



**VSPM Academy of Higher Education**  
**Jawaharlal Nehru Arts, Commerce and Science**  
**College Wadi, Nagpur**  
**Dist. Nagpur (Maharashtra) 440023**

Criterion III  
Research, Innovations  
and Extension

**3.3 Research Publications and Awards**

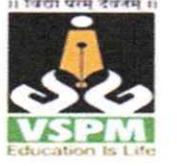
3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years



VSPM Academy of Higher Education Nagpur's

**Jawaharlal Nehru Arts, Commerce and Science  
College, Wadi, Nagpur- 440023 (M.S.)**

(Affiliated to RTM Nagpur University, Nagpur)



Website: [www.jncwadi.ac.in](http://www.jncwadi.ac.in)

E-mail: [jnc.wadi@rediffmail.com](mailto:jnc.wadi@rediffmail.com)

Phone: (07104) 220963

Date: 10/09/2024

This document hereby confirms that the data enclosed, comprising information, supporting documents, numerical data, and reports, has been thoroughly examined and authenticated by both the IQAC and the Principal, and is deemed accurate.

Convenor  
(IQAC)

JN. Arts, Comm. & Sci. College  
Wadi, Nagpur

Principal

Jawaharlal Nehru Arts, Comm. & Sci.  
College, Wadi, Nagpur



*Books and chapters in edited  
volumes/books published*

3.3.2.1 Total number of books and chapters in edited volumes/books published and papers published in national/international conference proceedings year wise during last five years.

**(1) Number of books and chapters in edited/books published –**

| Year   | 2023-2024 | 2022-2023 | 2021-2022 | 2020-2021 | 2019-2020 | 2018-2019 |
|--------|-----------|-----------|-----------|-----------|-----------|-----------|
| Number | 05        | 10        | 06        | 02        | 01        | 03        |



Principal  
Jawaharal Nehru Arts, Comm. & Sci  
College, WadiNagpur

***2023-2024***

| S. No. | Name of Teacher                                 | Title of Book published / Name of Authors   | Name of publisher                                | National, International/ ISBN/ISSN | Year of publication |
|--------|---|---|--|------------------------------------|---------------------|
| 01.    | Dr. S. K. Shembekar                             | As per New Education Policy (NEP M. Com, Semester I. व्यावसायिक कायदे Business Laws | Om Sai Publishers and Distributers Nagpur        | National                           | 2024                |
| 02.    | Dr. S. K. Shembekar                             | As per New Education Policy (NEP M. Com, Semester I. International Business         | Sai Jyoti Publications Nagpur                    | National                           | 2024                |
| 03.    | Dr. (Mrs.) N. H. Kamble                         | Indian Finance System (M. Com. Semester I)  | Sai Jyoti Publications Nagpur                    | National                           | 2024                |
| 04.    | Dr. S. K. Shembekar AND Dr. (Mrs.) N. H. Kamble | As per New Education Policy (NEP M. Com, Semester-I) International Business         | Sai Jyoti Publications Nagpur                    | National                           | 2024                |
| 05.    | Dr. N. R. Petkar                                | The Rationalist in Dr. B. R. Ambedkar: The Legacy of Social Policy in India         | Parab Publications, India ISBN-978-81-19585-79-3 | National                           | 2023                |



Principal

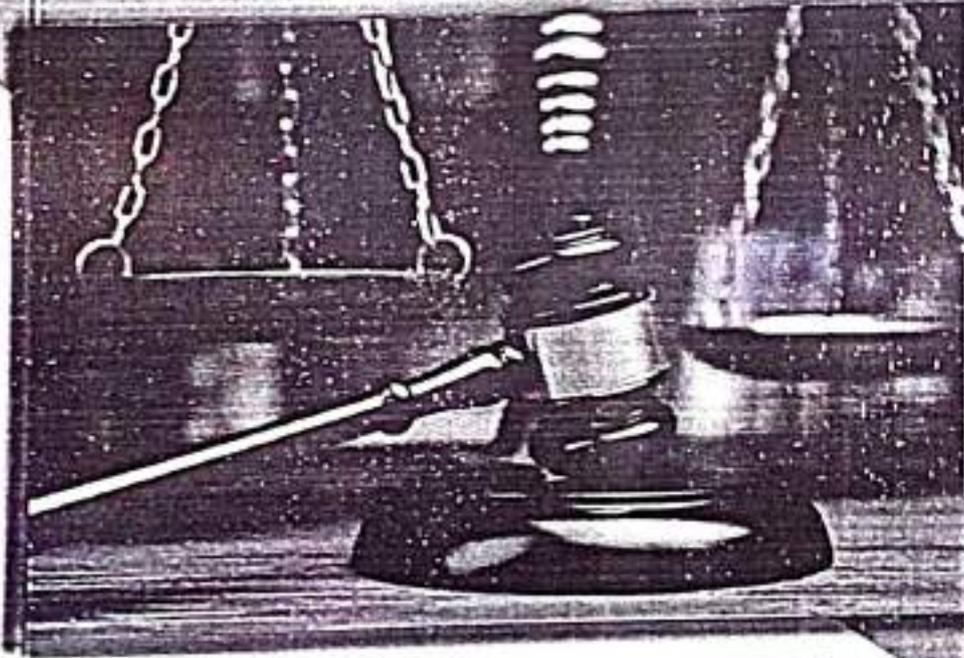
Jawaharlal Nehru Arts, Comm. & Sci  
College, WadiNagpur

OM SAI

As per New Education Policy (NEP M.Com. Semester 1\*)

# व्यावसायिक कायदे

BUSINESS LAWS



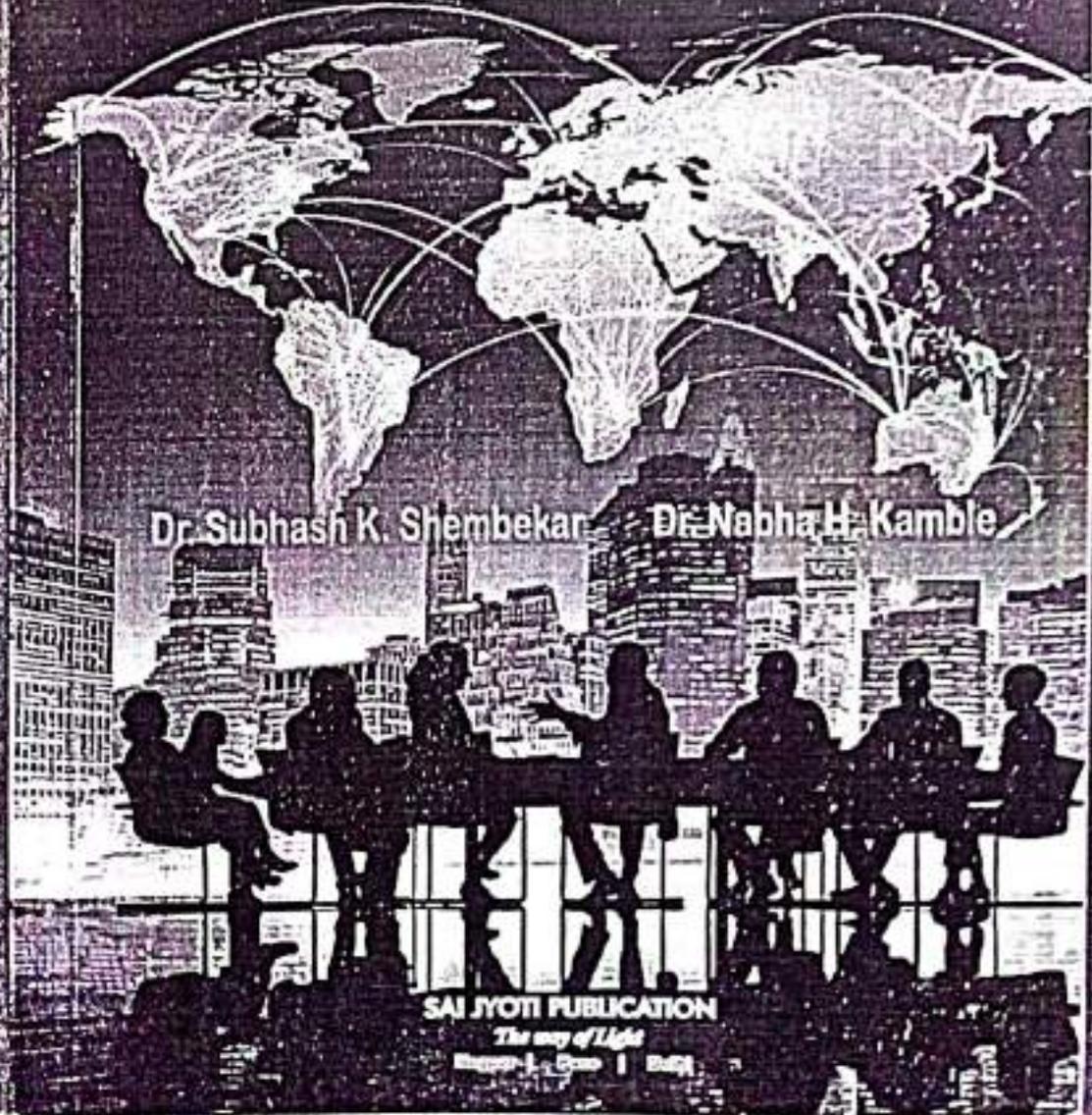
डॉ. आनंद मुळे  
डॉ. सुभाष कृ. शेंवेकर

OM SAI  
Publishers & Distributors  
Mumbai | Pune | India

SAI JYOTI

As per New Education Policy (NEP M.Com. Semester I)

# INTERNATIONAL BUSINESS



Dr. Subhash K. Shembekar

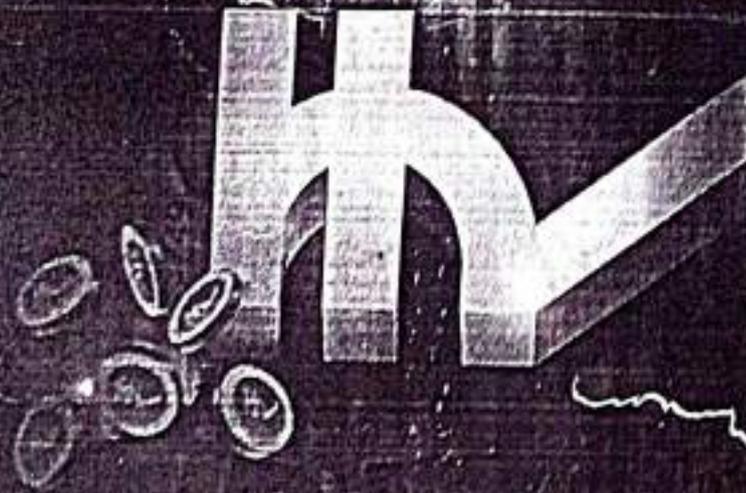
Dr. Nabha H. Kamble

SAI JYOTI PUBLICATION

*The way of Light*

Mumbai | Pune | Delhi

# INDIAN FINANCIAL SYSTEM



**Dr. Nabha H. Kamble  
Dr. Vijay Bankar**

Indian Financial System M.Com. Sem. I Dr. Nabha H. Kamble, Dr. Vijay Bankar

**Dr. Nabha H. Kamble**  
M.Com., M.Phil., M.A. (Eco. & Stat.), Ph.D.  
Professor, Department of Economics,  
Jawahar Lal Nehru Arts, Commerce and Science  
Wadi, Nagpur

**Dr. Vijay Bankar**  
M.Com., M.Phil., Ph.D.  
Assistant Professor, Department of Commerce,  
Govindrao Waghmare Arts & Commerce College,  
Savarnagar, Nagpur, Dist. Chhindrapur



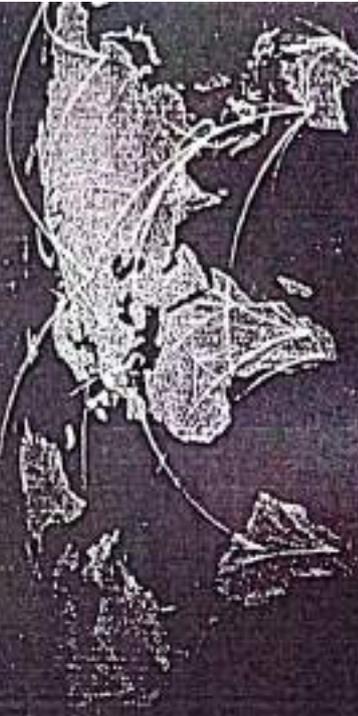
**SRI SAI PUBLICATIONS**  
Phone : 874873003, 882366500  
Email : sripai@sripai.com  
Website : www.sripai.in

**Sri Sai Publications & Distributions**  
Bldg. No. - 952585555, 832585552  
E-mail : sripai@sripai.com

Available Also on Amazon.in

New Education Policy (NEP M.Com. Semester I)

# INTERNATIONAL BUSINESS



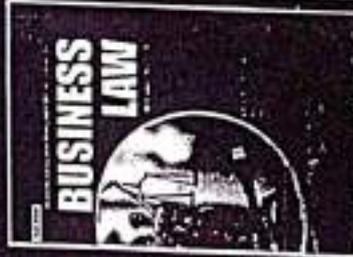
Dr. Nabha H. Kamble

Dr. Subhash K. Shembekar

Dr. Subhash K. Shembekar  
Dr. Nabha H. Kamble

**Dr. Subhash K. Shembekar**  
M.Com., M.Phil., B.Ed., M.A. (P.H.D.) (P.H.D.)  
Associate Professor, Department of Commerce,  
Jawaharbal Nalini Arts, Commerce and Science College,  
Wadi, Nagpur

**Dr. Nabha H. Kamble**  
M.Com., M.Phil., M.A. (P.H.D.) (P.H.D.)  
Professor, Department of Commerce,  
Jawaharbal Nalini Arts, Commerce and Science College,  
Wadi, Nagpur



Dr. Subhash K. Shembekar  
Dr. Nabha H. Kamble

Dr. Subhash K. Shembekar  
Dr. Nabha H. Kamble

# **The Rationalist in**

**Dr. B. R. Ambedkar :**

**The Legacy of Social Policy in India**



**Professor Aftab Anwar Shaikh**

**Dr. Mukhtar Shaikh**

**Dr. M. Shahid Jamal Ansari**

## DR. AMBEDKAR'S CONTRIBUTION IN MAKING OF CONSTITUTION OF INDIA

Dr. Nirlay R. Petkar

Assistant Professor, Department of English, Jawaharlal Nehru College  
Wadi, Nagpur, (Maharashtra)

### INTRODUCTION

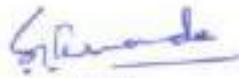
Dr. Ambedkar was the greatest humanitarian and revolutionist. He was a great philosopher and one of great intellectuals of the world. He was a human rights pioneer who liberated one billion Bahujan's and women. He also revived Buddhism in the land of its origin and oblivion. The father of modern scientific, industrial, and urban India. He is also the Father of all Fathers due to his unparalleled fore vision and work in building the Indian Democratic Nation by planning and policy formulation. Annihilation of caste, individual, and free social order, reorganization of India, "New India" and "New Social Order," Prabuddha Bharat, and the New World Order. Democracy and Democratic World Order, world reconstruction, and an enlightened New World are some of the enlightenments that captivate humanity as a whole, not just Indians. His legacy continues to inspire both at home and abroad, with millions admiring. His life and mission, as well as the billions of dollars at stake, every year, Deeksha Bhoomi (Nagpur) and Chaitya Bhoomi (Mumbai) have over 1 million followers. So are Kranti Bhoomi (Mahad, Nashik) and Mahaparinirvan Bhoomi (New Delhi). Thousands of villages and cities across India, Europe, America, Africa, Australia, and Asia celebrate April 14th, and Columbia University, Simon Fraser University, Koyasan University, the London School of Economics, and others have begun to pay attention to this world philosopher and revolutionary, who not only awakens India's conscience but enlightens the entire humanity.

Bharat as a country was to frame a constitution for the 1<sup>st</sup> time in its civilization in pursuance with the Cabinet Mission Plan of May 16, 1946. Though the developments started with August offer of 1940, amidst world war 2<sup>nd</sup>. The elections to the CA completed by the end of July 1946 (except for the sikh seats in Punjab which completed in August 1946). The congress was anxious to take steps to convene the CA but the Muslim League was reluctant to join the CA for its demand of Pakistan, though it has nominated 5 members in the Interim Govt. None the less a decision was taken to summon the CA and invitations to all the members were send on 20<sup>th</sup> November and the 1<sup>st</sup> meeting of the CA was convened on 9<sup>th</sup> December 1949 at 11.00 AM. At Constituent Assembly Chamber in the Council House, New Delhi. Out of 296 members, 207 attended. Muslim League members boycotted the Assembly. Amidst uncertainty of Muslim League participating in the CA which got a little clear only in January 1947, with its stand not to participate. Accordingly on February 20, 1947 the British Prime Minister Atlee made a statement in House of Commons, clarifying as to whom the powers of the Central Government in British India should be handed over in absence of a fully representative CA. In context of the functioning of CA it must be noted that from 9<sup>th</sup> December 1946 to 26<sup>th</sup> November 1949 the Constituent Assembly in its 11 sessions sat for 166 days and the Drafting Committee from 30<sup>th</sup> August 1947 to 26<sup>th</sup> Noyember 1949 met for 141 days. The rest of the period barring this (166 + 141 = 10 months & 5 days) was consumed by work of various committees and suggestions solicited. Out of the 166 days the CA spend only 114 days for the consideration of the Draft Constitution, the rest for consideration of reports and legislative matters. The DC apart from dealing with total 2473 amendments moved in the CA considered reports of various committees, notes, references letters, opinions & suggestions from all. What a stupendous job in framing the lengthiest & best Constitution with 395 Articles and 8 Schedules if compared with the Constitutions of other countries.

The Indian Constitution is regarded as the bedrock of India's democratic, administrative system. There have been many ups and downs in the social, political, administrative, and other fields

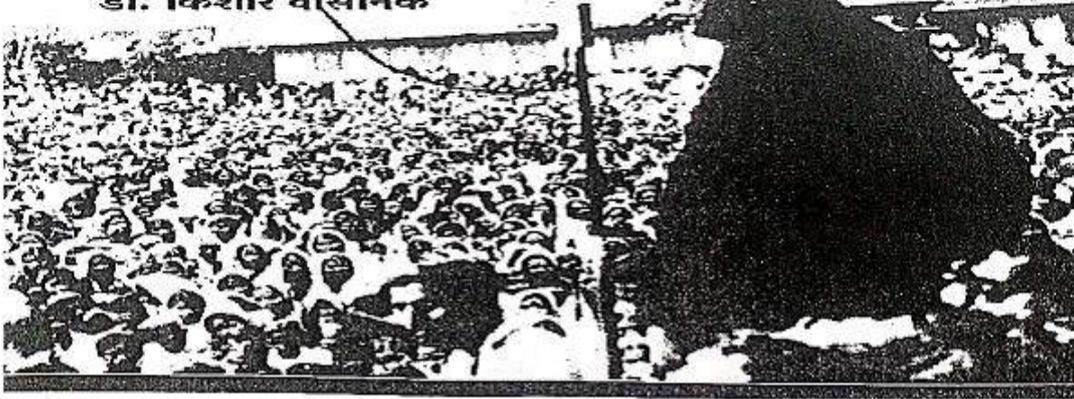
***2022-2023***

| S. No. | Name of Teacher                          | Title of Book published / Name of Authors  | Name of publisher  | National, International/ ISBN/ISSN | Year of publication |
|--------|--|--|--|------------------------------------|---------------------|
| 01.    | Dr. N. R. Petkar<br>(English)            | <b>Dr. Babasaheb Ambedkar- Life and Work</b><br>(Chapter in a book, Dr. B. R. Ambedkar : father of Indian Constitution))   | Notion Press media Pvt. Ltd. Chennai, Tamilnadu,                       | National<br>979-88-90028-41-9      | April 2023          |
| 02.    | Dr. (Mrs.) A. K. Deshmukh<br>(English)   | <b>Gender Equality</b><br>(Chapter in a book, Gender Based themes in post - colonial Indian English women writers : with refrence to Kamla Markandaya, Shashi Deshpande and Anita Desai)   | B. Aadhar Publications   | National<br>978-93-91305-28-1      | March 2023          |
| 03.    | Dr. (Mrs.) L. V. Phate<br>(English)      | <b>Gender Equality</b><br>(Chapter in a book, Gender Roles and Stereotypes in the selected writings of Githa Hariharan)  | B Aadhar Publications  | National<br>978-93-91305-28-1      | March 2023          |
| 04.    | Dr. (Miss) P. P. Kurhekar<br>(Library)   | <b>Gender Equality</b><br>(Chapter in a book, Human rights and domestic violence of women)   | B Aadhar Publications  | National<br>978-93-91305-28-1      | March 2022          |
| 05.    | Dr. (Miss) M. M. Bhatkulkar<br>(Zoology) | <b>Wastewater Assessment, Treatment, Reuse and Development in India</b><br>(Chapter in a book, Sustainable Construction Practices for Residential Buildings to Reduce the water footprint) | Earth and Environmental Sciences Library, Springer Nature publications | International<br>978-3-030-95786-5 | August 2022         |
| 06.    | Dr. (Miss) M. M. Bhatkulkar<br>(Zoology) | <b>Gender Equality</b><br>(Chapter in a book, Changing status of women in India)   | B Aadhar Publications  | National<br>978-93-91305-28-1      | March 2023          |
| 07.    | Dr. G. D. Zade<br>(Physics)              | <b>A Text Book of Physics (B. Sc. Semester- III)</b><br>(Full paper in Textbook)   | Saijyoti Publications  | National<br>978-93-95008-20-4      | Nov. 2022           |
| 08.    | Dr. G. D. Zade<br>(Physics)              | <b>A Text Book of Physics (B. Sc. Semester- V)</b><br>(Full paper in Textbook)   | Saijyoti Publications  | National<br>978-93-91201-70-8      | Nov. 2022           |
| 09.    | Dr. S. S. Tekade<br>(Commerce)           | <b>Commercial Firms</b>  | Sir Sahitya Kendra Nagpur  | National<br>978-93-94477-10-0      |                     |
| 10.    | Dr. S. S. Tekade<br>(Commerce)           | <b>Business Economics</b>  | Sir Sahitya Kendra Nagpur  | National<br>978-93-94477-05-6      |                     |

  
 Principal  
 Jawaharlal Nehru Arts, Comm. & Sc  
 College, WadiNagpur

# डॉ. बाबासाहेब आंबेडकर - जीवन आणि कार्य

संपादक -  
डॉ. रक्षित बागडे  
डॉ. किशोर वासनिक



**Dr. B.R. Ambedkar: Father of Indian Constitution**

**Dr. Nirlay.R. Petkar**  
Assistant Professor  
Jawaharlal Nehru College  
Wadi, Nagpur (Maharashtra)

## **Abstract-**

Dr. Ambedkar was the world's greatest humanitarian. He was the pioneer of human rights. There were total of seven members on the drafting committee, such as: 1) A. Krishna Swamy Iyer. 2) . N. Gopalswamy Iyengar 3) Dr. Ambedkar 4) K.M. Munshi 5) Muhammad Sadulla Sayyad 6) N. Madhav Rao 7) Krishnam Achari. In the first meeting of the committee, Dr. Ambedkar was unanimously elected the chairman of the Drafting Committee. But unfortunately, the other six members of the committee were not available because of their various personal reasons. So, all the burden comes on the shoulders of Dr. Ambedkar. But Dr. Ambedkar has single-handedly taken on the responsibility of drafting the Indian Constitution. That's why Dr. Ambedkar was considered as Father of Indian Constitution.

