

OCS-AMCA | 2022

18-19 DECEMBER

36<sup>th</sup> Annual Conference of  
**Orissa Chemical Society**  
&  
**National Conference on  
Advances in Materials Chemistry  
and Applications**

BOOK OF ABSTRACTS



**Department of Chemistry**  
**Utkal University**  
**Vani Vihar, Bhubaneswar-751004**  
**Odisha**

**36<sup>th</sup> Annual Conference of Orissa Chemical Society  
& National Conference on  
Advances in Materials Chemistry and Applications  
(OCS-AMCA -2022)  
December 18-19, 2022**

**Souvenir cum  
Book of Abstracts**

*Organised by*



**Post Graduate Department of Chemistry  
Utkal University, Vani Vihar, Bhubaneswar 751 004, Odisha  
&  
Orissa Chemical Society**



**Prof. Ganeshi Lal**

Governor, Odisha

ପ୍ରଫେସର ଗଣେଶୀ ଲାଲ

ରାଜ୍ୟପାଳ, ଓଡ଼ିଶା



सत्यमेव जयते

RAJBHAVAN  
BHUBANESWAR - 751 008

ରାଜଭବନ  
ଭୁବନେଶ୍ୱର-୭୫୧ ୦୦୮

December 16, 2022

MESSAGE

I am glad to know that the P.G. Department of Chemistry, Utkal University, Bhubaneswar is organising the 36<sup>th</sup> Annual Conference of "Orissa Chemical Society (OCS)" & a National Conference on "Advances in Materials Chemistry and Applications (AMCA)" on December 18-19, 2022. A Souvenir-cum-Book of abstract is also being brought out on the occasion.

Orissa Chemical Society is among the foremost scientific societies in the State. Since its formation, it has organised a number of activities and events building networks and connectivity for faculty, researchers and chemical professionals in the State. Chemistry represents an area of research strength and Materials Chemistry has been a popular research field in the chemistry community in Odisha. The national conference is an important forum for exchange of ideas and dissemination of knowledge. I am confident that both the annual conference and the national conference would be highly stimulating, interesting and productive.

I wish OCS-AMCA-2022 conference and publication all success.

(Ganeshi Lal)



**SHRI ROHIT PUJARI**  
MINISTER OF STATE (IND. CHARGE)  
Higher Education, Odisha



D.O. No. .... /MOSHE

BHUBANESWAR

Date 16/12/2022

### MESSAGE

I am glad to know that the P. G. Department of Chemistry, Utkal University, Bhubaneswar is organising 36th Annual Conference of "Orissa Chemical Society (OCS)" & National Conference on "Advances in Materials Chemistry and Applications (AMCA)" during December 18-19, 2022. A souvenir-cum-book of abstract is being brought out to mark the occasion.

Orissa Chemical Society has been constantly working to promote and improve the standard of teaching and research in chemistry and allied sciences in Odisha since 1985. On the other hand, Materials Chemistry has emerged as an important sub-discipline within chemistry and holds the keys in design and synthesis of new materials with better performance and tailored made properties. I believe the deliberations during the conference will focus on the latest development in Chemical sciences in general and materials chemistry in particular. My best wishes to all the participants, invitees, staff and students of Department for this scientific endeavour.

I wish the conference and publication a grand success.

  
(Rohit Pujari)



**Professor Sabita Acharya**  
**VICE CHANCELLOR**



**UTKAL UNIVERSITY**

VANI VIHAR, BHUBANESWAR - 751004  
ODISHA, INDIA  
www.utkaluniversity.ac.in  
Mob : 9437015893(0), 9438423366(P)  
Tel. Off: (0674) 2567700  
E-mail : vcuu@rediffmail.com  
vc@utkaluniversity.ac.in

Date:

### **MESSAGE**

I am glad to know that the Department of Chemistry, Utkal University, Bhubaneswar is organising a National Conference on "Advances in Materials Chemistry and Applications (AMCA) along with 36<sup>th</sup> Annual Conference of "Orissa Chemical Society (OCS)" during December 18-19, 2022. A souvenir-cum-book of abstract is being brought out on this occasion.

Since its inception in 1985, Orissa Chemical Society has been engaged in organizing different programmes/events for the improvement of teaching standard and research in chemical sciences in Odisha. The conference series on AMCA is in the line of thrust area research of Department of Chemistry, Utkal University to bring distinguished researchers, academicians, and students into a common platform for an in-depth discussion on recent advancement in materials chemistry and applications.

I am sure the deliberations during the conference will not only enlighten the participants with the updated information on recent developments in the frontier areas of chemistry and material science but also encourage for collaborations among the concerned stakeholders and immensely help the younger generation of researchers for future course of their research.

I congratulate the Organising Committee for conducting this event and wish the conference and publication a grand success.

