCl, KNO_3 , NH_4NO_3 and pure water system have been determined from density (ρ) and viscosity (η) measurements at 298.15 to 313.15 K using a pycnometer and Ubbelohde viscometer respectively. Masson's equations, Jones-Dole equation are used to study various interactions among the ion-ion, ion-solvent, and solvent-solvent. Further diffusion controlled reaction rate constant (k_d) are also evaluated.

Keywords: KIO_3 , density, viscosity, B-coefficient.

Introduction:

KIO_3 is one of the strong oxidizing agents¹ and like $KClO_3$ and $KBrO_3$; KIO_3 can cause fires if it comes in contact with combustible materials or reducing agents. It has been used as a food additive, to prevent iodine deficiency; sometimes table salt is iodated using potassium iodate in place of potassium iodide as iodide can get oxidized easily in wet condition and in presence of molecular oxygen to iodine. In baking process, like potassium bromate, potassium iodate is also sometimes used as a maturing agent. In some countries, potassium iodate is also an ingredient in milk powders and baby formula milk and used as a source for dietary iodine. KIO_3 get decomposed in presence of heat, shock, friction, combustible materials, reducing materials, aluminum, organic compounds, carbon, hydrogen peroxide and sulphides. Potassium iodate may be used to protect against the health risks caused by accumulation of radioactive iodine in the thyroid by administrating and saturating the body with a stable source of iodine in the form of KIO_3 prior to exposure². It is also approved by the World Health Organization that for radiation protection, potassium iodate (KIO_3) is the best alternative to potassium iodide (KI), as KI has poor shelf life in humid and hot climates³.

It is well known that physicochemical characterization of oxidizing agents plays a crucial role in all the stages associated to design and development of pharmaceutical drugs especially those intended to parenteral administration to cure the various diseases caused by them. In this context, as a contribution to generation and systematization of physicochemical information about oxidizing agent behaviour in aqueous solutions of KCl, KNO_3 and NH_4NO_3 system, the main goal of this study was to evaluate the effect of concentration and temperature on the apparent molar volume, interaction parameters and solvolysis of oxidizing agent in different solvent systems. In solution chemistry various physical properties are easily measured but interpretation of results is very complex. Solution chemistry is useful in science as well as applied science. It is based on theories like Van't Hoff, Gibbs, Debye-Huckel and Onsager.

The simple physical properties like density and viscosity are used to explain the molecular interaction in aqueous solutions.

Experimental:

Materials:

पिता की परंपरा क्या है? यह परिवार उस समाज का हिस्सा है, जहाँ औरत केवल शरीर रूप में होती है। जो पुरुषों की सेवा सुविधा के लिए श्रम कर सके इसके अलावा वे योनि रूप में होती है पुत्रवती होकर वंश वेल बढ़ाएँ, बेटी पैदा करे तो अगली पुरुष पीढ़ी के लिए काम आएँ”

मैत्रेयी पुष्पा की आत्मकथा मूल्यों की नहीं, बल्कि जीवन मूल्यों की बात कहती हैं। ऐसे मूल्य जो जीवन को गतिशीलता दे न की उसे जड़ बनाए। मैत्रेयी की आत्मकथा में बुर्के और घूँघट में लिपटी औरत नहीं बल्कि अपनी सांसों के लिए छटपटाती औरत है। ऐसी औरत को वह आजाद देखना चाहती है। आत्मकथा में ऐसे अनेक प्रसंग हैं, जब मैत्रेयी समाज द्वारा थोपे गए जीवन मूल्यों को न अपना कर अपने मूल्य स्वयं गढ़ती है। मैत्रेयी परिवर्तन चाहती है। आत्मकथा में वे लिखती है—“मुझे स्त्री जीवन की वह छवि पेश नहीं करनी है जो मर्यादा, शील—शुचिता और इज्जत के नाम पर स्त्री की नकली तस्वीर है। दमन और दबाव के कारण आँख झुकाए हुए... आवज को घूटे हुए... मैं उनमें से एक सेना, श्रम और रोकथाम के लिए समर्पित... बदलाव चाहिए ही चाहिए।” मैत्रेयी पुष्पा की आत्मकथा एक स्त्री की कथा भर नहीं, बल्कि बंधनों और वर्जनाओं से जुझती एक स्त्री का आत्मीय संवाद भी है। मैत्रेयी प्राचीन परंपरा को तोड़ती हुई अपनी संस्कृति खुद बनाती है। मैत्रेयी कि लड़ाई समाज से नहीं बल्कि उन नियमों, उन मूल्यों से है जो उसे चैन से जीने नहीं देते। तरह—तरह के फतवे जो उससे जीने का हक ही छीन लेते हैं। मैत्रेयी पुष्पा की यह आत्मकथा ऐसे फतवों का निषेध करती है।

