Chemical Data Collections 30 (2020) 100567

Contents lists available at ScienceDirect

Chemical Data Collections

journal homepage: www.elsevier.com/locate/cdc

Data Article

A total and convergent synthesis of (7Z,11Z,13E)-7,11,13-Hexadecatrienal, the major sex pheromone component of the citrus leafminer, *Phyllocnistis citrella*

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ARTICLE INFO

Article history:
Received 2 May 2020
Revised 12 October 2020
Accepted 13 October 2020
Available online 15 October 2020

Keywords:
Citrus leaf miner
Stereoselective synthesis
Phyllocnistis citrella
(Z, Z, E)-7, 11, 13-Hexadecatrienal
Alkylation
Reduction
Oxidation
Wittig reaction

ABSTRACT

(Z, Z, E)-7, 11, 13-Hexadecatrienal, the major component of the sex pheromone of the citrus leaf miner *Phyllocnistis citrella* is efficiently and stereoselectively synthesized starting from the commercially available 6-Bromo-1-hexanol and described hereby. The synthesis of (Z, Z, E)-7, 11, 13-Hexadecatrienal was carried out by using the key step being Wittig reaction of the protected ylide using potassium tertiary butoxide a base to furnish 11Z double bond (Z)-isomer as the major product. The stereoselective formation of the 7Z double bond is formed by the stereospecific reduction of internal alkyne with sodium borohydride (PIINi). The synthetic methodology is inexpensive with its operational simplicity and it will be attractive for academic and industrial research.

Specifications Table

Subject area	*Organic Chemistry, Agricultural chemistry, Spectroscopy, Physical Chemistry, etc.*
Compounds	*(7Z,11Z,13E)−)-7,11,13-Hexadecatrienal*
Data category	*Data of Synthesized compound and spectral data*
Data acquisition format	*Synthesis, IR, NMR (^1H and ^{13}C), mass spectra*
Data type	*Detailed data of analysed of Synthesized compound and Green Metrics Calculations*
Procedure	*The Major Sex Pheromone Component of the Citrus Leafminer, Phyllocnistis citrella (7Z,11Z,13E)-7,11,13-Hexadecatrienal have been synthesized from the commercially available 6-Bromo-1-hexanol.*
Data accessibility	*Data included in the article*

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https://doi.org/10.1016/j.cdc.2020.100567

J Mater Sci: Mater Electron (2021) 32:2219–2233

Enhanced NO_2 gas sensing performance of Ni-doped ZnO nanostructures

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Received: 26 June 2020
Accepted: 27 November 2020
Published online: 7 January 2021

ABSTRACT

Pure and 1–4 at.% Ni-doped ZnO (N_0Z-N_4Z) nanostructures have been successfully prepared by simple and cost-effective co-precipitation method. The prepared nanostructures were studied using XRD, FESEM, HRTEM, EDX, FTIR, UV–Visible absorption and XPS techniques. The XRD study revealed that the hexagonal wurtzite structure of pure and Ni doped ZnO nanostructures, and their preferred peak growth orientation is along (101) plane without inferior phases in Ni-doped ZnO samples. The morphological investigation of Ni doped ZnO samples by FESEM and HRTEM techniques exhibited nanorods. The average diameter and length of nanorods are 25–80 nm and 140–410 nm. The results of UV–Visible absorption spectroscopy of Ni-doped ZnO nanostructures indicate red shift with varying amounts of Ni concentration. The estimated band gaps were obtained 3.11, 3.06, 3.02, 2.99 and 2.97 eV of N_0Z, N_1Z, N_2Z, N_3Z and N_4Z nanostructures respectively. The NO_2 gas sensing performance of fabricated N_0Z-N_4Z sensors were tested at different working temperatures (120–280 °C) and concentrations (5–100 ppm). Among them, the N_2Z sensor showed stable, reproducible and the highest response (356%) when exposed to 100 ppm NO_2 gas at 200 °C working temperature. The probable sensing mechanism of NO_2 gas by Ni-doped ZnO nanostructures is investigated and discussed. Sensing response of N_2Z gas sensor was also studied for 100 ppm Cl_2, SO_2 and H_2S gases at 200 °C operating temperature and it appeared for most selective towards NO_2 gas. The present study reveals that N_2Z nanostructure can be attractive material as a sensor for recognition of hazardous NO_2 gas at low concentrations.

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https://doi.org/10.1007/s10854-020-04987-z

Ceramics International 47 (2021) 2430–2440

Contents lists available at ScienceDirect

Ceramics International

journal homepage: www.elsevier.com/locate/ceramint

Fabrication of enhanced sensitive and selective porous indium oxide nanocube sensor for NO_2 detection

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ARTICLE INFO

Keywords:
Porous In_2O_3 nanocubes
CTAB
Kirkendall effect
NO_2 sensing

ABSTRACT

Porous nanoarchitectures of metal oxide semiconductors (MOS) are promising advanced materials due to their relatively higher surface area, more active sites and are beneficial for variety of applications. Herein, we report a simple method for making porous Indium oxide nanocubes (PINC) using a novel surfactant based biogenic hydrothermal method followed by a nanoscale Kirkendall effect. The nucleation and growth of PINCs were optimized by controlling amount of Cetyl Trimethylammonium Bromide (CTAB), which helps to control the size of nanocubes. The formation of porosity on the nanocubes through the nanoscale Kirkendall effect was proposed. Furthermore, the PINC based films were employed to fabricate solid-state chemiresistive gas sensor and sensing properties were studied. The PINC based film sensor was found to respond towards Carbon dioxide (CO_2), Acetone ($(CH_3)_2CO$), Ammonia (NH_3), and Nitrogen dioxide (NO_2) gases. However, It exhibited highest gas response to NO_2 gas (response S = 3450) with a shorter response (Rs = 14s) and recovery time (Rc = 115s) at 100 °C operating temperature. Besides, the sensing properties such as linearity, selectivity and real-time sensing analysis were also studied systematically. Herein, we demonstrated the effect of porosity and size of nanocubes on the sensing properties of PINC based sensor device.

1. Introduction

The development and progress in transportation and industrial sectors have introduced pollutants such as toxic gases, contaminated water and other mephitises in the environment [1]. Toxic pollutant gases such as Carbon monoxide (CO), Volatile organic compounds (VOC), acetone, ethanol, ammonia (NH_3), Carbon dioxide (CO_2) and nitrogen dioxide (NO_2) etc. Have been released into the atmosphere rapidly [2–5]. Therefore, the development of toxic gas sensors acquiring a substantial response, high selectivity, rapid response, transduction, signal processing and rapid recovery time is most awaited to probe, measure and control the release of toxic gases. Metal oxide semiconductor (MOS) based chemiresistive gas sensors such as SnO_2, ZnO, In_2O_3, Co_3O_4, Fe_2O_3, NiO, TiO_2 and WO_3 have been widely studied and deployed substantially in industries, laboratories and public places for the detection of toxic gases. This may be due to low cost, fast response and long term stability with an excellent sensitivity [6–8].

However, the porous MOS have attracted substantial attention for various application in modern technologies such as energy conversion devices, nanomedicine, photonics and catalytic reactions [8]. Porous MOS nanostructure has an advantage of prolific number of active sites, large surface area to volume ratio, low density and favorable condition for physical and chemical heterogeneous interactions [7–9]. Therefore, the uses of porous MOS nanostructures in the field of gas sensors have emerged in recent years [8]. Initially, silicon-based oxide has been deployed as a porous material for gas sensing [8,9]. Similarly, the traditional sensing materials such as ZnO and SnO_2 have been reported for various toxic gases such as ethanol, butanol, acetone, CO, and Volatile organic compounds [8,10–12]. Also, many porous MOS nanostructures have been reported for various toxic gas sensing [3,13,14]. The enhancement in the sensing properties of porous MOS nanostructures have been observed due to extra coverage, low density, large

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https://doi.org/10.1016/j.ceramint.2020.09.085
Received 28 July 2020; Received in revised form 6 September 2020; Accepted 7 September 2020
Available online 10 September 2020

The Study of Sugarcane Concentration in Lower Bhima Basin

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Abstract:

Sugarcane is the most important commercial crop of India and tropical, sub-tropical countries. Sugarcane is one of the water-intensive crops cultivated predominantly leads to growth in the economy of Maharashtra. Sugarcane is a renewable, natural agriculture resource because it provides sugar, besides biofuel, fiber, fertilizer and myriad of byproducts/co-products with ecological sustainability. It is cultivated predominantly in states like Uttar Pradesh, Maharashtra and Karnataka. The concentration of crop in an area largely depends on its terrain, temperature, and moisture and pedological condition.

Herewith can take one tahsil is one administrative unit for each tahsil for the selected present study in the Lower Bhima basin of Maharashtra and Karnataka state. To analyze the sugarcane concentration taking only the secondary information was collected from different sources. For calculate the concentration of sugarcane crop, Bhatia's Crop Concentration (1965) technique has assumed. Study shows that the high concentration of sugarcane in the Pandharpur tahsil is due to irrigation facilities. The low sugarcane concentration whereas remained found in Barshi, Sangola, North-Solapur, Afzalpur, Sindhi, Jevargi and Shahpur tahsil. Here irrigation facility was low. The empirical result suggested that there is an urgent need to improve irrigation facilities, use high yield verity seeds and use modern technology for increasing sugarcane area under low concentration of sugarcane in lower Bhima basin

Key Words: *Bhima Basin, Concentration, Region and Sugarcane.*

Introduction:

Sugarcane is a renewable, natural agriculture resource because it provides sugar, besides biofuel, fiber, fertilizer and myriad of byproducts/co-products with ecological sustainability. Sugarcane juice is used for making white sugar, brown sugar (Khandsari), Jaggery (Gur) and Ethanol. The main byproducts of the sugar industry are Bagasse and Molasses. Sugarcane is one of the water-intensive crops cultivated predominantly in different parts of India. It is cultivated predominantly in states like Uttar Pradesh, Maharashtra and Karnataka. Sugarcane has been cultivated mainly in a region, where suitable climatic condition and soil, availability of irrigational facilities. Sugarcane is the basic raw material for the sugar industry. This point of view sugarcane cultivation in the Lower Bhīma Basin is assessed.

Crop Concentration means the variations in the density of any crop in an area region at a given point of time. The concentration of crop in an area largely depends on its terrain, temperature, and moisture and pedological condition. It tends to have a high concentration in the area of ideal agro-climatic conditions and density declines as the geographical condition becomes less conductive. It is because of the suitability of agro-climatic conditions (Husain M. 2009). The region Lower Bhīma Basin is an ideal agro climatic condition for the concentration of sugarcane crop. Then there are Spatio-temporal changes due to uncertain and scanty rainfall. Therefore an attempt is made here to "The study of sugarcane concentration in lower Bhima basin".

Study Region:

The Lower Bhima Basin is one of the most important regions of the Maharashtra and Karnataka state both in terms of area and population. The Lower Bhima Basin starts from base level Ujani dam i.e. from village Takli of Solapur district in Maharashtra to the Karnataka State up to Krishna and Bhima River Sangam near Kadlur village. The catchment area of lower Bhima Basin covers the area of tahsils Madha, Barshi, Malshiras, Pandharpur Mohol, Mangalwedha, Sangola, North Solapur, South Solapur and Akkalkot tahsils of Solapur district in Maharashtra state, and in Karnataka, it covers the area of Indi, Sindgi, Afzalpur, Kalaburagi, Jevargi, Chittapur, Shahpur and Yadgir tahsils of Vijayapura, Kalaburagi and Yadgir districts respectively The absolute location of Lower Bhima Basin is from $16^{0}23'$ 53.02'' North to $18^{0}26'22.64''$ North latitude and $74^{0}36'50.53''$ East to $77^{0}28'18.32''$ East longitude. It covers an area 27705.69 sq.km. of the whole region and its length is 346 km which lies mostly rural area. The minimum average of rainfall in the region is 537.67 M.M.

IMPACT FACTOR 6.10

ISSN 2393-8412
Indo Asian Social Science Research Journal (IASSRJ)
Issue : XIII, Vol. III
August 2020 To Jan. 2021
www.irasg.com

Nutrition and Physical Work Performance for Students

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Introduction :-

Eating is an essential part of the daily lives of everyone. Colleges and universities, are recognizing the importance of food for the students, provide food service facilities on the campus. Even though the chief function of the food is to supply materials to meet physiological needs, it serves other functions also. Food plays an integral role in social life, whether on the college or university campus, in the home of the land, or in the affairs of the convening diplomats of the world.

Still another function of food is that of the psychological or emotional influence Familiar foods are favourite foods, imparting a sense of well-being and satisfaction unrelated to food value but reminiscent of past experiences.

1) Nutritional Deficiency and Performance

Normally, voluntary drinking is stimulated when the body water content drops by 1 percent, but during exercise voluntary in take is inhibited and water balance balace may not be attained until hours or days after a severe bout of work with high rate of water loss as sweat. In a comfortable environment water loss due to sweating during moderate exercise will be about 1 litre per hour; at higher work output or in heat, loss may be two to four times to of regular that rate. Physical performance begins to deteriorate when the water deficit exceeds 3 per cent of body weight.

In spite of this evidence, extremely ill-advised practices are used to meet weight ranges in competitive sports such as wrestling practices that in cloud withholding water, wearing

Our Heritage

ISSN 0474-9030
Vol-68-Issue-32-February-2020

Depiction of the Arduous Journey of Deeti in Amitav Ghosh's *Sea of Poppies*

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Abstract:

The experience of colonization has produced an explosion of new writing in English. Amitav Ghosh's *Sea of Poppies* presents gender as a subject of analysis presenting the cultural practices. His writing is a platform to demand equality, rights and justice for women. He exposes the pre-determined role of Deeti and how she is trained into different roles. It means that roles like daughter, sister and mother are not natural but social because she has to be trained to think, talk, act in particular ways that suit the role. She is socially conditioned, trained and prescribed so as to assume the role of women. The novelist presents the arduous struggle of Deeti who has to face the opposition of her family. At the same time, the society does not allow her to break the shackles of orthodox traditions. With the help of Kalua, the untouchable, she sees herself as ushering in a new world discarding age-old traditions and sets the example of a new woman.

Key words:Ibis, Opium War, Patriarchy, Other, Emancipation, Feminism etc.

The woman has been socialized and trained to believe that some works are what make her truly feminine. That is the characteristics one associates with the feminine in women are socially given values and the woman assimilates these values so that she fits into the category of the feminine. Wollstonecraft was one of the pioneers who moved from a biological view of gender to a social one, she saw social norms, values, laws and cultural practices forms behaviour from women. The woman has little choice in Wollstonecraft's critique but to accept these forms and norms, if she didn't she would be treated as a freak, a monster or a witch. Thus, the woman consented to feminine roles and to her own subordination (Nayar,56)

The co-option of Indian labour and soldiers by the British rule reinforces Ghosh's Ibis trilogy. He presents the picture of nineteenth century women in his novel *Sea of Poppies* the first novel in a trilogy. The vibrant saga of a sailing ship named Ibis is at the heart of this novel. It depicts the tumultuous voyages of the ship across the Indian Ocean before the start of the Opium War in Ghosh's portrait. The fate of women in the pre-independence [illegible]

IMPACT FACTOR – 5.61

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24.

HUMANITY AT ITS BEST: REFLECTIONS ON THE LIFE OF KESHTA IN RABINDRANATH TAGORE'S *PURATAN BHRITYA*

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ABSTRACT:

The research paper introduces Rabindranth Tagore's impressions about the master-servant relationship in his poem Puratan Bhritya. His poems hold a mirror to our troubled times. In the poem,the owner of the house (narrator) expresses his thoughts about his servant named Keshta. He works regularly and sincerely for his master, but faces the music every time. His master calls him names, but Keshta never feels humiliated in life. The narrator catches smallpox during his pilgrimage, but Keshta saves him sacrificing his own life. In this heart-touching poem, Rabindranath Tagore brings out the unparalleled devotion of Keshta who emerges as the champion of humanity. He also draws our attention to the insufficient health facilities and the deaths of people due to various diseases during that turbulent period.

Key words: Keshta, Smallpox, Humanity, Vrindavan, Sree Dham, Krishnakanta etc.

Rabindranath Tagore, hailed by Mahatma Gandhi as 'The Great Sentinel' was one of the men of his age, who touched and enriched modern Indian life at several points. (Naik, p.58) Rabindranath Tagore was a poet, dramatist, actor, producer; he was a musician and painter; he was an educationist, reformer and prophet; he was a novelist and short story writer and a critic of life and literature.(Iyengar,p.99) He was a great man, the Rishi, the Gurudev. Tagore's verse in English is essentially lyrical in quality. He is a very unequal poet. He is a poet with a delicate sensibility deeply Indian in spirit. Jawaharlal Nehru says about him that He was in line with the rishis, the great sages of India, drawing from the wisdom of the ancient past and giving it a practical garb and meaning in the present. He gave India's own message in a new language in keeping with the yugadharma, the spirit of the times.

Most of the personal tragedies in Tagore's life had occurred. Kadambari Devi, his sister-in-law, once his playmate and later his intellectual companion, had committed suicide in 1884; later he lost the wife, Mrinalini, to whom he had been joined in an 'arranged' marriage in 1883; his second daughter Renuka,had died in 1903 of tuberculosis; in 1907his younger on Shamindranath died of cholera.(Mehrotra,p.119).When the poet was an adolescent, he saw the deaths of people due to smallpox, cholera, plague etc.

CURRENT GLOBAL REVIEWER
Half Yearly
Issue X Vol V, Sept. 2020
UGC Approved
Sr. No. 64310
ISSN : 2319 - 8648
Impact Factor : 7.139

Optimization of Growth Kinetics for Citric Acid production by *Aspergillus niger* using Solid State Fermentation

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ABSTRACT

Citric acid exists as an intermediate in the tricarboxylic acid cycle (TCA) and consequently occurs in the metabolism of almost all living organisms. The accumulation of citric acid by *Aspergillus niger* is strongly affected by the nutrient composition of the production medium. Solid substrate fermentation is ideal to grow *Aspergillus niger* on a sugar rich byproduct to produce citric acid for various purposes. The present model was used to identify the optimum fermentation conditions leading to a maximum citric acid production: a fermentation temperature of 35^{0}C, an initial substrate pH of 7.0 and a CW initial MC of 75%. Growing *Aspergillus niger* under the conditions optimized by the CCD method predicted a maximum citric acid level by using cheese whey.

Keywords: Optimization, *Aspergillus niger,* Solid substrate, Citric acid, Cheese whey

INTRODUCTION

Citric acid (chemical formula $C_6H_8O_6$) i.e., 2-hydroxy propane 1,2,3-tricarboxylic acid is an organic acid of huge industrial importance. It was first crystallized from lemon juice by the Swedish scientist Carl Wilhelm Scheele in 1784. Dr. James Curie (1917) isolated the fungus *Aspergillus niger* as an efficient citric acid producer and developed a new industrial scale fermentation process. Citric acid fermentation process has been extensively improved in industry since the 1920's (Sarangbin, S. 1993). The most popular white rot fungus for large-scale production of citric acid is *Aspergillus niger* due to its high citric productivity low pH and without the secretion of toxic byproducts.

It was well known fact that growth and production of *A. niger* are strongly affected by the medium composition, fermentation parameters and stimulators. The type and concentration of the carbon source, especially glucose and sucrose, has a significant effect on citric acid production. In general, the final concentration of citric acid increases as the initial concentration of the carbon source is increased. Citric acid production by *A. niger* also depends on presence of other nutrients such as nitrogen, phosphorous, potassium and other salts (Wen, Z.Y and Chen, F. 2001). The important physico-chemical fermentation parameters influencing the growth of *Aspergillus niger* on a solid substrate and its production of citric acid are solid substrate composition, moisture content, particle size distribution, fermentation temperature, pH, fermentation time and inoculum density (Xu, D.B. *et al.*, 1989a; Jianlong, W. and Ping, L. 1998).