  
**(Sabita Acharya)**



**CENTRAL OFFICE  
POST-GRADUATE COUNCIL  
UTKAL UNIVERSITY**

**Prof. Durga Shankar Pattnaik**  
**Chairman**  
**P.G. Council**

**Gram: UTKALVIHAR**  
**Uni. Fax- (0674) 2581850**  
**Phone: (0674) 2567036**  
**Mobile: 09437484999**



**MESSAGE**

I am happy to know that the P. G. Department of Chemistry, Utkal University, Bhubaneswar is organising 36<sup>th</sup> Annual Conference of “Orissa Chemical Society (OCS)” along with a National Conference on “Advances in Materials Chemistry and Applications (AMCA)” during December 18-19, 2022. A souvenir-cum-book of abstract is being published on this occasion.

Materials Chemistry is exciting and interdisciplinary area of research which plays vital role in development of new materials for varied applications. This conference will bring together the scientists, academicians, research scholars and students into one forum for discussion on the latest developments in chemical science in general and materials chemistry in particular.

I hope the discussions during the conference will encourage the faculty, research scholars and students of the department for undertaking more collaborative research and also immensely help the next generation researchers to face the upcoming challenges in their research careers.

I convey my good wishes to the Organising team, students and staff of the department and wish both the conferences all success.

A handwritten signature in black ink, appearing to be 'D' with a vertical line through it, and the date '15.12.22' written below it.

(Durga Shankar Pattanaik)  
Chairman, P.G. Council



**Prof. S. N. Mohanty**  
*President*  
**Orissa Chemical Society**

### **MESSAGE**

It gives me immense pleasure to know that “Proceedings” of **36<sup>th</sup> Annual Conference of Orissa Chemical Society and National Conference** on “Advances in Materials Chemistry and Applications” - **2022**, organised jointly by Orissa Chemical Society & P. G. Department of Chemistry, Utkal University, Vani Vihar, Bhubaneswar on **18<sup>th</sup>&19<sup>th</sup> Dec., 2022** is being published for future reference and wide circulation. I hope that the publication will inspire young learners & researchers to a large extent & will steer their journey in right direction.

Hope the conference a **Grand Success**.

*Chemistry is a beautiful branch of physical sciences. It is studied by learners, explained by teachers, explored by researchers and authorised by scientists*

A handwritten signature in black ink, appearing to read 'S. N. Mohanty', written in a cursive style.

**(S. N. Mohanty)**  
**President**  
**Orissa Chemical Society**

## **ABOUT ORISSA CHEMICAL SOCIETY**

The Orissa Chemical Society (OCS) was established in the year 1985 with Prof. Mahendra Kumar K. Rout as the founder president. The primary objectives are to (i) promote, improve the standard of teaching and research in chemistry and allied sciences in Odisha, (ii) organise conference and symposia for further improvement in teaching and research in chemistry, (iii) create public awareness regarding the environmental impacts of the use of various chemicals in our daily life, (iv) bring out a journal/magazine in chemistry, and (v) popularize the discipline of chemistry. Till date more 1500 chemists have enrolled as life and patron member of the society. OCS organises annual and regional conference on regular basis besides OCS-Industry meet and bestowed several awards to students and young for their achievements in different domain.

## **ABOUT UTKAL UNIVERSITY**

Established in 1943, Utkal University, Bhubaneswar is the 17<sup>th</sup> oldest University of India and the 1<sup>st</sup> University of the state of Odisha. The University has acquired NAAC A<sup>+</sup> accreditation and secured 87<sup>th</sup> NIRF rank of 2021. It caters to the learning needs of about 1.5 crore people belonging to nine districts of the state. It is a teaching, research-cum-affiliating university offering 27 full-fledged regular Post-Graduate programmes and 15 Self-Financing programmes within the campus and has more than 370 affiliated colleges covering faculties of Humanities and the Social Sciences, Science & Technology, Commerce and Management, Pedagogical Science (Education), Medicine including Ayurveda, Homeopathy, paramedical.

## **ABOUT DEPARTMENT OF CHEMISTRY**

The P.G. Department of Chemistry, established in the year 1967, has been imparting teaching and training in emerging fields of Chemistry and Chemical sciences through regular M.Sc., M.Phil. and Ph.D. programmes. The department has been well recognized at national level and received funds through UGC (Under DRS, DSA-I, DSA-II) and DST (FIST and PURSE) programmes besides sponsored projects from various funding agencies. The department has celebrated its Golden Jubilee in the year 2017. During last 55 years, the department has produced a large number of quality human resources in Chemical sciences, who occupied important academic/research and industrial positions in India and abroad. Currently, with nine well qualified faculty members, the department is actively engaged in teaching and pursuing research in several frontier areas of chemical sciences.

## **ABOUT THE CONFERENCE**

The conference of **OCS-AMCA 2022** aims to provide a forum for eminent academicians, scientists, technologists and young researchers to exchange and share their experiences and research results on the latest developments in various fields of chemical science. It is expected that the august gathering will deliberate on future direction of research in chemical science in general and materials chemistry in particular to find solutions of some upcoming challenges.