संदर्भ:

१. मैत्रेयी पुष्पा 'कस्तुरी कुंडल' बसे'
२. मैत्रेयी पुष्पा 'गुड़िया भीतर गुड़िया'
३. कथाकम, सितंबर २००९ पृ. १०२
४. मैत्रेयी पुष्पा 'गुड़िया भीतर गुड़िया' पृ. १३१
५. वही, पृ. ३३८

19

सामाजिक आस्थाओं के कहानीकार — कमलेश्वर

प्रा.डॉ.वर्दे—अग्रवाल

हिंदी विभाग,

एस.एस.जी.एम.कॉलेज, कोपरगाव

कथासाहित्य गद्य की प्राचीनतम विद्या है। इसका उद्भव आदिकाल से मानव सभ्यता के साथ होता चला आ रहा है। मनुष्य में अभिव्यक्ति की प्रवृत्ति होती है। इस सहजप्रवृत्ति के चलने वह कहता—सुनता रहा है। मनुष्य की जिज्ञासापूर्ति, मनोरंजन तथा उपदेशात्मकता होने से कहानियाँ जीवन को दिशा देने का कार्य भी करती रही हैं। आधुनिक काल में कहानी का क्षेत्र व्यापक होता गया। धार्मिक, सामाजिक, राजनीतिक, नीतिपरक तथा मनोविश्लेषणात्मक आदि अनेक संदर्भ विकसित होते गए। कहानी जीवन से अधिक जुड़ गई, जीवन का प्रतिबिंब उसमें देखा गया।

आदिकाल से आधुनिककाल तक मनुष्य के सामाजिक विकास के साथ—साथ उसके विवके का भी विकास होता रहा। मानव—मूल्यों का आधार यही विवके माना जाता है। सामाजिक जीवन को सुचारू रूप से चलाने के लिए मूल्य महत्वपूर्ण भूमिका निभाते हैं क्योंकि 'मूल्य' दैनिक जीवन में व्यवहार को नियंत्रित करने के सामान्य सिद्धान्त हैं। मूल्य न केवल मानव व्यवहार को दिशा प्रदान करते हैं, बल्कि वे अपने आप में आदर्श और उद्देश्य भी हैं।

वर्तमान युग अन्तर्द्वन्द्व का युग है। एक ओर प्राचीन भारतीय संस्कृति तो दूसरी ओर वैज्ञानिक और प्रौद्योगिकी के परिणाम स्वरूप परिवर्तनशील

10

जीवनगत प्रश्नों से मुठभेड करती कहानियाँ (विशेष संदर्भ — कथाकार अमरकांत)