**Keywords:** Constitution, Humanitarian Assembly, Drafting.

## **Introduction:**

Dr. Ambedkar was known for his great contribution to the Constitution of India. He was the greatest humanitarian and revolutionist. He was a great philosopher and one of great intellectuals of the world. He was a human rights pioneer who liberated one billion Bahujan's and women. He also revived Buddhism in the land of its origin and oblivion. The father of modern scientific, industrial, and urban India His legacy continues to inspire both at home and abroad, with millions admiring. His life and mission, as well as the billions of dollars at stake, every year, Deeksha Bhoomi (Nagpur) and Chaitya Bhoomi (Mumbai) have over 1 million followers. So are Kramti Bhoomi (Mahad, Nashik) and Mahaparinirvan Bhoomi (New Delhi). Thousands of villages and cities across India, Europe, America, Africa, Australia, and Asia celebrate April 14<sup>th</sup>. Our constitution remained our guiding light. The future of India and the future of Indian citizens depend on our constitution. That is why, it is prime duty of every citizen

# GENDER EQUALITY



EDITOR  
DR. VAISHALI MESHAM

Gender Equality

## Gender Based Themes in Post-Colonial Indian English Women Writers: With Reference to Kamala Markandaya, Shashi Deshpande and Anita Desai Dr Archana Kiran Deshmukh

Assistant Professor, Dept. Of English, Jawaharlal Nehru Arts, Commerce  
and Science College, Wadi, Nagpur, archanakirandeshmukh@gmail.com,  
9922658885

### Abstract

This paper is an attempt to analyse the depiction of gender in the work of postcolonial Indian English women writers with special reference to Kamala Markandaya, Shashi Deshpande and Anita Desai. Women empowerment and feminism finds their expression with all the strength and might in postcolonial Indian English literature. These writers understand the gender biases, questions the patriarchy and pursue their individuality suggesting various perceptions of Indian morals and Indian cultural inheritance. While presenting gender issues they pertain to the tradition, mythological symbols, family structure and caste system as key elements of patriarchal social organization and aims at achieving gender equality. These women writers study the status of women in postcolonial India where the government agencies claim to be safeguarding their society, gender equality while maintaining their self-respect, but in reality, women face many biases leading to internal as well as external conflicts. With the passage of time, these women writers indicate a bright future by depicting more modern and strong women characters.

**Keywords:** gender, postcolonial, feminism, equality, patriarchy

### Introduction

Indian writing is always understood and recognized as one of the most conventional writings in the world through its countless folklore and fictions from pre-independent to post-independent times. The growth of Indian English literature after independence has been noteworthy and brilliant, encompassing a variety of themes and aspects of human existence. Women empowerment and feminism finds their expression with all the strength and might in post-independent Indian English literature. Indian women writers like Nayantara Sehgal, Shashi Deshpande and Kamala Markandaya, Anita Desai, Ruth Praver Jhabvala, Kiran Desai and more recent ones like Arundhati Roy, Githa Hariharan have produced quality literature while conspicuously highlighting the importance of gender equality in a modernistic line, social realism and in





Shalini Yadav  
Abdelazim M. Negm  
Ram Narayan Yadava *Editors*

# Wastewater Assessment, Treatment, Reuse and Development in India

 Springer

# Sustainable Construction Practices for Residential Buildings to Reduce the Water Footprint



Vineet Tirth, Ram Karan Singh, Amit Tirth, Saiful Islam,  
and Manisha Bhatkulkar

**Abstract** The sustainable construction practices primarily include three aspects namely; the conservation and optimization of resources, waste management, and reduction of energy and water footprint. A large number of studies have been directed towards the construction practices adopted in different stages of building construction and its life cycle assessment. The present study is dedicated to the environment-friendly construction practices by optimizing the use of water during several construction phases of a reinforced cement concrete framed multi-story residential building constructed on a land of area 199 m<sup>2</sup>. The building was constructed in seventeen months in the Moradabad city of western Uttar Pradesh. The direct water footprint of the residential building has been estimated during different phases of construction. The methods have been suggested to reorder the construction stages in correlation with the ambient conditions to reduce water consumption, recycle the water used for curing and minimize the wastewater in washing and cleaning. The proposed water resource management strategy is expected to reduce the water footprint of building construction significantly, hence adding to sustainable construction practices.

---

V. Tirth (✉)

Mechanical Engineering Department, College of Engineering, King Khalid University, Abha 61421, Saudi Arabia  
e-mail: vtirth@kku.edu.sa

R. K. Singh

The ICFAI University Dehradun, Dehradun 248001, Uttarakhand, India  
e-mail: ramkaransingh@ncuindia.edu

A. Tirth

Department of Public Health Dentistry, Kothiwal Dental College and Research Center, Moradabad 244001, UP, India

S. Islam

Civil Engineering Department, College of Engineering, King Khalid University, Abha 61411, Saudi Arabia  
e-mail: sfakrul@kku.edu.sa

M. Bhatkulkar

Department of Zoology, Jawaharlal Nehru Arts, Commerce and Science College, Wadi, Nagpur 440023, India

© Springer Nature Switzerland AG 2022

S. Yadav et al. (eds.), *Wastewater Assessment, Treatment, Reuse and Development in India*, Earth and Environmental Sciences Library,

https://doi.org/10.1007/978-3-030-95786-5\_14



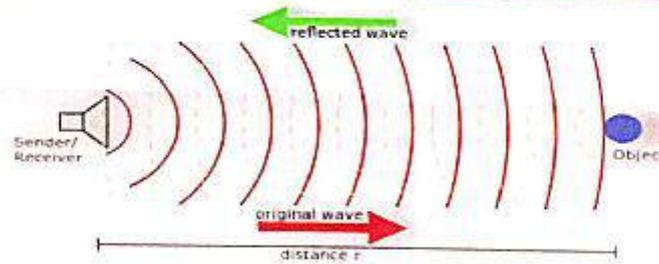
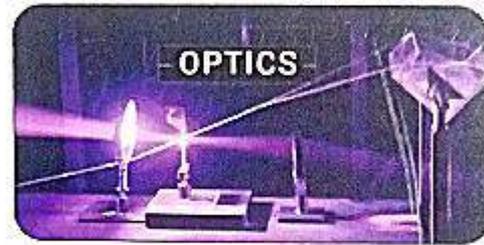
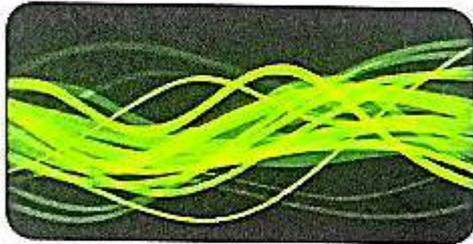
As per the New Semester wise Syllabus of Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur.

A Text book of  
**PHYSICS**

**B. Sc. Semester - III**

Paper-I (301) : Sound Waves, Applied Acoustic, Ultrasonic & Power Supply

Paper-II (302): Physical optics and Electromagnetic waves



**Dr. G. D. Zade**  
**Dr. R. N. Taikar**  
**Dr. P. R. Chaudhari**

**SAI JYOTI PUBLICATION**



*The way of Light*

• Nagpur • Pune • Delhi

As per the New Semester wise Syllabus of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

A Text book of

# PHYSICS

B. Sc. Semester - V

Paper-I : Atomic physics, Free electron theory and Statistical physics  
Paper-II : Quantum mechanics, Nanomaterials and Nanotechnology



Dr. Gajanan D. Zade  
Dr. Deepak R. Taikar  
Dr. Ramesh N. Taikar  
Dr. Sureshkumar R. Choubey



**SAI JYOTI PUBLICATION**

**SJP**

*The way of Light*

• Nagpur • Pune • Delhi

As per New Syllabus

# COMMERCIAL FIRMS



- Dr. Sanjay Tekade
- Dr. Mrunali Deshpande
- Mrudul Shelke



**Sir Sahitya Kendra, Nagpur.**

Page No. \_\_\_\_\_

Serial No. \_\_\_\_\_

**As per New Syllabus**

# **BUSINESS ECONOMICS-1**



- **Dr. Sanjay Tekade**
- **Dr. Tushar Chaudhari**



**Sir Sahitya Kendra, Nagpur.**

***2021-2022***

| S. No. | Name of Teacher                    | Title of Book published / Name of Authors              | Name of publisher                           | National, International/ ISBN/ISSN | Year of publication |
|--------|------------------------------------|--|---|------------------------------------|---------------------|
| 1.     | (Miss.) M. M. Bhatkulkar (Zoology) | A Text book of Zoology (B. Sc. Semester-1)             | Sai Jyoti Publication, Nagpur               | ISBN-978-93-91201-09-8             | 2021                |
| 2.     | Dr. G. D. Zade (Physics)           | A Text book of Physics (B. Sc. Semester-2)             | Om Sai Publication, and Distribution Nagpur | ISBN-978-98-91201-14-2             | 2021                |
| 3.     | Dr. G. D. Zade (Physics)           | A Text book of Physics (B. Sc. Semester-4)             | Om Sai Publication, and Distribution Nagpur | ISBN-978-93-91201-51-7             | 2022                |
| 4.     | Dr. G. D. Zade (Physics)           | A Text book of Physics (B. Sc. Semester-1)             | Om Sai Publication, and Distribution Nagpur | ISBN-978-98-91201-56-2             | 2021                |
| 5.     | Dr. (Mrs.) C. S. Laddha (Botany)   | Microbial Diversity and Technology (B. Sc. Semester-1) | Himalaya Publishing House, Nagpur           | ISBN-978-93-5596-510-3             | 2022                |
| 6.     | Dr. N. C. Kongre (Chemistry)       | A Test Book of Chemistry                               | Dnyan Path Publication Amravati             | ISBN-978-93-87278-87-5             | 2021                |

  
**Principal**  
**Jawaharal Nehru Arts, Comm. & Sci**  
**College, WadiNagpur**

As Per the New Semester wise Syllabus (2021-22) of RTM Nagpur University, Nagpur

New Edition

Free  
Practical  
Manual Inside

A Text Book of

# ZOOLOGY

B.Sc. Semester - I

Paper - I : Life and Diversity of Animals - Nonchordates (Protozoa to Annelida)

Paper - II : Environmental Biology

Dr. M. S. Ambatkar  
Dr. M. M. Bhatkulkar  
Dr. A. M. Watkar  
Dr. A. D. Tiple  
Dr. M. M. Meshram



SAI JYOTI PUBLICATION

Nagpur | Pune | Delhi



AI DUAL CAMERA  
Shot by Dr. G. D. Zade

2022/11/09 12:40

As per the New Semester wise Syllabus of Rashtrasant Tukdoji Maharaj  
Nagpur University, Nagpur.

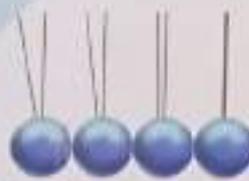
Text Book of  
**Physics**

B.Sc. Semester - II

Paper - I : Oscillations, Kinetic Theory of Gases and Thermodynamics  
Paper - II : Gravitation, Astrophysics, Magnetism and Magnetostatics

New  
Revised Edition

**Dr. R. N. Taikar**  
**Dr. G. D. Zade**  
**Dr. S. R. Choubey**  
**Mr. S. R. Sarve**  
**Dr. S. Y. Mulemwar**



 **SJP** DIGITAL CAMERA  
Scanned by Dr. G. D. Zade

**SAI JYOTI PUBLICATION**

*The way of Light*

• Nagpur • Pune • Delhi

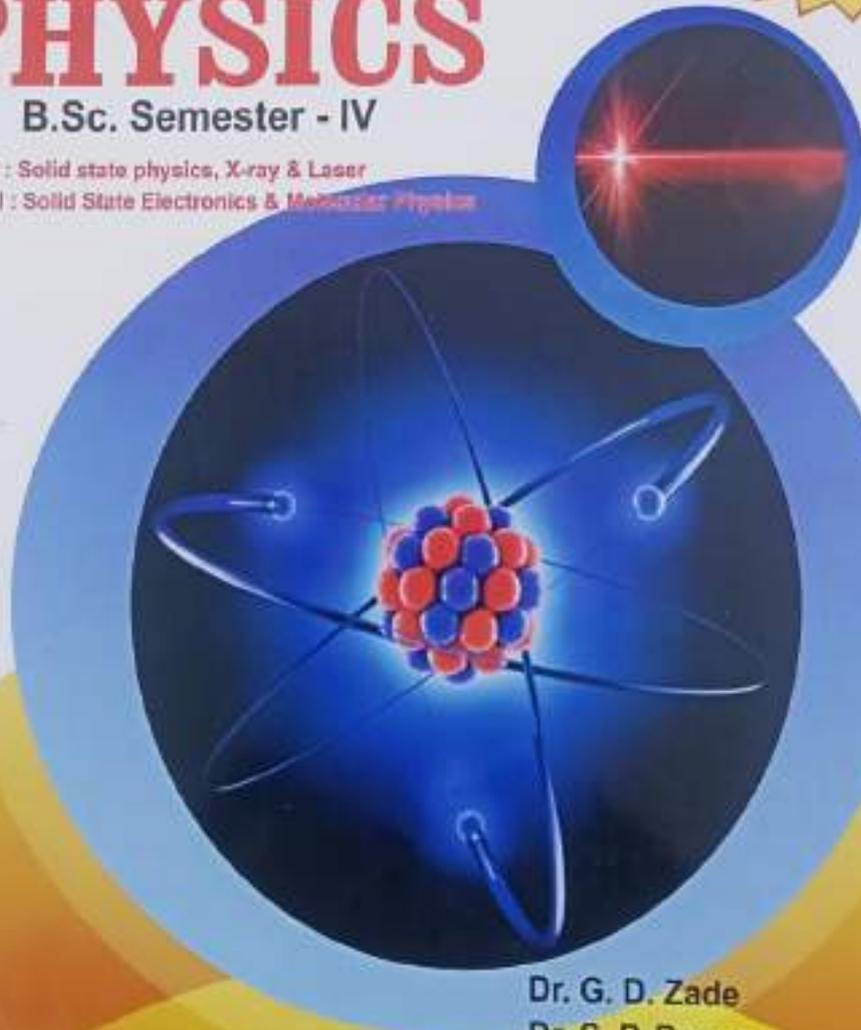
As per the New Semester wise Syllabus of Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur.

New  
Revised Edition

Text Book of  
**PHYSICS**  
B.Sc. Semester - IV

Paper - I : Solid state physics, X-ray & Laser

Paper - II : Solid State Electronics & Molecular Physics



Dr. G. D. Zade  
Dr. S. P. Dange  
Dr. I. H. Dhadade  
Dr. N. M. Haridas  
Dr. V. R. Chinchamalpure



with USB CAMERA  
Printed by G. D. Zade

**SJB PUBLICATION**  
*The way of Light*

2022/11/09 12:42

• Nagpur • Pune • Delhi

As per the New Semester wise Syllabus of Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.

2022/11/09 12:43

A Text Book of

New Revised  
Edition

# Physics

B. Sc. First year (Semester – I)

Paper - I (101) - (Properties of Matter and Mechanics)

Paper-II (102) - (Electrostatics, Time varying fields & Electric Currents)

Dr. G. D. Zade  
Dr. Ramesh N. Taikar  
Mr. Muneshwar S. Bisen

 **GOM SAI**  
PUBLISHERS &  
DISTRIBUTORS

AI DUAL CAMERA  
Shot by Dr. G. D. Zade







As per Semester - wise New Syllabus of  
Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

A TEXT BOOK OF

# Chemistry

**B.Sc. SEMESTER - V**

Paper I - Organic Chemistry

Paper II - Physical Chemistry

## AUTHORS

Dr. C. S. Bhaskar

Dr. A. R. Yaul

Dr. M. G. Dhonde

Dr. M. R. Raghuwanshi

Dr. N. C. Kongre

Dr. P. B. Thakare

Dr. U. P. Meshram

Dr. P. V. Tekade

## EDITORS

Dr. N. J. Siddiqui

Dr. D. M. Borikar

**FREE** INSIDE

- Practical Manual
- University Question Paper
- Periodic Table

***2020-2021***

| S. No. | Name of Teacher                 | Title of Book published / Name of Authors  | Name of publisher   | National, International/ ISBN/ISSN | Year of publication |
|--------|---------------------------------|--|---|------------------------------------|---------------------|
| 1      | (Mrs.) L. V. Phate<br>(English) | Indian Literature and Translation, Reflection of Indianness in selected works of Githa Hariharan | Vanya publication, Kanpur                                 | National                           | 2021                |
| 2      | Dr. G. D. Zade<br>(Physics)     | Luminescent materials in display and biomedical applications (Chapter 6, PP 116-130)             | CRC Press, T and F Group, A SCIENCE PUBLISHERS BOOK, USA. | International ISBN-9780367112127   | Oct. 2020           |

  
**Principal**  
**Jawaharlal Nehru Arts, Comm. & Sci**  
**College, WadiNagpur**

# Indian literature and Translation

**Editor**

**Dr. Varsha V. Vaidya  
Dr. Vishnu M. Chavan**



## The Reflection of Indianness in Githa Hariharan's work

---

Dr. Leena V. Phate

### Abstract

The present work is about the reflection of Indianness in the novels of Githa Hariharan. The work includes her four valuable novels such as *The Thousand Faces of Night*, *The Ghosts of Vasu Master*, *In Times of Siege* and *Fugitive Histories*. There is the distinctive quality of Indianness in all her works, be its theme, explorations of thoughts and ideas of Indianness. Most of her creations centre on Indian themes. Here, is an attempt to mirror Indianness, including the above mentioned four novels.

**Keywords:** Feminism, myth, siege, humanism, Indianness, fugitive

### Introduction

Githa Hariharan, an Indian voice which sounds the theme of Indianness. She was born in Coimbatore in 1954, a famous city of Tamil Nadu. She has travelled widely, grew up in Bombay and Manila, and later moved to the USA to continue her studies. Initially, she worked in Mumbai, Chennai and New Delhi as an editor in a publishing house, after returning to India in 1979 and later as a freelancer. Though having a multi-cultural experience, Githa Hariharan endeavours to chronicle multi-dimensional facets of Indian culture and society in almost all her writing. She is respected as a novelist of feminism, myth and legends, rituals, history, subalternity, cultural issues and humanism. Hariharan has discarded Eurocentric models and

Investigations on Tunable Blue Light Emitting P-Acetyl Biphenyl-DPQ Phosphor for OLED Applications  
Chapter 6 (Oct. 2020) DOI: [10.1201/9781002513464](https://doi.org/10.1201/9781002513464)

In book: *Luminescent Materials in Display and Biomedical Applications* (pp.116-130)

Authors:



Syed Mullenwar



G.D. Zade



Thejo Kalyani



Xiaoyong Huang

The screenshot shows a web browser window with the following content:

- Browser tabs: "Journal of Applied Physics", "Journal of Applied Physics", "Journal of Applied Physics", "Journal of Applied Physics".
- Address bar: "bookshelf.taylorandfrancis.com/https://doi.org/10.1201/9781002513464\_chapter6".
- Page title: "CHAPTER 6 Investigations on Tunable Blue Light Emitting P-Acetyl Biphenyl-DPQ Phosphor for OLED Applications".
- Authors: "S.Y. Mullenwar<sup>1</sup>, G.D. Zade<sup>2</sup>, N. Thejo Kalyani<sup>1,2</sup>, S.J. Dhoble<sup>3</sup> and Xiaoyong Huang<sup>5</sup>".
- Footnote 1: "1 D. D. Bhavsar College of Arts and Science, Mumbai, Nagpur - 441114, India".
- Footnote 2: "2 J. J. Jay's Commerce and Science College, Yashwantrao Chavan Nagar, Nagpur - 441117, India".
- Footnote 3: "3 Department of Applied Physics, Department of Technology, Nagpur - 441113, India".
- Footnote 4: "4 Department of Physics, RIM, Nagpur University, Nagpur - 441111, India".
- Footnote 5: "5 College of Physics and Optoelectronics, Tsinghua University of Technology, Beijing 100084, P.R. China".
- Footnote 6: "6 Corresponding author. Email: [smullenwar@rediffmail.com](mailto:smullenwar@rediffmail.com)".
- Section: "Introduction".
- Text: "The use of Organic Light Emitting Diodes (OLEDs) and Polymer Light Emitting Diodes (PLEDs) has evolved tremendously from the time when preliminary reports by Tang and Van Slyke [1] (Nobel prize in 1993) were accepted. Though researchers are determined to improve the quantum efficiency of phosphorescent (PL) and electrophosphorescent (EL) OLEDs, the challenges still exist [2]. One such challenge is the development of blue primary colors (red, green and blue) or complementary colors (blue and orange) as a new color emission. Because of the low quantum efficiency of blue OLEDs, much attention [3-5] is given to improve the quantum efficiency of blue light emitting materials, which can compete with the red and green light emitting counterparts with respect to quantum efficiency. In this regard, organic phosphors based on acetyl phosphor or phosphor based on a benzophenone moiety have been used as a substantial amount of research interest in the field of blue light emitting materials [6-10]. However, the quantum efficiency of these materials is still low [11]."