## **LOCAL ORGANISING COMMITTEE**

|                             |   |
|-----------------------------|---|
| <b>Chief Patron</b>         | : Prof. S. Acharya, Vice Chancellor, Utkal University       |
| <b>Patron</b>               | : Prof. D.S. Pattanaik, Chairman, P.G. Council, Utkal Univ. |
| <b>Convener</b>             | : Prof. N. Das, Department of Chemistry                     |
| <b>Organising Secretary</b> | : Dr. B. N. Patra, Department of Chemistry                  |
| <b>Treasurer</b>            | : Dr. S. N. Pal, Department of Chemistry                    |

## **MEMBERS**

|                                     |  |
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| Prof. J. Behera, Utkal University   | Prof. S. K. Badamali, Utkal University |
| Dr. J. Dinda, Utkal University      | Prof. Renuka Sahu, B.J.B College.      |
| Dr. B. Jena, Utkal University       | Dr. A. K. Behera, Utkal University     |
| Dr. H. K. Kisan, Utkal University   | Dr. B. C. Tripathy, IMMT, Bhubaneswar  |
| Dr. A.N. Acharya, OUTR, Bhubaneswar | Dr. N. Swain, OUAT, Bhubaneswar        |
| Dr. S. Mohanty, CIPET, Bhubaneswar  |  |

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| Prof. S. Samal, Retd. Prof., S.B Rath Womens College |   |

## **EXECUTIVE COMMITTEE OF OCS**

|                                |   |
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| <b>President</b>               | : Prof. Surendra Nath Mohanty   |
| <b>Vice Presidents</b>         | : Prof. Nigamananda Das<br>Prof. Sarat K. Swain<br>Prof. Pramoda K. Satapathy |
| <b>Secretary-cum-Treasurer</b> | : Dr. Debasis Mohanty   |
| <b>Joint Secretaries</b>       | : Prof. (Mrs.) Jayanti Panda<br>Dr. Bigyan Ranjan Jali                        |

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| Dr. Nrusingha Charan Pati  | Prof. Ajay Kumar Behera    |
| Prof. Arun Kumar Padhi     | Prof. Narayan Pradhan      |
| Prof. Paritosh Mohanty     | Mr. Ashok Kumar Nayak      |
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| Mrs. Sasmita Panda         | Dr. Subash Ch. Mallick     |

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Shubhendu Sekhar Patra  
Bikash Kumar Rout  
Manthan Kumar Mohapatra  
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Pushpa Munda  
Bhagyashree Bhatra  
Priyadarshinee Pradhan  
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Ananta Krushna Sahoo

## **Cultural Committee**

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Satyasmita Swain  
Shibani Jamdalia  
Juee Mahananda  
Niharika Khora  
Bismrit Ranjan Mishra  
Swapnil Tarei  
Prakash Narayan Majhi  
Manabhanjan Tripathy

**36<sup>th</sup> Annual Conference of Orissa Chemical Society &  
National Conference on  
Advances in Materials Chemistry and Applications  
(OCS-AMCA-2022)**

**December 18-19, 2022**

**P. G. DEPARTMENT OF CHEMISTRY**

**Utkal University, Bhubaneswar 751 004, Odisha**

**PROGRAMME**

Venue: M. K. C. G. Auditorium, Utkal University

| <b>Day 1 : 18<sup>th</sup> December 2022</b>         |  |                             |
|--|--|-----------------------------|
| <b>8.00 – 9.50 AM : Registration &amp; Breakfast</b> |  |                             |
| <b>10.00 – 11.00 AM : Inauguration</b>               |  |                             |
| <b>Technical Session-I</b>                           | <b>Speaker</b>   | <b>Session Chair</b>        |
| 11.00 AM – 11.45 AM                                  | Prof. M. K. Rout Memorial Lecture<br><b>Prof. A. K. Sahoo</b><br>University of Hyderabad   | <b>Prof. S. N. Mohanty</b>  |
| <b>11.45 AM – 12.00 TEA BREAK</b>                    |  |                             |
| 12.00 Noon - 12.20 PM                                | Award Lectures<br>AL-1: Prof. Dayanidhi Patnaik Memorial Award<br><b>Ms. N. N. Bhuyan, Sambalpur University</b>  | <b>Prof. B. K. Mishra</b>   |
| 12.20 PM - 12.40 PM                                  | AL-2: Prof. R. C. Tripathy Memorial Award (Inside-the-state Category)<br><b>Dr. B. R. Jali, VSSUT Burla</b>  |                             |
| 12.40 PM-1.00 PM                                     | AL-3: Prof. G. B. Behera Best PhD Thesis Award<br><b>Dr. A. Mohanty, NIT Rourkela</b>  |                             |
| <b>1.00 PM – 2.00 PM LUNCH BREAK</b>                 |  |                             |
| <b>Technical Session-II</b>                          | <b>Speaker</b>   | <b>Session Chair</b>        |
| 2.00 PM - 2.45 PM                                    | CIPET-Sponsored Prof. P. L. Nayak Memorial Lecture<br><b>Prof. Amar K. Mohanty</b><br>Professor & OAC Distinguished Research Chair, University of Guelph, ON, Canada | <b>Prof. Subasini Lenka</b> |
| 2.45 PM – 3.05 PM                                    | AL-4: Prof. Donald S. Matterson and Prof. P. K. Jesthi Award<br><b>Dr. Rupam Dhinda, NIT Rourkela</b>  | <b>Prof. A. K. Behera</b>   |
| <b>3.05 PM – 3.20 PM TEA BREAK</b>                   |  |                             |
| <b>Technical Session-III</b>                         | <b>Event</b>   | <b>Session Chair</b>        |