प्रा. नारायणराव हिरडे

हिंदी विभाग अध्यक्ष

महाराजा जिवाजीराव शिंदे महाविद्यालय,
श्रीगोंदा, जि. अहमदनगर,

प्रा. डॉ. योगेश दाणे

सहा. प्राध्यापक हिंदी विभाग

एस.एस.जी.एम. कॉलेज, कोपरगांव

प्रस्तावना —

'मूल्य' यद्यपि दर्शनशास्त्र, समाज शास्त्र, और मनोविज्ञान की विषय सामग्री है, परंतु मानव जीवन सापेक्ष होने के कारण साहित्य में मानव मूल्य समाविष्ट होते हैं। अतः साहित्य और मानवमूल्यों अथवा जीवन मूल्यों का घनिष्ठ संबंध है। साहित्य का स्रष्टा मानव है और मानव जीवन का अंकन ही साहित्य का उद्देश्य है। साहित्य के द्वारा ही मानव जीवन के समस्त पहलुओं का लेखा जोखा निहित होता है। वास्तव में हम कह सकते हैं कि साहित्य मानव जीवन की विशेष अभिव्यक्ति है। दरअसल, साहित्य को जीवन से अलग करके नहीं रख सकते, क्योंकि साहित्य का विषय ही मानव जीवन है। अतः मानव जीवन के मूल्यों को इसमें स्थान मिलना स्वाभाविक है। डॉ. शंभुनाथ सिंह के अनुसार "साहित्य में जीवन मूल्य ऊपर से आरोपित नहीं होते, बल्कि वे साहित्यकार के रूप में स्वीकृत किए जाते हैं।" इस कथन से स्पष्ट हो जाता है कि जीवन मूल्यों

को साहित्य से पृथक नहीं किया जा सकता और साहित्य के मूल्य और जीवन के मूल्यों के विरोध नहीं हो सकते। साहित्य में भले ही किसी शाश्वत सिद्धांत या सार्वभौम दर्शन का प्रयोग किया जाए, जीवन मूल्यों की उपेक्षा करके वास्तविक निष्कर्षों तक नहीं पहुँचा जा सकता। साहित्य में अभिव्यक्त होकर ही जीवनमूल्य साहित्यिक मूल्य कहलाते हैं। अतः "साहित्यिक मूल्य और जीवन मूल्य भी दो विभिन्न कोटियाँ नहीं, बल्कि तत्त्वतः एक ही है।" २

साहित्य एवं समाज का परस्पर सम्बन्ध है। साहित्य में ही जीवन एवं समाज प्रतिबिंबित होता है। साहित्यकार समाज में रहता है। अतः सामाजिक, सांस्कृतिक, परिस्थितियाँ उसे पूर्णतः प्रभावित करती हैं। संक्षेप में कहा जाए तो साहित्य समाज का दर्पण है। साहित्यकार जो देखता है, अनुभव करता है, उसे अपने विचारों के माध्यम से साहित्य में अभिव्यक्त करता है। प्राचीनकाल से लेकर आज तक अनेक प्रकार के साहित्य का सृजन हुआ है। साहित्यकारों ने अपनी कृतियों का सृजन समाज की कोई न कोई घटना को केंद्र में रखकर किया है। कहानीकार अमरकांत जी ने लेखन की सामाजिक प्रतिबद्धता को स्पष्ट करते हुए लिखा है — "एक लेखक को समाज से हमारा गहरा संपर्क रखना चाहिए, क्योंकि भाषा या नई भाषा समाज से मिलती है। कल्पना से भाषा नहीं लिखी जा सकती। वास्तविक भाषा होनी चाहिए। उसमें संकेत वगैरह होने चाहिए। 'संवेदना' गहरी होनी चाहिए! क्योंकि बिना संवेदना के कहानी भाषा नहीं बनेगी।" ३ वास्तव में कहा जाए तो साहित्य के प्रत्येक रूप में देशकाल, वातावरण, युगीन परिस्थितियों का प्रभाव प्रत्यक्ष या परोक्ष रूप से अवश्य पड़ता है। इसी प्रभाव के फलस्वरूप सच्चे साहित्य का निर्माण होता है, और यह मानवीय जीवनमूल्यों के साथ साथ राष्ट्रीय भावधार का भी पलवन करता है। साहित्य के जीवन मूल्य जीवन की उस मूल्यवत्ता का प्रतीक है, जिसे कोई युग सहर्ष स्वीकार करता है। बाबु गुलाबराय का मानना है — "साहित्य के मूल्य जीवन के मूल्य से भिन्न नहीं है। अतः यह