## Investigations on Tunable Blue Light Emitting P-Acetyl Biphenyl-DPQ Phosphor for OLED Applications

---

S.Y. Mullemwar<sup>1</sup>, G.D. Zade<sup>2</sup>, N. Thejo Kalyani<sup>3\*</sup>, S.J. Dhoble<sup>4</sup>  
and Xiaoyong Huang<sup>5</sup>

<sup>1</sup> D. D. Bhoyar College of Arts and Science Mouda, Nagpur - 441104, India

<sup>2</sup> J. N. Arts, Commerce and Science College, Wadi, Nagpur - 440023, India

<sup>3</sup> Department of Applied Physics, Laxminarayan Institute of Technology, Nagpur - 440033, India

<sup>4</sup> Department of Physics, RTM, Nagpur University, Nagpur - 440033, India

<sup>5</sup> College of Physics and Optoelectronics, Taiyuan University of Technology, Taiyuan 030024, P.R. China

### Introduction

The era of Organic Light-Emitting Diodes (OLEDs) and Polymeric Light Emitting Diodes (PLEDs) has evolved tremendously from the time when preliminary reports by (Tang and Van Slyke 1987; Burroughes et al. 1990) were accepted. Though researchers are determined to improve the quantum efficiency of photoluminescence (PL) and electroluminescence (EL) OLEDs, challenges still exist. (Zhu et al. 2003). Universally, the blends of three primary colors (red, green and blue) or complementary colours (blue and orange) give rise to white emission. Amongst all, the luminous efficiency of blue OLEDs needs improvement (Kato et al. 2015). Hence, it is imperative to come-up with novel blue light emitting materials, which can compete with their red and green light emissive counterpart materials with respect to luminous efficiency, life time so as to harvest stable white light emission from these three RGB materials. In this regard, organic phosphors based on quinoline comprise an imperative class of a heterocyclic group and hence create substantial awareness amongst researchers worldwide. Poly(quinoline)s were principally reported (Stille 1981) by using Friedlander

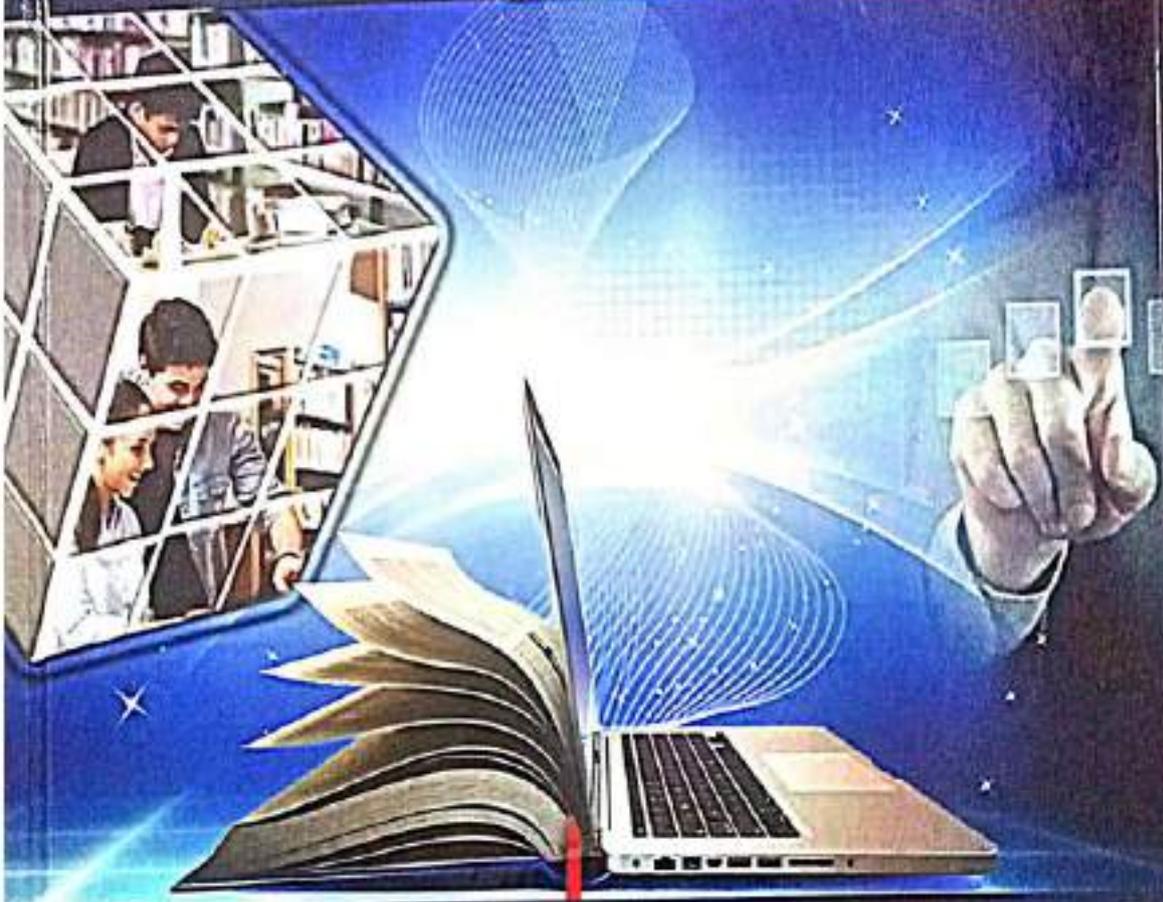
\*Corresponding author: thejokalyani@rediffmail.com

***2019-2020***

| S. No. | Name of Teacher                    | Title of Book published / Name of Authors   | Name of publisher              | National, International/ ISBN/ISSN | Year of publication |
|--------|------------------------------------|---|--------------------------------|------------------------------------|---------------------|
| 1.     | Dr. (Ms.) P. P. Kurhekar (Library) | Information Technology & Library Automation | Swastik Publication, New Delhi | National 976-93-67347-20-3         | 2019                |

  
Principal  
Jawaharlal Nehru Arts, Comm. & Sci  
College, WadiNagpur

Premlata P. Kurhekar



# Information Technology and Library



*Papers published in National /  
International conference  
proceedings*

***2023-2024***

## Research papers presented /paper in Proceedings in conferences during the academic sessions

| S. No. | Name of faculty member     | Department | Title of research paper   | Any other details  |
|--------|----------------------------|------------|---|--|
| 01     | Dr. (Mrs.) L. V. Phate     | English    | Diasporic spaces and self-Exploration: Analysing Meena Alexander's Manhattan Music                              | National conference on Contemporary Aspects in Humanities, Social Science and Commerce by V. V. Arts, Commerce and Science College Samudrapur, on 3-4 Jan. 2024            |
| 02     | Dr. (Mrs.) L. V. Phate     | English    | मानव्य शास्त्रातील समकालीन अभ्यास प्रवाह  | National Conference on Multi interdisciplinary Subjects by Saibab Lok Prabhodan Kala Mahavidyalay Wadner on 31 <sup>st</sup> Jan. 2024                                     |
| 03     | Dr. (Mrs.) A. K. Deshmukh  | English    | Role of Jim Corbett's in creating environmental awareness; An Eco-Activist Approach                             | National Conference on Research and Studies by J. N. College Wadi Nagpur on 20 <sup>th</sup> March 2024  |
| 04     | Dr. (Mrs.) A. K. Deshmukh  | English    | The east and the west: A diasporic cosmopolitan experience in the mango season.                                 | National conference on Contemporary Aspects in Humanities, Social Science and Commerce by V. V. Arts, Commerce and Science College Samudrapur, on 3-4 Jan. 2024            |
| 05     | Dr. (Ms.) M. M. Bhatkulkar | Zoology    | The study of impact of increasing environmental pollution on biodiversity                                       | International conference on functional material by Nabira Mahavidyalaya Katol, Nagpur on 15-16 March 2024  |
| 06     | Dr. (Ms.) M. M. Bhatkulkar | Zoology    | An outlook on effects of climate change on fish biology   | National multidisciplinary conference on emerging trends opportunities and challenges in higher education by S. V. N. M. Mahavidyalaya Pusad on 28 <sup>th</sup> Jan. 2023 |
| 07     | Dr. (Ms.) M. M. Bhatkulkar | Zoology    | Ichthyofaunal diversity of Vena rever, Hingna, Dist. Nagpur   | Biodiversity and wetland conservation by S.S.J College Arjuni (Morgaon, Dist. Gondia on 24 <sup>th</sup> Feb. 2023   |
| 08     | Dr. (Ms.) M. M. Bhatkulkar | Zoology    | Physicochemical studies doped polymer synthesis from amiline and sulfamilic acid for environmental applications | National conference on Green Eart – Clean earth by L. A. D. College Nagpur on 10 <sup>th</sup> Feb. 2024   |
| 9      | Dr. G. D. Zade             | Physics    | Role of methods for the synthesis and characterization of phosphor materials for display devices                | International conference on advancement in material science: Trends and application organised by science college parbhani on 25 <sup>th</sup> Jan. 2024                    |

|    |                  |           |   |  |
|----|------------------|-----------|---|--|
| 10 | Dr. G. D. Zade   | Physics   | Spectroscopic investigation of novel $\text{Eu}^{+3}$ doped $\text{Na}_2\text{LiAlF}_6$ for solid state lighting applications                                       | 2 <sup>nd</sup> International conference on materials for sustainable development and technology by Central University Jammu on 1-3 May 2024 |
| 11 | Dr. G. D. Zade   | Physics   | Wet chemically synthesized optical investigation of $\text{Tb}^{+3}/\text{Eu}^{3+}$ activated /co-activated $\text{BaTiO}_3$ phosphors by energy transfer mechanism | 2 <sup>nd</sup> International conference on materials for sustainable development and technology by Central University Jammu on 1-3 May 2024 |
| 12 | Dr. G. D. Zade   | Physics   | Energy transfer in $\text{Sr}_3\text{CeO}:\text{Dy}^{3+}$ phosphor between $\text{Ce}^{4+}$ to $\text{Dy}^{3+}$   | National conference on multidisciplinary research and studies organised by J. N. College Wadi, Nagpur on 20 <sup>th</sup> March 2024         |
| 13 | Dr. G. D. Zade   | Physics   | Comparative study of P-acetyl biphenyl-DPQ and P- acetyl biphenyl-Cl -DPQ organic phosphors for OLED applications   | National conference on multidisciplinary research and studies organised by J. N. College Wadi, Nagpur on 20 <sup>th</sup> March 2024         |
| 14 | Dr. N. C. Kongre | Chemistry | Thermogravimetric analysis of copper polymer composite adsorbents synthesized material  | International conference on functional material by Nabira Mahavidyalaya Katol, Nagpur on 15-16 March 2024                                    |

  
 Principal  
 Jawaharlal Nehru Arts, Comm. & Sci  
 College, WadiNagpur

VIDYA VIKAS EDUCATION SOCIETY HINGANGHAT'S  
**VIDYA VIKAS ARTS, COMMERCE AND SCIENCE COLLEGE, SAMUDRAPUR**  
**DISTRICT: WARDHA 442305**  
(Affiliated to R.T.M. Nagpur University, Nagpur, Maharashtra)

**ORGANIZED**  
**TWODAYS**  
**INTERDISCIPLINARY NATIONAL E-CONFERENCE**  
**ON**  
**"CONTEMPORARY ASPECTS IN HUMANITIES, SOCIAL SCIENCE AND COMMERCE"**  
**CERTIFICATE**

This is to certify that Prof./Dr./Mr./Ms. **Leena Vijay Phate, Jawaharlal Nehru Art's Commerce and Science College Wadi Nagpur** has participated in Two Days Interdisciplinary National E-Conference on "Contemporary Aspects in Humanities, Social Science and Commerce", organized on 3<sup>rd</sup> and 4<sup>th</sup> January 2024 Days- Wednesday and Thursday.

He/She has Published/Presented a research paper entitled : **Diasporic Spaces and Self Exploration: Analysing Meena Alexander's Manhattan Music**



Convener  
Mr. Ganesh Hele  
Assistant Professor



Co-Convener  
Dr. Pramod Abote  
Librarian



Organizer  
Dr. Kishoryashra Rautkar  
Principal



VSPM Academy of Higher Education Nagpur's  
**JAWAHARLAL NEHRU ARTS, COMMERCE & SCIENCE COLLEGE, WADI, NAGPUR.**

**NATIONAL CONFERENCE  
 ON  
 MULTIDISCIPLINARY RESEARCH & STUDIES**



This is to certify that *Prof./Dr/Mr./Ms. Archana Kiran Deshmukh from Jawaharlal Nehru Arts, Commerce & Science College, Wadi, Nagpur* has attended/presented Paper/Poster titled *"Role of Jim Corbett's Literature in Creating Environmental Awareness: An Eco-Activist Approach"* in the National Conference on Multidisciplinary Research and Studies organized by Department of Chemistry and IQAC held on 20<sup>th</sup> March, 2024.

*[Signature]*

**Dr. Nitin Kongre,**  
 Convener

*[Signature]*  
 (Mrs.) Leena V. Phate  
 Head, Dept. of English  
 Jawaharlal Nehru Arts,  
 Commerce & Science College,  
 Wadi, Nagpur

**Dr. Narendra Gharad**  
 Organizing Secretary

*[Signature]*

**Dr. Sanjay Tekade**  
 Principal  
 Jawaharlal Nehru College, Wadi

VIDYA VIKAS EDUCATION SOCIETY HINGANGHAT'S  
**VIDYA VIKAS ARTS, COMMERCE AND SCIENCE COLLEGE, SAMUDRAPUR**  
**DISTRICT: WARDHA 442305**  
(Affiliated to R.T.M. Nagpur University, Nagpur, Maharashtra)  
ORGANIZED  
TWO DAYS

**INTERDISCIPLINARY NATIONAL E-CONFERENCE**  
**ON**  
**"CONTEMPORARY ASPECTS IN HUMANITIES, SOCIAL SCIENCE AND COMMERCE"**  
**CERTIFICATE**

This is to certify that Prof./Dr./Mr./Ms. Archana Kiran Deshmukh , Jawaharlal Nehru Arts Commerce and Science college Wadi Nagpur has participated in Two Days Interdisciplinary National E-Conference on "Contemporary Aspects in Humanities, Social Science and Commerce", organized on 3<sup>rd</sup> and 4<sup>th</sup> January 2024 Days- Wednesday and Thursday.

He/She has Published/Presented a research paper entitled: **The East and The West: A Daisporic Cosmopolitan Experience in The Mango Season**

  
Convener  
Mr. Ganesh Bele  
Assistant Professor

  
Co-Convener  
Dr. Pramod Alone  
Librarian

  
Organizer  
Dr. Kishorechandra Rewatkar  
Principal

**The Study Of The Impact Of Increasing Environmental Pollution On Biodiversity****Manisha Bhatkulkar***Jawahar Lal Nehru Arts Commerce and Science College Wadi Naggur Maharashtra  
Email id - manishabhatkulkar@gmail.com***ABSTRACT**

Each species found in an ecosystem has its role to play. The existence of every species is important. Each organism not only performs its functions but also helps other organisms to flourish. Co-existence is an example of this. Second, the greater the diversity of an ecosystem, the more likely a species is to survive in adverse conditions and the greater its productivity. Or in other words, the loss of species will threaten the survival of the entire system. That is the more species in the ecosystem, the more stable that ecosystem is. Apart from environmental importance, biodiversity is also important from an economic point of view. Crop diversity is an important part of biodiversity, also known as agricultural biodiversity. Food crops, animals, forest resources, fish, and medical resources are some of the major economic products, which are available to humans as a result of biodiversity. Biodiversity refers to the diversity of living beings (plants and animals) that occurs in each region, country, continent, or globally. Under this, microorganisms to the whole living world are included. In this research paper, the effect of increasing environmental pollution on biodiversity has been studied.

**Keywords:** Ecosystem, Species, Environmental Pollution, Bio-Diversity, Bio-Rich, Genetic, Species And Ecosystem



## An Outlook on Effects of Climate Change on Fish Biology

Dr. Manisha Bhatkulkar

Associate Professor and Head Department of Zoology, Jawaharlal Nehru Arts, Commerce and Science College,  
Wadi, Nagpur, Maharashtra, India

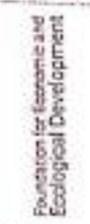
### ABSTRACT

Climate change is anticipated to have an effect on any person organism through all lifestyles stages, thereby affecting population of species, groups and the functioning of ecosystems. The results of weather change may be direct, via adjustments in distinct bodily phenomena and related phonologies, or on the whole oblique and mediated via direct results on key stone species which change the composition and dynamic coupling of any environment. Due to speedy development within side the improvement of its lifestyles fashion with the assist of technological know-how and technology, this has inflicting, outstanding harm to the encircling surroundings. The careless mind-set closer to the harms inflicting to the encircling surroundings has commenced to repay with inside the shape of unusual climatic phenomena like common floods and droughts, air pollution, abnormal climate phenomena like El-NINO etc. The harm due to the anthropogenic sports to the surroundings is extensively felt and accepted, because the consequences of that harm are too distinguished to be omitted with inside the shape of worldwide weather adjustments. Some most important phenomena due to weather change encompass worldwide warming, ozone depletion, species extinction etc., which in turn have destructive effects on each biotic and abiotic factors of all different ecosystems and at the biosphere as a whole. Keeping in view the data that water occupies approximately 2/3rd of the earth's general floor vicinity and it bureaucracy the only habitat for fishes, adjustments in weather at one end in adjustments in water chemistry like boom in common water temperature, acidity, salinity, destructive climate phenomena etc. which make it tough for the fish fauna to live to tell the tale in such situations and end result both of their demise or dispersal to new habitat sites. Fish being poikilothermic isn't capable of alter its frame temperature therefore main to harm of frame additives like proteins, inflicting thermal stress.

**Keywords:** Change, environmental, temperature, phenomena.

### 1. INTRODUCTION

Climate change is the version withinside the earth's worldwide weather or withinside the nearby weather over a time frame and it includes adjustments withinside the variability or nation of the ecosystem over intervals of a long time to hundreds of thousands of years (Mohanty et al., 2010). It is likewise described as a change withinside the statistical properties, mainly its suggest and spread, of the weather device, while taken into consideration over lengthy intervals of time no matter the purpose. It includes the shift in international climate phenomena related to an boom in worldwide common temperatures, that is extra particularly called



Foundation for Economic and Ecological Development

# NATIONAL CONFERENCE ON BIODIVERSITY AND WETLAND CONSERVATION

Hosted by  
Department of Zoology & Internal Quality Assurance Cell

Shri Durga Shikshan Sanstha's

Shivprasad Sadanand Jaiswal College, Arjuni/Morgaon, Dist. Gondia  
NAAC RE-ACCREDITED WITH 'B' GRADE

## Certificate

This is to certify that Prof./Dr./Mr./Ms./Mrs. Mamisha Bhatkulkar  
of Jawahar Lal Nehru College, Wadi Nagpur  
has Participated / Presented paper / Poster / Delivered keynote address / Invited talk in the  
"National Conference on Biodiversity and Wetland Conservation (NCBWC - 2023)" held  
on 24th February 2023 at Shivprasad Sadanand Jaiswal College, Arjuni/Morgaon, Dist. Gondia.  
He/She has Presented Paper / Poster Entitled Ichthyofaunal Diversity  
of Vena river, Hingna Dist. Nagpur.

Dr. G. T. Paliwal  
Organizing Secretary  
NCBWC-2023

Prof. Ishwar S. Mohurle  
Convener, NCBWC-2023  
Premalata P. Kumbhakar  
Librarian  
Jawahar Lal Nehru Art's Commerce & Science College, Wadi

In Collaboration with

Hirwad Bahaudheshiya Sanstha, Gondia  
Foundation for Economic and Ecological Development (FEED)  
Navegaon Nagzira Tiger Reserve (NNTR)

118



WOMEN'S EDUCATION SOCIETY'S  
 LADY AMRITBAI DAGA COLLEGE FOR WOMEN OF ARTS, COMMERCE & SCIENCE AND  
 SMT. RATNIDEVI PUROHIT COLLEGE OF HOME SCIENCE AND HOME SCIENCE TECHNOLOGY  
 SHANKAR NAGAR, NAGPUR - 440 010. (M.S.) INDIA  
 (Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)  
 NAAC Accredited 'A' Level (I,II,III,IV Cycle)  
 College with Potential for Excellence (2016-2021)



वसुधैवा कुटुम्बकम्

Interdisciplinary Research, Ideation and Collaboration Hub  
 &  
 organised

**National Conference**

**Green Earth - Clean Earth**

on

10 February 2024

Under Save Earth-Save Future

Vasundhara Samvardhan Literacy Year 2023-2024

An IQAC Initiative

This is to certify that Prof./Dr./Mr./Ms./ Maishra Bhaskulkow  
 from J.N. Arts. Com & Sci College Wadi Nagpur has attended/presented a research paper titled,  
Physicochemical Studies of doped polymer synthesized from oxiline  
and sulfamic acid for environmental applications  
 in the Multidisciplinary National Conference on Green Earth-Clean Earth jointly organised by L.A.D.  
 & Smt. R. P. College for Women, Nagpur and IRICH on 10 February 2024.

*Dr. Deepali Chahande*

Dr. Deepali Chahande

*Dr. Archana Masram*

Dr. Archana Masram

*Dr. Premjata P. Kurbekar*

Dr. Premjata P. Kurbekar

Librarian

Jawaharal Nehru Art's Commerce &  
 Science College, Vadi

151

International e-Conference On  
 "Advancements in Material Science: Trends and Applications (ICAMSTA-2024)"  
 Thursday, January 25, 2024.