|  |   |   |
|--|---|---|
| 3.20 PM – 5.00 PM                            | <b>Poster Presentation</b>  | Inauguration by<br><b>Prof. S. C. Das</b> |
| 5.00 PM - 6.00 PM                            | <b>Oral Presentation<br/>OP1 – OP6</b>  | <b>Prof. A. Samantaray</b>                |
| 6.00 PM - 7.00 PM                            | <b>General Body Meeting</b>   |   |
| 7.00 PM - 8.00 PM                            | <b>Cultural Programme</b>   |   |
| 8.00 PM - 9.00 PM                            | <b>Dinner</b>   |   |
| <b>Day 2 : 19<sup>th</sup> December 2022</b> |   |   |
| <b>Technical Session-IV</b>                  | <b>Speaker</b>  | <b>Session Chair</b>                      |
| 9.30 AM – 10.15 AM                           | Prof. S. R. Mohanty Memorial Lecture<br><b>Prof. R.K. Dutta</b><br>Department of Chemistry, IIT<br>Roorkee    | <b>Prof. S. Jena</b>                      |
| 10.15 AM – 10.35 AM                          | AL-5: Prof. Sripati Pani Memorial<br>Award<br><b>Mr. Jayadev Nayak, IICT</b><br>Hyderabad                     | <b>Prof. S. Samal</b>                     |
| 10.35 AM – 10.55 AM                          | AL-6: Prof. Bimbadhar Nayak<br>Memorial Award<br><b>Dr. Santosh Kumar Behera, CSIR-<br/>IMMT, Bhubaneswar</b> |   |
| <b>10.55 AM -11.10 AM TEA BREAK</b>          |   |   |
| <b>Technical Session-V</b>                   | <b>Speaker</b>  | <b>Session Chair</b>                      |
| 11.10 AM –11.55 AM                           | Prof. Gangadhar Sahu<br>Memorial Lecture<br><b>Prof. A. C. Dash</b><br>Retd. Professor, Utkal University      | <b>Prof. Pranabadhu<br/>Tripathy</b>      |
| 11.55 AM –1.25 PM                            | <b>Oral Presentation<br/>OP7-OP15</b>   | <b>Prof. A. K.<br/>Pattnaik</b>           |
| <b>1.25 – 2.30 PM LUNCH BREAK</b>            |   |   |
| <b>Technical Session-VI</b>                  | <b>Speaker</b>  | <b>Session Chair</b>                      |
| 2.30 PM – 2.50 PM                            | AL-7: Prof. Manju Misra Award<br><b>Dr. Mamata Mohapatra, CSIR-<br/>IMMT Bhubaneswar</b>                      | <b>Prof. P. K.<br/>Mohanty</b>            |
| 2.50 PM - 3.30PM                             | <b>Poster Presentation</b>  | -   |
| 3.30 PM - 5.20 PM                            | <b>Oral Presentation<br/>OP16-OP25</b>  | <b>Dr. (Smt.) R. R.<br/>Das</b>           |
| 5.20 PM – 5.40 PM                            | <b>VALEDICTORY FUNCTION</b>   |   |

# ANNUAL REPORT OF THE SECRETARY-CUM-TREASURER ORISSA CHEMICAL SOCIETY FOR THE YEAR 2022



**Dr. Debasis Mohanty**

*Secretary-cum-Treasurer, OCS*

Head, Deptt. of Chemistry, Dhenkanal (A) College, Dhenkanal

Esteemed President of Orissa Chemical Society, Prof. Surendra Nath Mohanty, Honorable Vice-Chancellor of Utkal University, Chief Guest of the Inaugural Function of the 36<sup>th</sup> Annual Conference of Orissa Chemical Society (OCS), and Chief Patron of the Conference Prof. Sabita Acharya, honourable Chairman, P.G. Council, Utkal University, Dr. Durga Shankar Pattanaik, revered Guest of Honor Prof. Suddhasatwa Basu, Director, CSIR - Institute of Minerals and Materials Technology, Bhubaneswar, , the Head of the Department of Chemistry, Utkal University, and Organizing Secretary, Dr. Braja Narayan Patra, Convener of the National Seminar ‘Advances in Materials Chemistry and Applications (AMCA2022)’ Prof. Nigamananda Das, Joint Secretaries and Members of the Local Organizing Committee, Vice-Presidents, Joint-Secretaries, and Members of the OCS Executive Committee, esteemed former Presidents and Secretaries of the OCS, esteemed Members of the Awards Committee, and Members of the Prof. Mahendra Kumar Rout Birth Centenary Celebration Committee, distinguished invited speakers, life and patron members of the OCS, delegates, invitees, members of the press, and dear students, today, the 18<sup>th</sup> Dec 2022, the Orissa Chemical Society is celebrating the 36<sup>th</sup> Annual Conference in the Department of Chemistry, Utkal University, Bhubaneswar. On behalf of the Orissa Chemical Society, I extend you all a warm welcome to the Annual Conference.