03

सामाजिक एवं राजनीतिक मूल्यों की बेबाक अभिव्यक्ति—'बैल बाजी मार ले गये' । केदारनाथ अग्रवाल

प्रकाश सावंत

सहा. प्राध्यापक, एस.एस.जी.एम. कॉलेज,
कोपरगांव, जि.अ.नगर

प्रस्तावना—

मानव अपने जीवन को श्रेष्ठ तथा उदात्त बनाने के लिए जो मानदण्ड निर्धारित करता है, उन्हें जीवनमूल्य या मानव-मूल्य कहा जाता है। जीवन-मूल्य की सबसे बड़ी कसौटी मानव समाज है और साहित्य को इससे अलग नहीं रखा जा सकता। वास्तव में 'मूल्य' किसी वस्तु का नाम नहीं है बल्कि नीतिशास्त्र के (अंसनम) 'वैल्यू' शब्द का पर्याय है। मूल्य एक धारणा है जिसका निर्धारण मनुष्य की चेतना द्वारा होता है और इसमें जीवन की सर्वांगीणता का भाव रहता है।

आर.के.मुखर्जी ने 'मूल्य' को इस प्रकार परिभाषित किया है, "जो कुछ भी इच्छित वांछित है वही 'मूल्य' है। '१' 'मूल्य' ही व्यक्ति के अस्तित्व एवं उसके विकास के विधायक तत्व होते हैं। ये सामाजिक आवश्यकताओं, सामान्य जनकल्याण एवं लोकहित में साधक होते हैं। मूल्य समाज के वे आधारस्तंभ हैं जिन पर समाज की सभ्यता एवं संस्कृति का भव्य भवन आधारित रहता है। इनकी धारणा किसी वस्तु के सत्य और सत्य की तात्विक धारणा है। ऐसे सत्य या सार तत्व की जिससे वस्तु मूल्यवान बनती है।

जीवनमूल्य एवं साहित्य के मानव मूल्यों में तत्त्वतः कोई अंतर नहीं है, क्योंकि साहित्य में जीवनमूल्यों की अभिव्यक्ति होती है। डॉ.जगदीश गुप्त लिखते हैं—

'साहित्य में वे जीवनमूल्य ही प्रतिबिंबित एवं समाविष्ट हो पाते हैं, जिनको साहित्यकार में अपने अंतःकरण में धारण कर लिया है।' साहित्य युग विशेष का प्रतिनिधित्व करता है तथा युग विशेष के विचारों का निर्माण कर्ता पथ प्रदर्शन भी होता है। इसलिए जीवन मूल्य, या मूल्यबोध के संदर्भ में साहित्य का महत्त्व बढ़ जाता है। साहित्यकार अनिवार्य रूप से समाज के प्रति समर्पित होता है। वह अपनी रचनाओं के द्वारा जीवन-मूल्यों को जीवन में प्रतिष्ठित करता है। प्रगतिवादी कवि केदारनाथ अग्रवाल भी इसके लिए अपवाद नहीं हैं। स्वतंत्रता प्राप्ति के पश्चात नैतिक, राजनैतिक, आर्थिक, सामाजिक, सांस्कृतिक आदि सभी क्षेत्रों के मूल्य बोधों का विघटन होता गया। इन सबका चित्रण केदारनाथ जी के कथा साहित्य में दिखाई देता है। प्रगतिवादी कवि केदारनाथ अग्रवालजी ने भले ही कविता के रूप में ख्याति प्राप्त की हो, परंतु उन्होंने 'कथा साहित्य' में भी अपनी लेखनी चलाई है। केदारनाथ अग्रवालजी ने केवल दो उपन्यासों की रचना कर उपन्यासकार के रूप में भी हिंदी साहित्य में अपना विशिष्ट स्थान बनाया। उनके कथा साहित्य पर उनके प्रकाशक शिवकुमार सहाय की यह टिप्पणी उचित प्रतीत होती है, जो उन्होंने 'पतिया' उपन्यास की भूमिका में लिखी थी—