**Group I**

| Sr. No. | Oral Presentation Number | Abstract Title  | Authors Name   |
|---------|--------------------------|---|--|
| 1.      | IC-OP-01                 | Influence Of Indium Substitution On The Structural Properties Of Zinc Oxide Thin Films  | Dr. Syed Ghauze Ibrahim                                |
| 2.      | IC-OP-02                 | Polyaniline Material For High-Performance Supercapacitor Application By Oxidative Polymerization Method   | Mrs. Tangevva Hanamant Bajantri                        |
| 3.      | IC-OP-03                 | Chemical Synthesis Of Grain-Like NiO Thin Films For Supercapacitor Applications   | Mr. Kunal Rajabhata Sali<br>Dr. Sunil Rameshgar Gosavi |
| 4.      | IC-OP-04                 | Effect Of Annealing On The Structural, Morphological, And Optical Properties Of SnO <sub>2</sub> Thin Films Prepared By Spray Pyrolysis Method            | Mr Swapnil Santosh Tayade                              |
| 5.      | IC-OP-05                 | Structural And Electrochemical Analysis Of MnO <sub>2</sub> For Supercapacitor Applications   | Sangram Anil Mane                                      |
| 6.      | IC-OP-06                 | Ferroelectric PVDF/MWCNT Nanocomposites By Pld Process  | Dr. Chetan V. Channal                                  |
| 7.      | IC-OP-07                 | Synthesis And Characterization Of Mg <sub>3</sub> N <sub>2</sub> Doped Nano Solid Polymer Electrolyte System  | Dr.R. R. Risodkar                                      |
| 8.      | IC-OP-08                 | Synthesis, Characterization Mixed Oxide Nanoparticles And Their Gas Sensing Application   | Dr. Sachin Vasant Bangale                              |
| 9.      | IC-OP-09                 | Advancements In Non-Destructive Testing Of Materials Through Double Exposure Digital Holographic Interferometry   | Dr Prashant P Chikode                                  |
| 10.     | IC-OP-010                | Kinetic Study Of 4-Thiazolidinones Derivatives Catalyzed By Schiff Bases And Thioglycolic Acid  | Santosh Ramchandra Kshirsagar                          |
| 11.     | IC-OP-011                | Determination Of Thermodynamic Parameter For Oxidation Of 2-Furoic Carboxylic Acid Hydrazides By Using Thallium (Ii) In Acidic Medium-A Kinetic Approach. | Mr.Samadhasi Hanamant Nikalaje                         |
| 12.     | IC-OP-012                | Advancements In Material Science: Trends And Applications In Medicine And Pharmaceutical Health Care Unit   | Mr. Sarang Sunil Mahamuni                              |
| 13.     | IC-OP-013                | Removal Of Pb <sup>2+</sup> In Wastewater Via Adsorption Onto An Activated Carbon Produced From Agricultural Wast Material                                | Dr. Sudhir Sharadrao Hunge                             |
| 14.     | IC-OP-014                | Role Of Methods For The Synthesis And Characterization Of Phosphor Materials For Display Devices  | Dr. Gajanan D. Zade                                    |
| 15.     | IC-OP-015                | Soft Chemical Synthesis Of A Changed Morphology Supercapacitor Electrode Made Of PANI-Doped NiO <sub>2</sub> Composite                                    | Mr. Suraj Dilavar Pathan                               |
| 16.     | IC-OP-016                | Utilizing Nano-Materials For The Elimination Of Heavy Metals In Wastewater  | Deepmala Dalal   |
| 17.     | IC-OP-017                | Characterization And Antibacterial Activity Of Flower-Like ZnO Thin Films Grown By Low Cost SILAR Technique   | Tushar Rajendra Wagh                                   |
| 18.     | IC-OP-018                | Microwave Assisted Combustion Synthesis And Characterization Of Magnesium Zinc Ferrite  | Dr. Shubhangi B. Nairde                                |
| 19.     | IC-OP-019                | Phase Transfer Of D-MnO <sub>2</sub> Nanoflakes From Aqueous To Organic Medium Using Di Alkyl Phosphate Extractor   | Ms. Bhosale Mayura Uitamrao Mangal                     |
| 20.     | IC-OP-020                | A Review on Activated Carbon Synthesis from Organic Waste for Sustainable Energy Solutions  | Dr. Heena  |

**International e-Conference on “Advancements in Material Science:  
Trends and Applications”  
(ICAMSTA-2024)**

**“Role of methods for the synthesis and characterization of phosphor  
materials for display devices”**

**Gajanan D. Zade\***

*\*Department of Physics, Jawaharlal Nehru Arts, Commerce & Science College Wadi,  
Nagpur, 440023, India.*

[zadegajanan@gmail.com](mailto:zadegajanan@gmail.com)

**ABSTRACT**

Phosphor materials were used in all the display devices by various fabricating industries. The materials used for the display devices are of the order of nano size particles ( $10^{-9}$ m). The physical, optical and chemical properties of the nano materials are totally depends on the size of the particle. As the size changes its properties also change. So, the synthesis method is very much important to get uniform size of the particle, proper structure, and required composition. There are two types of phosphor materials used in display devices. They are (1) Synthesis of organic phosphor materials and (2) Synthesis of inorganic phosphor materials. In inorganic phosphor materials there are various methods for the synthesis of nano particles. Some of them are - chemical reduction method, solvothermal and hydrothermal method, sol-gel method, soft and hard method tempting method, reverse micelle method, seeding method, precipitation method etc. The route of synthesis in inorganic methods are easy and different than the synthesis of nano materials in organic method. There are limited methods for the synthesis of organic nano phosphors used in display devices. One of the method for the synthesis of organic nano phosphors is the Friedlander condensation reaction method. This is the simplest methods among the several reported methods for the synthesis of organic quinolone and its derivatives. The classical Friedlander reaction reported by Paul Friedlander in 1882 used 2-aminobenzaldehyde with acetaldehyde in the presence of sodium hydroxide. Generally, Friedlander reaction is carried out by reflecting aqueous or alcoholic reaction mixture in the presence of a base or an acid or by heating reaction mixture at higher temperature up to  $140^{\circ}\text{C}$  without catalyst. Lewis acids were also used commonly and found efficient. Friedlander condensation reaction method gives excellent results with respect to the uniform particle size, crystal structure and chemical composition. The uniform size of the nano phosphors play an important role in display devices and hence proper synthesis route must be selected to get the targeted result. The synthesised phosphors is tested and studied by taking various characterizations for further studies. The important parameters needed to be determined are summarised below-

| S. No. | Entity characterized         | Technique suitable                         |
|--------|------------------------------|--|
| 01     | Size (structural properties) | TEM, XRD, DLS, NTA, SAXS, SEM, UV-VIS, NMR |
| 02     | Shape                        | TEM, HRTEM, AFM, EPLS                      |
| 03     | Element chemical composition | XRD, XPS, ICP-MS, NMR                      |
| 04     | Crystal structural           | XRD, EXAFS, HRTEM, ELECTRON DIFFRACTION    |
| 05     | Size distribution            | DCS, DLS, SAXS, NTA                        |
| 06     | Surface area                 | BET, LIQUID NMR                            |
| 07     | Optical properties           | UV-VIS-NIR, PL, EELS-STEM                  |
| 08     | Structural defects           | HRTEM, EBSD                                |
| 09     | Magnetic properties          | SQUID, VSM, MFM, FMR, XMCD                 |
| 10     | 3D visualization             | 3D-TOMOGRAPHY, AFM, SEM                    |

**Keywords:** Phosphor composition, Synthesis route, Characterizations, Applications.



**2<sup>nd</sup> International Conference on Materials for Sustainable  
Development and Technologies  
(ICMSDT – 2024)**

**01 - 03 May, 2024**

**Department of Nano Science and Materials, Central University of Jammu**

***Certificate***

This is to certify that Prof./Dr./Mr./Ms. Gajanan D Zade, Jawaharlal Nehru College Wadi has delivered a Oral presentation/ Poster presentation/ Participated in the 2<sup>nd</sup> International Conference on Materials for Sustainable Development and Technologies (ICMSDT – 2024) held on 01-3 May, 2024 at the Department of Nano Science and Materials, Central University of Jammu, UT-J&K, India-181143.

  
(Convener)

  
(Conference Chair)



## **Spectroscopic Investigation of novel Eu<sup>3+</sup> doped Na<sub>2</sub>LiAlF<sub>6</sub> for solid state lighting applications**

G. D. Zade<sup>1\*</sup>, Sanket J. Helode<sup>2</sup> and S. J. Dhoble<sup>2</sup>

<sup>1</sup> *Department of Physics, Jawaharlal Nehru College, Wadi, Nagpur-440023, India*

<sup>2</sup> *Department of Physics, R. T. M. Nagpur University, Nagpur-440033, India*

*Email- [zadegajanan@gmail.com](mailto:zadegajanan@gmail.com)*

Luminescent properties of Rare earth activated inorganic compounds are most investigated due to its excellent luminous efficiency, high chemical and thermal stability as well. In this paper we report the novel Na<sub>2</sub>LiAlF<sub>6</sub> luminescent host material activated with Eu<sup>3+</sup> rare earth ions. The proposed luminescent material is synthesized by the low temperature wet chemical method. Optical properties of the material were studied briefly with the inclusion of excitation and emission spectral studies. A TG/DTA characterizations has been done for the analysis of thermal stability and change in sample weight as a function of temperature. In the PL investigations excitation band is observed in the range of 350 nm to 550 nm range having intense peaks due to the major transitions in between <sup>7</sup>F<sub>0</sub> – <sup>5</sup>L<sub>6</sub> and <sup>7</sup>F<sub>0</sub> – <sup>5</sup>D<sub>1</sub>. Whereas the emission band is observed in the range of 570 nm to 640 nm having two peaks due to <sup>5</sup>D<sub>0</sub> to <sup>7</sup>F<sub>1</sub> and <sup>7</sup>F<sub>2</sub> transitions. Effect of concentration quenching studied briefly. Color temperature has also been calculated for the prepared phosphor which demonstrates that the prepared red emitting phosphor is useful in various device applications such as phosphor converted White light emitting diodes (PC- WLED's), solid state lighting, display technology etc.

**Keywords:** Photoluminescence; lamp phosphor; WLED; XRD; Wet-chemical

**Wet chemically synthesized optical investigation of Tb<sup>3+</sup>/Eu<sup>3+</sup> activated/co-activated BaTiO<sub>3</sub> phosphors by energy transfer mechanism**

G. D. Zade<sup>1\*</sup>, A. R. Kadam<sup>2</sup>, S. J. Dhoble<sup>3</sup>

<sup>1</sup>Department of Physics, Jawaharlal Nehru College, Wadi, Nagpur- 440023, India

<sup>2</sup>Department of Physics, School of Basic and Applied Sciences, M.G.M. University, Chhatrapati Sambhajinagar (Aurangabad) - 431003, India

<sup>3</sup>Department of Physics, R. T. M. Nagpur University, Nagpur – 440033, India

\*Email: [gadzade@rediffmail.com](mailto:gadzade@rediffmail.com)

In last few years rare earth activated inorganic phosphors comes into trend in the field of display devices. In the proposed research article, Tb<sup>3+</sup>, Eu<sup>3+</sup> activated/co-activated BaTiO<sub>3</sub> phosphor prepared by wet chemical method. Through the use of XRD and Rietveld refinement, the phase identity and crystal structure of produced phosphor are examined. SEM is used to examine the morphological analysis and elemental analysis of the suggested phosphor in conjunction with elemental analysis of the sample. In photoluminescence spectra (PL), Under 265 nm, 395 nm and 465 nm excitation, the synthesized Tb<sup>3+</sup>, Eu<sup>3+</sup> activated/co-activated BaTiO<sub>3</sub> phosphors exhibited an orange emission peak located 595 nm and a red emission peak located 614 nm due to the <sup>5</sup>D<sub>0</sub>→<sup>7</sup>F<sub>1</sub> and <sup>5</sup>D<sub>0</sub>→<sup>7</sup>F<sub>2</sub> transitions of Eu<sup>3+</sup> ions while doping of Tb<sup>3+</sup> ions gives emission in green region. On satisfying the spectral overlap criteria, the co-doping of both the rare earth ions is done in the host matrix and resultant PL shows that the sample shows color tunability from green to red region. These all results confirm that the prepared phosphor is potential candidate for WLEDs and display applications.

**Keywords:** wet chemical; lamp phosphor; LEDs; color tunability; energy transfer.

**Wet chemically synthesized optical investigation of Tb<sup>3+</sup>/Eu<sup>3+</sup> activated/co-activated BaTiO<sub>3</sub> phosphors by energy transfer mechanism**

G. D. Zade<sup>1\*</sup>, A. R. Kadam<sup>2</sup>, S. J. Dhoble<sup>3</sup>

<sup>1</sup>Department of Physics, Jawaharlal Nehru College, Wadi, Nagpur- 440023, India

<sup>2</sup>Department of Physics, School of Basic and Applied Sciences, M.G.M. University, Chhatrapati Sambhajinagar (Aurangabad) - 431003, India

<sup>3</sup>Department of Physics, R. T. M. Nagpur University, Nagpur - 440033, India

\*Email: [gdzade@rediffmail.com](mailto:gdzade@rediffmail.com)

In last few years rare earth activated inorganic phosphors comes into trend in the field of display devices. In the proposed research article, Tb<sup>3+</sup>, Eu<sup>3+</sup> activated/co-activated BaTiO<sub>3</sub> phosphor prepared by wet chemical method. Through the use of XRD and Rietveld refinement, the phase identity and crystal structure of produced phosphor are examined. SEM is used to examine the morphological analysis and elemental analysis of the suggested phosphor in conjunction with elemental analysis of the sample. In photoluminescence spectra (PL), Under 265 nm, 395 nm and 465 nm excitation, the synthesized Tb<sup>3+</sup>, Eu<sup>3+</sup> activated/co-activated BaTiO<sub>3</sub> phosphors exhibited an orange emission peak located 595 nm and a red emission peak located 614 nm due to the <sup>5</sup>D<sub>0</sub>→<sup>7</sup>F<sub>1</sub> and <sup>5</sup>D<sub>0</sub>→<sup>7</sup>F<sub>2</sub> transitions of Eu<sup>3+</sup> ions while doping of Tb<sup>3+</sup> ions gives emission in green region. On satisfying the spectral overlap criteria, the co-doping of both the rare earth ions is done in the host matrix and resultant PL shows that the sample shows color tunability from green to red region. These all results confirm that the prepared phosphor is potential candidate for WLEDs and display applications.

**Keywords:** wet chemical; lamp phosphor; LEDs; color tunability; energy transfer.

## Energy transfer in Sr,CeO<sub>3</sub>:Dy<sup>3+</sup> phosphor between Ce<sup>4+</sup> to Dy<sup>3+</sup> ions

R. S. Ukare, G. D. Zade\* and S. J. Dhoble<sup>†</sup>

Department of Physics, C.J. Patel College Tirons-441911, Dist. Gondia.

\* Department of Physics, J.N. Ar<sup>†</sup>n, Commerce and Science College Wadi, Nagpur-440023.

<sup>†</sup>Department of Physics, R.T.M. Nagpur University, Nagpur-440033.

\*Corresponding author email: zade@apnau@gmail.com.

### Abstract

Sr,CeO<sub>3</sub> is the most famous tunable multicolor emitter with rare earth doping and it is very popular for superior photoluminescence (PL) and cathodoluminescence properties which makes them useful as important components of color emission in plasma display panel (PDP), field emission display (FED) and for lamps. Thus, we prepare superfine blue light emitting phosphor Sr,CeO<sub>3</sub> using oxalate precipitation which produces high degree of homogeneity conformed by x-ray diffraction pattern. The intensity of Sr,CeO<sub>3</sub> sample by Dy<sup>3+</sup> doping found to shifted from blue region to yellow region, since Sr,CeO<sub>3</sub> exist in mixed state of cubic phase in which energy transfer (ET) explain by two ways, firstly by considering conversion of cerium ions from Ce<sup>4+</sup> to Ce<sup>3+</sup> in which Ce<sup>4+</sup> just gain the electron from oxygen atoms and convert to Ce<sup>3+</sup> ions and reduce CT transitions states between Ce<sup>4+</sup>-O<sup>2-</sup>. And secondly transition of electrons from Ce<sup>3+</sup> to Dy<sup>3+</sup> ions, where excited state of Ce<sup>3+</sup> ions and upper excited states of Dy<sup>3+</sup> ions are approximately matched which is responsible for resonance condition and excited state of Dy<sup>3+</sup> ions emit yellow color and excited state of Ce<sup>3+</sup> is responsible for emission in blue color region. Overlap of emission spectra of sensitizer (Dy<sup>3+</sup>) and activator (host) are most responsible for resonance ET. Dexter's energy transfer formula and Reisfeld's approximation conditions is used to explain possible ET between Ce<sup>3+</sup> to Dy<sup>3+</sup> ions.

**Keywords:** Sr,CeO<sub>3</sub>, PL, ET between Ce<sup>3+</sup> to Dy<sup>3+</sup> and XRD.

---

## Comparative study of P-Acetyl Biphenyl-DPQ and P-Acetylbiphenyl-CI-DPQ Organic Phosphors for OLED Applications.

S. Y. Mullenwar<sup>1</sup>, G. D. Zade<sup>1</sup>, S. J. Dhoble<sup>2</sup>

<sup>1</sup> Department of Physics, D. D. Bhoyar College of Arts and Science Mouda, Nagpur, Maharashtra, India;

<sup>2</sup> Department of Physics, J.N. Art's, Commerce and Science College, Wadi, Nagpur, Maharashtra, India;

<sup>3</sup> Department of Physics, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra, India.

### Abstract

Two novel P-Acetyl Biphenyl-DPQ and P-Acetylbiphenyl-CI-DPQ Organic Phosphors was synthesized by Friedlander condensation reaction at 140° C. To check its suitability for fabricating OLEDs the synthesized organic phosphors are assessed by various characterization techniques such as Fourier Transform Infrared (FTIR) spectroscopy, H-NMR, C-NMR, Thermo gravimetric/ Differential Thermal Analysis (TGA/DTA), optical absorption spectra and photoluminescence (PL) spectra in solid state. The synthesized phosphors are molecularly doped in Polystyrene matrix different wt% to explore its compatibility with polymers. FTIR and NMR confirm the structural formation of the desired complex. TGA and DTA reveal appreciable thermal stability and melting point. Absorption spectra were employed to study optical transitions in the synthesized phosphors at 10<sup>-3</sup> M concentration in various organic solvents. The energy band gap of the synthesized organic phosphors was calculated in chloroform, dichloromethane, acetic acid and formic acid, respectively. PL spectra of the phosphor in solid state, various organic solvents and in polystyrene reveal emission in the range of 383-495 nm, under excitation wavelength ranging between 360-419 nm. Stokes shift of about 63-66 nm was observed. CIE coordinates reflect that the synthesized organic phosphors can be used as an emissive material in the range of blue to near UV emission in the fabrication of blue and near UV -OLEDs.

