

The National Academy of Sciences, India

5, Lajpatrai Road, Prayagraj-211002, India



Summary of the Activities, held in the month of October 2022

1. A two day workshop on 'Novel Methods of Targeted Drug Delivery' was organized in joint collaboration with the IIT Allahabad on Sept 30 to Oct. 1, 2022 (copy of the programme enclosed herewith as **Annex. 1**). About 200 students participated in the programme.
2. NASI has chalked out a detailed plan for celebrating 'Azadi ka Amrit Mahotsav (AKAM)', which will continue for another year and will culminate on August 15, 2023, as per direction of the DST, GoI. NASI-HQ and its different Chapters will participate in this activity. A programme on the Assembly of Telescope & Night Vision, was organized by the NASI-Delhi Chapter (**Annex. 2**), in continuation of AKAM.
3. Birth Anniversary of Prof. Meghnad Saha, a world famous scientist and the founder of NASI, was celebrated on 6th Oct. 2022 in a hybrid mode in the Academy. Further in continuation of the celebration, the NASI joined hands with other organisations (as MNNIT, UoA, IIT Allahabad, etc.) for an elaborate programme on Oct. 27-28, 2022 (please see the poster enclosed herewith as **Annex. 3**).
4. A two-day National seminar on 'Bio-economy based entrepreneurship development with biotechnological interventions' was held at Imphal on Oct. 11-12, 2022 under the Chairmanship of Prof. Manju Sharma, Past President, NASI (a copy of the programme enclosed herewith as **Annex. 4**). About 200 students/researchers/entrepreneurs participated in the programme. Prof. Ajoy Ghatak, President, NASI inaugurated the programme emphasizing the role of the Academy for '**Atma Nirbhar Bharat**'. He expressed that as new technologies based on renewable raw materials and biological principles are becoming available, bioeconomic transformation could help to achieve the United Nations' Sustainable Development Goals (SDGs). Not only that, the Prime Minister of India is also of the same view for achieving the sustainable progress & development for our beloved nation. Further, MN Saha, the leading spirit in organising several scientific societies in India and Founder of NASI, was himself a great promoter of sustainable development concept.
5. An Inspire Lecture on 'Chemistry for Health' was organized by the NASI-Mumbai Chapter on 15th Oct. 2022 for the science students & researchers (please see the poster enclosed herewith as **Annex. 5**).
6. A three-day conference on 'Material and Sustainable Developments' was organized by the NASI-Nagpur Chapter on Oct. 10-12, 2022 at Nagpur (please see a brief report enclosed herewith as **Annex. 6**).
7. Several Chapters of the Academy also organised Science-Society Programmes of the NASI; the publication of the NASI-Journals also achieved their time-lines.



राष्ट्रीय विज्ञान अकादमी, भारत

5, लाजपराय मार्ग, प्रयागराज-211002



The National Academy of Sciences, India

5, Lajpatrai Road, Prayagraj -211002

In association with

भारतीय सूचना प्रौद्योगिकी संस्थान, इलाहाबाद

Indian Institute of Information Technology (IIIT), Allahabad

organizes

TWO DAYS WORKSHOP

on

Novel Method of Targeted Drug Delivery

Reducing Doses and Enhancing Efficacy of Therapeutic Drugs

Date: September 30 - October 01, 2022

Venue: NASI Auditorium; 5, Lajpatrai Road, Prayagraj (30.9.2022)

&

IIIT Allahabad, Jhalwa, Prayagraj (01.10.2022)

--- Tentative Programme ---

Day-1 (September 30, 2022)

Registration of the Students – 9.30 am

Inaugural Session: - (10.00– 11.00 am)

- ❖ **Welcome & Introductory Remarks** : Dr. Niraj Kumar, Executive Secretary, NASI
- ❖ **Address by the Guest of Honour** : Prof. Krishna Misra, Emeritus Professor, IIITA, Prayagraj; & Former General Secretary, NASI
- ❖ **Chief Guest Address** : Prof. R.S.Verma, Director Motilal Nehru National Institute of Technology & IIITA, Prayagraj
- ❖ **Presidential Address** : Prof. U.C.Srivastava, Coordinator, Science Communication Programme & Treasurer, NASI
- ❖ **Vote of thanks** : Dr Sangeeta Singh, Convener of the programme

(High tea 11.00 – 11.30 am)

TECHNICAL SESSION:

Lecture-1 (11.30 am-12.30 pm)

Prof. Bechan Sharma, Department of Biochemistry, University of Allahabad, Prayagraj

Topic:

Lecture-2 (12.30-1.30 pm)

Dr. Santosh Shukla, Asst. Executive Secretary, NASI

Topic: Drug Dosage Forms

Lunch 1.30- 2.30 pm

SESSION-2 (2.30 – 3.30 PM)

Interaction and Visit to Ganga-gallery

End of the first day programme

Day-2 (October 01, 2022)

Note: The students will have to reach directly at IIIT, Allahabad at 10.30 am

Day 2: 1st October, 2022 (Saturday)		
Venue: Indian Institute of Information Technology, Allahabad, Prayagraj		
Session 1 (11:00 am to 12:00 pm)		
11:00 am to 12:00 pm	Lecture I	Prof.Syed Ibrahim Rizvi Department of Biochemistry, University of Allahabad
Session 2 (12:00 am to 2:00 pm)		
12:00 pm to 2:00 pm	Lab Visit	Molecular Biology Lab, Physics Lab, Chemistry & Nanotechnology Lab and Robotics Lab, IIIT Allahabad
Lunch Break (2:00 pm to 2:30 pm)		
End of the Second day programme		