'केदारजी के इस कथा-संपदा से यह पता चलता है कि उनके अंदर कवि और निबंधकार के साथ एक कोमल और जनपक्षधर कथाकार भी है, लेकिन कविता के आगे उन्होंने कथाकार को तवज्जो नहीं दी, अन्यथा कविता की ही तरह कथा के क्षेत्र में भी उनकी भूमिका निश्चय ही महत्त्वपूर्ण होती है।' केदारनाथजी ने एक उपन्यास पूरा लिखा (पतिया) और दूसरा अधूरा उपन्यास 'बैल बाजी मार ले गये', इस समय साक्षात्कार अगस्त-नवम्बर १९८६ के पत्रिका में संकलित है। इस उपन्यास के नामकरण के संदर्भ में डॉ.अशोक त्रिपाठी का मतव्य है— 'सन १९८६ ई.

2018-19



Influence of Mother Tongue on Indian English Speaker

Dr. Varpe Sandip Dadabhau

Assistant Professor

Department of English

Rayat Shikshan Sanstha's, SSGM College, Kopergaon (SPPU, Pune)

Tal- Kopergaon, Ahmednagar (MS)

E- mail : sandipvarpe13@gmail.com

Introduction

Humans use their unique ability of speech, speech depends on symbols and codes combine in language. Language use for communicate their ideas, thoughts, and desires with their relatives, sounds are means which explains his psychological and physiological survival. Child listen words spoken around him or her by their mother, father, brother and family members and tried to develop that first language called mother tongue. Mother tongue develops in natural surrounding so its sounds curved on blank slate of mind which never delete from memory. Mother tongues sounds influence while that child tried to learn another language like Hindi and English. English is a Universal language which plays vital role in communication on international level resulted in English become global language.

Scope of English in world

English is on second rank in world's native languages; it is used in 70 countries as official language which increases value of English in this modern world. Speaker gives importance to it after their mother tongue. Nowadays English become link language because for communication among speakers of two different languages required one common language which makes them able to communicate these aspects fulfill by unique language in world well-known as English. Person who travel abroad or in other part of the world must know universal language English, it is common language which is spoken all over world by millions of people. Indians used English as third language. Indians speak Hindi which recognized as aunt of mother tongue because regional languages and Hindi belongs to same devnagari script. Every Indian eager to learn English because it is window of the world which introduces them with vast ocean of knowledge... The main purpose behind teaching English in India is to enrich their basic skills required for learn English no one needs to imitate English speakers or American's accent. . Twenty first centuries dawn introduces English is being taught to children at primary level itself. Students are strictly made to speak in English when they are in college premises. Communicating in English has quite a big role in day to day life. English is used in banks, railway stations, bus stations, airways, educational sector, medical, private sector, etc.

Influence

It is observed that Whenever Indians begin speaking in the third language English at that time they primarily use sounds from their mother tongue Thus, everyone can find mother tongues influence over English. Students give preference for learn English because they know it is necessary for build their good career; they can become successful if they speak fluent in English which develop their communication skill as well as their confidence while they face many people in panel interviews. It is well known fact that Mother tongue get in the way of the learn pronunciation or soft words of English. Students who face interviews in Indian surrounding

368 3
531

174



शिवकालीन जलव्यवस्थापन ✓

प्रा.डॉ.शीला दत्तात्रेय गाडे

मराठी विभाग प्रमुख,

एस.एस.जी.एम.कॉलेज, कोपरगाव, जि.अहमदनगर.