**Keywords:** - Friedlander condensation reaction, OLEDs, Solid state lighting.

---

Shikshan Prasarak Mandal's  
**NABIRA MAHAVIDYALAYA, KATOL**  
District- Nagpur, (M.S.), India- 441302.  
Affiliated to R. T.M. Nagpur University, Nagpur



In Association with  
**Association of Chemistry Teachers (ACT),  
Mumbai**

INTERNATIONAL CONFERENCE  
ON  
**FUNCTIONAL  
MATERIALS**

(Incorporating Chemical, Physical and Biological Sciences)

**ICFM-2024**  
15<sup>th</sup> & 16<sup>th</sup> March 2024

Sponsored By:



# Certificate

This is to certify that

Prof./Dr./Mr./Ms. *Mitin C. Kangee*  
of *Jambharkar Mehta Arts, Commerce & Science  
College Wadi*  
has participated in the International Conference on "Functional Materials  
(ICFM-2024)" held on 15<sup>th</sup> and 16<sup>th</sup> March 2024. He/She presented a (Poster / Oral )  
paper entitled *Thermogravimetric Analysis of Graft  
Polymer Composite Adsorbents Synthesized...*

Dr. N. V. Gandhare  
Convener, ICFM-2024  
Nabira Mahavidyalaya, Katol

Prof. D. V. Prabhu  
General Secretary, ACT, Mumbai

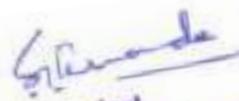
Dr. S. K. Navin  
Principal, Nabira Mahavidyalaya, Katol

Dr. Raju Deshmukh  
President, Shikshan Prasarak Mandal, Katol

**2022-2023**

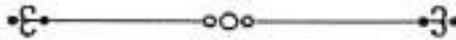
| S. No. | Name of faculty member    | Department         | Title of research paper   | Any other details  |
|--------|---------------------------|--------------------|---|--|
| 01     | Dr. (Ms) M. M. Bhatkulkar | Zoology            | Fish diversity of vena river, Hingna, Dist.-Nagpur                                    | National conference on New frontiers of biological sciences organized by Shivaji science College Pauni, Bhandara. (28 April 2023)  |
| 02     | Dr. (Ms) M. M. Bhatkulkar | Zoology            | Role of autonomous colleges in implementation of NEP                                  | National seminar on NEP: challenges and opportunities for higher education by G. S. Commerce and economics Nagpur on 30 <sup>th</sup> July 2022.   |
| 03     | Dr. (Ms) M. M. Bhatkulkar | Zoology            | Ichthyofaunal diversity of Vena River, Hingna, Dist. Nagpur                           | National conference on biodiversity and wetland conservation by S. S. Jaiswal college Arjuni Morgaon, Dist Gondia on 24 <sup>th</sup> Feb. 2023.   |
| 04     | Dr. S. K. Shembekar       | Commerce           | Role of environment protection in the effective sustainable development of the Nation | Paper published in Journal of management and Entrepreneurship, ISSN-2229-5348 (April June 2023)  |
| 05     | Dr. S. K. Shembekar       | Commerce           | The clash between RTI and the right to privacy  | Paper published in International Peer Reviewed Multidisciplinary E Journal, ISSN-258-9173 (April 2023)   |
| 06     | Dr. S. S. Tekade          | Commerce           | Role of environment protection in the effective sustainable development of the Nation | Paper published in Journal of management and Entrepreneurship, ISSN-2229-5348 (April June 2023)  |
| 07     | Dr. N. C. Kongre          | Chemistry          | A review on biosynthesis of nano particles using plant extract                        | International conference on recent trends in multidisciplinary research, organised by Dr. Khatri Mahavidyalaya Chandrapur & SSES AMTS Science college Nagpur 14 <sup>th</sup> Jan. 2023 (Oral) |
| 08     | Dr. S. S. Khadse          | Physical Education | Trends and growth in physical education and world of sports                           | 75 <sup>th</sup> years of Indian Independence status and goals by Yashwant Mahavidyalaya Seloo, Wardha. On 22 <sup>nd</sup> Dec. 2022. ( ISBN-978-93-95494-12-0)                               |
| 09     | Dr. (Ms) P. P. Kurhekar   | Library            | National education policy challenges and opportunities in higher education            | National seminar on NEP challenges and opportunities for higher educations by G. S. College of Commerce and Economics Nagpur on 30 <sup>th</sup> July 2022                                     |
| 10     | Dr. (Ms) P. P. Kurhekar   | Library            | Use of ICT for library activities and services  | 75 <sup>th</sup> years of Indian Independence status and goals by Yashwant Mahavidyalaya Seloo, Wardha. On 22 <sup>nd</sup> Dec. 2022. ( ISBN-978-93-95494-12-0)                               |
| 11     | Dr. (Mrs.) A. K. Deshmukh | English            | In Indian English literature from pre to post independence era                        | 75 <sup>th</sup> years of Indian Independence status and goals by Yashwant Mahavidyalaya Seloo, Wardha. On 22 <sup>nd</sup> Dec. 2022. ( ISBN-978-93-95494-12-0)                               |

|    |                           |         |  |   |
|----|---------------------------|---------|--|---|
| 11 | Dr. (Mrs.) A. K. Deshmukh | English | Postcolonial cultural A lie notio in English August: An Indian story.                    | International conference on New literary trends and narratives in English by M. K. S. K. A. K . Arts, Commerce & Science College Beed on 17-18 March 2023.  |
| 12 | Dr. (Mrs.) A. K. Deshmukh | English | English language teaching: New methodologies   | National conference on new teaching methods in higher education: Introducing Technology by V. N. Govt. Institute of Arts and Social sciences Nagpur on 1 <sup>st</sup> Oct. 2022.   |
| 13 | Dr. (Mrs.) L. V. Phate    | English | Contribution of post independent women novelists in Indian English literature: A Review. | 75 <sup>th</sup> years of Indian Independence status and goals by Yashwant Mahavidyalaya Seloo, Wardha. On 22 <sup>nd</sup> Dec. 2022. (ISBN-978-93-95494-12-0)   |
| 14 | Dr. (Mrs.) L. V. Phate    | English | Research cultural in the college   | National conference on new teaching methods in higher education: Introducing Technology by V. N. Govt. Institute of Arts and Social sciences Nagpur on 1 <sup>st</sup> Oct. 2022.   |
| 15 | Dr. N. R. Petkar          | English | Namdeo Dhasal: A dalit protest poet  | International conference on Emerging trends in research methodology of humanities, social sciences, commerce and management, arts, pure sciences, library science, sports, law, science, nursing science, hospitality, Sanskrit language by Dr. Ambedkar college Nagpur on 27 <sup>th</sup> Nov. 2022 |
| 16 | Dr. N. R. Petkar          | English | Dalit women in dalit literature: violation of human rights and gender discrimination     | National seminar on human rights and human dignity by Jawaharlal Nehru College Wadi, Nagpur on 24 <sup>th</sup> April 2023  |

  
 Principal  
 Jawaharlal Nehru Arts, Comm. & Sc.  
 College, Wadi Nagpur



# SOUVENIR



EDITOR IN CHIEF  
DR. A. K. ANEY  
DR. D. S. RAHILE

NATIONAL CONFERENCE ON  
**NEW FRONTIERS OF  
BIOLOGICAL SCIENCES**  
(NCNFBS-2023)

*April 28, 2023*



JOINTLY ORGANISED BY

**IQAC & BIOLOGICAL SOCIETY**

SHRI SHIVAJI EDUCATION SOCIETY AMARAVATI'S

**SCIENCE COLLEGE PAUNI**

Dist. Bhandara (MS), India- 441910



in the pond. The investigation shown that this water body is very much polluted which results to the eutrophic condition because of the anthropogenic activities by the people.

**Keywords:** Eutrophication, Bioindicators, Pollution, Chirebandi Pond.

**AB 22]**

### **FISH DIVERSITY OF VENA RIVER, HINGNA, DIST-NAGPUR**

**Dr. Manisha Bhatkulkar<sup>1</sup> and Varsha Gharpure<sup>2</sup>**

*<sup>1</sup>Associate Prof. and <sup>2</sup>Head Dept. of Zoology*

*<sup>1</sup>Jawaharlal Nehru Arts, Commerce and Science College, Wadi Nagpur*

*<sup>2</sup>Jawaharlal Nehru Vidyalaya and Junior College, Wadi Nagpur*

*Email- [manishabhatkulkar@gmail.com](mailto:manishabhatkulkar@gmail.com)*

#### **ABSTRACT:**

Water is essential for the survival of all kind of Organisms on the Mother Earth and has most significance for human for adequate life. Vena river is the natural and exclusive source of fresh water in the Vidharbha region. To evaluate the sustainability of water for aquatic life and drinking purpose. Fish plays an important role from ancient times in providing protein rich and less fat diet to the mankind. India stood in seventh position among the fish producing countries of the world. The present piece of work has been made to investigate the Ichthyofaunal diversity and some species of fishes were recorded during the study.

**Keywords-**Ichthyofaunal, sustainability, diversity.

**AB 23]**

### **DYE YEILDING PLANTS AND THEIR MEDICINAL VALUES- STUDY FROM CHANDRAPUR DISTRICT OF MAHARASHTRA**

**<sup>1</sup>Nannaware P. E., <sup>2</sup>Ghule S.M. and <sup>3</sup>Jakhi P. S.**

*Department of Botany, Institute of Science, Nagpur*

*<sup>1</sup>poojanannaware2912@gmail.com <sup>2</sup>sakshighule09@gmail.com <sup>3</sup>jakhips@gmail.com*

#### **ABSTRACT:**

Since ancient period most of the requirements of people fulfilled from surrounding. Chandrapur important southeast district of Maharashtra predominated with different types of forest and various types of industries. Most of the population of Chandrapur district scattered in the small villages in the areas adjoining to forest. In some of the tehsil like Rajura, Jivati, Korpana, Gadchandur population is concentrated in the



Shiksha Mandal, Wardha's

**G.S. COLLEGE OF COMMERCE & ECONOMICS, NAGPUR**

NAAC Reaccredited 'A' Grade Autonomous Institution

(A Hindu Linguistic Minority Institution)

A RUSA BENEFICIARY INSTITUTION

A NAAC-SPONSORED

One-Day National Seminar on

**"NEP: Challenges and Opportunities for Higher Educational Institutions"**

**SATURDAY, 30<sup>th</sup> JULY 2022**

## Certificate

This is to certify that Dr./Prof./Mr./Mrs./Ms. Manisha . M. Bhatkulkar  
of Jawaharbal Nehru Arts, Comm- & Science College, Wadi  
participated in the NAAC-sponsored One-day National Seminar on "NEP: Challenges and Opportunities for Higher Educational Institutions" on 30th July 2022.

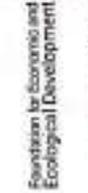
He/She presented a paper entitled " Role of Autonomous Colleges In Implementation of NEP "

  
Chairman, Shiksha Mandal, Wardha

  
Dr. N. A. Khargate  
Principal

  
Dr. Ranjana Sahu  
Convener, A. P. M. Wardha

  
Prof. Akash Jadhav  
Organising Secretary



Foundation for Economic and Ecological Development

## NATIONAL CONFERENCE ON BIODIVERSITY AND WETLAND CONSERVATION

Hosted by  
Department of Zoology & Internal Quality Assurance Cell

Shri Durga Shikshan Sanstha's

Shivprasad Sadanand Jaiswal College, Arjuni/Morgaon, Dist. Gondia  
NAAC RE-ACCREDITED WITH 'B' GRADE

### Certificate

This is to certify that Prof./Dr./Mr./Ms./Mrs. Manisha Bhatkulkar  
of Jawahar Nehru College, Wadi Nagpur.  
has Participated / Presented paper / Poster / Delivered keynote address / Invited talk in the  
"National Conference on Biodiversity and Wetland Conservation (NCBWC - 2023)" held  
on 24th February 2023 at Shivprasad Sadanand Jaiswal College, Arjuni/Morgaon, Dist. Gondia.  
He/She has Presented Paper / Poster Entitled Ichthyofaunal Diversity  
of Vena River, Hingna, Dist. Nagpur.

Dr. G. T. Padiwal  
Organizing Secretary  
NCBWC-2023

Prof. Ishwar S. Mohurle  
Convener, NCBWC-2023  
Principal

in Collaboration with

Hareend Babuoddhoshya Sarashta, Gondia  
Foundation for Economic and Ecological Development (FEEED)  
Nayagam Nayam Tiger Reserve (NNTTR)

**ROLE OF ENVIRONMENT PROTECTION IN THE EFFECTIVE SUSTAINABLE  
DEVELOPMENT OF THE NATION**

**Dr. S. K. Shembekar**

Department of Commerce, Jawaharlal Nehru Arts Commerce & Science College  
Amaravati Road, Wadi, Nagpur - 440023 (M.S.)

**Dr. Sanjay Tekade**

Department of Commerce, Jawaharlal Nehru Arts Commerce & Science College  
Amaravati Road, Wadi, Nagpur - 440023 (M.S.)

**Abstract :**

Globally, sustainability had more importance. The countries are progressing rapidly. The economic development and the infrastructural development is getting momentum. Due to this ever growing development, environment is suffering and there are many impacts of environmental damages on the nation. In view of this; all nations should strive for the environment protection while development. This paper focuses on the role of environment in sustainable development.

**Keywords :** sustainable development, environment protection, economic development

**Introduction**

The world is changing, economic development is taking place in tremendous speed due to that the problem of environmental pollution and ecological damage has become a common concern across the world. To cope with the issue of environmental damage, all must strive to protect the environment, and enterprises should increase their investment in environmental protection and actively assume environmental responsibility while developing their profit. With the increasing awareness of environmental protection in India, the participation of organizations in environmental protection has received significant attention from the government, stakeholders, and the public and attracted the attention of investors who seek references for their investment decisions. Thus there should be involvement of all citizens, corporate, and government in the environment protection so that we can achieve sustainable development goal.

**Environment Protection**

Environment protection and sustainability are harmonious and sustainability can be achieved by protecting our natural resources.

**Sustainable Development**

Sustainable development has a primary importance as the key to future use and management of finite world resources. It recognizes the need for development opportunities while maintaining a balance between these and the environment. As stated by the UN Brundtland Commission in 1987, sustainable development should "meet the needs of the present generation without compromising the ability of future generations to meet their own needs, encompasses e.g. keeping population densities below the carrying capacity of a region, facilitating the renewal of renewable resources, conserving and establishing priorities for the use of non-renewable resources, and keeping environmental impact below the level required to allow affected systems to recover and continue to evolve". Environmental sustainability can be viewed as balancing the "three pillars" of economic and social development with environmental protection.

## THE CLASH BETWEEN RTI AND THE RIGHT TO PRIVACY

**Dr. Subhash K Shembekar**  
Associate Professor,  
Jawaharlal Nehru Art's, Commerce  
and Science College Wadi, Nagpur

**Rahul Suresh Dolfode**  
Assistant professor,  
Jawaharlal Nehru Art's, Commerce  
and Science College Wadi, Nagpur.

### Introduction:

It is quite interesting how two of the most cherished rights, The Right to Information and The Right to Privacy, though being poles apart, and contradictory and antagonistic to each other, still exist together, complementary to each other, in the Indian Legal System. Both are two essential rights for the survival of a human being in the rapidly advancing, modern and technical world - where, the protection of an Individual's privacy and Security are becoming a matter of concern. Though not explicitly mentioned under the Constitution of India, it was through various judgements of the apex court, held that, both the rights are a part of the fundamental rights - wherein, The Right to Information stands as a part of Article 19(1)(a) - Right to freedom of speech and expression, and The Right to Privacy holds a position under the provision, which is also known as the Heart of the Indian Constitution - Article 21: Right to Life.

The privacy of the individual is being increasingly challenged by new technologies and trends in the society. In such a circumstance, where, it becomes of significance to choose between two essential rights - which one do we choose and how?

This paper deals with third party information, which includes personal information. For a biological person, the protection of Right to Privacy is available under Article 21 of the Constitution of India. Though such protection is not available to other kinds of Third party information, legal right conferred by RTI Act and other Statutes are available to those third parties. This aspect is as important Right to Privacy. The lacuna present in RTI Act with reference to this type of personal information is also present and equally affecting the interests of third parties in the other types of third party information. The problem needs to be plugged in both the cases. In this paper, an attempt has been made to underline the importance of both the rights, i.e., The Right to Information and The Right to Privacy, and the various conflicts concerning their relationship, and possible solutions to the issues concerned, after an analysis.

### 2. The Right to Information :

#### 2.1. What is Information?

"Information is the resolution of uncertainty; it is that which answers the question of "what an entity is" and thus defines both its essence and nature of its characteristics. Information relates to both data and knowledge, as data represents values attributed to parameters, and knowledge signifies understanding of a concept." According to Section 2(f) of The Right to Information Act, 2002, 1 "Information" means any material in any form, including records, documents, memos, e-mails, opinions, advices, press releases, circulars, orders, logbooks, contracts, reports, papers, samples, models, data materials held in any electronic





# INTERNATIONAL CONFERENCE

ON RECENT TRENDS IN MULTI-DISCIPLINARY RESEARCH



DSPM'S DR. KHATRI MAHAVIDYALAYA  
TUKUM, CHANDRAPUR, MAHARASHTRA



SSES AMTS SCIENCE COLLEGE  
CONGRESS NAGAR, NAGPUR, MAHARASHTRA

JOINTLY ORGANIZED BY

ICRTMR  
2023

January 14<sup>th</sup> - 15<sup>th</sup>, 2023 VAN ACADEMY, Mul Road, Chandrapur, Maharashtra, India

## CERTIFICATE

*This certificate is proudly presented to Prof. Dr./Mr./Mrs./Ms. NITIN C. KONGRE  
of JAWAHARLAL NEHRU ART'S COMMERCE AND SCIENCE COLLEGE WADI NAGPUR  
has actively participated in INTERNATIONAL CONFERENCE ON "RECENT TRENDS IN MULTI-DISCIPLINARY RESEARCH" (ICRTMR 2023)  
held on January 14th - 15th, 2023 at Van Academy, Chandrapur, Maharashtra, India.  
He/She has presented paper / poster entitled*

**A REVIEW ON BIOSYNTHESIS OF NANOPARTICLES USING PLANT EXTRACT**



*Bojori*

Convener

Dr. S. B. Kapoor  
ICRTMR-2023

*JMC*

Principal

Dr. J. M. Kakde  
DR. KHATRI MAHAVIDYALAYA  
TUKUM, CHANDRAPUR

*npk*

Principal

Prof. M. P. Dhore  
SSES'S SCIENCE COLLEGE  
CONGRESS NAGAR, NAGPUR

*Calvin*

Convener

Prof. A. D. Bobdey  
ICRTMR-2023

## Trends And Growth In Physical Education And World Of Sports

**Dr. Sarang S. Khadse**

Professor, Physical education & sports J. N. College, Wadi Naggur

**Dr. Sanjay R. Agashe**

Asst. Professor, Physical education & sports S. N. Mor College, Tumkar

### Abstract

The contemporary fashion in PE practise has centered much less on a laugh and group sports activities and greater on getting youngsters healthy. Training is a process that aims to improve overall performance and make the "right here and now" special after remote work or in the future. Although exceptional forms of training such as physical education, mental health education and vocational training, etc., abound in the current training situation, there is too much exceptionalism of the historical era. A changing financial and political landscape, a changing society, a changing identity, a connected society, the digital revolution and healthier lifestyles are shaping our practice. As the reputation of education evolves, many schools and universities now offer study packages that are approved with the help of a professional association. Some guides offer teacher certifications after just a few days of training.

### Introduction

The modern practices and present curriculum desires to be changed to generate hobby of college students in bodily training and sports activities sports. The destiny demanding situations will especially be the correct curriculum to be made and observed and to make to be had ok price range from numerous corporations with a purpose to guide the needy however clever kids so as to simplest attention on their recreation with out demanding approximately the price range. The era can even play an critical function in increasing and developing the hobby in bodily sports. The significance of bodily training and sports activities sports are being recognized in today's global and efforts are being made to enhance the conditions in order that an increasing number of expertise may be recognized. Education has many definitions. Training vocabulary is the technique of teaching, training and nurturing someone or a human organization to achieve specific goals or expand unique skills. Coaching is a form of improvement in which someone called a teacher helps a learner or consumer achieve a specific non-public or expert goal through training and guidance. A learner is sometimes called an educator. Sometimes education can also mean social interaction with people from whom you get more pleasure and knowledge than vice versa, and you give suggestions and instructions because the latter learns; however, coaching differs from mentoring in that it specializes in unique tasks or goals, rather than larger, standard dreams or improvements. There are many teaching methods, various training and educational techniques. Training is a process that aims to improve overall performance and make the "right here and now" special after remote work or in the future. Although there are many extraordinary facts in education, it is not about "the teacher as an expert", but about teaching as a facilitator of knowledge acquisition. Research from the last decade has shown that the enjoyment of kilometers and the comments of different trainers are still the first information for trainers. However, teaching and perseverance do not attract experienced healers to this joy. Using the paintings of Pierre Bourdieu, this article seeks to understand how "art practice" can be characterized as established improvement and how pleasure is critical in structuring educational practice. The text of modern teaching training and evaluation shows that teaching practice, which is considered as a combination of knowledge, has not particularly considered the impact of the spread of teaching on teaching practice. Based on academic reviews, we look at how the persistence of teaching and professional improvement can use mentoring and focused reflection to realistically enjoy education. Health education is defined as a whole new way to help people "manage" their illnesses and diseases, especially those that are persistent in nature. The guide uses unique techniques, non-public enjoyment, information and motivation to help educate people to change behavior to reduce health risks and health costs. The National Society of Health Coaches (NSHC) distinguished between fitness education and health education. According to the NSHC, fitness coaches are qualified for "active people with acute or ongoing illnesses and/or mild or excessive exercise risk," and health coaches provide advice and inspiration to "otherwise healthy people who want to maintain or improve their health."



Shiksha Mandal, Wardha's  
**H.S. COLLEGE OF COMMERCE & ECONOMICS, NAAPUR**  
 NAAC Reaccredited 'A'-Grade Autonomous Institution  
 (A Hindi Linguistic Minority Institution)



**A RUSA BENEFICIARY INSTITUTION**

**A NAAC-SPONSORED**  
 One-Day National Seminar on

**"NEP: Challenges and Opportunities for Higher Educational Institutions"**  
**SATURDAY, 30th JULY 2022**

## Certificate

This is to certify that Dr./Prof./Mr./Mrs./Ms. *Premlata P. Jambhale*  
of *Yashwantrao Chavan Sanshodhan Mandal, Chavan*  
 participated in the NAAC-sponsored One-day National Seminar on **"NEP: Challenges and Opportunities for Higher Educational Institutions"** on 30th July 2022.

He/She presented a paper entitled *"National Education Policy Share and Opportunities in Higher Education"*

*[Signature]*  
 Chairperson, Shiksha Mandal, Wardha

*[Signature]*  
 Principal

*[Signature]*  
 Convenor & IQAC Co-ordinator

*[Signature]*  
 Organising Secretary



Vedvishwani Rural Education Society's

VEDVISHWANI MAHARAJWALAYA, SELOO, DIST. WARDHA  
DEPARTMENT OF HISTORY & DEPARTMENT OF POLITICAL SCIENCE

*Sanstha ki bhayashakti*



One Day National Interdisciplinary Conference on

### 75<sup>th</sup> YEARS OF INDIAN INDEPENDENCE : STATUS & GOALS

*Certificate of Publication*

This is to certify that Prof./Dr./ Mr./Mrs./Ms.

**Dr. Premlata P. Kurhekar**

of H.O.D of Library Jawaharlal Nehru Arts, Comm. & Science College Wadi, Nagpur.

has published a paper on Use Of Ict For Library Activities And Services

in B. Aadhar Single Blind Peer Reviewed & Refereed Multidisciplinary International Indexed Research Journal Special Issue on "75<sup>th</sup> Years of Indian Independence : Status & Goals" published on dated 23<sup>rd</sup> December 2022.

*(Signature)*

*(Signature)*

*(Signature)*

*(Signature)*

Director  
Aadhar Social Research &  
Development Institute, Anuvavati

Head, Dept. of Political Science  
Veshwan Mahavishwalya, Seloo  
Dist. Wardha

Associate Professor & Head,  
Department of History  
Veshwan Mahavishwalya, Seloo

Officiating Principal  
Veshwan Mahavishwalya, Seloo  
Dist. Wardha

## Reflection of Culture in Indian English Literature from Pre-Independence to Post-Independence Era

Dr Archana Kiran Deshmukh

Assistant Professor, Dept. Of English, Jawaharlal Nehru Arts, Commerce and Science College, Wadi, Nagpur, archanakirandeshmukh@gmail.com, 9922658885

### Abstract:

This paper is an attempt to analyse the depiction of Indian culture in the development of Indian English Literature from pre-independence to post-independence Era. Indian writing is constantly understood and documented as one of the most conventional writings in the world through its innumerable folklore and tales from pre-independence to post-independence times. Literature published in this era signifies the personified enterprise of the people, their life lookout, sentiments, philosophies, ceremonies, spiritual beliefs and ethics demonstrating the cultural inheritance. The pre-independent heritage of encompassing the cultural, social, political, and religious aspects was carried forward by post-independence India writers but with a modern perspective. The journey was initiated by independence movement by patriotic fervour but progressively after independence the changing socio-cultural syntax of Indian life is wonderfully captured by the modern post-independence writers. The contribution is realistic, evocative and shows obligation to Indian culture. Majority of Indian writers have marvellous potential and have established them as accomplished writers aware of their cultural heritage in different shades.