A variety of fungi are reported to produce organic acids such as citric, oxalic, succinic and malic acid. Citric acid production using the filamentous fungus *Aspergillus niger* is well known and widely used by industries producing food, beverages, chemicals and pharmaceutical products (Haq, I. *et al.*, 2001a). However, the global demand for citric acid is growing faster than its production, implying that more economical processes are

CURRENT GLOBAL REVIEWER
Half Yearly
Issue X Vol V, Sept. 2020 | UGC Approved Sr. No. 64310 | ISSN : 2319 - 8648 Impact Factor : 7.139

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Nibandha Mala(UGC CARE Journal) ISSN 2277-2359
Vol-12-Issue-02
February 2020

सुषमा मुनींद्र के कहानी साहित्य में अभिव्यक्त सामाजिक विषमता

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भ्रमणध्वनि:– ९०७५८४४०८३

प्रस्तावना:–

प्रख्यात लेखिका सुषमा मुनींद्र आधुनिक हिंदी साहित्य में अपना विशेष स्थान रखती हैं। उनके साहित्य में विषयों में विविधता मिलती है। स्त्री विमर्श, दलित विमर्श,पुरूष विमर्श ,घुमंतू जातियों का विमर्श आदि विमर्श का चित्रण मिलता है। अनेक समस्याओं का भी अंकन लेखिका ने अपनी कहानियों में किया है। उच्च वर्ग से लेकर पिछडे वर्ग तक का यथार्थ चित्रण उनकी कहानियों में मिलता है। सहज,सरल शैली में लिखी उनकी कहानियॉ बहुत रोचक लगती है। कहानियों में शोषितों के करूणगान का चित्रण तो है ही साथ में शोषकों के साथ मुकाबला करने की अदम्य शक्ति का भी अंकन हुआ है। साहित्य में समाज का प्रतिबिंब उभरता है। साहित्यकार साहित्य के माध्यम से अनछुए प्रश्नों तथा प्रसगों से समाज को अवगत कराता है। सुषमा जी अपने सामाजिक,आर्थिक,धार्मिक विसंगतियों की बेबाक अभिव्यक्ति देती है। सुषमा जी के साहित्य में स्त्री विमर्श का चित्रण हुआ है। स्त्री सदियों से प्रताडित रही, दबती कुचलती रही है। सुषमा जी ने स्त्री का चित्रण दबती कुचलती स्त्री के रूप में नहीं किया है,बल्कि सशक्त रूप में किया है। शिक्षा के वल पर स्त्री खुद को सिद्ध कर रही है। उसमें निरंतर सकारात्मक परिवर्तन होने लगा है। सुषमा जी कहानियों में स्त्री के सकारात्मक परिवर्तन का सही अंकन हुआ है। कहानियों में चित्रित स्त्री अन्याय अत्याचार को सहती हुई नजर तो आती है,लेकिन सही अवसर पाकर अपने कुशल कार्य से पुरूषी अहम् को चूर चूर कर देती है।सुषमा जी 'उपचार' कहानी में लिखती है,कि ''शिक्षा ने चूँकि स्त्री को महत्त्वाकांक्षी बना दिया है, अत: वह अपना अवमूल्यन होने देना नहीं चाहती। कुछ सार्थक करना चाहती है, अर्थ उपार्जन के लिए नहीं बल्कि खुद को साबित करने के लिए।''१ सुशमा मुनींद्र के 'मृत्युगंध' नामक कहानीसंग्रह में 'देवता' कहानी में बंजारा घुमंतू जाति का चित्रण हुआ है। यह कहानी बंजारा स्त्री सुभागी और उच्चवर्गीय निर्गुण साकल्ले पर चित्रित है। इस कहानी में सुशमा जी ने बंजारा समाज का यथातथ्य चित्रण किया है। उनकी जीवन पैली रस्म–रिवाज आदि का भी यथार्थ चित्रण किया है। इस समाज में फैली व्यसनाधिनता को भी दर्षाया है।

INDEX

१०. डॉ. बाबासाहेब आंबेडकर यांचे सामाजिक विचार - एक काळाची गरज

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प्रस्तावना

भारतीय राज्यघटनेचे शिल्पकार म्हणून डॉ. बाबासाहेब आंबेडकर यांचे योगदान भारतीय समाजाच्या दृष्टीकोनातून बहुमुखी असल्याचे दिसून येते. त्यांचे व्यक्तिमत्व सर्वस्पर्शी असून त्यांनी आपल्या सामाजिक, राजकीय, शैक्षणिक व धार्मिक क्षेत्रात उत्तुंग असे कार्य केले होते. जसे की, त्यांनी आपल्या काळात भारतीय समाज एकसंघ व्हावा व या देशातील बहुजन समाज, अस्पृश्य समाज हा एकाच अधिकाराखाली यावा. व या सर्वांना नैसर्गिक हक्क मिळावे. सर्वांना हक्क व अधिकार मिळण्यासाठी त्यांनी आपली सामाजिक चळवळ निर्माण केली. तसेच त्यांनी केलेले अस्पृश्यतेच्या सुधारणात्मक कार्यामुळे ते सबंध विश्वाला परिचित आहेत. त्या बरोबरच त्यांनी ज्या-ज्या समस्याच्या बाबतीत मुळापर्यंत जाऊन अभ्यास केला. त्यातून त्यांनी नवीन दृष्टीकोन संशोधनाच्या माध्यमातून शोधण्याचे काम केले. त्यामुळे ते निश्चितच एक 'समाजशास्त्रज्ञ' व समाजसुधारक ठरतात. त्यामुळे भारतातील असमानता नष्ट करण्यासाठी डॉ. आंबेडकरानी सैद्धांतिक पद्धतीने आपले सामाजिक विचार मांडून सामाजिक समता, बंधुता व स्वातंत्र या मुदयावर आधारीत ही भारतीय समाजव्यवस्था आणण्याचा प्रयत्न केला. त्यांचा हा विचार सदैव स्मरणात राहावा व येणाऱ्या भावी पिढ्यांनी डॉ. बाबासाहेब आंबेडकराच्या सामाजिक विचारातून समाजविकासाभिमुख कार्य करावे. व आपल्या सा.चळवळी नेटाने पुढे घेऊन जाव्यात व त्यांचा हा सामाजिक विचार येणाऱ्या पिढयाना मार्गदर्शक ठरण्यासाठी सर्वांनीच सा. विचार अभ्यासणे ही काळाची गरज असल्याचे लक्षात येते. हाच या संशोधनामागील मूळ उद्देश आहे.

डॉ. बाबासाहेब आंबेडकर यांच्या सामाजिक कार्याचा उद्देश

डॉ. आंबेडकराचे सार्वजनिक कार्यात पदार्पण सन १९२०-३० च्या दशकात झाले. त्यांचे हे पदार्पण सामाजिक परिवर्तनाच्या आंतरिक धारणेतून पुढे आले होते. भारतीय समाजव्यवस्था जातीभेदावर उभी असून ती सर्वांना सामाजिक दृष्ट्या समान वागणूक देत नाही. वर्षानुवर्ष ती अमानवी व असहिष्णू राहिली आहे. आणि म्हणूनच ती बदलली पाहिजे. ही डॉ. बाबासाहेब आंबेडकर यांची मनोभावना होती. प्रत्येक **माणसाला** सामाजिक, राजकीय आणि सांस्कृतिक हक्क आहेत. आणि ते जन्माच्या किवा परंपरेच्या

ISSN: 2394-3114
Vol-40-Issue-22-February-2020

"डॉ. बाबासाहेब आंबेडकर यांचा वंचितांच्या इतिहासाकडे पाहण्याचा दृष्टिकोन"

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प्रस्तावना –

अलीकडे इतिहास लेखनात अनेक नवीन प्रवाह उदयास येत असलेले दिसून येतात. त्यामध्ये प्रामुख्याने मार्क्सवादी इतिहास लेखन प्रवाह, वंचितांचा इतिहास लेखन प्रवाह तसेच स्त्रीवादी इतिहास लेखन प्रवाह व आंबेडकरवादी इतिहास लेखन प्रवाह असे अत्यंत महत्वाचे इतिहास लेखन प्रवाह सध्या इतिहासात येत आहेत. कारण इतिहासकारांवर कोणत्या ना कोणत्या विचारांचा प्रभाव असतो. तो त्या प्रभावाखाली येऊन इतिहास लेखन करण्याचा प्रयत्न करीत असतो. म्हणून अलीकडे 20 व्या शतकात जेवढे काही इतिहास लेखनातील नवीन प्रवाह येऊ पाहत आहेत. त्यापैकी अत्यंत महत्वाचा प्रवाह म्हणजे आंबेडकरी नवप्रवाह होय. डॉ. बाबासाहेब आंबेडकरांनी आपल्या इतिहासविषयक दृष्टिकोनातून अभिजनाचा इतिहास मांडला आहे. त्यांनी वंचितांच्या इतिहास लेखनास सुरुवात केली.

वंचितांचा इतिहास म्हणजे उपेक्षित, दुर्लक्षित केलेले, प्रवाहाच्या बाहेर असलेले समूह होय. वंचित म्हणजे 'उपेक्षित लोक' अथवा समूह होय. वंचितांच्या इतिहासाला फार उशीरा सुरुवात झाली. तरीही हा एक प्रवाह निघाला तो पाश्चात्य इतिहासाच्या तत्त्ववेत्यांनी १९ व्या शतकात हा प्रवाह निर्माण केला. व वंचित घटकाला आता तरी इतिहासात स्थान मिळेल काय? याचा विचार होण्यास सुरुवात झाली. वंचितांचा इतिहासात डॉ. बाबासाहेब आंबेडकरांचे कार्ये कोणते होते? असा प्रश्न निर्माण होतो. म्हणजेच या नवीन प्रवाहामध्ये डॉ. बाबासाहेब आंबेडकरांच्या विचारांचा प्रवाह पाहत असताना त्यांचा वंचितांचा इतिहासाकडे पाहण्याचा दृष्टिकोन फार व्यापक व पुढारलेला दिसून येतो.

या देशाच्या व जगाच्या इतिहासामध्ये वंचित घटकांचा मोठ्या प्रमाणात सहभाग नक्कीच आहे. कारण वंचितांच्या सहभागाशिवाय कोणत्याही देशाचा इतिहास पूर्णत्वाकडे जात नाही. म्हणूनच डॉ. बाबासाहेब आंबेडकरांचा दृष्टिकोन पाहता वंचितांच्या इतिहासाला त्यांनी प्रथमत: प्राधान्य दिले आहे. त्यांच्यापूर्वी महात्मा फुलेपासून डॉ. बाबासाहेब आंबेडकरांपर्यंत वंचित

International Research Journal of Environmental Sciences
Vol. 9(4), 1-9, October (2020)
ISSN 2319–1414
Int. Res. J. Environmental Sci.

Studies on physicochemical parameters of Indrayani River, Pune, Maharashtra, India

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Available online at: www.isca.in, www.isca.me
Received th November 2019, revised th February 2020, accepted th April 2020

Abstract

The Indrayani River is one of the river of Bhima River, originates at Kurvande village near Lonavala, and flows towards east across the north border of city of Pune. The Valvan dam is constructed on Indrayani River for irrigation and hydroelectric power plant. It flows. In the catchment area of Indrayani River, population is rapidly increasing, because of best connectivity of roads and railway transport, many educational hubs and job opportunities. Many villages and four Municipal councils release their untreated sewage wastes into the Indrayani River. At Indori and Dehu collection sites all the physiochemical parameters have high values and this water is not found suitable for drinking and other purposes. The river is becomes eutrophic, at many places water surface is covered with aquatic vegetation such water hyacinth and Vallisneria. Therefore, Indrayani River is getting polluted due of domestic and industrial discharges; there is record of death of fishes, mostly Mahseer.

Keywords: Studies, physicochemical, parameters.

Introduction

The living organism on the earth cannot survive without water, they need water for their existence. The freshwater bodies such river and ponds and streams are become habitat of aquatic fauna. The life on planet needs good quality water for drinking. Human requires good quality water for various purposes such as drinking, agriculture and industries etc. However nowadays, the number of substances such as wastes from various resources being continuously added in water bodies.

These wastes comprising bacteria, viruses, heavy metals, nitrates, phosphates, salts, sewage and detergents are discharged water bodies. These wastes such as sewage, industrial waste water, agricultural runoff and other liquid waste without sufficient treatment are discharged into the water bodies.

These wastes alter the physical and chemical properties of water and make water harmful to human being and for other activities. Today, the major rivers and streams of the world are heavily polluted. The huge population expansion, widespread urbanization, industrialization and agricultural development have led to affect the water quality all over the world[1].

The water is valuable components of origin of life and sustains of life. The water is necessary for whole life processes[2]. There are numerous sources of water contamination, but most of them which are domestic waste, industrial waste, the waste dumped into water by human being, cutting of trees and flooding causes soil deterioration, usage of insecticides and fertilizers in agricultural fields and unprocessed wastes etc. The industrial wastes containing heavy metal and their by-products discharged into the water bodies without processing and proper treatment, these wastes settle down in water bodies. So the aquatic animals and human being are exposed to these hazardous wastes. These wastes get accumulated in the body of animal like fishes and other aquatic animals and finally in human body as these contaminated fishes were eaten.

These waste materials are so poisonous and can be produce a variety disorders in human body and causes many diseases in human being. The diseases like inflammation, reproductive failure within fertility, immune compromise, respirational and gastrointestinal disorder, histophatological disorder, cancer and even death. It also causes many infectious diseases such as typhoid and cholera and even many cancers by contaminated water[3]. The water contaminants can also spread up to dermatitis, renal disease, diarrhea, dementia etc[4].

As per the report of WHO the 1/6th human population of the world i.e. about 1.1 billion individuals are not getting good quality water for drinking and 2.4 billion people are not having proper sanitation facility. The pollution of water by domestics, industrial and agriculture wastes cause destruction to publichealth and the environment[5].

The level of water pollution is indicated by factors like pH, temperature, dissolved oxygen, hardness, turbidity, alkalinity, ammonia, chlorides, nitrate and phosphate. As well as the contamination level of a stated water body is indicated by biological oxygen demand (BOD) and chemical oxygen demand (COD)[6].

31

Mental health of college students using social media

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Abstract

The objective of the study wasto study the mental health male and female college studentusing social media another objective was to compare and analyzed the mental health of male and female college student using social media.The study was hundredcollege student were selected from Barshi City. The age range of participants was between 18to 20 years. Simple random sampling method for used for data collection. The findings were there is significant gender difference in mental health of male and female college student using social media. Female college student are more good mental health using social media

Keywords- Mental Health, professional, male and female college student using social media.

Introduction

Youth are the future of any nation. The importance of youth in development is unique and complex. Youth developing ability to reason gives them a new level of social awareness and moral judgment. Young teenagers become capable of thinking about their thinking, and of thinking about other people's thinking.

Every youth has right for health care, social security, education, leisure recreation and cultural activities. The youth are growing minds and growing bodies.theyare public as well as individual risibility.

Is the state of mental health getting worse under the supposedly increasing stresses of modern life? Doubtless more people with disorders are discovered or seek treatment, as a result of increased facilities and knowledge of the subject.

Mental health includes our emotional, psychological, and social well-being. It is the "psychological state of someone who is functioning at a satisfactory level of emotional and behavioral adjustment According to World Health Organization (WHO) mental health includes "subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence, and self-actualization of one's intellectual and emotional potential, among other It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood Coping with normal stresses of life, productive work and contribution to their community. However, cultural differences, subjective assessments, and competing professional theories all affect how "mental health"

Now a day's college student group is crazy for mobile phone. They like to gossip and chat on mobiles with their friends ext. whatsApp, Facebookand other social media. They are sending SMS to their friends time to time. Most of the message are private and sometimes very absence also, which they enjoy most. They like to listen music. They prefer rock-n-roll music. They like the item songs and the songs which are made for dance. They like the songs of love. This age group doesn't like the devotional songs like Abhangas and Bhajans. They like vulgar music. The most dangerous thing is that they are fond of Facebook. Some of them are connected on face book for several hours in days which is symptom of addiction. They like to make new friends through face book. They like online chat also. They behave like a crazy person who is disliked by parents and teachers

ISSN: 2394-3114
Vol-40-Issue-22-February-2020

A study of relation between self-concept and achievement motivationamong adolescent

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Abstract

The main purpose of the study the relationship between self-concept and achievement motivation of urban and rural youth.80(40 boys and 40 girls) were selected by random sampling method from Barshi city and rural area around Barshi. Self-concept Questionnaire by Raj Kumar Saraswaand Achievement motivation scale: PratibhaDeo and AshaMohan.was used for data collection. The study revealed that there is negative correlation between self-concept and achievement motivation of urban, rural and boy's adolescent. Study also revealed that there is positive correlation between self-concept and achievement motivation of girls

Keywords- Self-concept, achievement motivation,adolescent

Introduction:

Youth are the future of any nation. The importance of children in development is unique and complex. Children are both facilitators as well as deterrent factor in the process of development. The Youth are hands to work at the same extra mouths to feed, cared and to be prepared for the life. The youth have a bridge position in the continuum of past and future development. The youth of today are product of yesterday development. Also the Youth of today are the bottom base for tomorrow's development.

Self-concept is the sum total of all an individual can call his own, including both physical and mental data. The self is the totality of our impressions, thoughts and feelings such that we have a continuing conscious sense of being. It is a composite of ideas, feelings and attitudes a person has about him. It includes one self-esteem sense of personal worth and ones ideal self.

OUR HERITAGE
January - 2020
ISSN (Online) : 0474-9030 Vol-68, Special Issue-5
Impact Factor (2020) - 6.8
Special Issue on "*Sustainable Development Goals*"

A study of relation between self-concept and mental health among youth

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Abstract

The main purpose of the study the relationship between self-concept and mental health of urban and rural youth.60(30 boys and 30 girls) were selected by random sampling method from Barshi city and rural area around Barshi. Self-concept Questionnaire by Raj Kumar Saraswaand Mental Health Inventory (MHI) by Jagdish and Srivastava was used for data collection. The study revealed that there is negative correlation between self-concept and mental health of urban, rural and boy's youth. Study also revealed that there is positive correlation between self-concept and mental health of girls

Keywords- Self-concept, Mental health, Youth

Youth are the future of any nation. The importance of children in development is unique and complex. Children are both facilitators as well as deterrent factor in the process of development. The Youth are hands to work at the same extra mouths to feed, cared and to be prepared for the life. The youth have a bridge position in the continuum of past and future development. The youth of today are product of yesterday development. Also the Youth of today are the bottom base for tomorrow's development.

Self-concept is the sum total of all an individual can call his own, including both physical and mental data. The self is the totality of our impressions, thoughts and feelings such that we have a continuing conscious sense of being. It is a composite of ideas, feelings and attitudes a person has about him. It includes one self-esteem sense of personal worth and ones ideal self.

Self-concept refers to self-evaluation or self-perception and it represents the sum of an individual's belief about his or her own attributes. Self-concept reflects how a child evaluateshimself or herself in domains in which he or she considerer's success important. Self-concept plays an important role in understanding human behavior.

According to allport(1961) "The self is something of which we are immediately aware of we think of it a swarm, central, private region of our life. As such, it plays a crucial part in our life." As such, it plays a crucial part in our consciousness and personality. The self is a person's inner world. It is composite of a person's thoughts and feelings, striving and hopes, fear and fantasies, his view of what he is, what he has been, what he might become and his attitudes pertaining to his worth.