प्रस्तावना:

आपली भारतीय संस्कृतीच मुळी 'जलसंस्कृती' आहे. संस्कृती म्हटल्यावर समाज आलाच आणि समाज म्हटले की पाणी आलेच. पाण्यावरून आपल्याकडे अनेक वाक्प्रचार तयार झाले. उदा.पाणी चाखणे, पाणी जोखणे, पाण्यात पाहणे, पाणी सोडणे, पाणी दाखवणे, पाणी लागणे, पाणी पचवणे, पाणी-पाणी होणे, वाक्प्रचारप्रमाणे काही म्हणी प्रदेशनिहाय तयार झाल्या. उदा.उथळ पाण्याला खळखळट फार, गेलेली गंगा राहिलेले तीर्थ, वाहत्या पाण्यात हात धुऊन घेणे इत्यादी. यावरून आपल्या एक लक्षात येते की, पाणी आणि समाज, आणि त्यातून साकार होणारे सांस्कृतिक जीवन हे अतुट असल्याचे जाणवते.

मात्र आम्ही भारतीय दिवसेंदिवस जलसंस्कृतीला विसरत चाललोय की काय? असा प्रश्न पडावा, असेच एकंदर वातावरण अवतीभोवती पहायला मिळते. आपण डोंगर नश्ट करून कृत्रिम पध्दते तयार केली. प्रदूषणाचा भस्मासूर वाढत गेला, गेल्या काही वर्षांत उन्हाळा सुरू झाला की प्रसारमाध्यमांच्या बातम्या झळकू लागतात. पाण्यासाठी दाहीदिशा घणवण करणारी जनता, गुरेद्वारे अन्न-पाण्यावाचून मरतांना दिसतात. पाण्याच्या एका घेंबासाठी आसुसलेला पक्षी बघतांना माणसाच्या हृदयाला पाझर फोडणारे हे दृश्य परंतु नुसते बघून वा हळहळ व्यक्त करून काय उपयोग? यासाठी प्रयत्नांची, नियोजनाची गरज आहे. आजही राजस्थानमधील बिषनोई जमात पर्यावरण संरक्षणाचे काम करते. ही जमात पर्यावरणाबद्दल अतिपय दक्ष आहे. वृक्षसंवर्धन हाच त्यांचा धर्म आहे. कोणत्याही प्रतिकूल परिस्थितीमध्ये ते वृक्षाचे जतन करतात. झाडे तोडणे त्यांच्या दृष्टिकोनातून पाप आहे. जलसंवर्धनास पूरक भूमिका त्यांनी स्वीकारली आहे. पुराणामधून जलसंवर्धनाचे, पर्यावरण संरक्षणाचे आणि पर्जन्याचे निरनिराळे सिध्दांत मांडलेले आढळतात. मात्र प्राचीन जलसंस्कृतीचा वारसा पुढील पिढ्यांनी जतन करणे गरजेचे आहे. म्हणून इतिहासाला विसरून चालणार नाही. त्यासाठीच मी माझ्या पोषनिबंधाला विशयाची मर्यादा घालून शिवकालीन जलव्यवस्थापन हा विशय निष्चित केला आहे.

छत्रपती शिवाजी महाराजांना रयतेचा राजा मानले जाते, ते काही उगाच नव्हे. अत्यंत प्रतिकूल परिस्थितीमध्ये राज्य कारभार चालवत असतांना त्यांनी जनहिताच्या कोणत्याही गोष्टीकडे दुर्लक्ष केलेले नाही. जनहिताच्या अतिपय बारीकसारीक गोष्टीकडे जातीने लक्ष दिले. लोकांना आवाहन करून गावतळी, विहिरी, बारवा इ.जलसंधारणाची कामे मोठ्या प्रमाणात करून घेतली. त्यानुसार पेतकऱ्यांनी आपल्या पेटात बागायतीला प्राधान्य द्यावे आणि असणारे पाट, कालवे यांचे मनापासून संवर्धन करावे, आज्ञापत्रातील अपा तऱ्हेच्या

अमात्यांच्या नोंदीवरून महाराजांचे जलसंवर्धनविशयीचे घोरप स्पष्ट होण्यास मदत होते. त्यांनी असे म्हटले आहे की, 'दुर्गावरील पाणी बहुत जतन करावे । दुर्गावरील अष्ठीउदक पावून दुर्ग बांधावा । पाणी नाही,