The Orissa Chemical Society is the apex society of the chemists of the state. Conceptualized in the School of Chemistry, Sambalpur University in 1985, the organization was formed with the late Professor Mahendra Kumar Rout as the Founder and President. Since then, the OCS has consistently grown in strength with a member base of nearly 1500 Life and Patron Members. The Society is founded on the principle of equal emphasis on quality teaching and research in Odisha in frontline areas of chemical sciences. It organizes regional and annual conferences at regular intervals each year in institutes of higher learning and research of the state. I consider it a rare privilege to put up before this august house the Annual Report of the Society for the year 2022.

The 35<sup>th</sup> OCS Annual Conference was held on 18<sup>th</sup> -19<sup>th</sup> December 2021 at Maharaj Sriram Chandra Bhanja Deo University, Baripada. In the General Body meeting held on the 18<sup>th</sup> of December 2021 at Maharaj Sriram Chandra Bhanja Deo University, the Executive Committee for 2022 was formed with the following office bearers:

|                 |   |
|-----------------|---|
| President       | Prof. Surendra Nath Mohanty   |
| Vice-Presidents | 1. Prof. Nigamananda Das<br>2. Prof. Sarat Kumar Swain<br>3. Prof. Pramoda K. Satapathy |



|                         |  |
|-------------------------|--|
| Secretary-cum-Treasurer | Dr. Debasis Mohanty  |
| Joint Secretaries       | 1. Prof. (Mrs) Jayanti Panda<br>2. Dr. Bigyan Ranjan Jali  |
| Members                 | 1. Dr. Nrusnigha Charan Pati<br>2. Prof. Ajay Kumar Behera<br>3. Prof. Arun Kumar Padhi<br>4. Prof. Narayan Pradhan<br>5. Prof. Paritosh Mohanty<br>6. Dr. (Smt.) Smruti Pattanaik<br>7. Dr. Bibhuti Bhusan Parida<br>8. Mrs. Sasmita Panda<br>9. Dr. Subhash Chandra Mallick (Industry representative, Nominated by the President, OCS) |

The first meeting of the Executive Committee was held on the 20th of February 2022 at Utkal University, Vani Vihar, Bhubaneswar. In this meeting, apart from discussions of the various activities of the OCS, the Awards Committee was formed and the program of the first Regional Conference was approved. The second Executive Committee meeting was held on 26<sup>th</sup> October 2022 at Utkal University, Vani Vihar, Bhubaneswar. The programs for the 26<sup>th</sup> Regional Conference and 36<sup>th</sup> Annual Conference were finalized in this meeting. An emergency EC meeting was held on 17<sup>th</sup> November at VSSUT, Burla. The fourth EC meeting was held on 17<sup>th</sup> December 2022 at Utkal University. Besides these meetings, an online meeting was held on 26<sup>th</sup> June 2022 through a virtual platform in which the organizations/family members who instituted the new memorial lectures and awards were honored.

The EC formed the Awards Committee consisting of the following members:

1. Prof. B. K. Mishra
2. Prof. Prakash Mohanty
3. Prof. S. Samal
4. Prof. S. Jena
5. Prof. S. C. Das
6. Prof. Smrutiprava Das

The OCS gives several awards and prizes every year. Applications/nominations were invited, and based on decisions made by the Awards Committee, the winners of the awards/prizes are as follows:

### ORISSA CHEMICAL SOCIETY AWARDS 2022

| Sl. No. | Name of the Award                                       | Awardee   |
|---------|---|---|
| 1       | Prof. Dayanidhi Patnaik Memorial Award                  | Ms. Nirmala Niharika Bhuyan<br>Sambalpur University, Jyoti Vihar, Burla |
| 2       | Prof. R. C. Tripathy Memorial Award (Outside the State, | Required number of applications/nominations were not received.          |