Mental Health

Youth are generally in good health, but they often discover they can avoid unpleasant situation by "not feeling well" Girls for example, often use their menstrual periods as an excuse for not going to school. Physical defects that can be corrected, such as crooked teeth, poor eyesight, or hearing loss, rarely prevent adolescents from doing what their peers do. Physical defects which prevent the adolescent from doing what his peers do, such as chronic asthma and obesity, are physical as well as psychological hazards.

The major psychological hazards of adolescence center around the failure to make the psychological transitions to maturity that constitute the important developmental tasks of adolescence. In

ISSN: 2278-4632
Vol-10 Issue-6 No. 2 June 2020

GEOGRAPHICAL ANALYSIS OF RAINFALL IN SOUTHERN PUNE DISTRICT

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Abstract

Climate plays an important role in characteristics of agricultural economy in a region. Temperature and rainfall are two major elements of climate, which is treated as primary determinants of crop growth. Rainfall means amount of rain and rain means a form of precipitation consisting of water droplets ranging from 1 to 5mm in diameter. Rainfall is most important climatic element considering agricultural phenomena. Rainfall is the most important climatic factor as it determines the potential of any region in terms of crops to be raised, farming systems to be adopted, the nature and sequence of farming operations to be followed, and the targets to be achieved in agricultural productivity. Therefore attempt is made here to analyse rainfall in South Pune district. The paper is based on secondary data source. To calculate annual average rainfall and average rainy days the statistical technique, arithmetic mean has been utilized. The rainfall variability is calculated by using the formula of Co-efficient of variation. The study reveals that high rainfall in Western part and low in Eastern part of the study region is a result of physiography of study area. The high rainfall variability in Baramati and Indapur is mainy due to the location in plain and drought prone area which indicates low assurance of rainfall.

Key wards: Rainfall, Intensity Variability.

Introduction:

Man's agricultural activities depend on the physical environment in which he lives although he often has tried to minimize the restrictions (Singh and Dhillon, 1984). Nature, in its diverse manifestations, namely, the soil, the water and the climate, provides man in different area with a variety of possibilities for development (Hettener, 1947). For the scientific study of agricultural phenomena, one must pay attention to relationship in between the climate and agriculture. Climate plays an important role in characteristics of agricultural economy in a region. It can influence the choice of farming system either indirectly through its impact on soil formation or directly through such as the length of the growing season, the occurrence of frost and the availability of water for crop Growth (Shirlaw ·D.W. (1971).

ISSN: 2278-4632
Vol-10 Issue-5 No. 17 May 2020

Irrigated Area As A Determinants Of Agricultural Productivity: The Study Of Lower Sina Basin

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Abstract

Agricultural productivity is a important aspect of agricultural geography. Agricultural productivity could be defined as the ratio of output to input in relation to land, capital and overall resources employed in agriculture. Irrigation is basic determinants of agriculture in arid and semi arid areas and where rainfall is inadequate. Irrigation means the supply of water to the land by means of channels, streams, and sprinklers in order to permit the growth of crops. Importance of irrigation has substantially increased after the enormous growth of population in developing and under developed countries. Irrigation is basic determinants of agriculture because its inadequacies are the most powerful constraints on increase of agricultural production. Therefore attempt is made here to assess the impact of irrigated area on agricultural productivity as irrigation is a determinants of agricultural productivity. The study is based on secondary data source. To examine the influence of irrigated area on agricultural productivity the Pearson's Coefficient of Correlation, Coefficient of determination and regression analysis technique has been utilized. The study reveals that the increase of one percent net irrigated area causes for increase of value of composite index of agricultural productivity of tahsils of lower Sina basin by 0.632 in study region.

Key wards: *Irrigated area, Productivity, Correlation, Coefficient of determination.*

Introduction

Agriculture is basic and most important primary economic activity as most of the world's population depend on agriculture and allied activities for their livelihood. Agricultural productivity is a important aspect of agricultural geography. Agricultural productivity could be defined as the ratio of output to input in relation to land, capital and overall resources employed in agriculture (Noor Mohammad, 1995). Agriculture productivity is determined by number of factors such as physical, Social, economical and technical. Irrigation is a basic determinants of agriculture in arid and semi arid areas and where rainfall is inadequate and unpredictable. Irrigation is the watering of

Peer Reviewed International Research Journal of Geography
Maharashtra Bhugolshastra Sanshodhan Patrika
ISSN : 0971-6785 {Impact Factor 4.567 Renew (IIFS)} Vol. 37, No.2, Jul-Dec 2020. pp 92- 97

A Critical Study of Agricultural Productivity in Lower Sina Basin

Dr. Arjun Nanaware Mr. Amar Wakade

Abstract

Agricultural productivity is a measure of efficiency with which inputs are used to provide an output.The measurement of agricultural productivity helps in knowing the area that is performing rather less efficiency in comparison to the neighboring areas. By delimiting the areas of low, medium and high productivity, agricultural plans may be formulated to remove and minimize for the regional inequalities. It is also provides an opportunity to ascertain the ground reality, the real cause of agricultural backwardness of a region. Therefore, attempt is made here to study agriculture productivity in lower Sina basin. This paper is based on secondary data source. To determine agricultural productivity Jasbir Singh's method (1976) is applied. The study reveals that high agricultural productivity of Jowar in Karmala, Barshi and North Solapur tahsil, is a result of development of surface irrigation facilities and black soil. The high agricultural productivity of Sugarcane in Madha and Mohol tahsil mainly due to the Bhima-Sina joint canal, while it is low in Paranda, Barshi and South Solapur tahsil due to the lower development of surface irrigation facility.
Keywords:*Agriculture, Productivity.*

Introduction:

The concept of productivity is a relative term and cannot be uniformity applied all over the world. Some have viewed productivity as the overall effectiveness of productive unit, while some have confined the use of the term productivity to denote the ratio of output to the corresponding input of labour. Productivity defined in economic or agricultural geography as output per unit of input or per unit of area respectively. Agricultural productivity is a measure of efficiency with which inputs are used to provide an output (Nanaware A.H., 2015).

. Agriculture productivity is a function of number of factors including physical, Socio economical and technical organization, mechanization (Noor Mohammad and Majeed Abdul, 1995). These factors are highly variables and dynamic both in space and in time leading to spatio-temporal variations in agriculture productivity. The regional differences in agricultural productivity are the result partly of natural advantages of a biotic environment and partly of farming efficiency as controlled by cultural ecology.The choice of farm inputs, and their relative quantities, and the techniques and the skill is largely depend on education and educational attainment of farmers (Nanaware A.H., 2018). It is widely accepted that agriculture production is the result of combinations of infra-structural elements, viz, physical, techno-economic, socio-economic, socio-culture, etc. by which agriculture efficiency is influenced (Singh S. and ChauhanV.S., 1994).By delimiting the areas of low, medium and high productivity, agricultural plans may be formulated to remove and minimize for the regional inequalities. It is also provides an opportunity to ascertain the ground reality, the real cause of agricultural backwardness of a region. Therefore, attempt is made here to study agriculture productivity in lower Sina basin.

Location of study region:

The study area is located in South central part of Maharashtra State. It is situated between 170 20' 22" North latitude to 180 40' 00" North latitude and 750 02' 00" East longitude to 760 10' 00" East longitude. It lies on the Deccan plateau. On an average height of study area is510 meters above mean sea level.

INTERNATIONAL JOURNAL OF ENVIRONMENTAL ANALYTICAL CHEMISTRY
https://doi.org/10.1080/03067319.2020.1792893

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Taylor & Francis Group

ARTICLE

Experimentally validated extractive spectrophotometric determination method of osmium(VIII) from environmental samples: sequential separation of osmium(VIII), rhodium(III) and ruthenium(III)

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ABSTRACT

An ethanolic solution of 1, 3–bis(hydroxymethyl) benzimidazole–2-thione (BHMBT), in the presence of hydrochloric and perchloric acid (1 mol L^{-1}), reacts with osmium(VIII) to give pink-coloured complex instantly at room temperature. The coloured species formed is extracted into methyl isobutyl ketone and shows maximum absorbance at 520 nm (hydrochloric acid) and 540 nm (perchloric acid). Excellent linearity with regression equation as $y = 0.025x + 0.005$ having correlation coefficient $R^2 = 0.999$ over concentration range of 5.5–30.0 µg mL^{-1} of osmium(VIII) is achieved with notable molar absorptivity of 4.907×10^4 L mol^{-1} cm^{-1}. The optimum concentration range is 5.62–29.99 µg mL^{-1} which is deduced by Ringbom's plot. Further other features like limit of detection (LOD = 0.15 µg mL^{-1}), limit of quantification (LOQ = 0.48 µg mL^{-1}) and Sandell's sensitivity (SS = of 0.038 µg cm^{-2}) are determined as well. The stoichiometry of [Os(VIII)–BHMBT] (1:1) complex is confirmed by applying log-log plot scheme. The specificity headed for osmium(VIII) is well studied and proper masking reagents are used where required to improve it. The intra-day and inter-day precision values are found to be brilliant with % relative standard deviation of 0.84 and 0.87 respectively with % accuracy within the range of 99.00–100. The method is effectively used for determination of osmium(VIII) from water samples, binary and ternary synthetic mixtures, simultaneous spectrophotometric determination of palladium(II) and osmium(VIII) and sequential separation of it from other associated metal ions. The method is sensitive and free from interference of associated ions commonly found with osmium(VIII).

KEYWORDS

1,3–Bis (hydroxymethyl) benzimidazole-2-thione; extractive spectrophotometry; sequential separation; osmium(VIII); simultaneous determination

1. Introduction

In the view of platinum group metals (PGMs), osmium is very rare and expensive. Large amount of osmium is produced in the form of metallic osmium and osmium tetraoxide. It is used in chemical synthesis of steroids, hydrogenation catalytic reactions, alloying

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Supplemental data for this article can be accessed here.

Contents lists available at ScienceDirect

Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy

journal homepage: www.elsevier.com/locate/saa

Highly reproducible, simple and selective analytical method for extractive UV–visible spectrophotometric determination of ruthenium (III): Analysis of catalyst, fissium alloy and sequential separation

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ARTICLE INFO

Article history:
Received 19 May 2020
Received in revised form 30 July 2020
Accepted 7 August 2020
Available online 11 August 2020

Keywords:
Alloy samples
FBIMMT
Ruthenium(III)
Synthetic mixtures
Spectrophotometric determination

ABSTRACT

An easy and selective method has been developed for the extractive spectrophotometric determination of ruthenium(III) with 4-(4′-flurobenzylideneimino)-3-methyl-5-mercapto-1,2,4-triazole (FBIMMT) as a chelating reagent. The basis of the method is the formation of stable complex of 'soft base' FBIMMT with 'soft acid' ruthenium(III). The reagent FBIMMT in *n*-butanol easily forms extractable yellow coloured complex with ruthenium(III) in acetate buffer of pH 4.8. The absorbance of [Ru(III)–FBIMMT] complex is measured at 394 nm against the reagent blank. Good linearity range of concentration up to 27.0 μg mL^{-1} of ruthenium(III) is attained with correlation coefficient $R^2 = 0.998$. The optimum concentration range is 6 to 27.0 μg mL^{-1} which is deduced by Ringbom's plot. The apparent molar absorptivity found to be 2.75×10^3 L mol^{-1} cm^{-1}. Some additional characteristics such as limit of detection (LOD = 0.48 μg mL^{-1}), limit of quantification (LOQ = 1.19 μg mL^{-1}), and Sandell's sensitivity (SS = of 0.0367 μg cm^{-2}) are also estimated. The composition of [Ru(III)–FBIMMT] complex has been established from Job's continuous variation method, mole ratio method, and log-log plot method. The specificity towards ruthenium(III) is well studied and appropriate masking agents are applied wherever required to boost it. The intra-day and inter-day precision values are found to be brilliant with % relative standard deviation of 0.52 and 0.68 respectively with % accuracy within the range of 99.00–100. The method is effectively used for determination of ruthenium(III) from water samples, binary and ternary synthetic mixtures, fissium alloy samples and catalyst materials. A scheme for sequential group separation of ruthenium(III), palladium(II) and osmium(VIII) has also been developed. The reproducible results of the present method confirm that the method has a good potential for quantitative determination of ruthenium(III) from various matrices.

1. Introduction

The prime attention in analytical determination of ruthenium is because of its distinctive characteristic properties and precious platinum group metal. It is widely used in the electronics industry and jewelry production. It is also used in alloying of platinum and palladium where its little amount boosts the hardness, durability, and also helps to improve electrical and thermal properties. It has strong catalytic characteristics in many acidic and alkaline medium [1] and solar cell production [2], while the coordination compounds of ruthenium with many ligands are being studied as the potential bioactive compounds for medical purposes [3]. Owing to these reasons, numerous analytical procedures have been fruitfully designed and used for its determination.

Recently varied range of analytically advanced techniques comprising expensive instrumentation have been developed for the determination of ruthenium(III). These methods include: neutron activation analysis [4], X-ray fluorescence [5,6], atomic absorption spectrometry (AAS) [7], graphite furnace atomic absorption spectrometry (GF-AAS) [8], pulse stripping voltametry [9], and inductively coupled plasma mass spectrophotometry (ICP-MS) [10,11], solid phase extraction (SPE) [12], and dispersive liquid-liquid microextraction (DLLME) [13]. These analytical methods are highly selective and sensitive, but are expensive and may not be always accessible in usual analytical laboratories. These methods include complicated instrumentation, time-

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https://doi.org/10.1016/j.saa.2020.118814
1386-1425/

Source : Economic survey of India, Various issues Economy, २०१५-१६.

निष्कर्ष :-

१. अभ्यासकाळात देशाच्या स्थुल घरगुती देशांतर्गत उत्पन्नातील प्राथमिक क्षेत्राचा वाटा वर्ष २०१५-१६ मध्ये सर्वात कमी म्हणजे १९.५७ टक्के व वर्ष २००१-०२ मध्ये सर्वात जास्त म्हणजेच २५.१३ टक्के एवढा होता. अभ्यासकाळात सरासरी प्राथमिक क्षेत्राचा वाटा २१.४३ टक्के राहिला.

२. स्थुल देशांतर्गत उत्पन्नातील तृतीय क्षेत्राचा समभागाचे प्रमाण वर्ष २००१-०२ मध्ये सर्वात कमी ५१.९९ टक्के तर वर्ष २०११-१२ मध्ये सर्वात अधिक ५४.९१ टक्के राहिला. याकाळात सरासरी तृतीय क्षेत्राचा वाटा ५२.९९ टक्के राहिल्याचे स्पष्ट होते.

३. स्थुल देशांतर्गत उत्पन्नातील क्षेत्रीय वृध्दीचा दर अभ्यासला असता GDP चा वृध्दीदर सरासरी ५.१६ टक्के राहिला. प्राथमिक क्षेत्राचा सरासरी वृध्दीदर २.८९ टक्के राहिला. द्वितीय क्षेत्राचा सरासरी वृध्दीदर ६.२७ टक्के तर तृतीय क्षेत्राचा सरासरी वृध्दीदर ६.५४ टक्के राहिल्याचे स्पष्ट होते. यावरून अभ्यासकाळात प्राथमिक, दुय्यम व तृतीय क्षेत्राच्या वृध्दीदरात झालेला बदल फारसा लक्षणीय नाही व देशाच्या आर्थिक विकासाच्या दृष्टीने तृतीय क्षेत्र हे प्रभावी क्षेत्र ठरले आहे.

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26

कृष्णा सोबती के उपन्यास और नारी

डॉ. सुब्राव नामदेव जाधव
हिंदी – विभाग,
श्री शिवाजी महाविद्यालय बार्शी

कृष्णा सोबती के कथा साहित्य में नारी के विविध रूपों में नारी का वृध्दा रूप भी परिलक्षित है। एक स्त्री के रूप में अपना संपूर्ण जीवन पुरूष व अपनी गृहस्थो के प्रति समर्पित कर अपने कर अपने बोए आम, बबूल दे रहे यही वृध्दों की त्रासदी विविध उपन्यासों व कहानी में निम्न रूप से प्रकट होती, इंतजार करती व शेषयात्रा के तानों–बानों में गुथित फैली पसरी कुछ इस प्रकार है। मित्रो मरजानी की धनवंती अब बूढी हो चूकी है, लेकिन फिर भी हाथ–पैर चलाती रहती है, अपना काम स्वयं करती है, बहुओं का भी हथ बँटाती है, अपने वृध्द पति गुरूदास का भी ख्याल रखती है। इस बुढापे में उसकी एकही आस है कि कब उसके अँगना पोते–पोती खेलें? जिदगीनाम में बेबे निक्के लाल वड्डे गाँव के सबसे बडे बुर्जुग है। सारा गाँव उनको भगवान मानता है। उनकी जोडी को साक्षात स्वयंभू और सतरूपा का अवतार मानते है। सतपुरूष मान गाँव के पंडित जी कहते है– अपने पिंड पर वड्डेवाला और बेबे की छत्रछाया बनी रहे । जो पिछले जन्म के पुण्य–प्रताप से सौ बरस जी ले, वह इस कलजुग में भी देवता १०१ लेकिन अपने बहु–बेटों से खचाखच भरे परिवार में सबकुछ में अपने द्वारा उगायी पकायी फसलों में जब घर के में जब घर लोगों के भीतर मन ही निक्के बेबे दुराव पाती है तो चौन से सो भी नहीं पाती। लाला वड्डे के अपनी पत्नी को राजमहीषी कहने पर वह कहती है– मेरे भोले मालिका चढती राजेश्वरी और ढलती राजमाता में ऊपर – थल्ले का फरक, एक के हाथ में

29

वृध्दावस्था की समस्या

डॉ. सुब्राव नामदेव जाधव
हिंदी – विभाग,
श्री शिवाजी महाविद्यालय बार्शी

जो जीवित रहते हैं उन सभी को इस अवस्था से गुजराना ही पडता है। समय के साथ–साथ चलकर घिसी देह धीरे–धीरे पुरानी पडने लगती है व्यक्ति का दम–खम छूटने लगता है ऐसे में जब अपना ही शरीर बरसों से पाला–पोसा प्रेम किया काम नहीं देता जो हकों–अधिकारों, व तानाशाही की भी हर किसी के लिए सीमा मर्यादित होती है। छुटते अपने तन के बूढे होने का गम व्यक्ति को उतना नहीं सालता जितने की छुटते हक–अधिकार। कुल मिलाकर सब–कुछ हाथ से छुटता देखता व्यक्ति असहाय या कुछ नहीं कर पाता क्योंकि उसे पाने की होड में लगे दावेदार अधिक सशक्त व सक्षम होते है और दिखाई भी देते हैय ऐसे में पुरानी पडी यह पीढी उस नयी पीढी को कोसकर मन ही लानतें भेज संतोष कर लेती है।