**Keywords:** Pre-independence, Post-independent, culture, Colonial

### Research Question:

This paper attempts to study the evolution of pre- to post-Independent Indian English literature and how it portrays Indian culture through the work of various writers.

### Methodology

This study is based on Primary and Secondary sources available on and related to pre-independent and post-independent Indian writers who contributed to the English language. Prominent English language writers of pre-independence to post-independence India are considered while studying the reflection of Indian culture in their work. The journey from pre-independent to post-independent India is analysed to study the literary contribution of these writers to conclude. Research papers in various journals, articles in newspapers, books and real-life observations from academics are used as secondary sources. A comprehensive analysis of the available literature was undertaken by using both printed and internet sources.

### Literature Review:

Salih S.M.(2018) remarks that post-independence (colonial) literature is considered the literature of those countries that were colonized, mainly by European countries. It mostly addresses the queries concerning to the political and cultural independence of previously yielding people, and major themes such as acclimating through compelling new culture, racialism, and colonialism are discussed. Fasil Dar and Ajeet Singh (2019) distinctly points out that Indian English poetry is very rich in expressions of Indianness, its culture, politics, ethos and mythos. They endure that the pre-independent and post-independent poets have a noticeable mark of dissimilarity between their ideas, themes, values and applications. Gauri Shankar Jha (2006) claims that the Indian writers owes its inheritance to opposite cultures: the east and the west leading to cultural conflict. The purposes of cultural studies are analytic, pedagogic and political. In particular, cultural studies has sought to develop ways of thinking about culture and power that can be utilized by forms of social agency in the pursuit of change says Chris Barker. (2004) Leena Rajani & Dipti Mehta (2014) remarks that pre-independence Indian English writing was the outcome of the cross-impregnation of two cultures – Indian and English. Sarika Goyal (2019) instigates that independence has been a major miracle in Indian history that shaped the future of modern India with musings mostly bitter of its colonial past and furthered the associating of eastern & western culture. In the last quarter of the twentieth century with the advent of post-colonial literary studies, this domineering on Indian literary writing in English to translate India to itself and the world received a further boost remarks Rosemary George (2013). In a post-colonial context, remarks Chris Barker that women carry the double burden of being



Two Day International Conference



# New Literary Trends and Narratives in English Literature

Organized by

Department of English

NSSR's

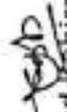
Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts,  
Science & Commerce College, Beed (M.S.)

(Re-accredited by NAAC 'A' Grade (3.18 CGPA as per new BAF) & ISO 21001-2018 certified)

17<sup>th</sup> & 18<sup>th</sup> March 2023

## CERTIFICATE

This is to certify that Prof./Dr./Mr./Ms. Archana Kiran Deshmukh  
of Jawaharlal Nehru Arts, Commerce and Sci. College, Wadi, Nagpur  
participated in the Two Day International Conference on New Literary Trends and Narratives in English  
Literature held on 17<sup>th</sup> & 18<sup>th</sup> March 2023 He/She presented a paper entitled Postcolonial Culture  
Alienation in English August: An Indian Story

  
Dr. Shivanand Kshirsagar  
(Organizing Secretary)

  
Dr. Shivaji N. Shirde  
(Secretary)



आजादी का  
अमृत महोत्सव

## Internal Quality Assurance Cell

Vasant Rao Naik Government Institute of Arts and Social Sciences, Nagpur (VNGIASS)  
Organised One day NAAC Sponsored National Conference (in Hybrid Mode)

### *New Teaching Methods in Higher Education: Introducing Technology*

This is to certify that Dr./Mr./Ms./Mrs. Dr. Archana Kiran of  
Jawaharlal Nehru Arts Commerce and Science college Deshmukh  
Wadi Nagpur participated/presented a paper titled.....  
English language Teachings : New Methodologys  
in One day NAAC Sponsored National Conference (in Hybrid Mode) organised on Saturday,  
October 1, 2022.

U

Dr. Kapil Singhel  
IQAC Coordinator  
(VNGIASS)

Sadhana Shiledar

Dr. Sadhana Shiledar  
Director  
(VNGIASS)



Yeshwant Rural Education Society's

**YESHWANT MAHAVIDYALAYA, SELOO, DIST. WARDHA**  
DEPARTMENT OF HISTORY & DEPARTMENT OF POLITICAL SCIENCE

*Jointly Organised*



One Day National Interdisciplinary Conference on

**75<sup>th</sup> YEARS OF INDIAN INDEPENDENCE : STATUS & GOALS**

22<sup>nd</sup> DECEMBER 2022

## *Certificate*

This is to certify that

Prof./Dr./ Mrs. Leena V. Phate  
of Jawaharlal Nehru Arts, Commerce and science College, wadi, Nagpur.  
has actively participated in the National Interdisciplinary Conference on

*"75<sup>th</sup> Years of Indian Independence : Status & Goals"*

and presented a paper entitled Contribution of Post-Independent women novelists  
in Indian English Literature : A Review .

*Dr. Sandip Kale*  
Head, Dept. of Political Science  
Yeshwant Mahavidyalaya, Seeloo  
Dist. Wardha

*Dr. Anant Rindhe*  
Associate Professor & Head,  
Department of History  
Yeshwant Mahavidyalaya, Seeloo

*Dr. Archana Dahane*  
Officiating Principal  
Yeshwant Mahavidyalaya, Seeloo  
Dist. Wardha



## Internal Quality Assurance Cell

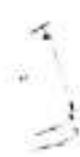
of  
Vasantrao Naik Government Institute of Arts and Social Sciences, Nagpur (VI  
Organised One day NAAC Sponsored National Conference (in Hybrid Mode)

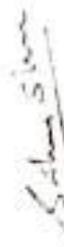
### ***New Teaching Methods in Higher Education: Introducing Technology***

This is to certify that Dr./Mr./Ms/Mr./Mrs..... Dr. Leena Phate  
Jawaharlal Nehru Art's Commerce and Science College

participated/presented a paper titled.....  
Research culture in the college

in One day NAAC Sponsored National Conference (in Hybrid Mode) organised on Sa  
October 1, 2022.

  
Dr. Kapil Singhel  
IQAC Coordinator  
(VNGIASS)

  
Dr. Sadhana Shiledar  
Director  
(VNGIASS)

PARAM POOJYA DR. BABASAHEB AMBEDKAR SMARAK SAMITTI'S

**Dr. AMBEDKAR COLLEGE, DEEKSHA BHOOMI,**

**Nagpur, Maharashtra, India-441305**

Affiliated to RTMNU, NAGPUR NAAC RE-ACCREDITED WITH 'A' GRADE BY NAAC CGPA: 3.45  
RECOGNIZED AS COLLEGE WITH POTENTIAL FOR EXCELLENCE BY UGC

**One Day Online International Multidisciplinary Conference On**

**"Emerging Trends in Research Methodology of Humanities, Social Sciences, Commerce & Management, Arts, Pure Sciences, Library Science, Sports, Law, Science, Nursing Science, Hospitality, Sanskrit Language,**

**Organized by: Humanities Dept. & IQAC**

**CERTIFICATE OF PARTICIPATION & PRESENTATION**

*This is to certify that Mr/Mrs/Dr/Prof. NIRLAY R. PETKAR (Assistant professor) of Jawaharlal Nehru College wadi Nagpur, India has participated and presented research paper entitled " Namdeo Dhasal : A. Dalit Protest Poet " in One Day Online International Multidisciplinary Conference which held on 27 November, 2022.*



*[Signature]*  
Dr. Mrs. B.A. Mehre  
Principal

*[Signature]*  
Dr. Mrs. D.Y. Panbekar  
IQAC Coordinator

*[Signature]*  
Dr. Harish Bawangade  
Coordinator





VSPM ACADEMY OF HIGHER EDUCATION, NAGPUR  
**JAWAHARLAL NEHRU ARTS, COMMERCE & SCIENCE  
COLLEGE WADI, NAGPUR.**



**NATIONAL SEMINAR ON HUMAN RIGHTS AND HUMAN DIGNITY**

Certificate

This is to certify that Dr. / Mr. / Ms. / Mrs. Nirajay R. Petkar of \_\_\_\_\_

J.N. College Wadi, Nagpur

Participated / Presented / Published a paper titled Dalit Woman in Dalit Literature:

Violation of Human Rights and Gender Discrimination.

in One Day National Seminar on Human Rights and Human Dignity on Monday, 24 April, 2023.

Organized by  
Internal Quality Assurance Cell  
Department of English and Department of Commerce & Management

Bhate

Dr. Leena Phate  
Convener

[Signature]

Dr. Narendra Gharud  
IQAC, Coordinator

[Signature]

Dr. Sanjay Tekade  
Principal

**2021-2022**

| S. No. | Name of faculty member     | Department | Title of research paper   | Any other details  |
|--------|----------------------------|------------|---|--|
| 01     | Dr. (Ms.) M. M. Bhatkulkar | Zoology    | Global warming -A biggest issue for sustainable development   | National conference on Basics and Advances in biological sciences by Sindhu Mahavidyalaya Nagpur on 8-9 April 2022                                     |
| 02     | Dr. (Ms.) M. M. Bhatkulkar | Zoology    | Importance of green campus in NAAC Accreditation  | National Seminar on challenges and future prospects in online submission of SSR by D. A. K. M. Jaripatka, Nagpur on 30 April 2022                      |
| 03     | Dr. (Mrs.) A. K. Deshmukh  | English    | Global emerging trends in transformation of English language teaching   | International conference on Global emerging trends in transformation of education by D. Y. Patil College of Education Pimpri, Pune on 20-21 April 2021 |
| 04     | Dr. (Mrs.) A. K. Deshmukh  | English    | Life and the world: Theam of subjugation of the downtrodden and approaches in Indian culture as revealed in my India  | International conference on language, Literature and cultural by Trinity College for Women Namakkal, Tamilnadu on 23-25 July 2021.                     |
| 05     | Dr. (Mrs.) A. K. Deshmukh  | English    | Indianness A socio-cultural conflict in 2 states: The story of my marriage  | National seminar on Socio-Cultural and political perspective in Indio-Anglian fiction by D. M. K Umathe College Nagpur on 7 August 2021                |
| 06     | Dr. (Mrs.) A. K. Deshmukh  | English    | Role of Indian English literature in Nation building in pre independent Era: with special reference to Raja Rammohan Roy, Rabindranath Tagore and Sir Aurobindo | International conference on Contribution of various aspects in Nation building by A. C. and S. College Moregaon, Yavatmal on 11-13 Oct. 2021           |
| 07     | Dr. G. D. Zade             | Physics    | Potential of organic light emitting diodes in solid state lighting  | International E- conference on frontiers in chemical sciences by MLSU, Udaipur, Rajasthan on 25 June 2021  |
| 08     | Dr. G. D. Zade             | Physics    | Development of organic electroluminescent phosphor materials for display devices  | V International conference on multifunctional advanced materials by Jnan Vikas Mandal's Degree college Navi Mumbai on 9-10 Aug. 2021                   |
| 09     | Dr. G. D. Zade             | Physics    | Synthesis of organic phosphor materials for display devices   | International E- conference on sustainable and futuristic materials by Kamla Nehru Mahavidyalaya Nagpur on 29-30 Nov. 2021                             |
| 10     | Dr. R. K. Wanare           | Chemistry  | Heterocyclic chemistry and their glucosides   | International conference on material science and spectroscopy by Maharishi University of Information   |

|    |                        |           |   |  |
|----|------------------------|-----------|---|--|
|    |                        |           |   | Technology Lucknow on 22-24 Sept. 2021   |
| 11 | Dr. R. K. Wanare       | Chemistry | Synthesis and biological applications of substituted pyrazolyl  | International conference on sustainable Asia's problem & Prospects by Warora's Vivekanand Mahavidyalaya Bhadrawati, Chandrapur on 22-24 Nov. 2021                  |
| 12 | Dr. R. K. Wanare       | Chemistry | Synthesis and self-assembling properties of beta – glucuronosyl-5 -acetyl-7-[(1-acetal-5-aryl-4,5-dihydro-1H-pyrazol-3-yl)-amino]-1,1-benzisoxazol-3-carboxylates | International Web Conference on advanced material science and nanotechnology by Vinayak Vidnyan Mahavidyalaya Nandgaon Khandeshwar, Amravati on 23-25 Nov. 2021.   |
| 13 | Dr. R. K. Wanare       | Chemistry | Design, synthesis and evaluation of novel thiopyrimidine glucuronide compounds with promising biological activities   | International conference on Interdisciplinary approaches in chemical sciences by Abasaheb Garware College Pune on 21-23 Oct. 2021.                                 |
| 14 | Dr. (Mrs.) L. V. Phate | English   | Use of technology and digital platform in English language teaching   | International conference on Contribution of various aspects in Nation building by A. C. and S. College Moregaon, Yavatmal on 11-13 Oct. 2021                       |
| 15 | Dr. (Mrs.) L. V. Phate | English   | Githa Hariharan's In times of Siege: History, Politics and Censorship   | National seminar on Socio-Cultural and political perspective in Indo-Anglian fiction by D. M. K Umathe College Nagpur on 7 August 2021                             |
| 16 | Dr. (Mrs.) L. V. Phate | English   | Cultural identity and identity crises in selected novels of Githa Hariharan   | International conference on language, Literature and cultural by Trinity College for Women Namakkal, Tamilnadu on 23-25 July 2021.                                 |
| 17 | Dr. (Mrs.) L. V. Phate | English   | Religious intolerance and liberal dissent in Giths Hariharan's In Times of Siege  | International conference on impact of race, caste, class and religion on Indian and International society by Late V. K. arts college Rohana, Wardha on 7 Aug. 2021 |



Principal

Jawaharal Nehru Arts, Comm. & Sc'  
College, WadiNagpur



Dada Ramechand Bakhru Sindhu Mahavidyalaya, Nagpur  
organized National Conference

**"Basics and Advances in Biological Sciences"**

in collaboration with  
Technology & Energy Park, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur



Global Biotech Forum, Nagpur  
8<sup>th</sup> and 9<sup>th</sup> April 2022



**Certificate**

This is to certify that Prof./Dr./Mr./Mrs./Ms. Manisha Bhatkulkar  
of Jawaharbal Nehru Arts Commerce & Science College, Wadi has actively participated  
in the National Conference on "Basics and Advances in Biological Sciences" organized by Dada  
Ramechand Bakhru Sindhu Mahavidyalaya, Nagpur in collaboration with Technology and Energy Park,  
R.T.M. Nagpur University, Nagpur and Global Biotech Forum, Nagpur on 8<sup>th</sup> & 9<sup>th</sup> April 2022.

He/She has presented paper entitled Global Warming - A Biggest Issue for  
Sustainable Development.

*by*

**Dr. S.G. Hate**  
Organizing Secretary

*Z. V. Kashmiri*

**Dr. Mrs. Zeenat Kashmiri**  
Convener

*58*

**Dr. V. M. Pendsey**  
Officiating Principal



A One Day NAAC Sponsored National Seminar on Challenges and Future Prospects in  
Online Submission of SSR  
Organised By



*Arya Vidya Sabha's*  
**DAYANAND ARYA KANYA MAHAVIDYALAYA, JARIPATKA, NAGPUR**

**ON**  
**30 APRIL 2022**  
**In Hybrid Mode**



*Presented to*

*Dr. MANISHA BHATKULIKAR* OF *JAWAHARLAL NEHRU ARTS COMMERCE*  
*AND SCIENCE COLLEGE WADI NAGPUR*  
*in recognition of his / her participation in the National Seminar on Challenges and Future Prospects in*

*Online Submission of SSR on 30 APRIL 2022 and Attending / Presenting / Publishing Paper Titled*

*IMPORTANCE OF GREEN CAMPUS IN NAAC ACCREDITATION*

*SMD*

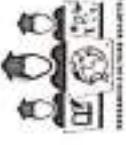
*Dr. Mughda Deshpande*  
Organising Secretary  
Asso. Prof. Dept. of Commerce

*Dr. Sujata Chakravorty*

Organising Secretary  
Asso. Prof. & Head, Dept of English

*Dr. Shrabha Anilkumar*

Convener & Principal  
DAK Mahavidyalaya, Nagpur



# DPU

Dr. D. Y. Patil Unitech Society's  
Dr. D.Y. Patil College of Education (B.Ed., M.Ed.)  
Pimpri, Pune 411018.

(NAAC ACCREDITED WITH 'B' GRADE)



## (TWO DAY'S INTERNATIONAL CONFERENCE)

This certificate is presented to Prof./ Dr. /Mr./ Mrs./ Dr. Archana Kiran Deshmukh  
From Asst. Prof. Dept of English, Jawaharlal Nehru Arts, Commerce & Science College, Wadi, Nagpur. He / She has Presented &  
Published Paper on Global Emerging Trends in Transformation of English Language Teaching, in

International Conference on Global Emerging Trends in Transformation of Education

(A Multidisciplinary approach) on 20<sup>th</sup> & 21<sup>st</sup> April 2021 in Educational Resurgence Journal Vol. 3,  
Special Issue June 2021 bearing ISSN No. 2581-9100, Organized by Dr. D. Y. Patil College of Education, Pimpri, Pune  
in Association with IQAC, DYPCOED, Savitribai Phule Pune University & Research Culture Society.

Asst. Prof. Suresh Waghmare  
Convener

Dr. Rekha Pathak  
Principal

Dr. D.Y. Patil College of Education

Certificate No. 425

Dr. D.Y. Patil College of Education



TRINITY COLLEGE FOR WOMEN

(Arts & Science)

NAMAKKAL-637 00, TAMILNADU, INDIA

(Permanently Affiliated to Periyar University, Salem-13)  
2(f) & 12(b) Status Granted by UGC, New Delhi



## CERTIFICATE OF APPRECIATION

Presented to

DR. ARCHANA DESHMUKH

Assistant Professor of English

Jawaharlal Nehru Arts, Commerce and Science College, Wadi,  
Nagpur, Maharashtra, India

For his/her outstanding presentation on Life and the World Around: Theme of Subjugation of the Downtrodden and Approaches in Indian Culture as Revealed in My India in a Three Day International Conference on Language, Literature and Culture (ICLLC2K21) from 23<sup>rd</sup> July, 2021 to 25<sup>th</sup> July 2021 organised by PG & Research Department of English, Trinity College for Women, Namakkal, Tamilnadu, India.

CONVENER

PRINCIPAL

SECRETARY

CHAIRMAN



## Dr. M. K. Umathe College, Nagpur

Department of English

Organized One Day Virtual National Seminar

### "Socio-Cultural and Political Perspectives in Indo-Anglian Fiction"

in collaboration with Departments of English of

Prin. Arunrao Kalode Maharavidyalaya, Nagpur

CSM's Arts & Commerce College, Chakan, Pune

Shri. Shivaji Arts, Commerce & Science College, Akot

Govindrao Wajurkar Arts and Commerce College, Nagbhid

### *Letter of Participation, Presentation and Publication*

This is to certify that Dr. Archana Kiran Deshmukh has attended One Day Virtual National Seminar titled Socio-Cultural and Political Perspectives in Indo-Anglian Fiction organized on 07 of August 2021. The paper submitted by her titled Indianness: A Socio-cultural Conflict in 2 States: The story of My Marriage has been shortlisted for Publication in Peer Reviewed Journal, indexed in SJIFactor.com with impact factor of 3.072 for the year 2021.

  
Dr. D. V. Naik  
Principal  
Dr. M. K. Umathe  
College, Nagpur

  
Dr. D. R. Sapate  
Principal  
Prin. Arunrao Kalode  
College, Nagpur

  
Dr. Rajesh Latane  
Principal  
CSM's Arts & Commerce  
College, Chakan Pune

  
Dr. A. L. Kolar  
Principal  
Shri. Shivaji Arts, Commerce  
& Science College Akot

  
Dr. S. R. Singh  
Principal  
Prin. Govindrao Wajurkar Arts &  
Commerce College, Nagbhid

Shetkari Shikshan Sanstha's



# ARTS, COMMERCE AND SCIENCE COLLEGE

Maregaon (Road), Dist-Yavatmal-445303 (M.S)

(Affiliated to Sant Gadge Baba Amravati University, Amravati)

ISO 9001:2015 certified, NAAC Accredited with B\* Grade



## MULTIDISCIPLINARY INTERNATIONAL E-CONFERENCE ON

### 'Contribution of Various Aspects in Nation Building'

CVAINB-2021, 11-13 October, 2021

#### E-CERTIFICATE

Ref. : CVAINB-2021/Presentation/021

Date : 14/10/2021

This is to certify that **Dr. Archana Kiran Deshmukh** of **Jawaharlal Nehru Arts Commerce and Science College Wadi Nagpur** has participated and presented a research paper entitled **Role of Indian English literature in Nation Building in Pre independent Era: With Special Reference to Raja Rammohun Roy, Rabindranath Tagore and Sir Aurobindo in Multidisciplinary International e-Conference on 'Contribution of Various Aspects in Nation Building (CVAINB-2021)'** organized by Department of English, Marathi, Sociology, History, Home economics, Commerce, Botany, Chemistry and Mathematics, Arts, Commerce and Science College, Maregaon from **11-13 October, 2021**.

**Dr. D. A. Gundawar**  
Convener, CVAINB-2021

**Dr. S. K. Khade**  
Organising Secretary, CVAINB-2021

**Dr. A. N. Gharde**  
Chairman, CVAINB-2021

*International Virtual Conference on  
Frontiers in Chemical Sciences  
(IVCFCS-2021)*

Organized by

DEPARTMENT OF CHEMISTRY  
MLSU, UDAIPUR, RAJASTHAN, INDIA



**25 June, 2021**

This is to certify that Dr. Gajanan D. Zade, Jawaharlal Nehru College, Wadi, Naggpur has delivered an invited talk at "International Virtual Conference on Frontiers in Chemical Sciences" (IVCFCS-2021) organized by Department of Chemistry, MLSU, Udaipur, Rajasthan, India on 25 June, 2021.