|    |  |   |
|----|--|---|
|    | Odisha)  |   |
| 3  | Prof. R. C. Tripathy Memorial Award (Inside the State, Odisha)                   | Dr. Bigyan Ranjan Jali<br>Department of Chemistry<br>VSSUT, Burla, Sambalpur  |
| 4  | Prof. R. K. Nanda Award for Best Paper Presentation                              | To be decided in the Annual Conference of OCS, 2022   |
| 5  | Prof. G. B. Behera Best Ph.D. Thesis Award                                       | Dr. Abhinav Mohanty<br>Research Scholar, Department of Chemistry<br>NIT Rourkela  |
| 6  | Kulamani Das Memorial Award in Environmental Science                             | Required number of applications/nominations were not received.  |
| 7  | Prof. K. K. Patnaik Memorial Award   | Miss Pusalata Rout<br>P.G. Department of Chemistry<br>Berhampur University, Bhanja Vihar,<br>Berhampur  |
| 8  | Smt. Parvati Mishra Memorial Award   | Miss Pusalata Rout<br>P.G. Department of Chemistry<br>Berhampur University, Bhanja Vihar,<br>Berhampur  |
| 9  | B. K. Mohanty Memorial Book Grant  | No nominations  |
| 10 | Smt. Subhadra Devi Memorial Award  | No nominations  |
| 11 | Dr. Subasini Lenka Award for Best Poster Presentation                            | To be decided in the Annual Conference of the OCS, 2022   |
| 12 | Prof. Pranabandhu Tripathy Award   | Required number of applications/nominations were not received.  |
| 13 | Prof. Donald S. Matteson and Prof. P. K. Jesthi Award                            | Dr. Rupam Dinda<br>Professor of Chemistry<br>NIT, Rourkela  |
| 14 | Prof. Sripati Pani Memorial Award  | Mr. Jayadev Nayak<br>IICT, Hyderabad  |
| 15 | Sarat Chandra Science Promotion Award (Conferred in the OCS Regional Conference) | Ms. Sumita Patri<br>Budha Raja High School, Sambalpur<br>The award is already presented at the OCS Regional Conference held in VSSUT, Burla on 18 <sup>th</sup> – 19 <sup>th</sup> November 2022. |
| 16 | Prof. Bimbadhar Nayak Memorial Award   | Dr. Santosh Kumar Behera<br>Department of Materials Chemistry<br>CSIT-IMMT, Bhubaneswar   |
| 17 | Prof. Dinabandhu Bhatta Memorial Award   | Required number of applications/nominations were not received.  |
| 18 | Prof. Manju Mishra Award   | Dr. Mamata Mohapatra<br>Hydro & Electrometallurgy Department<br>CSIR-IMMT, Bhubaneswar  |

The 25<sup>th</sup> Regional Conference of the OCS and National Seminar on ‘Frontiers in Recent Chemical Research’ were held at Kendrapara Autonomous College, Kendrapara on the 13<sup>th</sup> and 14<sup>th</sup> of March 2022. Prof. Ashok Kumar Das, Vice Chairman, Odisha State Higher Education Council, was the Chief Guest of the Conference, and the keynote speech was delivered by Prof. Ashok Kumar Mishra of IIT, Madras. Several highly informative invited lectures were presented.

The 26<sup>th</sup> Regional Conference of the OCS was held at VSSUT Burla on the 18<sup>th</sup> and 19<sup>th</sup> of November 2022 along with the ‘Recent Advancement of Material Sciences (RAIMS 2022)’ series of lectures. Keynote lectures were presented by Prof. Tarasankar Pal, retired Professor of Chemistry, IIT Kharagpur, Prof. Sabu Thomas, Mahatma Gandhi University, Kottayam (Kerala), and Prof. Kallol K. Ghosh, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur (Chhattisgarh). It was a highly successful conference with several invited lectures, as well as oral and poster presentations.

The Chemistry Olympiad (OLYCHEM 2022) was held on 27<sup>th</sup> November 2022. It was a grand success with the participation of about three thousand students appearing at the test in different college/school centers spanning all over the state. The top three students of the Chemistry Olympiad are given the ‘Awarded Prize’ by the OCS. The best 20 students receive cash prizes and the Olympiad Certificate of Merit, and all the participants receive certificates.

Since the last OCS General Body Meeting, three of our revered teachers have passed away:

1. Prof. Duryodhan Mangaraj      10.08.1929 – 13.02.2022
2. Prof. Indu Bhusan Mishra      10.02.1938 – 13.09.2022
3. Dr. Siba Narayan Mohapatra      01.11.1928 – 26.10.2022

They will be remembered for their contributions to the cause of science as teachers and researchers par excellence.

The Memorial Lectures are significant events of the Annual Conference of the Society. The prestigious Prof. M. K. Rout Memorial Lecture, instituted in memory of Prof. Mahendra Kumar Rout, Founder President of OCS, Principal of Erstwhile Ravenshaw College, Vice-Chancellor of Utkal University, and Chairman of State Pollution Control Board, will be presented by Professor Akhil Kumar Sahoo, Professor, School of Chemistry, University of Hyderabad. In memory of Prof. S. R. Mohanty, Professor and Head, Department of Chemistry, Utkal University, the OCS organizes memorial lectures every year. This year, Prof. S. R. Mohanty Memorial Lecture will be presented by Prof. R. K. Dutt of IIT, Roorkee. The CIEPT-sponsored Prof. P. L. Nayak Memorial Lecture will be presented by Prof. Amar Kumar Mohanty, Professor & OAC Distinguished Research Chair, University of Guelph, ON, Canada, and Prof. Gangadhar Sahu Memorial Lecture will be delivered by Prof. Anadi Charan Dash, former President of OCS and distinguished Professor of Chemistry, Utkal University. In addition to the Memorial Lectures, two eminent chemists have been invited to deliver lectures on their recent work.