कृष्णा सोबती द्वारा वृध्दों की समस्या लेकर लिखे उपन्यास समय सरगम में आरण्या, दमयंती, कामिनी तीनों की आर्थिक रूप से सक्षम होने के बावजूद अपनी–अपनी समस्याएँ हैं। आरण्या अविवाहित वृध्दा है व अपनी उम्र के ७० वर्ष पार चुकी है। जीवन से भरपूर आसक्ति, उसके क्षण–क्षण को जीने वाली आरण्या इस उम्र में भी अपने पर वृध्दावस्था हावी नहीं होने देती। मनमानियों की विशेषज्ञ आरण्या अपने अनुसार जीती हैय जब तक जागना है जागती है जो खाना है खाती हैय और जहाँ मन किया घूमने निकल जाती है। अपनी परिधि में बिल्कुल स्वतंत्र अपने लिए किराये पर मकान ढूँढने गयी आरण्या से एजेंट के साथ खडे बुजुर्ग पूछते हैं– यह बताएँ आपकी जिम्मेदारी कौन लेगा? मैं रहूँगी और मैं ही अपने लिऐ जिम्मेदार हूँ। जबाव जानने पर आरण्या से उसकी जन्म तारीख और सन पूछते हैं–कल को चली चलाई का कुछ चक्कर हो तो हम झमेले में क्यों पडे और एजेंट के इनकार करने से पहले आरण्या स्वयं ही कहती है– मुझे यह घर नहीं चाहिए। आप किसी ऐसे किरायेदार को दीजिए जिसे मरना न हो। आरण्या की ही तरह परिवार में रह रहे वरिष्ठ नागरिकों की अपनी समस्याएँ हैं। कई वरिष्ठ स्त्रियाँ अपने विदेश भ्रमण की, बात बताती है परंतु उसगें भी गतलब सधा हुआ। कहीं बहू को पोता हुआ है तो कहीं बेटी गर्भवती है। परिवार की परेशानियों से लथपथ जीवन बावजूद उसके एक अनदेखा पन बुजुर्गो के प्रति, लगावहीन रिश्ता व मात्र बोझ लगने वाले माता–पिता या सास–ससुर। समृध्द घर में रहने वाली दमयंती अपनी ही बहू–बेटों अपने ही घर में काठ सा जीवन जीती हैय और इस बात को बहूत अच्छी तरही समझती है चलते हाथ– पैरों और सक्षम शरीर के साथ जब इतनी बेकद्री तो बाद का क्या? उसी के पीठ पीछे बेटे नौकर को धमकाते हैं बताओ ममा लॉकर की चाबी कहाँ रखती हैं? माँ ने खाना खाया या नहीं, बीमार है या स्वस्थ है? घर पर है भी या नहीं इन सारी बातों से उसके बेटों को फर्क नहीं पडता। वही हाल कामिनी का है बचपन से पाले–पोसे उसके ही भाई–बहन उसकी प्रॉपर्टी पर हाथ साफ करना चाहते हैं और बीमार कामिनी को और बीमार कर उसका सब कुछ हाथियाना चाहते हैं। विश्वास नाम की कोई चीज नहीं, परिवार सुरक्षा के नाम पर अत्याधिक तनाव देकर वरिष्ठ नागरिकों की असमय हत्या कर रहे हैं। प्यार की जगह उन्हें मिलता है दुराव और अकेलापन। वे किसी से भी परिवार में अपना दर्द नहीं बाँट सकतेय क्योंकि किसी के पास उनके लिए समय है ही नही। परिवार से अलग अकेली रह रही आरण्या इस वस्तु स्थिती को तटस्थता से देख न्याया कर सकती है, बुजुर्गो व नौजवानों के आधे–आधे सच के साथ पीढी सरक जाए तो अख्तियार खुद आधे पौने हो जाते हैं। बहू–बेटों की मरज के मुताबिक चलना है। वह जैसा चाहें, रहते रहें। हम क्यों तानाशाह बने हुक्म चलाते

४ The Beharee, Jan to April 1913. The Pratap Nov - 1914 to March 1916, The Amrit Bazar Patrika, 16 December - 1914 .

५ ओ मैली, एल० एस० एस—डिस्ट्रिक्ट गजेटयेयर, मुजफ्फरपुर १९१७

६ डॉ० गोपाल कुमार (Rosera)- बिहार में जमींदारी व्यवस्था और कृषक जीवन (१७५७— १८५७) PH-D-Thesis (hindi), इतिहास विभाग ल. ना. मि. वि., दरभंगा, बिहार —२०१८, पृ०—१५८

७ ओ मैली एल०, एस०,एस—डिस्ट्रिक्ट गजेटयेयर, मुजफ्फरपुर १९१७

८ The Beharee, Jan to April 1913 . The Pratap Nov - 1914 to March 1916, The Amrit Bazar Patrika, 16 December - 1914 . P

9 Girish Mishra, Agararian Problems of Permanent Settlement . P - 287

10 Girish Mishra. Agararian problems of Permanent Settlement, P – 289

11 A . R . Desai Rural India in Transition, P - 206

12 Girish Mishra, Agararian Problems of Permanener Senlement, P - 289

13 Nirmal Kumar Bosc . Selections from Gandhi . P – 209

14 Gopal B . R ., Educating Harijams, P - 1

15 Gandhi's letter to the collector of Champaran - dated - 19 Nov ., 1917

16 Rajendra Prasad . Mahalma and Bihar, P - 26

१७ के० के० दत्ता, बिहार में स्वतंत्र आंदोलन का इतिहास भाग— पृ० ७९—८१

१८ डॉ० गोपाल कुमार (Rosera)— बिहार में जमींदारी व्यवस्था और कृषक जीवन) (१७५७—— १८५७) PH-D-Thesis (hindi), इतिहास विभाग ल. ना. मि.वि., दरभंगा, बिहार —२०१८, पृ०—१५८

१९ डॉ० गोपाल कुमार (Rosera)— वही—पृ० १५८

२० डॉ० गोपाल कुमार (Rosera)— वही—पृ० १५८

२१ डॉ० गोपाल कुमार (Rosera)— वही—पृ० १५८

31

समय—सरगम और बदलते मूल्य

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समय—सरगम कृष्णाजी का एक ऐसा उपन्यास है; जिसमें उन्होंने भारतीय संस्कृति के बदलते मूल्यों को व उसमें आए परिवर्तनों को ऐसी हकीकत के साथ हमारे सामने रखा है; जिसकी घुटन को महसूस तो सभी कर रहे है; परन्तु मानने को तैयार नहीं।

उपन्यास के दो मुख्य पात्र आरण्या और ईशान। बुध्दिजीवी बुजुर्ग हैं। आरण्या अविवाहित रही व ईशान की पत्नी का देहांत हो चुका है। उनका पुत्र लवी जब १३ वर्ष का था; तभी उसका देहांत में रहते है व अक्सर पार्क में टहलने दोनों एक ही ब्लॉक के दो अलग —२ अपार्टमेंट में रहते हैं व अक्सर पार्क में टहलने के कारण एक—दूसरे से परिचित हुए हैं। आरण्या एक लेखिका है; उनके मन में कहीं किसी भी बात को लेकर कोई पछतावा नहीं है। वे स्वयं भी इस बात को मानती हैं कि —इस चेहरे पर सताई हुई रेखाएँ नहीं। समय के साथ उगी पकी है। अपने वक्त को खुद जिया है।[३५]

रात भर काम करना सुबह ४.३० बजे सोना व प्रातः देरी से जगना, उनकी अपनी निजी आदत है; चाय की बहेद शैकिन हैं। ठीक इसके विपरीत ईशान अपने अकेलेंपन में काफी एकांत महसूस करते हैं; परिवार व अपने मित्रों की याद बराबर उन्हें आती रहती है। उनके साथ एक पहाडी नौकर बहादुर भी साथ रहता है। ईशान अपनी दिनचर्या को लेकर काफी सतर्क रहते हैं; व प्रयास करते है कि उसमें किसी भी प्रकार की लापरवाही न हो। समय—सारिणी बना छोटी—मोटी सावधानियों एवं सतर्कताओं से जीवन को

अनुवाद के क्षेत्र में रोजगार निर्मिती

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एक भाषा में **कही** गई बात को दूसरी भाषा में कहना अनुवाद है जैसे हिंदी भाषा में कहे गए किसी कथन को अंग्रेजी में कहना अनुवाद है हालाकिं अनुवाद का इतिहास काफी पुराना है लेकिन आज वैश्वीकरण के दौर में जब दो अलग- अलग भाषा के लोग संचार ओर व्यापार कर रहे है तो अनुवाद की भूमिका और भी बढ़ जाती है और यह अनुवाद करना किसी मशीन का काम नही है. कंप्यूटर के आने से **translation** काफी हद तक आसान हो गई है लेकिन अनुवाद के लिए पूरी तरह से मशीन पर निर्भर नही रहा जा सकता. क्योकि मशीन ज्यादा से ज्यादा **70% translation** कर सकती है और बाकि **30%** को पूरा करने के लिए एक व्यक्ति की जरूरत पड़ती ही है. फ़िलहाल मशीन या कंप्यूटर द्वारा अनुवाद बहुत कम देखने को मिलता है और अवुवाद करवाने वाले ज्यादातर संगठन किसी व्यक्ति से अनुवाद करवाना पसंद करते है जिसे अनुवादक कहा जाता है. ये सभी अनुवादक प्रोफेशनल होते है और इन्हें **translation** करने के लिए अच्छा वेतन दिया जाता है. अगर आपको थोडा लिखने-पढने का शौक रखते है तो अनुवादक बनना आपके सामने एक अच्छा विकल्प है.भारत में अनुवादक की जरूरत सरकारी और निजी क्षेत्र दोनों को ही है और आने वाले समय में इसकी मांग बढ़ने की उम्मीद है. आज बाजारवाद के इस दौर में हम **translation** के क्षेत्र मे रोजगार के कई विकल्प देख सकते है. इस लेख में हम भारतीय परिपेक्ष को ध्यान में रखते हुए हिंदी से अंग्रेजी और अंग्रेजी से हिंदी अनुवाद के सम्बन्ध में बात कर रहे है लेकिन अनुवाद किसी भी दो भाषाओ के बीच हो सकता है.

अनुवाद का अर्थ

अनुवाद शब्दो दो शब्दो 'अनु' उपसर्ग तथा 'वाद' प्रत्यय के सयोग से बना है ! जो संस्कृत के 'वद' धातु से बना है ! जिसका अर्थ बोलना होता है ! इस प्रकार से अनुवाद का शाब्दिक अर्थ होगा ''कहने या बोलने के बाद बोलना''

1.अनुवाद को अँग्रेजी मे ट्रान्सलेटर कहते है
2.अनुवाद में 'स्रोत भाषा' और एक 'लक्ष्य भाषा' होती है !

परिभाषा:

1.कैटफोर्ड के अनुसार 'एक भाषा पाठय सामग्री को दूसरी भाषा की समानार्थक पाठय सामग्री से प्रतिस्थापित करना ही अनुवाद है'!
2.न्यूमार्क के अनुसार अनुवाद एक ऐसा शिल्प है जिसके एक भाषा में व्यक्त संदेश के स्थान पर दूसरी भाषा के उसी संदेश को प्रस्तुत करने का प्रयास किया जाता है !

अनुवाद के साहित्यिक क्षेत्र

1.पदय क्षेत्र : कविताओं , दोहा , आदि का अनुवाद किया जाता है !
2.गदय क्षेत्र : कहानियों, उपन्यासों, जीवनी, आत्मकथा, नाटको, आदि का अनुवाद किया जाता है!
3.अनुवाद के गैर साहित्यिक क्षेत्र : व्यापार और वाणिज्य , शिक्षा , प्रशासन, पर्यटन, सरकारी कार्योलय, दैनिक जीवन व्यवहार विज्ञापन, सांस्कृतिक, फिल्म , न्यूज मिडीया , निजी क्षेत्र , विज्ञापन उदयोग आदि !

सरकारी विभाग – Government sector

सरकार के लगभग सभी विभागों में अनुवादक की जरूरत होती है जो सरकारी दस्तावेजो का अनुवाद करते है. भारत में राजभाषा अधिनियम के तहत सभी सरकारी दस्तावेजो का अंग्रेजी और हिंदी भाषा में होना अनिवार्य है. साथ ही राज्य सरकारों में क्षेत्रीय भाषाओ को भी मान्यता दी जाती है. इन सभी दस्तावेजो के अनुवाद के लिए अनुवादक की जरूरत होती है इसके अलावा संसद या विधानसभा में इंटरप्रेटर की पोस्ट भी होती है जिनका काम भाषण दे रहे लीडर की बातो को साथ-साथ अनुवाद करना होता है. यह काम लगभग सभी भारतीय भाषाओ में होता है जैसे अंग्रेजी में भाषण दिया जा रहा है और साथ साथ उसे एक अनुवादक हिंदी में बोल रहा है और दूसरा अनुवादक किसी और भाषा में बोल रहा है

Macromolecular Symposia
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Kinetics and Mechanism of Oxidation of Glutahione by Waugh-Type Enneamolybdomanganate(IV) in Aqueous Perchloric Acid

*Shekhar S. More, Vashistha M. Gurume, and Gavisiddappa S. Gokavi**

The reaction between enneamolybdomanganate(IV) and glutathione is studied under second-order conditions in aqueous perchloric acid. The reaction first-order in both the reactants and initiated through formation of a precursor complex. Protonated forms of both the reactants are found to be active as evidenced by the accelerating effect of increasing hydrogen ion concentration effect. The second step of the reaction is the slow decomposition of the complex leading to the formation of hydroxyl intermediate. The final product glutathione disulfide is formed in the fast third step as a result of reaction of intermediate with another glutathione cation.

1. Introduction

Glutathione is a non-protein tripeptide(L-c-glutamyl-L-cisteinylglycine) thiol found abundantly in living cell.[1] It has good antioxidant properties and its role in various biological metabolism is very important. Glutahione(GSH) gets converted to diglutahione (GSSG) as a result of its oxidation processes.[2] In fact the ratio of GSH/GSSG in cell is used to predict the cellular toxicity and the diseases like diabetes, cancer, and HIV.[3–5] The redox potential of the GSH/GSSG couple was found to be – 0.262 V against standard hydrogen electrode.[6] The redox potential has been determined from the half-cell potential of nicotineamide adenine dinucleotide phosphate(NADH/NADP$^+$) couple and the equilibrium constant.[6] The redox potential of the GSH/GSSG couple indicates that it can be oxidized conveniently by a mild oxidant. Several studies have also been reported for the oxidation of GSH by hydrogen peroxide,[7,8] t-butyl hydroperoxide,[9] radicals,[10] Co(II) bound superoxide,[11] $Fe(CN)_6^{3-}$, [12] and other oxidants.[8]

Polyoxometalates (POM) are the stable anionic metal oxygen clusters with or without a heteroatom either at the center or at the surface. These POMs with discrete structure resemble enzymes in their activities specifically the oxidative transformations.[13–15] The properties of the hetero atom either at the center in POM or at the surface of a lacunary POM can be altered so that they can be used for specific catalysis. The POMs can be utilized as the electron transfer, oxygen transfer or radical pathways as well as solid acids.[14,16,17] Due to such versatility of POM they are considered as model metalloenzymes in biologically analogous oxidations. Therefore, interaction between the redox active metal centers in a POM with hydroxylamine another biologically important simple molecule in nitrification reaction is of mechanistic interest.

It has also been noticed that the Mn^{III} and Fe^{III} substituted POMs have shown good catalytic activity in transferring oxygen from idosobenzene to either alkene or alkane.[18,19] The activity is analogous to metallophorphyrins and the Mn^{III}-POM was found to be more active than that of the Fe^{III}-POM. Therefore, we have considered a Waugh type POM, enneamolybdomanganate(IV), as an oxidant to understand its reactivity towards glutahione. The oxidant used in the present study is composed of central $Mn^{IV}O_6$ unit surrounded by nine MoO_6 octahedra. The redox potential of the Mn^{IV}/Mn^{II} couple in the POM is about 1.035 V[20] which is considerably lower that the value of 1.51 V[21] for free couple thus making it as a mild oxidizing agent. Since the oxidation of glutahione by ferricyanide gave the glutathione disulfide as a product, we have chosen enneamolybdomanganate(IV) as an oxidant for the kinetic study which also involve Mn^{IV}/Mn^{II} redox couple[22] to understand the mechanism.

2. Experimental Section

All chemicals were of reagent grade and double-distilled water was used throughout the work. A solution of hydroxylamine hydrochloride (SD Fine) was freshly prepared by dissolving an appropriate amount of sample in double-distilled water. Standard solution of perchloric acid was prepared in double distilled water. The ammonium salt of Mn^{IV} complex, $(NH_4)_6[Mn^{IV}Mo_9O_{32}]$ was prepared by reported method.[23] The oxidant was characterized by Fourier-transform infrared spectroscopy and AAS analysis as reported earlier.[24,25]

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DOI: 10.1002/masy.202000008

पानी के प्राचीर में चित्रित जल प्रकृती

डॉ. सुब्राव नामदेव जाधव
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साठोत्तरी हिंदी उपन्यास साहित्य का हिंदी साहित्य में महत्व है, क्योंकि इस दौर में हिंदी उपन्यास कई नये आयामों से गुजरा है। रामदरश मिश्र ने भी साठोत्तरी हिंदी उपन्यासों में उपना एक विशिष्ट स्थान बनाया है। उनका साठोत्री हिंदी उपन्यारा में उल्लेखनीय योगदान है।

पानी के प्राचीर - रामदरश मिश्र जी का यह प्रथम महत्वपूर्ण उपन्यास है। इसका प्रकाशन हिंदी प्रचारक संस्थान वाराणसी से है। यह रचना आंचलिक उपन्यासों की श्रेणी में आती है। उपन्यास में उत्तर प्रदेश के गोरखपुर जिले में स्थित राप्ती और गौरा नदियों से घिरे क्षेत्र को कथांचल बनाकर चित्रित किया है। युगों-युगों से राप्ती नदी के प्रकोप और अपने अभावों से जीवन के साथ जूझती हुई जनता को समर्पित।" वस्तुतः आंचलिक उपन्यास मूलाधार किसी विशिष्ट प्रदेश या उसका आंचल ही होता है। इसमें वहाँ के लोग जनता एवं समाज का विविधमुखी चित्रण रहता है। इसी प्रकार का चित्रण मिश्र जी के महाकाव्यात्मक उपन्यास "पानी के प्राचीर" में हुआ है। इसमें पाण्डेपुरवा गाँव का यथार्थ चित्रण मिलता है। पाण्डेपुरवा अक्सर गरीबी और दरिद्रता से संघर्ष करता गाव है । इस अंचल को लेखक ने प्रतीकात्मक रूप में स्वतंत्रतापूर्व हिंदुस्तान में बसे देहात की वास्तविकता को वाणी प्रदान की है। प्रस्तुत उपन्यास का केंद्र पाण्डेपुरवा भौगोलिक स्थिति के कारण नदियों से घिरा हुआ है, अतः वह विशिष्ट गाँव बन जाता है। राप्ती और गौरा नदियों का पानी इस प्रदेश के लिए जीवनदायिनी बन सकता था परंतु वहीं बाढ़ बनकर वहाँ का प्रदेश और लोगों के लिए आतंक फैलानेवाला तत्व बन गया है। क्योंकि बाढ़ खेतों में खड़ी फसलों और मकानों को अपने साथ ले जाती है। बाढ़ लोगों को बेघर बनाकर चली जाती है। मिश्र जी लिखते हैं - "इस गांव के चारों ओर फैली हुई नदियां बरसात में बीसों मील तक उमड़कर ठाठें मारती हैं। बाढ़ और बाढ़ ही दिखाई पड़ती है। दस-बारह मील तक सवारी का कोई रास्ता नहीं है। बाहर से न कोई आता है न कोई जाता है यह कछार प्रांत अपने आप में स्वतंत्र है, पूर्ण है। इस विशाल क्षेत्र में न कोई अंग्रेजी स्कूल है और न अस्पताल, न पुलिस चौकी है।"२ कहा जा सकता है कि पांडेपुरवा के लोग बहुत ही दयनीय और अभावों से ग्रस्त जीवन जी रहे थे यहीं नहीं पांडेपुरवा से लेकर गोरखपुर तक कोई सड़क तक नहीं थी।

पांडेपुरवा अंचल का यथार्थ चित्रण करते समय लेखक ने वहाँ के दयनीय जीवन और प्रसंगानुरूप अनेक पात्रों तथा प्रसंगों का उचित उद्घाटन किया है। आंचलवासी देहाती जीवन जीते समय छोटे-छोटे प्रसंगों को लेकर आपस में लड़ते-झगड़ते रहते हैं। उनकी लड़ाई की सूचना पाते ही उस इलाके का दरोगा वहाँ आ पहुँचता है। आपस में लड़नेवाले लोग दरोगा से बहुत ही डरते हैं। वे उसके डर के मारे काँपते रहते हैं। फिर भी दरोगा इस इलाके में आना पसंद नहीं करता। क्योंकि वहाँ की अभावग्रस्त जिंदगी और वहाँ के पशुवत लोगों के बीच अपनी जान को आफत में नहीं डालना चाहता। इस संबंध में दरोगा का प्रस्तुत वक्तव्य बहुत ही जीवंतता प्रदान करता

ACTA ABP BIOCHIMICA POLONICA

Vol. 67, No 3/2020
387–392
https://doi.org/10.18388/abp.2020_5239

Regular paper

Molecular characterization of a multidrug-resistant/pandrug-resistant nosocomial polymicrobial infection with *Klebsiella pneumoniae*, *Providencia rettgeri*, and *Acinetobacter baumannii* from Rural Maharashtra, India

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The emergence of resistance against commonly used antibiotics has become a serious global concern. The rapid development of antibiotic resistance exhibited by *Enterobacteriaceae* has caused an increasing concern regarding untreatable bacterial infections. Here, we isolated four pathogens from a geriatric female patient who was hospitalized for a month with ventilator-associated pneumonia (VAP) and fever. The organisms isolated from the tracheal aspirates and urine included *Klebsiella pneumoniae*, pandrug-resistant *Providencia rettgeri*, and *Acinetobacter baumannii*. Resistome analysis indicated that the bacterial isolates from the polymicrobial infection were multiple-drug resitnat and pandrug resistant clones. Molecular characterization revealed presence of bla_{TEM-1} in *K. pneumonaie*, *P. rettgeri* and *A. baumannii*. The bla_{TEM-1} and bla_{NDM-1} genes were present in *P. rettgeri* and *A. baumannii*, whereas the bla_{TEM-1}, bla_{NDM-1} and bla_{OXA-23} traits were present in *A. baumannii* isolates. The patient has died due to the unavailability of effective antimicrobial treatment for this drug-resistant polymicrobial infection.