Patron

Prof. Amarika Singh

Chairman

Prof. G.S. Rathore

Secretary

Dr. Jyoti Chaudhary

Organizing Secretary

Dr. Shikha Agarwal

|               |   |
|---------------|---|
|               | Dr. Nisar Ahmed<br>School of Chemistry, Cardiff University, Cardiff, UK<br>Topic of Talk:<br>Supramolecular Chemistry: Molecular recognition using<br>fluorescent probes  |
| 2:30-3:00 pm  | Invited Talk-4<br>Dr. Gajanan D. Zode<br>Head, Department of Physics,<br>Jawaharlal Nehru Arts, Commerce & Science College<br>Wadi, Nagpur, Maharashtra.<br>Topic of Talk:<br>Potential of organic light emitting diodes in solid state<br>lighting |
| 3:00-3:15 pm  | Break   |
| 3:15- 5:00 pm | Technical Session-3<br>OP 21-36   |
| 5:00-5:10 pm  | Closing Ceremony and Valedictory Remarks  |
| 5:10 pm       | National Anthem   |

#### Poster session on Twitter

Present your poster to a global chemistry audience via Twitter (@MLSU\_Chemistry).

Poster session will start on Friday, June 25 @ 10:30 am (IST) and conclude on Friday, June 25 @ 5:00 pm (IST).

1. Set Twitter profile to public for the duration of the poster session event – June 25 @ 10:30 am (IST) to June 25 @ 5:00 pm (IST)
2. Tag @MLSU\_Chemistry and use #MLSU\_Chemistry\_poster on your official poster tweet.
3. Pin your poster tweet, so your poster is easy to find.

It is important to upload your poster on time for judging purposes. The participants will answer to the query, if asked latest by technical committee latest by 4:00 pm.

**Dr. Jyoti Chaudhary**  
**Convener**  
Head, Department of Chemistry,  
MLSU, Udaipur, India

**Dr. Shikha Agarwal**  
**Organizing Secretary**  
Assistant Professor, Department of  
Chemistry, MLSU, Udaipur, India

#### **Organizing Committee:**

|                       |                   |                         |                      |
|-----------------------|-------------------|-------------------------|----------------------|
| Dr. Poonam Khandelwal | Dr. Chetna Ameta  | Dr. Dinesh Pandey       | Dr. Nectu Kumari     |
| Dr. Dinesh K. Yadav   | Dr. Nitin Kumar   | Dr. Prabhat K. Baroliya | Dr. Siddharth Sharma |
| Dr. Rama K. Khangarot | Dr. L. K. Agarwal | Dr. P. S. Ranawat       | Dr. Tarun Kumar      |
| Dr. Devendra Singh    | Mr. Vipin Khoker  | Dr. Kiran Meena         |                      |



JNAN VIKAS MANDAL'S DEGREE COLLEGE  
PLOT NO.9, SECTOR-19, AIROLI, NAVI MUMBAI,  
MAHARASHTRA - 400 708, INDIA  
PERMANENTLY AFFILIATED TO UNIVERSITY OF MUMBAI  
NAAC RE-ACCREDITED 'A' GRADE (CGPA-3.33)



## CERTIFICATE

This is to certify that 'Development of Organic Electroluminescent Phosphor materials for display devices' presented by Dr. Gajanan Zade of Jawaharlal Nehru Arts, Commerce and Science College, Wadi, Nagpur was selected as the Best Presentation in oral/poster presentation in 'VIRTUAL INTERNATIONAL CONFERENCE ON MULTIFUNCTIONAL ADVANCED MATERIALS (VICMAM-2021)' organized by Department of Chemistry, JVM's Degree College in collaboration with Association of Chemistry Teachers on 9<sup>th</sup> and 10<sup>th</sup> August, 2021.

*Signature*

Prof. Brijesh Pare  
President, ACT  
Madhav Science PG  
College, Ujjain

*Signature*

Prof. D.V.Prabhu  
General Secretary, ACT  
Wilson College, Mumbai

*Signature*

Asst. Prof. Sushhya Patil  
Co-Convenor  
(VICMAM-2021)

*Signature*

Asst. Prof. Harshada Niju  
Convener  
(VICMAM-2021)

*Signature*

Dr. Leena Sarkar  
Principal  
JVM's Degree College



JNAN VIKAS MANDAL'S DEGREE COLLEGE  
PLOT NO.9, SECTOR-19, AIROLI, NAVI MUMBAI,  
MAHARASHTRA - 400 708, INDIA  
PERMANENTLY AFFILIATED TO UNIVERSITY OF MUMBAI  
NAAC RE-ACCREDITED 'A' GRADE (CGPA-3.33)



## CERTIFICATE

This is to certify that 'Development of Organic Electroluminescent Phosphor materials for display devices' presented by **Dr. Gajanan Zade of Jawaharlal Nehru Arts, Commerce and Science College, Wadi, Nagpur** was selected as the Best Presentation in oral/poster presentation in '**VIRTUAL INTERNATIONAL CONFERENCE ON MULTIFUNCTIONAL ADVANCED MATERIALS (VICMAM-2021)**' organized by Department of Chemistry, JVM's Degree College in collaboration with Association of Chemistry Teachers on 9<sup>th</sup> and 10<sup>th</sup> August, 2021.

*Brijesh Pare*

Prof. Brijesh Pare  
President, ACT  
Madhav Science PG  
College, Ujjain

*D.V. Prabhhu*

Prof. D.V. Prabhhu  
General Secretary, ACT  
Wilson College, Mumbai

*Sandhya Patil*

Asst. Prof. Sandhya Patil  
Co-Convenor  
(VICMAM-2021)

*Harshada Nijju*

Asst. Prof. Harshada Nijju  
Convener  
(VICMAM-2021)

*Leena Sarkar*

Dr. Leena Sarkar  
Principal  
JVM's Degree College



## International E-Conference on Sustainable and Futuristic Materials (SFM-2021)

Organized by

International Research Centre and Department of Chemistry, Kalasalingam Academy of Research and Education, Krishnankoi  
*Gondia Education Society's*

Department of Chemistry, J.M. Patel Arts, Commerce & Science College, Bhandara

And

*Amar Sewa Mandals*

Department of Chemistry, Kamla Nehru Mahavidyalaya, Nagpur

### CERTIFICATE

This is to certify that **Dr. Gajanan D Zade**, Assistant professor. of **Jawaharlal Nehru college Wadi Nagpur**, has participated and delivered Oral Presentation in the **International E-Conference on Sustainable and Futuristic Materials (SFM-2021)** held during **29-30<sup>th</sup> November, 2021** organized by **International Research Center and Department of Chemistry, Kalasalingam Academy of Research and Education, Krishnankoi, Department of Chemistry, J. M. Patel Arts, Commerce & Science College, Bhandara, and Department of Chemistry, Kamla Nehru Mahavidyalaya, Nagpur.**

*Signature*  
Prof. Brijesh Pare  
President  
ACT

*Signature*  
Dr. D. V. Prabhu  
General Secretary  
ACT

*Signature*  
Prof. M. Swaminathan  
Convener  
SFM-2021

*Signature*  
Dr. V. P. Dhomne  
Principal  
J. M. Patel College, Bhandara

*Signature*  
Dr. W. B. Gurnule  
Organizing Secretary  
SFM-2021



## International E-Conference on Sustainable and Futuristic Materials (SFM-2021)

Organized by

International Research Centre and Department of Chemistry, Kalasalingam Academy of Research and Education, Krishnankoi  
*Gondia Education Society's*

Department of Chemistry, J.M. Patel Arts, Commerce & Science College, Bhandara

And

*Amar Sewa Mandals*

Department of Chemistry, Kamla Nehru Mahavidyalaya, Nagpur

### CERTIFICATE

This is to certify that **Dr. Gajanan D Zade**, Assistant professor. of **Jawaharlal Nehru college Wadi Nagpur**, has participated and delivered Oral Presentation in the **International E-Conference on Sustainable and Futuristic Materials (SFM-2021)** held during **29-30<sup>th</sup> November, 2021** organized by **International Research Center and Department of Chemistry, Kalasalingam Academy of Research and Education, Krishnankoi, Department of Chemistry, J. M. Patel Arts, Commerce & Science College, Bhandara, and Department of Chemistry, Kamla Nehru Mahavidyalaya, Nagpur.**

*Signature*  
Prof. Brijesh Pare  
President  
ACT

*Signature*  
Dr. D. V. Prabhu  
General Secretary  
ACT

*Signature*  
Prof. M. Swaminathan  
Convener  
SFM-2021

*Signature*  
Dr. V. P. Dhomne  
Principal  
J. M. Patel College, Bhandara

*Signature*  
Dr. W. B. Gurnule  
Organizing Secretary  
SFM-2021

## OP 23

**"Synthesis of Organic Phosphor Materials for Display Devices"**

**Gajanan D. Zade**

Jawaharlal Nehru Art's, Commerce & Science College Wadi, Nagpur,  
Maharashtra, India, 440023.

E-Mail – [zadegajanan@gmail.com](mailto:zadegajanan@gmail.com)

(Mob. No. - 9890628668)

**Abstract -**

An organic light emitting diode (OLED) also known as organic electroluminescent diode is a display device like light emitting diode in which an emissive electroluminescent layer is a film of organic compound material that emits light in response to an electric current. This organic layer is situated in between two electrodes; typically at least one of these electrodes is transparent. The organic molecules have conductivity levels ranging from insulators to conductors, and are therefore considered as organic semiconductors. Organic semiconductors were synthesised by one of the method known as the method of Friedlander condensation reaction. Originally, the basic polymer synthesised organic material is group of Diphenylquinoline (DPQ) family which consisted of a single organic layer for OLED. The family members of DPQ were synthesised by bonding chlorine- methyl, bromine, methyl, methoxy, P- hydroxyl, P-Acetyl-biphenyl and P- Acetyl bi-chlorine to the original structure of DPQ at various positions. All the synthesised polymers show crystalline in nature and emits blue colour under UV in various acidic as well as basic solvents like acetic acid, formic acid, chloroform, dichloromethane, tetrahydrofuran etc. The synthesised phosphors were characterised by different techniques to study physical, optical and chemical properties such as Fourier Transform infra-red (FTIR), UV- Visible absorption and photoluminescence spectra, X-Ray diffraction spectra (X-RD), Thermo gravimetric analysis (TGA) and Differential thermal analysis (DTA). All The blue emitting organic phosphors has generated considerable interest owing to their good photoluminescence efficiencies.

**Keywords** – OLED's, Solid state lighting, Friedlander condensation reaction, Organic Phosphors

## OP 24

**AMALGAMATIONS AND SPECTRAL IDENTIFICATION OF HETEROCYCLIC COMPOUNDS COUMARIN AND THEIR COMPLEX WITH BIOACTIVE COBALT METAL ION AS PHARMACOPHORE**

**Anil Kumar Koshal<sup>1</sup> and Alka Pradhan<sup>2</sup>**

E-mail: [koshal\\_anil@yahoo.com](mailto:koshal_anil@yahoo.com)

<sup>1</sup>Department of Chemistry, Govt. College Lateri, Distt, Vidisha (M. P.) India 464114

<sup>2</sup>Department of Chemistry, Govt. MotilalVigyanMahavidhyalaya, Bhopal (M. P.) India 460102

**Abstract-**

The present work describes the amalgamation of chelate compound of coumarin heterocyclic moiety derived from condensation of "diethylmalonate, salicylaldehyde, thiosemicarbazide and substituted aromatic aldehyde with different condensing agents". Complexes of Cobalt (II) with the generic structural formula ML(1:1) has been prepared using this tetradentatechelating compound. The synthesised compound and complexes were characterized by spectral analysis data such as IR spectral data, elemental analysis, electronic spectra, magnetic susceptibility and Mass spectra. The metal ligand 1:1 [M:L] ratio in the complex confirmed by elemental analysis data, IR data gave information about the chelating nature of ligand. Electronic spectral analysis indicates the octahedral geometry of metal complexes. The synthesised compound and complex were screened for antimicrobial activity against selected micro pathogens.

**Key words** : Heterocyclic, Coumarin, Bioactive, Micro pathogens.



**International Conference on Materials Science and Spectroscopy  
(ICMSS-21)**

MUIT/SOS/IC/ICMSS21/OP/014

September 22-24, 2021

**CERTIFICATE**

This is to certify that Dr. Rajendra K. Wanare  
of RTM, Nagpur University, Nagpur (M.S.) has participated

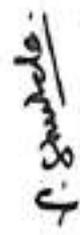
and presented a research paper Oral in the "International Conference on Materials Science and Spectroscopy" organized by School of Science, Maharishi University of Information Technology, Lucknow, Uttar Pradesh, India during September 22-24, 2021.

Title of Research Paper: Heterocyclic Chemistry and their Glucosides

  
Prof. B. P. Singh  
Vice-Chancellor

  
Dr. Nishant Kumar  
Convener

  
Prof. Madhulika Singh  
Organizing Secretary

  
Dr. Vikas Kumar Shukla  
Organizing Secretary

ORGANIZED BY



VIVEKANAND DNYANPEETH (CONVENT)  
PARKETI, PUDUCHERRY, MAHARASHTRA  
& CENTER FOR MANAGE LEARNING & RESEARCH  
100, CHANDRAPUR, MAHARASHTRA

2021  
**OTPIC**

THE PROGRESS INTERNATIONAL CONFERENCE - IV  
Puducherry, India

POWERED BY



THE  
**PROGRESS**  
INTERNATIONAL CONFERENCE

## Certificate of Appreciation

This is to certify that Prof./Dr./Mrs./Ms. R. K. WANARE has presented a paper  
of JAWAHARLAL NEHRU COLLEGE WADI, NAGPUR  
titled SYNTHESIS AND BIOLOGICAL APPLICATIONS OF SUBSTITUTED PYRAZOLYL  
DERIVATIVES  
in the THE PROGRESS International Conference - IV, Puducherry, India on "Sustainable Asia's Problems & Prospects"  
organized by Vivekanand Dnyanpeeth (Convent), Warora's Vivekanand Mahavidyalaya & Center For Higher Learning & Research  
Bhadrawati, Distt.- Chandrapur, Maharashtra on 22-24 November 2021.

*Mohit B. Sawe*

Mohit B. Sawe  
IQAC, Co-ordinator  
Vivekanand Mahavidyalaya, Bhadravati

*N. G. Umate*

Dr. N. G. Umate  
Principal  
Vivekanand Mahavidyalaya, Bhadravati

*Amghosh*

Dr. S. M. Ghosh  
Director, Auropath  
Auro Services Trust, Puducherry  
India



Pravin Khodke Memorial Trust Amravati's  
**Vinayak Vidyan Mahavidyalaya**

Nandgaon Khandeshwar, Dist. Amravati - 444708, Maharashtra, India



**Department of Physics, Organized**

# Second International Web Conference on Advanced Material Science and Nanotechnology

PA0165

This is to certify that

**Dr. Rajendra K. Wanare**

of

Jawaharlal Nehru College, Wadi, Nagpur-23

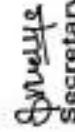
has participated and delivered Oral Presentation on Synthesis and Self-Assembling Properties of **beta-Glucuronosyl-5-acetyl-7-[(1-acetyl-5-aryl-4,5-dihydro-1H-pyrazol-3-yl)-amino]-1,2-benzisoxazole-3-carboxylates** in the Second International Web Conference on Advanced Material Science & Nanotechnology (2<sup>nd</sup> NANOMAT-2021) organized by Department of Physics, Vinayak Vidyan Mahavidyalaya, Nandgaon Khandeshwar, Dist. Amravati, Maharashtra, India from 23<sup>rd</sup> November - 25<sup>th</sup> November, 2021.

  
Convener  
Assistant Professor

**Dr. Prashant B. Kharat**  
Assistant Professor

  
Organizing Secretary  
Assistant Professor & Head

**Dr. Anant S. Wadatkar**  
Assistant Professor & Head

  
Secretary  
IQAC-Coordinator

**Dr. Suchita P. Khodke**  
IQAC-Coordinator

  
Chairman  
Principal

**Dr. Alka A. Bhise**  
Principal

**2<sup>nd</sup> NANOMAT - 2021**



Maharashtra Education Society's

**ABASAHEB GARWARE COLLEGE**

NAAC Re Accredited "A" Grade College

Best College Award by SPPU

Best student Development Board Award by SPPU

**Virtual International Conference on**

**INTERDISCIPLINARY APPROACHES IN CHEMICAL SCIENCES**

(IACS-2021)

**CERTIFICATE**

*This is to certify that Prof./Dr./Mrs./Mr. Rajendra K. Wanare from Jawaharlal Nehru Arts, Commerce and Science College, Wadi, Nagpur has participated and given a oral presentation on topic entitled "Design, Synthesis and Evaluation of Novel Thiopyrimidine Glucuronide Compounds with Promising Biological Activities" in International Conference IACS-2021 organised by Department of Chemistry, M.E.S's Abasaheb Garware College, Pune, during 21<sup>st</sup>-23<sup>rd</sup> October 2021.*

*S.A. Waghmode*

Prof. (Dr.) Shobha A. Waghmode  
Coordinator

*P. B. Buchade*

Dr. P. D. Sonawane  
Co-coordinator

*P. B. Buchade*

Prof. (Dr.) P. B. Buchade  
Convener

**2020-2021**

| S. No. | Name of faculty member    | Department | Title of research paper  | Any other details  |
|--------|---------------------------|------------|--|--|
| 01.    | Dr. S. K. Shembekar       | Commerce   | Rural development through entrepreneur development                                     | Paper published in International Journal of search, ISSN 2321-1709. (12 December 2020)   |
| 02.    | Dr. S. K. Shembekar       | Commerce   | Implications of climate change on the agricultural production and demand supply        | Paper published in Dogo Reangsang research Journal, ISSN 2347-7180. ( 03 July 2020)  |
| 03.    | Dr. (Mrs.) L. V. Phate    | English    | Technology integration and innovation techniques in English language teaching          | Online International conference on continuity, consistency and innovation in applied sciences and humanities by St. Martin's engineering College Secunderabad on 13-14 Aug. 2020 |
| 04.    | Dr. (Mrs.) L. V. Phate    | English    | Role and impact of information and communication technology on the future of education | International conference on the new normal: Evolving scenario in business and economy by Central Institute of business management, research and development on 27 Nov. 2020      |
| 05.    | Dr. (Mrs.) A. K. Deshmukh | English    | A study of media and women empowerment: pre-Independence to modern India               | International conference on Literature, society and the Global media by Agra College Agra, Utter Pradesh on 26-27 Sept. 2020. ISSN 2456-6683                                     |
| 06     | Dr. (Mrs.) A. K. Deshmukh | English    | Future of education in India: A review   | International conference on the new normal: Evolving scenario in business and economy by Central Institute of business management, research and development on 27 Nov. 2020      |
| 07     | Dr. (Mrs.) A. K. Deshmukh | English    | Indian culture and Hinduism: A study of Jim Corbett's work                             | National webinar on depiction of India in English literature by V. N. Govt. Institute Nagpur on 28-29 May 2021   |
| 08     | Dr. (Mrs.) A. K. Deshmukh | English    | Global emerging trends in transformation of English language teaching                  | International conference on Global emerging trends in transformation of education by D.  |
| 09     | Dr. M. N. Bhajbhuje       | Botany     | Mycodiversity of speed borne flora of vigna unguiculata L.                             | International E- conference on Innovative research trends in life science by Shivaji Science College Akola on 3-5 Dec. 2020.   |

  
 Principal  
 Jawaharlal Nehru Arts, Comm. & Sci  
 College, WadiNagpur



GE-International Journal of Management Research

ISSN (O): (2321-1709), ISSN (P): (2394-4226)

Vol. 8, Issue 12, December 2020 Impact Factor: 5.779

© Association of Academic Researchers and Faculties (AARF)

www.aarf.asia, Email: editor@aarf.asia, editoraarf@gmail.com

---

## Rural Development through Entrepreneur Development

Dr. Subhash K. Shembekar

Jawaharlal Nehru Arts, Commerce and Science College

Wadi, Nagpur

### Abstract :

Indian villages are not developed since long. The Rural development is now connected to entrepreneurship. Entrepreneurship Development is a vital driver of economic growth, productivity, innovation, and job creation, and as a key aspect of economic dynamism. This paper focuses on the role of entrepreneurship development in the rural development.

*Keywords : rural development, entrepreneurship, urbanization*

### Introduction :

Most of the rural areas around the world face economic challenges, due to their peripheral locations and also because of their declining economies. With the emergence of globalization and urbanization, many people who lived in rural areas before, have decided to move to urban centers, either for the updated infrastructure that cities have, or in exploitation of the employment opportunities that industries in cities offer. This means that majority of rural regions and towns are facing migration and decline.

One response to the deterioration of traditional rural industries, such as agriculture and mining, has been the emergence of tourism orientated entrepreneurial activities. Currently, many people indigenous to rural areas see tourism as a chance for them to stay and live in their region or towns, without reducing their standard of living.

---

© Association of Academic Researchers and Faculties (AARF)

A Monthly Double-Blind Peer-Reviewed, Refereed Open Access International e-Journal. Indexed in the International Serial Directories.

## Implications of Climate Change on the Agricultural Production and Demand-Supply

Dr. Subhash K. Shembekar  
Jawaharlal Nehru Arts, Commerce and Science College  
Wadi, Nagpur

### Abstract

The agricultural productivity decreases with an increase in annual average temperature in most of the crops. The adverse impact of climate change on agricultural production specifies food security threat to small and marginal farming households and adversely affected due to climatic fluctuations. This paper focuses on the impact of climate change on the agriculture sector.

**Keywords** climate, environment, demand-supply

### Introduction :

Weather is the condition of the atmosphere at a particular place and time. It is characterized by parameters such as temperature, humidity, rain and wind. Climate is the long term pattern of weather conditions for a given area. Climate change refers to a significant variation in either the mean state of the climate or its variability persisting for an extended period. India is home to extraordinary variation of climatic regions, ranging from tropical in the south to temperate and alpine in the Himalayan north where elevated regions receive sustained winter snowfall. The nation's climate is sturdily influenced by the Himalayas and the Thar Desert. Four major climatic groupings dominate into which fall seven climatic zones which are defined on the basis of temperature and precipitation.