Some OCS Awards require that the awardee deliver a lecture on the subject that led to the award. Accordingly, there will be several award lectures during these two days of the conference. Abstracts have been invited for oral and poster presentations. The OCS will give Prof. R.K. Nanda Award for best oral presentation and Dr. Subasini Lenka Award for best poster presentation in the valedictory meeting.

In spite of our best efforts, this year it was not possible to conduct Prof. M. K. Rout Memorial Essay Competition, OCS Extended Lecture Series, and OCS-Industry Interface meet. The OCS will strive hard and hold these important events of the Society in the coming years.

With humility and respect, I, on behalf of the OCS, convey my heartfelt thanks to the organizers of the OCS Annual Conference. The honourable Vice-Chancellor of Utkal University, Prof. Sabita Acharya, has been a constant source of inspiration and guidance. The OCS will remain indebted to him. I convey my thanks to the honourable Director of IMMT, for his kind gesture in accepting our invitation to grace the inaugural meeting as the Guest of Honour. Prof. Nigamananda Das, the Convenor of the Conference, Dr. Braja Narayan Patra, the Organising Secretary, and all the Members of the Chemistry Department have been relentlessly working for the last several months to organize the meeting. The OCS holds their endeavor with great admiration and thanks one and all for their noble service. The conference speakers will inculcate scientific temper, particularly among young researchers and students.

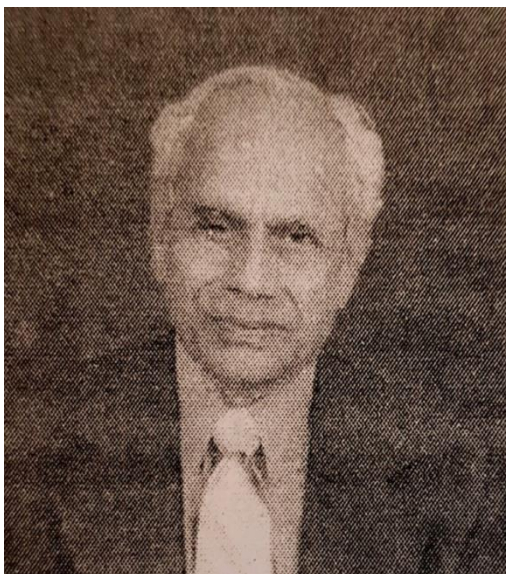
The OCS thanks the President of OCS, Prof. S. N. Mohanty, who has been a guiding force to alleviate the OCS to greater heights through several innovative programs. I am thankful to the Members of the Executive Committee, the Awards Committee, and the Chemistry Olympiad Committee for their selfless contributions to the OCS. The students are our force, and they are our future. Their contribution to the success of the Conferences deserves all the praise. Our sincere thanks to the Members of the Press, both print and digital media, for covering this state-level annual meeting. Lastly, I thank all the Members of the Supporting Staff, who have worked hard to make this meeting a grand success. I am sure the delegates will find this Annual Conference valuable and rewarding. Thank you all.



Dr. Debasis Mohanty  
Secretary-cum-Treasurer  
Orissa Chemical Society  
Head of the department  
Dhenkanal (A) College

The 36<sup>th</sup> Annual Conference of Orissa Chemical Society is dedicated to  
the loving memory of