Received: 07 April, 2020; revised: 07 June, 2020; accepted: 08 June, 2020; available on-line: 31 July, 2020

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Acknowledgements of Financial Support: Research Grant EEQ/2019/00521 by the Science and Engineering Research Board, Government of India to ASK is gratefully acknowledged.

Abbreviations: VAP, Ventilator Associated Pneumonia; ESBL, Extended Spectrum β-lactamase; MDR, Multiple Drug Resistant; XDR, Extensively Drug Resistant; PDR, PanDrug Resistant; CRE, Carbapenem-resistant Enterobacteriaceae; DPS, Delayed Premonition Syndrome

INTRODUCTION

Microorganisms that are primarily involved in antibiotic resistance are called the "ESKAPE" pathogens, and include *Enterococcus faecium*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *A. baumannii*, *Pseudomonas aeruginosa* and *Enterobacter species*, capable of "escaping" from commonly used antibacterial treatments (Boucher *et al.*, 2009). *A. baumannii* has emerged as a highly challenging pathogen due to its specific antibiotic resistance characteristics (Baucher *et al.*, 2009). Moreover, reports of extensively drug-resistant and pandrug-resistant *K. pneumoniae* (XDR-KP and PDR-KP) cases are increasing worldwide (Fiorellakrap *et al.*, 2018). *K. pneumoniae* is the most clinically relevant *Klebsiella* species and is responsible for >70% of infections (Hansen *et al.*, 1998). Antimicrobial resistance has become a global crisis because of escalating resistance coupled with diminished antibiotics in the developmental pipeline. A recent report estimates that by 2050, antimicrobial resistance-related mortality will be 10000000/year (de Kraker *et al.*, 2016).

The rapid emergence of carbapenem-resistant *Enterobacteriaceae* (CRE) worldwide has led to the concern that these infections may be soon untreatable. Management of infections caused by *K. pneumoniae* has been complicated by antimicrobial resistance, especially that against carbapenems. Whole genome sequence analyses of six extensively drug resistant (XDR) enteric pathogens isolated at New Delhi revealed multiple mobile genetic elements that were physically linked to antibiotic resistance traits. Thus, these elements seem to be responsible for disseminating drug resistance among organisms through underlying mechanisms of horizontal gene transfer and resistance to commonly used antibiotics (Kumar *et al.*, 2017). Resistance to carbapenems in *K. pneumonia* involves multiple mechanisms, including production of carbapenemases, such as KPC, NDM, VIM, and OXA-48-like (Johann *et al.*, 2015).

A 10-year study at Nashik, India (Odsbu *et al.*, 2018, Lokhande et al., 2019), revealed a significantly higher proportion of non-susceptible and extended-spectrum β-lactamase (ESBL)-producing isolates from inpatients than those from outpatients for both, *Escherichia coli* and *Klebsiella* spp. A higher proportion of non-susceptible isolates indicates a great need to focus on the optimal use of antibiotics to reduce the development of antibiotic resistance.

Diverse risk factors associated with multidrug-resistance (MDR) in A. baumannii and other *Enterobacteriaceae* members suggest that a separate outbreak investigation should be performed in each hospital setting. Development of innovative control strategies is needed to limit the spread of these pathogens (Falagas & Kopterides, 2006).

In this study, we aimed to elucidate the mechanisms underlying drug resistance exhibited by prevalent pathogens responsible for unresponsiveness to the treatment administered to the patient. *K. pneumoniae*, *P. rettgeri*, and *A. baumannii* were isolated from the urine and tracheal aspirate of the patient on admission to the Somani Hospital, Barshi, Maharashtra, India.

CASE PRESENTATION

A 64-year-old female patient was hospitalized in Barshi with altered behavior, history of fall, and intracranial hemorrhage; the patient was put on a ventilator. Earlier, for 4 weeks, she received treatment at the Neurology Centre in Solapur, Maharashtra, and upon stabiliza-

Peer-Reviewed & Refereed International Research Journal

July-September 2020 VOL.02. ISSUE II (A)

स्त्रीवादी साहित्य : बदलते आयाम

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नव्वदोत्तर मराठी स्त्री कथाकारांच्या कथांचा रूपबंध

प्रा.डॉ. रविकांत शिंदे

सहाय्यक प्राध्यापक, मराठी विभाग,

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प्रस्तावना :-

मराठी साहित्याच्या विकासात विविध कालखंडातील सामाजिक, सांस्कृतिक, आर्थिक, राजकीय स्थित्यंतरांनी नेहमीच महत्त्वाची भूमिका बजावलेली दिसून येते. साहित्याच्या निर्मिती प्रक्रियेवर वंश, काळ आणि परिस्थितीचा फार मोठा प्रभाव असतो, हे तेनचे निरीक्षण बहुतांश अचूक ठरताना दिसते. कारण कुठलाही लेखक त्याच्या भोवतालच्या अनेक सामाजिक घटकांनी नियंत्रित अथवा प्रभावित झालेला असतो. विशिष्ट कालखंडातील समाजाची ध्येयधोरणे, रूढी-परंपरा, प्रेरणा-प्रवृत्ती कोणत्या आहेत यावरच साहित्यप्रकाराला विशिष्ट दिशा लाभताना दिसून येते.

१९९० पर्यंत आधुनिक युगाचा अस्त झाला व १९९० नंतर उत्तराधुनिक कालखंडाची सुरूवात झाली असे मानण्यात येते. १९९० नंतरच्या कालखंडात भारताने स्वीकारलेल्या मुक्त अर्थव्यवस्थेने सर्वच क्षेत्रात जागतिकीकरणाचा प्रवेश झाला. व्यापारासाठी विविध देशांनी एकमेकांना सीमाविरहित बनवत, एकमेकांच्या भूमीत कायदेशीररीत्या खुलेपणाने व्यापार करण्याची व्यवस्था या माध्यमातून निर्माण केली. वरवर पाहताना आपणाला ही प्रक्रिया खूप सरळ, सोपी आणि व्यापारी वाटते. परंतु तितकीच ती गुंतागुंतीची, जटील आणि सामाजिक, सांस्कृतिक परीघाना छेद देणारी असलेली दिसून येते.

१९९० च्या कालखंडात मानवी समाजाला आंतर्बाह्य व्यापलेल्या जागतिकीकरणाचे परिणाम साहित्याच्या निर्मिती प्रक्रीयेवरही होवू लागले. साहित्याच्या सर्वच प्रकारात त्याचे बरे-वाईट परिणाम जाणवू लागले. जागतिकीकरणाचे आणि त्यामुळे बदललेल्या वास्तवाचे दूरगामी परिणाम मराठी कथेवरही मोठ्या प्रमाणात झाले. मराठी कथेच्या अभिव्यक्ती वैशिष्ट्यांमध्ये, आशयसूत्रांमध्येही मोठ्या प्रमाणात बदल झाला. प्रस्तुत शोधनिबंधाच्या माध्यमातून आपण नव्वदोत्तर मराठी स्त्री कथाकाराच्याकथांचा रूपबंध जाणून घेण्याचा प्रयत्न केला जाणार आहे. प्रस्तुत कालखंडात नीरजा, मोनिका गजेंद्रगडकर, योगिनी वेंगुर्लेकर, प्रज्ञा लोखंडे, मनस्विनी लता-रवींद्र आणि शिल्पा कांबळे या स्त्री कथाकाराच्या कथांचा बदलता रूपबंध जाणून घेतला जाणार आहे.

दुःखाचा परिहार आणि भयमुक्त समाजाची निर्मिती करू पाहणारी कथा:-

मानवी जीवनातील दुःखाच्या परीहारासाठी लेखक सतत आपल्या लेखनातून प्रयत्नशील असतो. मानवी जीवन सुंदर, मंगल आणि सुखदायी व्हावे ही प्रेरणा सतत त्याच्या लेखनाच्या मुळाशी असते. मानवी जीवनाच्या शुभंकरतेचा कथालेखक नेहमीच ध्यास घेत असतो. नव्वदोत्तर कालखंडात जागतिकीकरणाने मानवी जीवनात कमालीची निराशा, दुःखाने जी काजळी भरून राहिलेली आहे ती दूर करण्याचा प्रयत्न नव्वदोत्तर कालखंडातील अनेक कथाकार करत असलेले दिसून येतात.

मनावी जीवनात धर्म, अर्थ आणि ईश्वरावरून वाढत जाणारी दरी आणि त्यातून संपूर्ण जगाच्या वाट्याला आलेली युद्धे, दहशतवाद, बॉम्बस्फोट ही नव्वद नंतरच्या कालखंडातील भयाने बंदिस्त झालेल्या समाजाच्या निर्मिती मागची कारणे आहेत. टोकाच्या धर्मांधतेवरून माणसा-माणसातील वाढत चाललेली

२२. नव्वदोत्तर दलित कवितेतील जागतिकीकरणाचे चित्रण

प्रा. डॉ. रविकांत शिंदे
मराठी विभाग, श्री शिवाजी महाविद्यालय, बार्शी.

दलित साहित्याला डॉ. बाबासाहेब आंबेडकरांच्या विचारांचे आधिष्ठान लाभलेले आहे. डॉ. आंबेडकरांच्या विचार वारशातून संपन्न झालेली आजची दलित कविता दलित समाजावर होणाऱ्या अन्यायांना प्रखरतेने प्रतिबिंबित करताना दिसते. दलित समाजबांधवांवर होणाऱ्या अन्याय–अत्याचारांचे आत्मभान या कवींना असल्यामुळे काळाच्या प्रवाहात या कवींची भाषा आणखी धारदार होताना दिसते. दैनंदिन जीवन जगत असताना वेळोवेळी करावा लागणारा संघर्ष आणि माणूस म्हणून मिळायला हवी असणारी समानतेची वागणूक या विचारांनी दलित कवितेचा पाया अधिक मजबूत झालेला दिसून येतो.

शतकानुशतके लादलेल्या अन्याय, अत्याचाराच्या रूढी, परंपरांना नाकारण्याचे कार्य नव्वद नंतरची दलित कविता करताना दिसते. नव्वदोत्तर कालखंडात रूजलेल्या आणि अल्पावधीतच वेगाने फोफावलेल्या जागतिकीकरणाच्या प्रक्रियेने मानवी जीवनावर अंतर्बाह्य परिणाम घडवून आणले. दोन देशांतील आर्थिक, सामाजिक, सांस्कृतिक घटकांत नव्वद नंतरच्या कालखंडात मुक्तपणे सुरु झालेल्या व्यापारी संक्रमणाला जागतिकीकरण म्हणता येईल. मर्यादित स्वरूपाने आणि कांक्षा घेवून जगणारा माणूस अमर्याद मोहाच्या पाठीशी धावू लागला. अस्वस्थ, पराभूत, स्वार्थी याबरोबरीनेच भूकेकंगाल माणसांच्या आवृत्त्याच जागतिकीकरणाच्या प्रक्रियेतून जन्मास येवू लागल्या. "सगळ्या सजीव व निर्जीव तरीही उपयोगी भासणाऱ्या व्यवस्थांचं कमोडीटी मध्ये रूपांतर होणं, तुमचा चेहरा वा वेगळेपण संपून त्याची निर्विकार एकके तयार होणं ही जागतिकीकरणची एक अपरिहार्य निष्पत्ती आहे."[1] माणसाची खरी ओळख नाहिशी करणे हे जागतिकीकरणाचे प्रमुख कारण आहे असे रंगनाथ पठारे सांगतात. छोटे व्यापारी, मजूर, सामान्य माणूस या सर्वांची खरी ओळख जागतिकीकरणाने पुसून टाकली. सामान्य माणसाला जगण्यासाठी तीव्र संघर्ष करावा लागणे ही बाब जागतिकीकरणामुळे अत्यावश्यक बनली. जागतिकीकरणाचा सर्वात मोठा परिणाम घडून आला तो इथल्या संस्कृतीवर होय. भाषा, परंपरा, श्रद्धा यांचे संवर्धन करण्यासाठी माणसाला भयंकर संघर्ष करावा लागू लागला. माणसाच्या अस्मितांवरच घाला आला. मानवी मूल्यांचा ऱ्हास वेगाने होवू लागला. कधीकाळी शांत, समृद्ध, समाधानी आयुष्य जगणारी माणसेच जागतिकीकरणाने गिळंकृत केली. माणसाच्या सामाजिक, सांस्कृतिक जीवन वैशिष्ट्यांचे जागतिकीकरण या संकल्पनेने अनेक सूक्ष्म घटकांमध्ये विघटन घडवून आणले.

जागतिकीकरणाने मानवी जीवनाच्या सर्वच क्षेत्रांवर गंभीर परिणाम घडवून आणले. शोषणाची आणि भेदाची दरी जागतिकीकरणाने कायम राखली. उलट विकासाच्या नावाखाली शोषणाचे प्रमाण वाढले. मानवी जीवनाचा चेहराच बदलून टाकणाऱ्या जागतिकीकरणाचे प्रतिबिंब साहित्यात उमटणे अपरिहार्य होते. साहित्याच्या विविध प्रवाहांनी

06

नव्वदोत्तर महानगरीय कथेतील समाज चित्रण

प्रा.डॉ. रविकांत शिंदे
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प्रस्तावना :-

मराठी साहित्याच्या विकासात विविध कालखंडातील सामाजिक, सांस्कृतिक, आर्थिक, राजकीय स्थित्यंतरांनी नेहमीच महत्त्वाची भूमिका बजावलेली दिसून येते. साहित्याच्या निर्मिती प्रक्रियेवर वंश, काळ आणि परिस्थितीचा फार मोठा प्रभाव असतो, हे तेनचे निरीक्षण बहुतांश अचूक ठरताना दिसते. कारण कुठलाही लेखक त्याच्या भोवतालच्या अनेक सामाजिक घटकांनी नियंत्रित अथवा प्रभावित झालेला असतो. विशिष्ट कालखंडातील समाजाची ध्येयधोरणे, रूढी-परंपरा, प्रेरणा-प्रवृत्ती कोणत्या आहेत यावरच साहित्यप्रकाराला विशिष्ट दिशा लाभताना दिसून येते.

१९९० पर्यंत आधुनिक युगाचा अस्त झाला व १९९० नंतर उत्तराधुनिक कालखंडाची सुरूवात झाली असे मानण्यात येते. १९९० नंतरच्या कालखंडात भारताने स्वीकारलेल्या मुक्त अर्थव्यवस्थेने सर्वच क्षेत्रात जागतिकीकरणाचा प्रवेश झाला. व्यापारासाठी विविध देशांनी एकमेकांना सिमाविरहित बनवत, एकमेकांच्या भूमीत कायदेशीररीत्या खुलेपणाने व्यापार करण्याची व्यवस्था या माध्यमातून निर्माण केली. वरवर पाहताना आपणाला ही प्रक्रिया खूप सरळ, सोपी आणि व्यापारी वाटते. परंतु तितकीच ती गुंतागुंतीची, जटील आणि सामाजिक, सांस्कृतिक परीघांना छेद देणारी असलेली दिसून येते.

१९९० च्या कालखंडात मानवी समाजाला आंतर्बाह्य व्यापलेल्या जागतिकीकरणाचे परिणाम साहित्याच्या निर्मिती प्रक्रीयेवरही होवू लागले. साहित्याच्या सर्वच प्रकारांत त्याचे बरे-वाईट परिणाम जाणवू लागले. जागतिकीकरणाचे आणि त्यामुळे बदललेल्या वास्तवाचे दूरगामी परिणाम मराठी कथेवरही मोठ्या प्रमाणात झाले. मराठी कथेच्या अभिव्यक्ती वैशिष्ट्यांमध्ये, आशयसूत्रांमध्येही मोठ्या प्रमाणात बदल झाला. प्रस्तुत शोधनिबंधाच्या माध्यमातून नव्वदोत्तर महानगरीयकथेतील समाज चित्रणाविषयी जाणून घेण्याचा प्रयत्न केला गेला आहे.

CURRENT GLOBAL REVIEWER

Half Yearly | Peer Reviewed | ISSN : 2319 - 8648
Issue XII Vol I , May 2020 | Indexed (SJIF) | Impact Factor : 7.139

सांगीतिक वारसा गुरुचा

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सांगीतिक वारसा गुरुचा ' या विषयी विशेष माहिती देताना आपल्या गुरुंबद्दल असणारा आदर, प्रेम अशा भावना व्यक्त करण्यासाठी खरे म्हणजे शब्द भांडार नेहमीच कमी पडते. आपल्या शास्त्रीय संगीतात गुरु या तत्त्वाबद्दल अत्यंत सखोल मार्गदर्शन मिळते. राग हमीर या रात्रगेय रागामधील गुरुचे महत्व अधोरेखित करणारी एक फार सुंदर रचना आहे. ही रचना पं. वि.ना. भातखंडे यांच्या हिंदुस्तानी संगीत पद्धती, क्रमिक पुस्तक मालिका, भाग ३ मधे समाविष्ट केली आहे –
स्थाई

नमन करू मैं गुरु चरणा
भवभय हरणा वन्दित चरणा
तरणा प्रणत जन सुशरणा |
अन्तरा
कलिमल हरणा सबसुख करणा
अभय वितरणा जग उद्धारणा पातक हरणा ॥१

आध्यात्मिक व संगीत क्षेत्रात गुरुंचे स्थान अत्यंत महत्वाचे आहे. गुरु म्हणजे साक्षात् ' परब्रम्ह ' असे म्हणून त्यांची थोरवी वर्णन केली आहे. जिथे गुरुने बोट धरून मार्गदर्शन करायचे अशी ही दोन्ही क्षेत्रे आहेत. संत कबीर आपल्या दोह्यामध्ये म्हणतात,

" गुरु गोविंद दोऊ खडे काके लागू पाय |
बलिहारी गुरु आपने, जो गीविंद दियो बताय |"२

संत कबीर म्हणतात, 'गुरु व परमेश्वर दोघांना वंदन करताना प्रथम नमस्कार गुरुला, कारण त्यांच्याच कृपेने परमेश्वराची प्राप्ती होते.'