Currently we are able to secure food supplies under these varying conditions. All climate models predict that there will be more extreme weather conditions with more droughts, heavy rainfall and storms in agricultural production regions.

Climate change is the supreme important global environmental challenge facing humanity with implications for natural ecosystems, agriculture & health. The perusal of general circulation models (GCMs) on climate change indicate that rising levels of greenhouse gases (GHGs) are likely to increase the global average surface temperature by 1.5-4.5°C over the next 100 years. The difference of average temperature between the last ice age and present climate is 6°C. This will raise sea-levels, shift climate zones pole ward, decrease soil moisture and storms. Global warming is predicted to affect agricultural production.

Food Consumption in India

# St. MARTIN'S ENGINEERING COLLEGE

A NON-MINORITY COLLEGE, AFFILIATED TO JNTU, APPROVED BY AICTE, ACCREDITED BY NEA & NAAC 'A' ISO 9001:2015 CERTIFIED. URGED RECOGNITION BY MINISTRY OF SCIENCE & TECHNOLOGY, GOVT OF INDIA, DHULAPALLY, NEAR ADUPALLY SECUNDERABAD - 500 102 TELANGANA STATE, INDIA. WWW.SMEC.AC.IN



100% AUTONOMOUS



## CERTIFICATE OF APPRECIATION

This is to certify that

*Dr. Leena Phate,*

Jawaharlal Nehru Arts, Commerce and Science College

has participated and presented paper on

Technology Integration and Innovative Techniques in English Language Teaching  
in the First Online International Conference on

"Continuity, Consistency and Innovation in Applied Sciences and Humanities"  
(ICCLASH-2020)

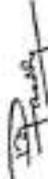
organized by Department of Science and Humanities,

St. Martin's Engineering College, Dhulapally, Secunderabad, T.S, India

on 13<sup>th</sup> & 14<sup>th</sup> August 2020.

Paper ID : 258



  
Dr. Ramadheer Reddy Dombhi  
Convener & HOD (S & H)



Dr. P. Santosh Kumar Patra  
Patron, Program Chair & Principal



13<sup>th</sup> CIBC 2020

Hosted By

NAAC Accredited B+ Grade

**CENTRAL INSTITUTE OF BUSINESS MANAGEMENT,  
RESEARCH & DEVELOPMENT**



**Certificate**

This is to certify that *Dr. Leena V. Phate* of Jawaharlal Nehru Arts Commerce and science College, Wadi, Nagpur  
, has Participated & submitted a Paper entitled

**"Role and Impact of Information and Communication Technology  
on the Future of Education"**

at the 13<sup>th</sup> Central India Management Conclave 2020 an International Conference on the Theme: *The New*

*Normal: Evolving Scenario in Business and Economy* held on Friday 27<sup>th</sup>, November 2020.

  
**Dr. Ajay Talwekar**  
Convener  
CIBC 2020

  
**Dr. Amishi Arora**  
Director  
C.I.B.M.R.D.

  
**Dr. Sagar Khursange**  
Co-Convener  
CIBC-2020





International Conference on  
**Literature, Society & the Global Media**

Date: 26 & 27, September, 2020

Jointly organized by  
Agra College, Agra, Uttar Pradesh, India  
Sabaragamuwa University of Sri Lanka, Sri Lanka

&

Research Culture Society

Ref.No: ICLSGM/CPP/016

***Certificate of Participation and Presentation***

This is to Certify that

**Dr. Archana Kiran Deshmukh**

has participated and presented article / paper titled

A Study of Media and Women Empowerment: Pre-Independence to Modern India

in 'International Conference on Literature, Society & the Global Media'  
dated 26<sup>th</sup> & 27<sup>th</sup> September, 2020.

**Dr. Rekha Patsariya**  
Principal, Agra College, Agra, UP, India.

**Dr. C. M. Patel**  
Director, Research Culture Society.

**Dr. Sangeeth Rathnayake**  
Head, Department of Languages,  
Sabaragamuwa University of Sri Lanka.



13<sup>th</sup> CIMC 2020



Hosted By

NAAC Accredited B+ Grade

**CENTRAL INSTITUTE OF BUSINESS MANAGEMENT,  
RESEARCH & DEVELOPMENT**



This is to certify that *Dr. Archana Kiran Deshmukh* has been awarded Certificate of Publication for research

Paper titled

**"Future of education in India: a review"**

published in Special Issue - 256 : The New Normal : Evolving Scenario in Business and Economy of

**RESEARCH JOURNEY - International E-Research Journal with E-ISSN : 2348-714, Nov-2020**

Peer Refereed & Indexed Journal, Impact Factor - (SJIF) - 6.625 (2019)

*Dr. Archana Kiran Deshmukh*

Dr. Anshu Talwar

*Dr. Sagar Khursanga*

Dr. Archana Kiran Deshmukh

Dr. Sagar Khursanga

*Dr. Archana Kiran Deshmukh*  
13.11.2020  
13.11.2020  
13.11.2020  
13.11.2020



**Vasantrao Naik Government Institute of Arts and Social Sciences, Nagpur**  
**Department of English**

Organized Two Day National Webinar

**Depiction of India in English Literature**  
in collaboration with

Departments of English of

Rajkumar Kewalramani Mahila Mahavidyalaya, Jaripatka, Nagpur  
Dr. M. K. Umathe College of Arts and Commerce, Nagpur  
Bhiwapur Mahavidyalaya, Bhiwapur

**Letter of Participation and Publication**

This is to certify that **Dr./Mr./ Ms./ Dr. Archana Kiran Deshmukh** has attended Two Day National Webinar titled Depiction of India in English Literature organized on 28 and 29 of May 2021. The paper submitted by him/her titled **Indian Culture and Hinduism : A Study of Jim Corbett's Work** has been shortlisted for Webinar Publication in Peer Reviewed Journal, indexed in SJIFactor.com with impact factor of 8.072 for the year 2021.

*Sujata Vyas*

**Dr. Sujata Vyas**  
Director, (Incharge)  
VNGIASS, Nagpur

*Delis*

**Dr. Urnila Dabir**  
BoS Chairperson and  
Principal, RKMM, Nagpur

*Prinsecare*

**Dr. Jobi George**  
Convener and Principal  
Bhiwapur M.V., Bhiwapur

*Dr. D. V. Naik*

**Dr. D. V. Naik**  
Convener and Principal  
Dr. M. K. Umathe College,  
Nagpur



# DPU

Dr. D. Y. Patil Unitech Society's  
Dr. D.Y. Patil College of Education (B.Ed., M.Ed.)  
Pimpri, Pune 411018.

(NAAC ACCREDITED WITH 'B' GRADE)

## Certificate



### (TWO DAY'S INTERNATIONAL CONFERENCE)

This certificate is presented to Prof/ Dr. /Mr./ Mrs./ ..... **Dr. Archana Kiran Deshmukh**  
From ..... Asst. Prof. Dept of English, Jawaharlal Nehru Arts, Commerce & Science College, Wadi, Nagpur. He / She has Presented &  
Published Paper on Global Emerging Trends in Transformation of English Language Teaching. .... in

*International Conference on Global Emerging Trends in Transformation of Education*  
*(A Multidisciplinary approach) on 20<sup>th</sup> & 21<sup>st</sup> April 2021 in Educational Resurgence Journal Vol. 3,*  
*Special Issue June 2021 bearing ISSN No. 2581-9100, Organized by Dr. D. Y. Patil College of Education, Pimpri, Pune*  
*in Association with IQAC, DYPCOED, Savitribai Phule Pune University & Research Culture Society,*

Asst. Prof. Suresh Waghmare  
Convener  
Dr. D.Y. Patil College of Education

Dr. Rekha Pathak  
Principal  
Dr. D.Y. Patil College of Education

Certificate No. 425

INTERNATIONAL E-CONFERENCE

ON

# INNOVATIVE RESEARCH TRENDS IN LIFE SCIENCES

(3<sup>rd</sup>, 4<sup>th</sup> & 5<sup>th</sup> December 2020)

Shri Shivaji Education Society, Amravati's



**SHRI SHIVAJI COLLEGE OF ARTS,  
COMMERCE AND SCIENCE, AKOLA**



Department of Life Sciences

In Collaboration with

**INDIAN SCIENCE CONGRESS ASSOCIATION  
( Amravati Chapter )**

## CERTIFICATE

This is to certify that

**Dr. M. N. Bhajbhaje**, Department of Botany, Jawaharlal Nehru Mahavidyalaya, Wadi, Nagpur(MS) has participated in the International e-Conference on Innovative Research Trends In Life Sciences (ICIRTLS-2020) held during 3<sup>rd</sup> to 5<sup>th</sup> December 2020 and organized by Department of Life Sciences, Shri Shivaji College of Arts, Commerce and Science, Akola (MS) in collaboration with Indian Science Congress Association- Amravati chapter (MS). He/ She has presented his/ her research paper entitled as **Mycodiversity of seed borne flora of Vigna unguiculata L.** as e-poster/ oral e-presentation.

The organizers acknowledge his/ her contribution and cooperation.

**Dr. R. M. Dhise**  
Principal & Chief Organizer  
ICIRTLS-2020

**Dr. A. S. Rant**  
Co-Organizer  
ICIRTLS-2020

**Dr. P. P. Umale**  
Convener,  
ICIRTLS-2020

**Dr. D. K. Koche**  
Organizing Secretary,  
ICIRTLS-2020

**Dr. Anil Budhike (M.Sc.,) Lecturer, P. H. E.**  
Convener - **Mass. Coll. of English**  
ISCA-Amravati Chapter  
Amravati, Maharashtra  
Akola, Nagpur

**2019-2020**

| S. No. | Name of faculty member | Department | Title of research paper   | Any other details   |
|--------|------------------------|------------|---|---|
| 01.    | Dr. A. R. Nagpure      | Maths      | Spherically symmetric cosmology in presence of perfect fluid  | Paper published in International Journal of Engineering and Creative science , ISSN 2456-3463 ( 2020)   |
| 02.    | Dr. A. R. Nagpure      | Maths      | Axially symmetric bulk viscous cosmological solutions with zero mass scalar field in general relativity | Paper published in International Journal of Engineering and Creative science , ISSN 2581-6667 ( 2020)   |
| 03.    | Dr. S. K. Shembekar    | Commerce   | Analytical study of foreign direct investment in India  | Paper published in International Journal of research in IT and management, ISSN 2231-4334. (November 2019)  |
| 04.    | Dr. S. K. Shembekar    | Commerce   | A study of E commerce in today's Global market  | Paper published in National Journal of Multidisciplinary research, ISS 2277-3428. (18 eptmr2019)  |
| 05     | Dr. Mrs. N. H. Kamble  | Commerce   | A study of startup scenario in Indian E commerce Industry.  | International E conference on E Business, E-Management, E-Education and E-Governance Organised by Kamla Nehru Mahavidyalaya Nagpur 7-8 Feb. 2020.                     |
| 06     | Dr. M. N. Bhajbhujje   | Botany     | Paper published   | International conference on Role of economy and ecology in sustainable development by Arts, Commerce College Phondaghat, Dist. Sindhudurg on 3 <sup>rd</sup> May 2020 |

  
 Principal  
 Jawaharlal Nehru Arts, Comm. & Sci  
 College, WadiNagpur

# Spherically Symmetric Cosmology in Presence of Perfect Fluid

Dr. Avinash Nagpure<sup>1</sup>, Manjushree Muley<sup>2</sup>, Dr. S.D. Tade<sup>3</sup>

<sup>1</sup>Department of Mathematics, Research Scholar Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

<sup>2</sup>Department of Mathematics, Jawaharlal Nehru Arts, Commerce & Science College, Wadi, Nagpur-440011 (India)

DOI: 10.46335/IJIES.2020.5.8.6

**Abstract** – The Spherically Symmetric Model has been obtained in the general theory of relativity. The source for energy-momentum tensor is assumed a perfect fluid. The field equation has been solved by using a special form of the average scale factor

$$R(t) = \left[ (t-t_0)^2 + \frac{t_0}{1-\beta} \right]^{\frac{1}{1-\beta}}$$

proposed by Cai et al. The physical properties and the bouncing behaviour of the model are also discussed.

**Keywords**– Spherically symmetric space time, Bouncing universe

## 1- INTRODUCTION

In this paper bouncing behaviour of Spherically Symmetric cosmological model has been obtained in the general theory of relativity. This work is organised as follows in Section 2. The metric and field equations have been presented. The field equations have been solved in section 3 by using a physical condition that the expansion scalar  $\theta$  is proportional to shear scalar  $\sigma$  and the special form of average scale factor

$$R(t) = \left[ (t-t_0)^2 + \frac{t_0}{1-\beta} \right]^{\frac{1}{1-\beta}}$$

Proposed by Cai et al. (2011). The physical and geometrical behaviour of the model have been discussed in section 4 in the last section 5 concluding remarks have been expressed.

## II- METRIC AND FIELD EQUATIONS

We consider five dimensional spherically symmetric metric of the form

$$ds^2 = dt^2 - a_1^2 dx^2 - a_2^2 [d\theta_1^2 + \sin^2 \theta_1 d\theta_2^2 + \sin^2 \theta_1 \sin^2 \theta_2 d\theta_3^2]$$

Where the metric functions  $a_1, a_2$  are functions of cosmic time 't' only.

The energy-momentum tensor for a perfect fluid is

$$T_i^j = (\rho + p) u_i u^j - p \delta_i^j$$

where  $p$  is the pressure,  $\rho$  is the energy density and  $g_i^j$  is a metric tensor. In co-moving coordinate system,  $u^i$  are the four co-moving velocity vectors which satisfy the condition

$$u_i u^i = 0, \text{ for } i = 1, 2, 3, 4$$

$$\text{and } u_i u^i = 1, \text{ for } i = 0$$

From equation (2) the components of energy momentum tensor are



# Axially Symmetric Bulk Viscous Cosmological Solutions with Zero Mass Scalar Field in General Relativity

Dr. Avinash Nagpure<sup>1</sup>, Manjushree Muley<sup>2</sup>, Dr. S. D. Tade<sup>3</sup>

<sup>1</sup>Department of Mathematics, Research Scholar, Rasthwarshi Tukadoji Maharaj Nagpur University, Nagpur

<sup>2,3</sup>Department of Mathematics, Jawahar Lal Nehru Arts, Commerce & Science College, Wadgaon, Nagpur-440031/India

**Abstract** - In this paper, we have investigated axially symmetric cosmological model with bulk viscosity and zero-mass scalar field in general relativity. The cosmological models are obtained with the help of the special law of variation for Hubble's parameter proposed by Berman (Nova Acta 149:182, 1983). Some physical properties of the models are discussed.

**Keywords**- Axially Symmetric space time, Zero-mass scalar field, Bulk viscosity, General Relativity.

## 1. Introduction

General theory of relativity proposed by Einstein [1] is the most successful theory of gravitation in which gravitation is described in terms of geometry.

The field equations in general relativity are,

$$R_i^j - \frac{1}{2} g_i^j R = -T_i^j, \quad (1)$$

where  $R_i^j$ ,  $R$  &  $T_i^j$  have the usual meaning.

Moreover, in order to understand evolution\* of the universe, many authors constructed cosmological models containing a viscous fluid. The presence of viscosity in the fluid introduces many interesting features in the dynamics of homogenous cosmological model. Bulk viscosity plays an important role in cosmology in getting

the accelerated expansion of universe. The possibilities of bulk viscosity leading to inflationary like solution in General Relativity. Another feature of bulk viscosity is that it acts like a negative energy field in an expanding universe. Many authors have studied cosmological models with the presence of bulk viscous fluid and cosmic strings coupled with scalar fields which play a vital role in the discussion of large scale structure and behaviour of the early universe. Khudekar et al. [3] discussed bulk viscosity in Friedmann universe with a varying speed of light described by modified equation of state. The five dimensional Kaluza - Klein universe with bulk viscosity and cosmic strings in Brans Dicke theory has been studied by Naidu et al. [4]. Reddy et al. [5] have studied five dimensional Kaluza-Klein universe with bulk viscosity and cosmic string in  $f(R, T)$  theory of gravity. Further Reddy et al. [6] discussed LRS Bianchi type-II universe in the presence of a bulk viscous fluid with one - dimensional cosmic strings in the scale-covariant theory of gravity proposed by Canuto et al. [7].



---

Analytical Study of Foreign Direct Investment in India

**Dr. Subhash K. Shembekar**  
Jawaharlal Nehru Arts, Commerce and Science College  
Wadi, Nagpur

**Abstract :**

FDI India was born with a single objective, of enabling financial strength for our clients through quality and conflict free Foreign Investments. FDI has support to raise the output, productivity and export in some sectors. However, it can be observed from the result of the PCONT that a very minimal relation in these variables (output, labour productivity and export) is established by the FDI inflows into the sectors. This may be due to the low flow of FDI into India both at the macro level as well as at the sectorial level. This paper focuses on the role of FDI in the Indian Economy.

*Keywords : FDI, Economy, investment*

**Introduction :**

FDI plays a pivotal role in a country. It provides a boost to working of the economy. Requirement of FDI relies on saving and investment rate of a country and in order to fulfil the gap between investment and saving, FDI plays an important role and acts as a bridge to fulfil the gap between investment and savings (Dwivedi & Kumar, 2017). Domestic saving limitations can be covered through foreign capital during the economic development process and through that it also provides superior and better technology that promotes better efficiency to the existing production capacity and thereby generate new production opportunity. It creates a window of transparency between the nations and hence accelerating bilateral trade among the countries (Hargreaves & Dermott, 1999). In the past two decades, the entire globe has witnessed the growing potential of foreign direct investment. In simple terms FDI means to the net inflows of funds into the home country which in turn leads to economic development (Noorbakhsh et al., 2001). It is a type of investment where the foreign funds are bought into an enterprise which operates in a different nation of origin from the investor. It is an important tool for any economy which acts as a lube for the economy. As per the

## A Study of E-Commerce in Today's Global Market

**Dr. Subash Shembekar**  
Assistant Professor,  
J.N. College, wadi

---

### Abstract

*Many experts believe that in recent years, a revolution has occurred similar to the industrial revolution which the world has entered the information age. It makes large changes in the economic, social and cultural aspects. One aspect of this transformation is changes in economic relations between individuals, corporations and governments. Commercial exchange between people who had been based on paper documents to transactions of by us the systems based on electronic information.*

**Keywords :** E-Commerce, advantage.

### Introduction

E-Commerce stands for electronic commerce and refers to exchange of products, services and information via internet. Electronic commerce is more than just buying and selling products online. It includes the entire online process of developing, marketing, selling, delivering, serving and paying for products and services. It is doing business online. It includes any commercial activity that takes place directly between a business, its partners, or its customers through electronic communication and digital information processing technology. E-Commerce is a modern business methodology that addresses the needs of the organisations, merchants and consumers to cut costs while improving the quality of goods and services and increasing the speed of service delivery. India has shown tremendous growth in the E-Commerce segment. E-Commerce has become an important tool for small and large businesses worldwide, not only to sell to customers but also to engage them.



OUR HERITAGE  
ISSN: 0474-9030, Vol-68, Special Issue-9  
International Conference On E-Business, E-Management,  
E-Education and E-Governance (ICE4-2020)  
Organised by  
Kamla Nehru Mahavidyalaya, Nagpur  
7th & 8th February-2020



## A study of startup scenario in Indian E-Commerce Industry

Dr. Nabha Kamble  
Associate Professor  
Department of Commerce,  
Jawaharlal Nehru Arts, Commerce and Science College,  
Wadi, Nagpur

### Abstract:

The e-commerce model, which is the simple extension of physical store, today is proven one extended to M-Commerce, Social Commerce and E-Startups. There are an increasing number of startups in the Indian e-commerce industry which has brought the new concept of business via online market places. Due to extensive demand for online goods and service, the e-commerce industry has been growing rapidly and thus there are bigger opportunities to the new entrepreneurs to take the advantages of the same. The paper deals with the study of startup scenario in Indian e-commerce industry.

*Keywords: e-commerce, E-Startups, online market places, online goods and service*

### Introduction:

In this era of globalization and internet technology, many finds lots of knowledge, information resources and business opportunities but population who are availing the real opportunities through internet, information and communication technology are the budding startup founders. This era can be seen as a boon for those who are able to transform their ideas into business venture. India ranks third largest hub for startups worldwide, with around 800 startups launched every year in India, billions of dollars in funding from venture capitalist and angel investors, encouraging towards entrepreneurship.



Phondaghat Education Society's

# Arts & Commerce College, Phondaghat

Dist. Sindhudurg - 416601, State - Maharashtra, INDIA

Affiliated to University of Mumbai (NAAC Grade "B")

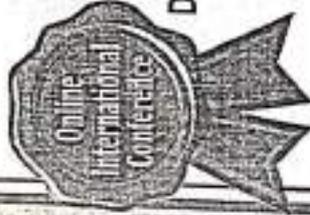
During Lock down period of Covid-19, our Institution is Organizing

## One Day Online International Interdisciplinary Conference on

### "ROLE OF ECONOMY AND ECOLOGY IN SUSTAINABLE DEVELOPMENT"

Organized by :-

Department of Economics, Department of Geography and Internal Quality Assurance Cell (IQAC)



*This is to certify that, Dr. M. N. Bhajbhujje of Jawaharlal Nehru College, Wadi, Nagpur, Maharashtra has actively participated and presented paper on Aeromycota of Satpuda National Garden, Nagpur through online video in International Conference on "Role of Economy and Ecology in Sustainable Development" on 3<sup>rd</sup> May, 2020 (During the Lock down period-Covid 19) organised by Arts & Commerce College, Phondaghat, Tal. Kankavli, Dist. Sindhudurg (M.S.).*

Dr. B. A. Survase  
Convener  
Department of Economics

Dr. R. B. Patil  
Convener  
Dept. of Geography & IQAC

Dr. S. N. Kamat  
Organising Secretary & I/C Principal,  
A & C College, Phondaghat