## **Late Prof. Siba Narayan Mohapatra**



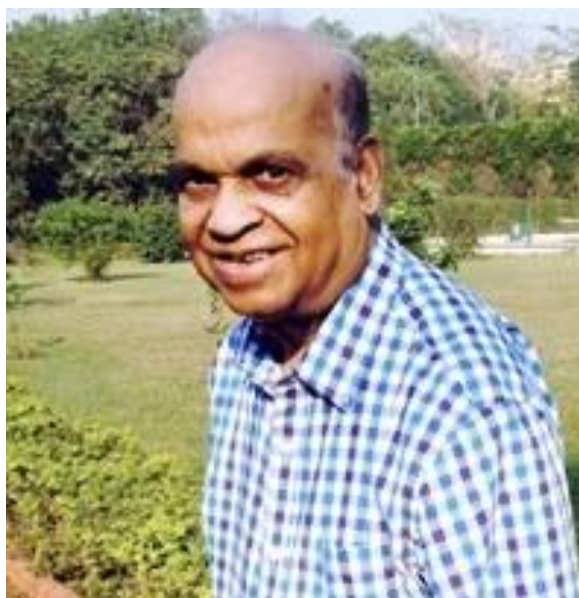
**01.11.1928 – 26.10.2022**

Prof. Siba Narayan Mohapatra was born in Mayurbhanj, Odisha, on 1st November 1928. He passed the Matriculation Examination in the year 1945. He passed B.Sc. (Hons.), and M.Sc. in Chemistry in 1949 and 1952, respectively, from Ravenshaw College. He served as Lecturer in Chemistry at Ravenshaw College and Khalikote College during 1952-59. He obtained his Ph.D. Degree in synthetic organic chemistry on the subject 'Synthesis of Natural Products' in 1958 from the Indian Institute of Science, Bangalore, working under the supervision of Prof. D. K. Banerjee. Prof. Mahapatra was a Post-Doctoral Research Associate in Chemistry at the IOWA State University under Prof. E. Wenkert and later at the University of Minnesota, Minneapolis, USA, under Prof. R. M. Dodson and worked on Synthetic Organic Chemistry from 1960 to 1963. Prof. Mahapatra joined Regional Research Laboratory (RRL), Bhubaneswar in 1965 as a Scientist, and worked as Project Coordinator & Head, of the Forests & Marine Products Division till 1988. During that period, he carried out research work on Natural Products, Marine Natural Products, Extraction of Drugs from Plant Sources, Chemistry of Oil Seeds, and Synthetic & Natural Perfumery Compounds, etc. He has to his credit 64 research publications both in Indian and foreign journals, several patents, and project reports. He is a Fellow and Member of a host of professional bodies both in the country and abroad. He was honoured as a "Distinguished Scientist" of the State by Odisha Bigyan Academy in the year 2000 for his outstanding research work in the field of Organic Chemistry. He was President of the Orissa Chemical Society in 1992. During his tenure as the OCS President, the Annual Conference was held at B.J.B. College, Bhubaneswar on February 20-21, 1993.



The 36<sup>th</sup> Annual Conference of Orissa Chemical Society is dedicated to  
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## Late Prof. Duryodhan Mangaraj



10.08.1929 – 13.02.2022

Prof. Duryodhan Mangaraj was born in Karilopatna in 1929, a small village in the Cuttack District (presently in Kendrapara District). He was the nephew of late Sri Jadumani Mangaraj, the first speaker of the Odisha Assembly. Jadumani Mangaraj was one of the few freedom fighters from Odisha, who joined Mahatma Gandhi for the independence of India from British rule. Prof. Duryodhan Mangaraj was a worthy son of the Managaraj legacy in the village. Prof. Mangaraj started his academic career as a Lecturer in Chemistry at Ravenshaw College, Cuttack. He moved to Kharagpur in 1961 as an Asst. Professor in Chemistry. In 1965, he moved to Harcourt Butler Technical Institute (HBTI) Kanpur (at present Harcourt Butler Technical University) as a Professor, and was officiating as the Director of the Institute before going to the USA. An unassuming and noble man, Prof. Mangaraj has made many contributions to polymer science, especially to rubber vulcanization. He was a founding member of the Odisha Society of the Americas (OSA). In 1997, Prof. Mangaraj, then a Life Member of the Orissa Chemical Society, came all the way from the USA at his own expense to deliver Prof. M. K. Rout Memorial Lecture at the OCS Annual Conference of 1997 held in the Department of Chemistry, Ravenshaw College, Cuttack. He is remembered as a teacher and advisor, for his deep political discussions and quirky jokes; a rare combination of an acclaimed scientist, a social organizer, and a simple man with many virtues. He loved life and he did not want to ever be far away from his family and friends. He was a quiet man who lived by many of Tagore's quotes "We live in the world when we love it". Prof. Mangaraj, at 92 years of age, passed away on 13<sup>th</sup> February 2022 at home peacefully with his family beside him.

The 36<sup>th</sup> Annual Conference of Orissa Chemical Society is dedicated to  
the loving memory of

## Late Prof. Indu Bhusan Mishra



10.02.1938 – 13.09.2022

Prof. Indu Bhusan Mishra was born in Kujahala, Odisha, in 1938. He received Bachelor's degree from Fakir Mohan College in 1957, Master's degree in Chemistry from Ravenshaw College in 1959, and Ph.D. degree from the University of Southern California under Prof. Anton Burg in 1971. Popularly known as the guru of boron hydrides, he served as a Lecturer of Chemistry at Ravenshaw College, Cuttack, and held Professor positions at the University of Brasilia, Brazil, Howard University, USA, University of Nevada-Reno, South Dakota School of Mines, and Arizona State University. He was the foremost teacher of chemistry to many of the original Oriyas immigrating to the United States. Prof. Mishra had numerous publications and he held many patents. One of the best examples of his patents was the perfection of the airbag. He holds the early patent on the propellant used in the Azide Airbag deployed widely in automobiles today. His discovery was used subsequently to drop payloads on Mars and has been successfully field-tested by dropping human capsules from 100,000 ft to assure a soft landing. As a very religious person, he embodied a deep humanitarian spirit. He volunteered his time and heart for many initiatives including the 2004 Indian Ocean earthquake and tsunami and helped the creation of Our Village Trust (OVT), a charity that built homes for the homeless in India. He contributed to resuscitating villages in Orissa which were affected by the Odisha Super Cyclone in 1999. His whole career was focused on thinking big – without boundaries – being fearless, forever anchored in enabling humanity. One of his favourite quotes was from Isaac Newton: "If I have seen further [than others], it is by standing on the shoulders of giants."

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