गुरुर्ब्रह्मा गुरुविष्णुः गुरुर्देवो महेश्वरः|
गुरु साक्षात् परब्रम्ह तस्मै श्री गुरवे नमः||

आषाढ़ महिन्यातील पौर्णिमेला गुरु पौर्णिमा किंवा व्यास पौर्णिमा म्हणतात. आपल्या गुरुचे स्मरण व पूजन करण्याचा दिवस आहे. 'भेटी लागे जीवा लागलीसे आस' अशा उत्कटतेने पांडुरंगाच्या भेटीला जाणा–या वारक–यांप्रमादणे गुरूविषयीची आत्मीयता, जिव्हाळा व्यक्त करण्याचा दिवस. पुराणात महर्षी व्यासांना सर्वश्रेष्ठ किंवा आद्य गुरु मानले आहे. महर्षी व्यासांनी ज्ञानाचे अमाप भांडार आपल्यासमोर खुले केले आहे. अठरा महापुराणे, अठरा उपपुराणे, महाभारत हा व्यासांचा ज्ञानाचा अनमोल खजिना आहे.

अज्ञानाचा अंधःकार दूर करून ज्ञानाच्या प्रकाशाची वाट दाखवणा–या गुरूंचे आदरपूर्वक पूजन करण्याचा दिवस. दरवर्षी आषाढ पौर्णिमेला गुरुपौर्णिमा साजरी केली जाते. आपल्या संस्कृतीत गुरुंचे स्थान महत्वाचे आहे. यादिवशी प्रवचन, कीर्तन, गुरुंचा सत्कार करून त्यांचा आशीर्वाद घेतात.

गुरु पौर्णिमेच्या संदर्भात डॉ. महारानी शर्मा गुरु पौर्णिमा एक संस्कृती है या लेखात म्हणतात, " गुरु पौर्णिमा का पर्व हम केवल इसलिये नाही मनाते कि हम गुरु की पूजा कर राहे है, बल्की गुरु के रूप में हम एक ऐसी संस्कृती का स्मरण करते है जो जीवन जिने की कला सिखाती है, जीवन उत्कृष्ठ नैतिक मुल्यो के प्रति समर्पण करणा सिखाती है |"३

गुरुला आई, माउली असे संबोधले जाते. ज्ञानाचा मार्ग दाखविणारा, प्रेमळ, उदार अंतःकरणाचा, सहृदयी, आपले जीवन उजळून टाकणारा असा गुरु मिळणे कठीण असते. असे म्हणतात की,गुरूला चांगला शिष्य व शिष्याला चांगला गुरु मिळणे कठीण असते. चांगला गुरु हा आधी चांगला शिष्य असावा लागतो.

INTERNATIONAL RESEARCH JOURNAL ON ADVANCED SCIENCE HUB

e-ISSN : 2582 - 4376
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Wireless Transceiver Module HC-12 based Automatic Water-level Monitoring and Control System

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Abstract

This paper proposes a wireless approach for water-level monitoring and control-system using standard wireless transceiver module HC-12 in a legal frequency band of 433.4 MHz to 473.0 MHz supported with hundred communication channels. The monitoring and control range is up to 500 meters in open-air and about 100 meters indoor. The microcontroller Arduino ATMEGA328 is used as monitoring and controlling device. The module is set initially for the baud-rate of 9600, 20 dBm transmitting power, -112 dBm receiving sensitivity, 445 MHz transmission frequency and channel number 50. All the modules in the network are set to the same parametric values to achieve synchronized communication. The controlling program collects the information regarding water-levels in different tanks and initiates control action as to start or stop the water pumping motor. It also displays the status of the water levels in different tanks. The design is tested for the household purpose. To achieve long range communications, the LORA modules could be used but for higher cost.

Keywords:wireless, transceiver, module, HC-12, automatic, water-level, monitoring, control system

1. Introduction

Wired type and IOT-based water-level monitoring and control system are already in the market. But the major drawback of wired-type is large wiring network from overhead-tank and ground-tank to the control system. The power losses in the wiring, electromagnetic interference, aging of the wiring, wear and tear, and cost. The problem is multiplied if building is multistore. On the other hand, the IOT-based systems require internet connectivity. To counteract these drawbacks we propose a wireless approach. The advantages of wireless-approach are, the wiring network is avoided that results in lowering the cost, reducing electromagnetic interference, no wear and tear, no aging effect, no power-loss and hence almost no maintenance. Number of low-cost wireless modules have already populated the market. But they suffer drawbacks like; networking is not possible, very less communication distance of the order of 10 to 20 meters, lesser receiving sensitivity, low transmitting power etc. We selected HC-12 wireless serial communication transceiver module on the basis of cost, networking capability, data security, large communication distance of over 100 meters, and high receiver sensitivity. HC-12 module is available at a cost of about Rs.150/- with properly matched spring antenna. The communication distance is enhanced if SMA antenna is used. Although, the datasheets of HC-12 module claim 1 KM wireless communication distance in open air but practically we observed a communication distance of about 300 meters in robust environment. The indoor communication distance of less than 100 meters is sufficient even for 10 to 15 multistore building. The basic block diagram of the wireless system is as shown in fig.1.The

www.rspsciencehub.com

Volume 02 Issue 10 October 2020

INTERNATIONAL RESEARCH JOURNAL ON ADVANCED SCIENCE HUB

e-ISSN : 2502 - 4376
Open Access

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A Standard Reference Audio Tone Generator for Tuning Indian Classical Musical Instruments

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Abstract

This paper proposes a novel method for generating the standard reference musical notes for tuning the Indian Classical Musical String Instruments and may other musical instruments that need periodical retuning. Proper tuning of the musical instruments, before public performance, is must-to-do activity. Even a fine mistuning leads to improper musical notes. In this paper we have designed an embedded system, using standard microcontroller 8051, to obtain standard reference frequencies (notes) for three different octaves (saptak's). The output signal is conditioned to obtain near sinewave and reproduced into sound using audio amplifier. The control program is written in assembly language to select the reference note and an octave. The standard reference note frequencies are measured using 0.5 Hz accuracy digital frequency counter and displayed on LCD.

Keywords:standard, audio, tone, generator, tuning, indian, classical, musical, instruments

1. Introduction

Most of the Indian string instruments are tuned traditionally with a reference note from harmonium or similar instrument. But the main problem with this method is that the reference note is considered as a standard without any confirmation. Due to advent of digital technology it is now possible to produce standard reference notes or frequencies for the string type musical instruments. In this paper, the design of an embedded system using standard microcontroller 8051 is discussed. The advantage of this design is the accuracy of generating the standard reference notes to 100%, at the same time displaying the reference frequency for the music performer. The Table.1 shows the standard reference frequency chart for Indian classical music. Slight variation in standard frequencies is

Table.1. Standard Reference Frequency Chart

Musical Tonein Hz / Octave	Sa	Re	Re	Ga	Ga	Ma	$\overline{Ma}$	Pa	$\overline{Dha}$	Dha	Ni	$\overline{Ni}$	Sa
Upper	520	558	590	626	664	702	744	787	837	884	941	995	1040
Middle	260	280	296	314	332	351	372	394	419	443	470	500	520
Lower	130	141	148	158	167	176	186	196	209	222	235	251	260

ISSN Print: 2229-7928
ISSN Online: 2230-7532

Taylor & Francis
Taylor & Francis Group

A New Experimental Design for Liquid-Liquid Extractive Spectrophotometric Determination of Gold(III) Using 4-(4'-Flurobenzylideneimino)-3-methyl-5-mercapto-1,2,4-triazole

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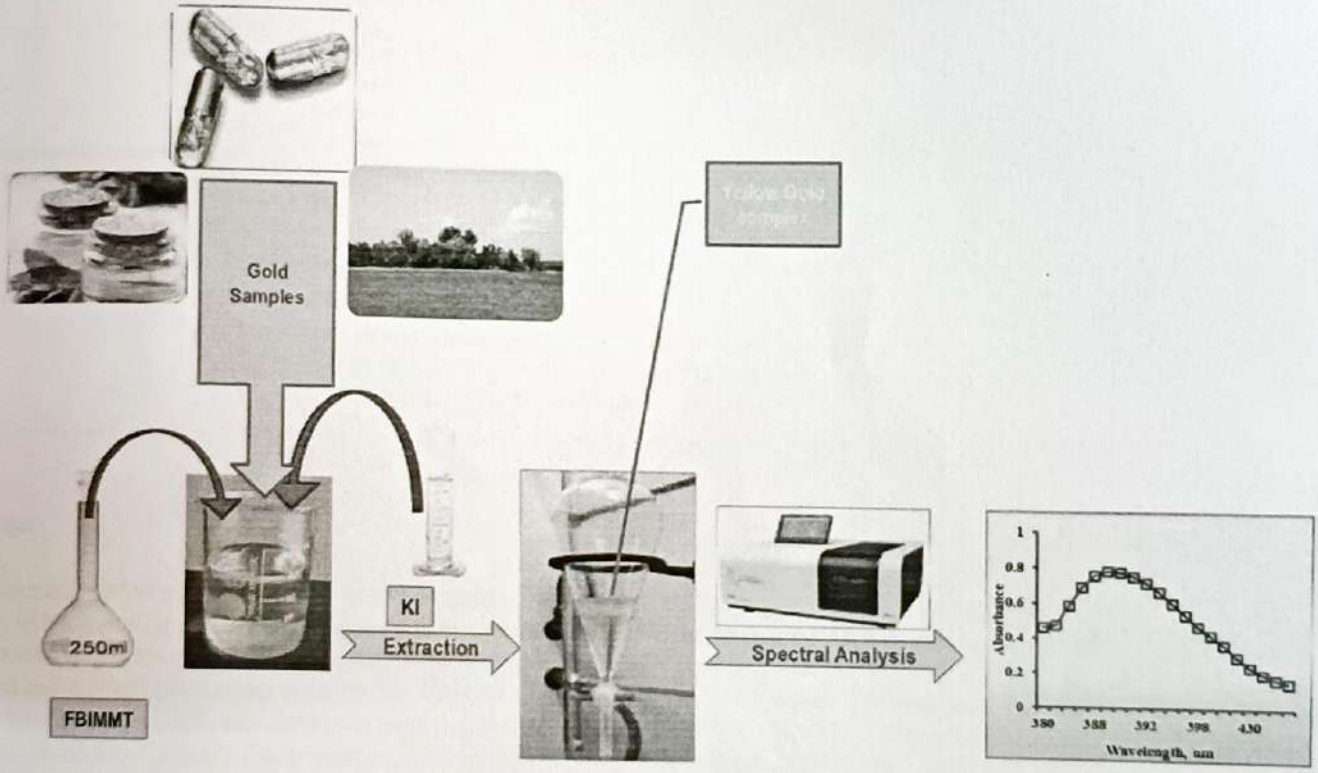
Received 16 April 2020; accepted in revised form 22 May 2020

Graphical abstract



Abstract: A new method is presented here for liquid-liquid extractive spectrophotometric determination of gold(III). The current method is based on complexation between 4-(4'-flurobenzylideneimino)-3-methyl-5-mercapto-1,2,4-triazole (FBIMMT) as a chromogenic reagent and gold(III) in presence of potassium iodide solution to form a yellow complex which was quantitatively extracted in chloroform at room temperature from 0.8 mol L^{-1} of hydrochloric acid medium. The (1:2) [Au(III)-FBIMMT] complex in chloroform exhibited maximum absorption at λ_{max} 390 nm and was stable for more than 24 hrs. The values of molar absorptivity and Sandell's sensitivity of [Au(III)-FBIMMT] complex were found to be 0.98485×10^4 L mol^{-1} cm^{-1} and is 0.01858 µg cm^{-2} respectively. The extraction system follows Beer's law from 4.0-17.5 µg mL^{-1} however Ringbom's plot suggests favourable concentration range as 4.5-17.5 µg mL^{-1}. The values of both LOD and LOQ were found to be as 0.20 and 0.78 µg mL^{-1} respectively.

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ISSN - 2348-2397
APPROVED UGC CARE
SHODH SARITA
SHODH SARITA
Vol. 7, Issue 25, January-March, 2020
Page Nos. 80-8
AN INTERNATIONAL BILINGUAL PEER REVIEWED REFEREED RESEARCH JOURNAL

'ऐलान गली जिन्दा है' उपन्यास की जनचेतना

❐ डॉ.जाधव सुब्राव नामदे
संभाजी शामराव गेजगे

शोध सारांश

'ऐलान गली जिन्दा है' चंद्रकांत लिखित उपन्यास में लेखिका ने अपनी जन्मभूमी के प्रति लगाव को प्रकाशित किया है। उन्होंने इ उपन्यास में अपने अतीत की मानसिक तकलीफ को सम्पूर्णतः देने का प्रयास किया है। 'ऐलान गली' में रहने वाले लोग तथा उन विविध समस्याओं को चंद्रकांता ने उजागर किया है। संसारचंद पुरोहित, मास्टर अनवर, अर्जुननाथ आर्जीनवीस, महिपा, अरून्धती, र चाची, हिमाली, रूपा, दिव्या, अवतारा जैसे अनेक पात्रों की भरमार इस उपन्यास में हैं। उसमें अवतारा एक नायक के रूप में प्रस्तुत इस उपन्यास में हर एक की अपनी–अपनी समस्या होकर भी यह सभी लोक एक दुसरे के प्रति स्नेह की भावना अपने मन में पाले हुए ऐलान गली जिन्दा है' उपन्यास में 'अपनी बात आपके साथ' में लेखिका कहती हैं, '' इस गली में. बहुत कुछ समझ से परे थ रीति–रस्म, रंग–ढंग, जीने–जिलाने की तरकीबें, सोचने के तरीके। जिस गली से दुर अवतांरा, तेजा आदि युवक छप्पन व्यंजनों में घास–फूस का स्वाद महसुस करते हैं, चंदन जैसे युवक कुम्हलाते फुलों को शबनमी छुअन देकर जिन्दा रखना चाहते है, वही शामु जै युवक नीलकण्ठ बनकर गली का जहर पीने को अभिशप्त है। '' यहाँ बहुत सारे इंजनीयर, डॉक्टर डिग्रियाँ लेकर आँखों में सपने लेक घुमते हैं लेकिन नौकरियाँ उन्हें भी नही मिलती है। इस उपन्यास मे. लेखिकाने सामाजिक, धार्मिक, राजनीतिक, आर्थिक सांस्कृतिक समस्याओं के साथ–साथ पारिवारिक विघटन, मानवीय मूल्यों का –हास, महानगरीय जीवन, अकेलापन, असुरक्षा, कुंठाग्रस्त जीवन औ नारी की विविध समस्याओं को उजागर करने का प्रयास किया है।

Keywords : पारिवारिक विघटन, मानवीय मूल्यों का –हास, हिन्दू तथा मुस्लिम दोनों में असुरक्षा की भावना, सामाजिक संघर्ष अंधविश्वास, अनैतिकता, कुंठाग्रस्त नारी।

आज इक्कीसवी सदी में. साहित्य वैभव विस्तृत होता जा रहा है। स्वतंत्रतापूर्व तथा स्वातंत्र्योंत्तर कालखंड में उपन्यास तथा कहानी विधा लोकप्रिय रही है। उपन्यास मानव जीवन का दर्पण माना जाता है। आधुनिक काल की विकसित विधाओं में उपन्यास का महत्त्वपुर्ण स्थान है। उसका मुख्य उद्देश्य आधुनिकता बोध है। डॉ. श्याम सुंदर दास लिखते है–'' मनुष्य के वास्तविक जीवन की कथा उपन्यास है।''

आज उपन्यास का कथ्य जीवन के अधिक नजदीक है, उसमें यथार्थबोध अधिक है। कथ्य और शिल्प की दृष्टि से भी नवीन प्रयोग किए जा रहे हैं। ऐसे साहित्यकारों में चंद्रकांता एक श्रेष्ठ साहित्यकार है।

चंद्रकांता हिंदी साहित्य के क्षेत्र में. प्रगतिशील परम्परा की ध्येयधर्मी रचनाकार है। हिंदी साहित्य की वृद्धि करने में चंद्रकान्ता का विशेष योगदान रहा है। परिणामतः हिंदी साहित्य मे. उनका स्थान लब्ध प्रतिष्ठित है। समकालीन हिंदी साहित्य में उनके कई कहानी संग्रह और उपन्यासों से वे हिंदी की एक प्रगतिशील कथाकार के रूप में प्रख्यात हुई हैं। उनका लेखन बेहतर दुनिया और बेहतर भविष्य की चिंता से प्रेरित है। उन्होंने अपनी कहानियों और उपन्यासों के कथ्य जीवन के बहुविध क्षेत्रों से चुने हैं।

समकालीन जीवन की विसंगतियों, विघटित मूल्यों, बदलते खोखले होते मानवीय रिश्तों और आर्थिक एवं सामाजिक स्थितियों को चंद्रकांता ने अपनी रचनाओं में यथार्थ रूप से रूपायित किया है। उन्होंने आत्मीयता और मार्मिकता के साथ अपने नीजि सत्यों को 'पोशुनल की वापसी,' ओ सोनकिसरी, 'तैतीबाई' आदि कहानियों और 'ऐलान गली जिन्दा है,' 'यहाँ वितस्ता बहती है, आदि उपन्यासों में अभिव्यक्त कर आम आदमी के जीवन सत्य को जनचेतना के माध्यम से अभिव्यक्ति दी है। उसी आत्मीयता एवं जीवंतता के साथ अनुभूत यथार्थ को 'आत्मबोध,' सिद्धि का कटरा,' 'नुराबाई', 'पत्थरों के राग', 'अंतिम साक्ष्य,' 'अपने–अपने काणार्क', आदि कृतियों में ढालकर पाठकों के सामने प्रस्तुत किया है।

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VOLUME - IX, ISSUE - I - JANUARY - MARCH - 2020
AJANTA - ISSN 2277 - 5730 - IMPACT FACTOR - 6.399 (www.sjifactor.com)

२१. संगणक युग में हिन्दी

डॉ. सुब्राव नामदेव जाधव
हिंदी विभाग, श्री. शिवाजी महाविद्यालय, बार्शी ।

हिन्दी संयुक्त राष्ट्र की भाषा बने, तो यह वास्तव में एक बड़ी बात होगी, लेकिन इससे भी बड़ी बात यह होगी कि हिन्दी अनुसंधान और अन्वेषण के क्षेत्रों में अभिव्यक्ति का माध्यम बने। उसमें ऐसा मौलिक साहित्य रचा जाए कि गैर हिन्दी–भाषी दुनिया उसे उत्सुकता से सीखना चाहे।

— इन्दिरा गाँधी

आज का युग हिन्दी भाषा के लिए अग्नि परीक्षा का युग है। सूचना क्रान्ति ने विश्व के परिदृश्य को पूरी तरह से बदल कर ही रख दिया है। जो भाषा इस क्रान्ति के दौर में आधुनिक तकनीकी विकास को भाषा नहीं बन पायेगी वह पहाड़ी भाषा ही मानी जायेगी और विकास की दौड़ में वह सदा के लिए ही पिछड़ जायेगी। हिन्दी भाषा भी इस परीक्षा के दौर से गुजर रहीं है और अपने आप तकनीकी विकास की तेज गति के साथ–साथ चलने का प्रयास कर रही है। हिन्दी भाषा का भविष्य आज इस बात पर निर्भर करता है हिन्दी किस प्रकार इस सूचना क्रान्ति की भाषा बनती है ? आज के युग में रेडियो, टेलीविजन, कम्प्यूटर, फोन, कृत्रिम उपग्रह आदि विकास समाज के केन्द्र में आ गये हैं। इन माध्यमों का प्रचार–प्रसार आज जीवन के प्रत्येक अंग तक हो गया। इनसे अलग आज सभ्य जीवन की कल्पना भी नहीं का जा सकती। इन क्षेत्रों में विकास ही शक्ति का मापदंड बन गया है। शक्ति का परम्परागत तत्व सेना भूमि, राजनीति, कूटनीति आदि भी आज इस माध्यमों हारा ही चालित हो रही है। आज रॉकेट, मिसाइलें, गुप्तचरी सभी का संचालन यूटर, उपग्रहों और सूचना तकनीकों के माध्यम से किया जाता है। अतः निश्चित ही यदि हिन्दी को भारत की राजभाषा और राष्ट्रभाषा बनना है तो इस सभी माध्यमों की भाषा बनना ही होगा और इस दिशा में केन्द्रीय महत्व कम्प्यूटर की भाषा के रूप में हिन्दी भाषा का विकास करने का है।

कम्प्यूटर की भाषा के रूप में हिन्दी के विकास का इतिहास अधिक पुराना नहीं है। हिन्दी का पहला कम्प्यूटर 'सिद्धार्थ' दिल्ली में सन् 1984 ई. में आयोजित तृतीय 'विश्व हिन्दी सम्मेलन' के दौरान सामने आया जिसका विकास आई. आई.टी. कानपुर ने किया था सिद्धार्थ 'जिस्ट'(ग्राफिक इंडियन स्क्रिप्ट टर्मिनल) कार्ड आधारित था। इस कार्ड को सी.पी.यू. में लगाकर कम्प्यूटर हिन्दी में कार्य करने लगता है। आज इसी जिस्ट तकनीक के आधार पर भारतीय लिपियों का कम्प्यूटरीकरण किया जा रहा है आज कम्प्यूटर के 'की–बोर्ड' को भो हिन्दी में कार्य करने के उपयुक्त बनाया जा चुका है इसके अतिरिक्त सी–डैक पूना' ने अंग्रेजी–हिन्दी अनुवाद के लिए 'टैग' (ट्री एडजाइनिंग ग्राम) पर आधारित अनुवाद विधि का विकास किया है। वैज्ञानिकों का भी मत है कि हिन्दी भाषा की वर्णमाला अत्यन्त वैज्ञानिक है और हिन्दी भाषा को कम्प्यूटर की भाषा बनाया जा सकता है।

कम्प्यूटर के आगमन पर माना जा रहा था कि इसका हिन्दी भाषा के विकास पर नकारात्मक प्रभाव पड़ेगा किन्तु इस धारणा के विपरीत कम्प्यूटर प्रयोग से हिन्दी का विकास तेजी से हुआ है कम्प्यूटर ने हिन्दी के कुंजीपटल

VOLUME - IX, ISSUE - I - JANUARY - MARCH - 2020
AJANTA - ISSN 2277 - 5730 - IMPACT FACTOR - 6.399 (www.sjifactor.com)

८. समकालीन कविता में प्रतीक विधान

डॉ. सुब्राव नामदेव जाधव
हिंदी विभाग, श्री शिवाजी महाविद्यालय, बार्शी.

समकालीन कविता आधुनिक हिन्दी कविता की नवीनतम अगलब्धि है। फलतः युग विशेष के संदर्भ में नये-नये प्रतीकों का यहा इसमें निर्माण हुआ है, वहीं पुराने परम्परागत रूढ प्रतीको का नवसर्जन भी हुआ है। नये प्रतीकों के निर्माण की ओर प्रायः शत-प्रतिशत कवियों की चेतन सजग है। इसी से नयी कविता प्रतीक योजना की दृष्टी से बहूत समृध्द है।'

समकालीन कविता के प्रतीकों का वर्गीकरण विभिन्न दृष्टीयों से अुआ है। डॉ. केदारनाथ सिंह ने प्रतीक के निम्न वर्ग मानते हैं- परम्परागत प्रतीक, साम्प्रदायिक प्रतीक, आध्यात्मिक प्रतीक, रहस्यात्मक प्रतीक, वैयक्तिक प्रतीक और स्वप्नपरक प्रतीक है। इसी प्रकार कही अर्थ के आधार पर कहीं रूप के आधार पर तो कही श्रोत के आधार पर विविध विभेद किये गये है। वर्ण्य विषय की दृष्टि से आज प्रतीकों के मुख्यतः चार विभेद किये जा सकते हैं-

प्राकृतिक प्रतीक

यह प्रतीक दृश्य जगत् पशुवर्ग एवं उनके द्वारा मानवीकृत रूपों में नियोजित किया जाता है। डॉ. रामेश्वर खंडेवाल के अनुसार 'ये पदार्थ उपमानों के रूप में ही प्रयक्त नहीं होते किन्तु मानव-हृदय में परंपरा से सुप्त अनेक सूक्ष्म भावनाओं को भी जगाते हैं। दीप कीलौ, चातक, किरण, कमल, चन्द्रमा, मीनआदि पदार्थ क्रमशः मूकव्यथा, अतृप्त तृष्णा, आनन्द का प्रकाश, पवित्रता , शीतलता, तडप आदि मानसिक स्थितियों के प्रतीक हैं।'

समकालीन कवियों ने प्राकृतिक प्रतीकों का प्रयोग नये सौन्दर्यबोध के लिये किया है, लेकिन इन प्रतीकों में कहीं-कहीं दूरहता और स्पष्टता अवश्य आ गयी है जैसे ; -

'अर्चना के धूप सी तुम गोद में लहरा गई
ज्यों झरे केसर, तितलियों के परों के भार से
सोनजुही की पंखुरियों से गुँथे, ये दो मदन के वान
मेरी गोद में। हो गये बेहोश दो नाजूक मृदल तूफान मेरी गोद में ।'

सांस्कृतिक प्रतीक

समकालीन कविता में महाभारत, रामायण से सम्बन्धित प्रतीकों की अधिकता है। ये प्रतीक जीवन संघर्ष में जू-----, जीवन चक्रव्युह से बच निकलने तथा जीवन की उलभी गुत्थियों की सुलभाने में योग देने के उद्देश से प्रयोग में लाए गए हैं। धर्मवीर भारती, नरेश मेहता, भारत भूषण अगवाल, कुंवर नारायण, दुष्यन्त कुमार तथा गिरिजा कुमार माथुर की कविताओं में ये

१६९

करना चाहिए। इन अंतर्राष्ट्रीय भावना से विश्व में शान्ति बनी रहेगी जिससे प्रत्येक राष्ट्र उन्नति के शिखर पर चढ़ता रहेगा। गौरतलब है कि हिंसा के मुख्य कारणों में अन्याय, विषमता, स्वार्थ और अधिपत्य स्थापित करने की भावना शामिल है। हिंसा को रोकने के लिए इसके बुनियादी कारणों को दूर करना होगा। इसके लिए गंभीर रूप से प्रयास होने चाहिए। इससे जहां रोजमर्रा के जीवन में हिंसा कम होगी, वही युद्ध, गृहयुद्ध और दंगे–फसाद जैसी सामूहिक हिंसा की आशंका भी कम हो जाएगी। अहिंसक जीवन जीने के लिए यह जरूरी है कि सादा जीवन उच्च विचार की प्रवृत्ति को अपनाया जाए। अहिंसक समाज की बुनियाद बनाने में परिवार के अलावा, स्कूल और कॉलेज भी अहम भूमिका निभा सकते हैं। इसके साथ ही विभिन्न धर्मों के धर्म गुरू भी लोगों को धर्म की मूल भावना मानवता का संदेश देकर अहिंसक समाज के निर्माण में अपना महत्वपूर्ण योगदान दे सकते हैं। इन सबके बल पर ही भारत विकासशील देश से विकसित देशों की श्रेणी में आ सकता है।

❑❑❑

46

रीति साहित्यकार और साहित्य

डॉ. सुब्राव नामदेव जाधव
हिंदी विभाग,
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हिंदी साहित्य की गति का उपर जो संक्षिप्त उल्लेख हुआ, उससे रीतिकाल की सामान्य प्रवृत्ति का पता चल सकता है।/अब इस काल के मुख्य–मुख्य कवियों का विविरण दिया जाता है।

१ चिंतामणि त्रिपाटी– ये तिकवॉपूर जिला कानपुर के रहने वाले और चार भाई थे– चिंतामणी, भूषण, मतिराम और जटाशंकर। चारों कवि थे, जिनमें प्रथम तीन तो हिंदी साहित्य में बहुत यशस्वी हूए। इनके पिता का नाम रत्नाकर त्रिपाटी था। कुछ दिन से यह विवाद उठाया गया है कि भूषण न तो चिंतामणी और मतिराम के भाई थे, न शिवाजी के दरबार में थें। पर इतनी प्रसिध्द बात का जब तक पर्याप्त विरुध्द प्रमाण न मिले तब तक वह अस्वीकार नहीं की जा सकती। चिंतामणी का 'कविकुलकल्पतरु' नामक ग्रंथ संवत १७०७ का लिखा है। इनके संबंध में शिवसिंहरोज में लिखा है कि थे 'ये बहुत दिन तक नागपुर में सूर्यवंशी भोसला मकरंदशाह के यहॉ रहे और उन्हीं के नाम पर 'छंद विचार' नामक पिंगल का बहूत भारी ग्रंथ बनाया और 'काव्य विवके' कविकुलकल्परु', 'काव्यप्रकाश', 'रामायण', ये पॉच ग्रंथ इनके बनाये हूए हमारे पुस्तकालय में मौजूद हैं। इनकी बनायी रामायण कवित्त और अन्य नाना छंदों में बहुत अपूर्व है। बाबू रुद्र साहि सोसंकी, शाहजहॉ बादशाह और जैनदी अहमद ने इनको बहूत दान दिये हैं। इन्होंने ग्रंथ में कहीं–कहीं अपना नाम मणिमाल भी कहा है।'

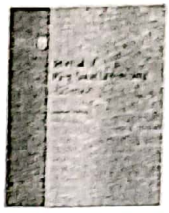
उपर के विवरण से स्पष्ट है कि चिंतामणि ने काव्य के सब अंगो पर ग्रंथ लिखे। इनकी भाषा ललित

Journal of King Saud University – Science 32 (2020) 3125–3130

Contents lists available at ScienceDirect

Journal of King Saud University – Science

journal homepage: www.sciencedirect.com



Original article

Pristine and palladium-doped perovskite bismuth ferrites and their nitrogen dioxide gas sensor studies

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ARTICLE INFO

Article history:
Received 5 July 2020
Revised 21 August 2020
Accepted 29 August 2020
Available online 4 September 2020

Keywords:
$BiFeO_3$ and Pd-$BiFeO_3$
NO_2 gas sensors
Sol-gel synthesis
Structural elucidation
Dual surface morphology

ABSTRACT

Undoped and palladium-doped perovskite bismuth ferrite nitrogen dioxide (NO_2) gas sensors ($BiFeO_3$ i.e. BFO and Pd-$BiFeO_3$ i.e. Pd-BFO) are successfully synthesized *via* an easy and low-cost sol–gel process. The Pd-doping in BFO is confirmed through an X-ray diffraction data, field emission scanning electron microscopy images, energy-dispersive X-ray spectroscopy analysis, and its influence on the structure, morphology, surface area, and the NO_2 gas sensor performance of the BFO sensor has been examined and explored. Moreover, the plausible gas sensing response mechanism of Pd-BFO film sensor has also been proposed. The nanocubes embedded into a uniformly distributed upright standing nanoplates facilitate better gas adsorption and diffusion behavior on providing an excellent NO_2-sensing performance with good sensitivity, excellent selectivity, better response (90 s)/recovery (110 s), and noticeable repeatability under a fixed 100 ppm NO_2 gas concentration level at an optimized low operating temperature i.e. 150 °C.

1. Introduction

Nitrogen dioxide (NO_2), as one of the important sources for air pollutant, has attracted a considerable attention due to its adverse impact on human life and environmental concerns (Liu et al., 2019) (Liu et al., 2019) (Liu et al., 2019) (Liu et al., 2019). On ground level, 15 ppb of NO_2 gives rise to irritation of eyes, nose and throat; for middle 30 ppb, people can be infected by airway hyperactivity of muscles; and upper 80 ppb level, the respiratory tract infections are drastically increased (Liu et al., 2016). Detection of toxic and hazardous gases at an early stage is major concern. Therefore, there is an urgent need to develop a new class materials of high-performance gas sensors to detect the NO_2 gas in an economic way. In last few years, ternary metal oxides based on perovskite ABO_3 type structures demonstrated steadfast gas-sensing properties and performance compared to other binary oxides, which could be due to different analytes ranging from cations and their capability to accept various doping elements (George K et al., 2020). Ferrites with various perovskite-based structures i.e. $BiFeO_3$, $LaFeO_3$, $PrFeO_3$, $EuFeO_3$, $GdFeO_3$, have demonstrated different degrees of gas sensor performance (Niu et al., 2004; Siemons et al., 2007).

Recently, various metal dopants in perovskite-based ferrite structures are used to enhance their gas sensing response and selectivity towards various gases. Fan *et al.* reported that the Ba-substituted BFO sensor increased gas-sensing performance due to presence of a large concentration of oxygen vacancy as compared to pure BFO (Dong et al., 2015). Mane *et al.* reported a high performance of tungsten-doped BFO nano sensor over pristine for NO_2 gas (Waghmare et al., 2018). Pal *et al.* approved 25 s response/17 s recovery time at low concentration of acetone vapors for BFO nanoparticle-sensors (Chakraborty and Pal, 2019). Mursalin *et al.* reported sono-chemically synthesis of BFO nanoparticle sensors with an outstanding SO_2 gas sensing performance and ultrafast response/recovery time (Das et al., 2015). Pal *et al.* prepared BFO

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Peer review under responsibility of King Saud University.

Production and hosting by Elsevier

https://doi.org/10.1016/j.jksus.2020.08.024
1018-3647/

CURRENT GLOBAL REVIEWER

Issue XIX (25) , Vol. I
Dec. 2020

Peer Reviewed
SJIF Impact factor

ISSN : 2319 - 8648
Impact Factor : 7.139

Importance of Mahatma Gandhiji's Views on Sanitation

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Introduction:

Total Sanitation Campaign was launched in 1999. Later it was renamed as Nirmal Bharat Abhiyan in 2012. After that the sitting Prime Minister Narendra Modi lunched a nation-wide cleanliness campaign on the occasion of Mahatma Gandhi's birth anniversary on 2nd October, 2014 and this campaign again he renamed as Sawcha Bharat Abhiyan. Modi himself explained that this mission is not a political act it is beyond that and is inspired by patriotism and not politics. This programme provides sanitation facilities to every family including toilets solid and liquid waste disposal systems village cleanliness and safe and adequate drinking water supply. His own target for this mission is to achieve it by 2019 as a befitting tribute to the father of the nation Mahatma Gandhi on his 150th birth anniversary. His pledge to people is very fantastic that is *na main gandagi karoonga na main gandagi karne doonga* (I shall not litter and wont allow anyone to do so) According to him it is not just a slogan but it is our responsibility. The base of this campaign is M. K. Gandhi's views on cleanliness (Sanitation)

The present paper aims at communicating Gandhiji's ideas and views on sanitation. It is the need of time because the Indian people's ignorance towards it is one of the main reasons of this dirty and polluted atmosphere.

Gandhiji's views on and Ideas of sanitation :

In this paper the focus is on how Gandhiji's views and thinking was built and what it gave to (India) the nation. To Know all these things, some important quotations by Gandhiji himself are very explanatory.

"Sanitation is more important than Independence."

"I will not let anyone walk through my mind with their dirty feet"

"Uka serves us by cleaning dirt and filth how can his touch pollute me ? The Gandhi family was living in Rajkot his father and grandfather served as dewans (Prime Minister) in Rajkot and other neighboring states. He had the guts to go round the town for a house to house inspection of the drains because he was dewans son and himself barrister to boot. Indians gained freedom under the leadership of Gandhi. But his aim of clean India is still unfulfilled. Sanitation and cleanliness was an integral part of his living. Total Sanitation was his dream. According to him cleanliness is most importance for physical well-being and a healthy environment. Everyone should learn about sanitation, cleanliness, hygiene and the various diseases that are caused due to poor hygienic conditions. We are not bothered about cleanliness of public places even if we inculcate certain habits like washing hands before meals, regular brushing of teeth, and bathing from a young age. Generally, the habits which we learn at young age get embedded into one's personality and live forever. Gandhi focused all those things about good habits and sanitation and pointed out its close relationship to good health. No one should spit or clean nose on the roads because a sputum is so harmful sometimes that germs infect others. Actually, spitting on roads is a criminal offence in some countries. Such people who spit after chewing tobacco and betel leaves have no consideration for the feelings of others. All these things should be controlled and strictly prohibited, said Gandhiji.

ISSN: 0394-3114
Vol-40-Issue-22-February-2020

स्त्रीवादाची संकल्पनाः उगम व विकास

डॉ॰ पंडित महादेव लावंड
राज्यशास्त्र विभागप्रमुख
श्री शिवाजी महाविद्यालयए बार्शी

प्रस्तावनाः

जागतीक स्तरावर स्त्रीयांच्या अधिकारासंबंधी व हक्कासंबंधी वैश्विक भान येण्यास विसावे शतक जरी उजाडले असले तरीए स्त्रीयांच्या हक्कासंदर्भात पाश्चात्य देशात अठराव्या व एकोणिसाव्या शतकातच चर्चा सुरू झाली आहे॰ जॉन स्टुअर्ट मिल चे स्त्रीयांचे दास्य हे पुस्तक या जाणीवेतूनच लिहिले गेले आहे असे म्हणण्यास आपणास वाव आहे॰ स्त्रीवादाची संकल्पना व चळवळ जरी पाश्चात देशात उगम पावलेली असला तरीए विसाव्या शतकात तस्या स्वरूपाच्या चळवळी स्त्रीयांचे मौलिक प्रश्न घेवून भारतासारख्या देशातही निर्माण झालेल्या आपणास दिसून येतात॰ स्त्रीवाद ही संकल्पना ही मुळातचे लोकशाही मूल्याच्या जवळ जाणारी संकल्पना आहे॰ लोकशाहीच्या विकासाबरोबर स्त्रीयांच्या हक्कांच्या चळवळी निर्माण झाल्या आहेत॰ जे॰एस॰ मिल या उदारमतवादी विचारवंताने आपल्या खासदारकीच्या कार्यकाळात ब्रिटीश संसदेत स्त्री मताधिकाराचा पुरस्कार केला॰ त्याचाच परिणाम म्हणून इंग्लडमध्ये 70 वर्षाच्या संघर्षानंतर सन 1918 मध्ये स्त्रीयांना सार्वत्रिक प्रौढ मतदानाचा अधिकार मिळाला॰

संशोधनाची गृहीतकेः

प्रस्तुत शोधनिबंधाची गृहीतके पुढीलप्रमाणे मांडण्यात आली आहेत॰

1द्व स्त्रीचळवळीचा उगम पाश्चात्य देशात झाला आहे॰

2द्व भारतीय स्त्रीचळवळीवर पाश्चात्य स्त्रीचळवहीचे छाप पडली आहे॰

3द्व स्त्रीचळवळ स्त्रीयांना झालेल्या अधिकाराच्या जाणीवेतून निर्माण झाल्या आहेत॰

4द्व स्त्रीचळवळीचा रोख स्त्रीयांना स्वातंत्र्याच्या दिशेने घेऊन जाणारा आहे॰

संशाधनाची उद्दिष्टेः

प्रस्तुत शोधनिबंधाची उद्दिष्टे पुढीलप्रमाणे मांडण्यात आली आहेत॰

1द्व स्त्रीचळवळीची पार्श्वभूमी समजून घेणे॰

2द्व पाश्चात देशातील स्त्रीचळवळीने हातळलेले प्रश्न समजून घेणे॰

3द्व भारतीय स्त्रीचळवळीचा कोणत्या प्रश्नातून उगम झाला हे जाणून घेणे॰

4द्व स्त्रीचळवळीतून निर्माण झालेले समाजभान जाणून घेणे॰

IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Population Structure and Regeneration status of *Xylocarpus granatum* Koen. at Revadanda Mangrove forest (Maharashtra)

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Abstract:

Xylocarpus granatum is most important medicinal plant. Population structure of *Xylocarpus granatum* was studied by observing number of individuals of species at the Revadanda mangrove forest. Individuals were categorized on the basis of diameter class i.e. seedling (0-2 cm), sapling (>2-6 cm) and adult (>6 cm). The stand density of tree species is calculated from the mangrove area of Revadanda. The diameter distribution pattern of adult indicates decrease in number of individuals in higher diameter class. As per IUCN category, *Xylocarpus granatum* is least concern plant. The policy should be made to protect this species legally to make awareness about this plant to people with its importance and need of conservation by addressing the prevalent factors which affects natural regeneration of the species.

Index Terms: Conservation, density, diameter, distribution, Population structure, regeneration status

I. INTRODUCTION:

The existence of species completely depends on its regeneration status under available environmental condition. Regeneration is critical phase of forest management because it maintains species composition. The regeneration status of community can be assessed from the population dynamics of seedling and sapling in the forest community. Regeneration status of tree species based on the age and diameter structure of the population (Pritts et al. 1983; ; Khan et al., 1987; Bhaiyan et al., 2003). The population structure was characterized by the sufficient number of seedling, sapling and young trees which represents satisfactory regeneration while inadequate number in seedling and sapling of tree species in a forest indicates poor regeneration (Saxena, 1984). The successful regeneration of species depends on its ability to produce large number of seedlings and the ability of seedling and sapling to survive and grow (Good and Good, 1972). However the presence of sufficient number of seedling, sapling and young trees is greatly influenced by interaction of biotic and abiotic factors of environment (Akasamit et al., 1984; Khan et al., 1986). The intensity magnitude and frequency of disturbance determine the structural composition of forest (Khan et al., 1987; Armesto et al., 1985). The disturbance has negative impact and disturbing the climax (Clement, 1936). The studies on population structure and regeneration status were carried out by several workers (Cao, et al., 1996; Uma et al., 1998; Veblen et al., 1979).

Xylocarpus granatum is belongs to family Meliaceae. It is most frequently occurs in the world and rarely found in the Maharashtra. It is locally known as 'Samudrafal'. It is medium sized tree occurs in the mangrove forest. The fruits of *X. granatum* used in pharmaceutical industries. This plant is least concern as per IUCN data (Ellison et al, 2010). Various researchers from Maharashtra reported this species from very few localities with least number and reported as critically endangered plant (Bhosale, 2002, Jugale, et al. 2009; Chavan and Gokhale, 2013). Fisherman collects seeds and fruits from flowing water for medicinal

REVIEW OF RESEARCH
ISSN: 2249-894X
IMPACT FACTOR : 5.7631(UIF)
VOLUME - 9 | ISSUE - 6 | MARCH - 2020

HOLD FAST ORGANS OF CESTODE PARSITE IN *GALLUS GALLUS DOMESTICUS* AND THEIR HISTOPATHOLOGICAL CHANGES IN HOST

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ABSTRACT :

Present study deals with the hold fast organs and pathological changes in cestode parasites in Gallus gallus domesticus from Solapur and Osmanabad dist (M.S) India.Hold fast organs of tapeworm are important for attachment and adhesion. Scolex is the hold fast organ which is present at anterior end of parasite. Morphology and dimensions of Hold fast organ important in the identification. Present study deals with hold fast organs of Gallus gallus domesticus and pathological changes caused due to parasitic infection collected from Solapur and Osmanabad dist (M.S) India.

KEY WORDS: Holdfast organs, cestode, *Gallus gallus domesticus*, Histopathology, Solapur and Osmanabad.

INTRODUCTION:

Cestodes are endoparasite of vertebrates from fishes to mammals. Infection of cestodes leads to anemia complications and protracted illness. Parasite represents an important component of natural community. India recorded the fastest growth rate in poultry meat production during 1985 -1995 with a growth rate about 18% per annum which perhaps, no other country or agro industry in the world has recorded, during that period. The birds are one of the components of the food cycle in ecology. They provide not only the delicious but also nutritious food in the form of flesh to human being.

The parasitic infection in chicken has considerable economic importance as it cause reduction in growth and weight loss, decrease in egg production, predation and mortality. Histopathology references to the microscopic examination of tissue affected by disease. Naturally it is important to study this relationship, not because of their parasitological value but for the relative existence of mankind. This study will help to observe pathological condition of host.

MATERIAL AND METHOD:

Taxonomy: Cestode parasites were collected from intestine of *Gallus gallus domesticus* from Solapur and Osmanabad dist (M.S.) India. Cestodes are preserved in hot 4% formalin, stained in Haematoxylin and Borax carmine mounted in D.P.X . Microphotograph were taken with digital camera and identification is done with the help of Yamaguti (1959).

Histopathology: For the histopathological study, intestine of *Gallus gallus domesticus* were dissected to observe the rate of infection. Some fishes were found to be infected and some normal. Both infected and normal hosts intestine were dissected and fixed in Bouin's fluid to study histopathological changes. The fixative inhibits the post mortem changes of the tissues. Then tissues were washed, dehydrated through alcoholic grades, cleared in xylene and embedded in paraffin wax (58-62°C).

The blocks were cut at 7μ and slides were stained in Eosin Haematoxylin double staining method. Best slides or sections were selected and observed under the microscope for histopathological study.

hemical Science Review and Letters ISSN 2278-6783

esearch Article

Stereoselective Synthesis of (4E,6Z)-Hexadecadien-1-ol, (4E,6Z)-Hexadecadienyl Acetate and (4E,6Z)-Hexadecadienal, the Pheromone Components of the Persimmon Fruit Moth, *Stathmopoda masinissa*

Ramchandra Awalekar[1], Priyanka Mohire[1], Ajinkya Patravale[2], Shilpa Salunkhe[3], Dattatray Jamale[3], Shankar Hangirgekar[3], Govind Kolekar[3] and Prashant Anbhule[3]*

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Abstract

The sex pheromone components of the Persimmon Fruit Moth (PFM) *Stathmopoda masinissa*, a dangerous persimmon pest in eastern Asia, (4E,6Z)-Hexadeca-4,6-dien-1-ol, (4E,6E)-Hexadeca-4,6-dienyl acetate and (4E,6Z)-Hexadeca-4,6-dienal, were synthesized stereoselectively and efficiently starting from commercially available starting materials. The stereoselective formation of (4E) double bond based on Hydroxymethylation of 4-(2 -tetrahyd- pyranyloxy)-1-pentyn prepared from commercially available 4-Pentynol, while the 6Z-double bond was formed by Wittig reaction of 6-(2-Tetrahydropyranyloxy)-hex-2(E)-en-1-al and n-decyltriphenylphosphonium bromide. The overall GC purities of the final alcohol, acetate, and aldehyde is 95.23%, 98.16% and 94.03% respectively while isomeric purities are more than 99%. Green metrics calculation gives a new insight towards the multistep pheromone synthesis.

Keywords: Pheromones, *Stathmopoda masinissa*, Hydroxymethylation, Wittig Reaction, Oxidation, Green Metrics Calculation

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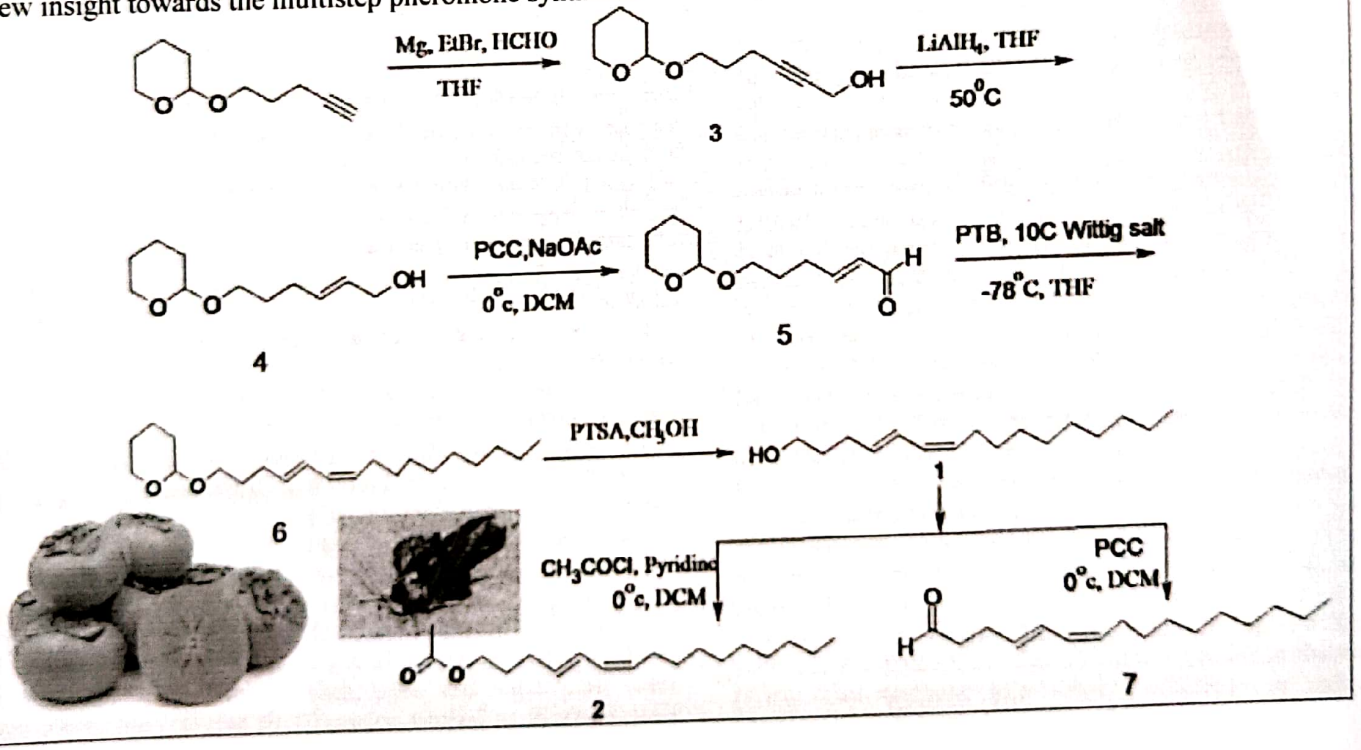

Introduction

The persimmon (Persimon) is an edible fruit of trees in the genus Diospyros. Persimmon (Diospyros kaki Thumb) is an important tree fruit belongs to family Ebenaceae [1]. This is the most significant deciduous fruit tree and the major producers are China, Korea, Japan, Brazil and Italy while U.S.A, India and Australia are the minor producers. In the midst of tree a fruit Persimmon is ranked first in Korea in terms of harvest area literature data reveals that in the year of 2012 almost 30,264 ha land was occupied [2].

Synthesis and biological evaluation of some triazole integrated Schiff Base as antioxidant and anti-inflammatory agents

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Abstract

A series of some 2-{(Z)-[(3-Methyl-5-sulfanyl-4H-1,2,4-triazol-4-yl)imino]methyl}-4H-chromen-4-ones were synthesized by reaction of substituted 4-oxo-4*H*-1-benzopyran-3-carbaldehyde with 4-amino-5-methyl-4*H*-1,2,4-triazole-3-thiol in acidic medium. The synthesized compounds were characterized by proton NMR, ^{13}C NMR, IR and mass spectroscopy techniques. The products were screened for their antioxidant and anti-inflammatory activities. Compound MP 2 and MP 6 demonstrate excellent antioxidant activity while remaining compounds show moderate activity. Compounds MP 2 and MP 3 demonstrate excellent anti-inflammatory activity while compounds MP 4, MP 6 and MP 8 show moderate activity.

Keywords Aldehydes, Biological activities, Heterocycles, Schiff bases, 1,2,4 triazole.

1.0 Introduction

Benzopyran and its derivatives belonging to significant oxygen containing heterocyclic compound occurs in most of the naturally occurring plants [1]. Most of the synthetic as well as naturally occurring derivative of chromones own excellent biological activities [2]. Chromones also acts as synthetic intermediate in many new heterocyclic compounds [3-5]. From last few year 3-formyl chromones plays a significant role in highly reactive compounds [6]. 3-Formylchromone with suitable substituent shows antifungal [7-8], antibacterial [9-11], anticancer [12-14], anti-HIV [15-17] activities. Hence it has been called as promising moiety in drug chemistry. Amongst the heterocyclic compounds, triazoles are one of the most important heterocycles demonstrating notable pharmacological properties [18]. The derivative of 1, 2, 4 triazole exhibits insecticidal [19], anti-inflammatory [20], antidepressant [21], anticancer [22-23], antifungal [24-26] and antibacterial [27-30] activities. Schiff bases have impressive importance due to its wide spectrum in biological activities such as antitubercular [31], antioxidant [32] and analgesic [33-34].

In view of these applications of 3-formyl chromones and 1, 2, 4 triazole, we thought to explore the chemistry of these moieties, to accomplish this we have carried out synthesis of some Schiff base derivatives by condensation of these moieties and also screened for anti inflammatory and antioxidant activities.

2.0 Experimental

2.1 Material and method:

All the chemicals were purchased from commercial suppliers of Sigma Aldrich and used without further purification. Melting points of synthesized compounds were taken by open tube capillary method and are uncorrected. The proton NMR spectra were recorded on a Bruker 400 MHz spectrometer using tetramethyl silane (TMS) as an internal standard. The Infra-red (IR)

'RESEARCH JOURNEY' International E- Research Journal
Impact Factor - (SJIF) - 6.625 (2019),
Vol. 7, Issue 4
Peer Reviewed Journal
E-ISSN : 2348-7143
Oct.-Nov.-Dec. 2020

स्वच्छ भारत मिशन योजनेचे तात्त्विक अधिष्ठान

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प्रस्तावना :

व्यक्तिगत व सार्वजनिक स्वच्छतेतून आरोग्याचे संवर्धन करणे हा निर्मल भारत अभियानाचा मुख्य हेतू आहे. राष्ट्रीय स्तरावर या अभियानाच्या अंमलबजावणीत महाराष्ट्राची भूमिका महत्त्वाची राहिली आहे. या स्वच्छता अभियानात भारतातील अन्य घटकराज्यांच्या तुलनेत महाराष्ट्राला प्राप्त झालेल्या यशाची विविध कारणे आहेत. त्यापैकी एक कारण म्हणजे, या अभियानाला महाराष्ट्रात प्राप्त झालेले तात्त्विक अधिष्ठान हे आहे. महाराष्ट्रातील समाजसुधारक व साधुसंतांनी आपल्या वैचारिक लेखनितून व कृतिशील कार्यातून व्यक्तिगत व सार्वजनिक आरोग्याचे धडे दिले आहेत. त्यातूनच महाराष्ट्रात एक कृतिशील वैचारिक वारसा आणि परंपरा निर्माण झाली आहे. त्यामध्ये संत गाडगे महाराज, संत तुकडोजी महाराज, महात्मा गांधी, सेनापती बापट, अप्पासाहेब पटवर्धन आणि डॉ. सुहास मापूस्कर यांच्या विचाराचा व कृतिशील कार्याचा समावेश होतो. त्यांच्या विचाराचा व कृतिशील कार्याचे विश्लेषण पुढीलप्रमाणे-

१. संत गाडगे महाराज :

भजन आणि कीर्तनाव्दारे अंधश्रद्धा, सामाजिक विषमता, धार्मिक कर्मकांड यासारख्या अनेक अनिष्ट रुढी, प्रथा, परंपरांच्याविरुद्ध अविरतपणे लोकप्रभोधनाचे कार्य करणारे संत गाडगे महाराज यांची ओळख 'स्वच्छता संत' म्हणूनही आहे. संत गाडगेबाबांचा सार्वजनिक स्वच्छता हा विचार आणि कृतीचा केंद्रबिंदू होता. संत गाडगे महाराज हे स्वतः शिक्षित नसूनही लोकांना मात्र सुसंस्कृतपणाचे त्यांनी अविरतपणे धडे दिले. महाराजांनी स्वतः हातात खराटा घेवून सर्वांना स्वच्छेचा कार्याचा कृतिशील आदर्श घालून दिला. हे समाजकार्याचे वृत्त हाती घेतलेल्या गाडगे महाराजांना मात्र दगड, शिव्या-शाप खाव्या लागल्या होत्या.[१] मात्र बाबांनी आपली समाज कार्याची बांधीलकी कधीही सोडली नाही. उलट हातात खराटा घेऊन स्वच्छतेचे कार्य करणे हे हालक्या दर्जाचे काम समजले जाई. त्या कार्याला प्रतिष्ठा प्राप्त करून देण्याचे कार्य गाडगेबाबांनी केले. महाराजांनी या कार्याला ईश्वर सेवा मानून अनासक्त भावनेने गावागावात जाऊन श्रमसंस्कृतीचे व स्वच्छतेचे महत्त्व आपल्या भजन व कीर्तनातून पटवून दिले. म्हणूनच गाडगे महाराजांचा 'खराटा' आजही स्वच्छतेचे प्रतिक मानला जातो.[२]

संत गाडगे महाराजांनी संपूर्ण आयुष्यर स्वच्छतेचे कार्य केले ते कोणी आपणास संत म्हणावे, कोणी तरी आपले शिष्यत्व स्वीकारावे असे त्यांना कधी वाटले नाही. तर गाडगे महाराज स्वतः ला नेहमी जनतेचे नम्र सेवक समजत असत. गाडगेबाबांना आनंदायी गाव निर्माण करावयाचे होते. म्हणूनच गाडगे महाराज म्हणत, 'मी स्वच्छ तर माझा परिवार स्वच्छ, माझा परिसर स्वच्छ तर माझा गाव स्वच्छ, माझा गाव स्वच्छ तर तर माझा देश स्वच्छ!' अशा प्रकारची व्यापक जाणीव ठेऊन ती जनतेत रुजविण्याचा त्यांनी अविरत प्रयत्न केले. महाराजांनी पुणे, पंढरपूर व नाशिक यासारख्या ठिकाणी सुरू केलेल्या धर्मशाळा ह्या खऱ्या अर्थाने स्वच्छतेच्या पाठशाळाच होत्या. गाडगे महाराजांच्या या कार्याबाबत प्रबोधकार ठाकरे म्हणतात, 'धर्मशाळेचा कानाकोपरा अत्यंत स्वच्छ, केराची कणही आढळायचा नाही. स्वच्छता आणि आदर हा येथला ठळक ट्रेडमार्क. स्वच्छतेचे बाबांना इतके वेढ की तेवढ्यासाठी त्यांनी आपली एक विशिष्ट खराटा संस्कृतीच निर्माण केली आहे म्हणा ना.'[३] प्रबोधनकारांच्या या विवेचनावरून गाडगे महाराजांना स्वच्छतेचे असलेले वेढ स्पष्ट होते. तसेच त्यांच्या स्वच्छता कार्याचीही आपणास प्रचितीही येते. गाडगे महाराजांच्या या