Annex. 2

Quasar, The Physics Society of Gargi College Presents
A Workshop on "Optics, evolution and demo on the Assembly of Telescopes
& A NIGHT GAZING SESSION



UNDER THE AEGIS OF IQAC, NATIONAL ACADEMY OF SCIENCES INDIA, SCIENCE-SOCIETY PROGRAM
AND A PART OF CENTENARY CELEBRATIONS OF UNIVERSITY OF DELHI

PATRONS

WELCOME ADDRESS

Prof. Sangeeta Bhatia
Principal (Acting)
Gargi College

GUEST OF HONOR

Prof. Ajoy K Ghatak
Former Professor, IITD
President, NASI

KEYNOTE SPEAKER

Prof. Anurag Sharma
Emeritus Professor, IITD
Chairman, NASI, Delhi Chapter

DATE: Monday, October 17, 2022

TIME: 1.30 PM - 5.00 PM

Night Gazing: 6.00 PM Onwards

VENUE: Gargi College, Delhi

ORGANIZING TEAM

Dr. Deepti Lehri (Gargi College)
Dr. Alka Garg (Gargi College)
Dr. Supreeti Das (Gargi College)
Dr. N. Chandrika Devi (Gargi College)
Dr. Hira Joshi (TIC, Phy, GC)
Dr. Anita (Gargi College)
Mr. Munish (Gargi College)
Dr. Archana Tripathi (Gargi College)
Mrs. Mansi Agrawal (Gargi College)
Dr. Manvi Tak (Gargi College)
Mr. Manraj (Gargi College)

Prof. Pushpa Bindal (Kalindi College)
Prof. S.K. Dhaka (Rajdhani College)
Dr. Poonam Juneja (Maitreyi College)
Prof. Punita Verma (Kalindi College)
Dr. Navina Mehan (Dyal Singh College)
Dr. Geetika Jain Saxena (Maharaj Agrasen College)
Dr. Rajveer Singh (ARSD College)

RESOURCE PERSON
Mr. Tushar Purohit,
Telescope Making
Intern, IUCAA,
Scipop, Pune

**A QUIZ on
the Sessions!**

Night Gazing Session

Mr. Tushar Purohit (IUCAA, Scipop)
Mrs. Kavita Sansanwal, Jagdish Chandra Basu Sci. Club

IQAC CO-ORDINATOR

Ms. Sailaja Modem
B.El.Ed Department
Gargi College

CONVENERS

Prof. Vandna Luthra
Physics Dept.
Gargi College

Prof. Shashi Chawla
Microbiology Dept.
Gargi College

Student Union

Ms. Priya Rajput
Ms. Anwasha
Ms. Priya Kumari
Ms. Ayushi Dharia

Email: phys.gargi@gmail.com

Registration Link:

<https://forms.gle/VpwoDHnhWuQJPGwo7>



National Conference

**“Celebrating the Vision, Mission and Persona of
Prof. M. N. Saha
as a Physicist and Nationalist”**

27th-28th October, 2022 Prayagraj, U.P., India



(Prof. M. N. Saha FRS)

Jointly Organized by



VIBHA

Vijnana Bharti Kashi Prant Uttar Pradesh



**Motilal Nehru National Institute of
Technology (MNNIT), Prayagraj**



**Indian Institute of Information Technology (IIIT)
Prayagraj**



**Science Faculty, University of Allahabad
Prayagraj**



**National Academy of Sciences (NASI)
Prayagraj**



**आज़ादी का अमृत महोत्सव
AZADI KA AMRIT MAHOTSAV**

National seminar on

**“Bioeconomy based entrepreneurship development with
biotechnological interventions”**

Jointly Organized by

The National Academy of Sciences, India, Prayagraj (Allahabad),

&

**Institute of Bioresources and Sustainable Development, Imphal,
Manipur**

October 11-12, 2022

Day-1: October 11, 2022

<https://ibsd.webex.com/ibsd/j.php?MTID=m7f9ad8993d7f514b0c21b540ebf8ad6d>

Day-2: October 12, 2022

<https://ibsd.webex.com/ibsd/j.php?MTID=m70226e14a6da94362cd52cfb7a4d1f0e>

Venue: Conference Hall (Hybrid mode)

INSTITUTE OF BIORESOURCES AND SUSTAINABLE DEVELOPMENT (IBSD)

Department of Biotechnology (DBT), Govt. of India

Takyelpat, Imphal 795001, Manipur, India



National seminar on
“Bioeconomy based entrepreneurs development
with biotechnological interventions”
(October 11-12, 2022)

Programme schedule

Day-1: October 11, 2022:

<https://ibsd.webex.com/ibsd/j.php?MTID=m7f9ad8993d7f514b0c21b540ebf8ad6d>

Registration: 9:00 - 10:00 am

Opening Session (10:00-11:00 am)

Welcome Address:
(10:00 - 10:10 am)

Prof. Pulok Kumar Mukherjee
Director, IBSD, Imphal

Opening Remarks
(10:10 - 10:30 am)
(NASI's Programme on “Bioeconomy based entrepreneurs development with biotechnological interventions”)

Prof. Manju Sharma
Former Secretary to the Govt. of India, DBT; Chairperson, NASI's New Initiatives

Theme Address:
(10:30 - 10:50 am)

Prof. Arun Pandey, VC, Mansarovar
Global University, Bhopal

Inaugural Address :
(10:50 - 11:00 am)

Prof. Ajoy Ghatak
President, NASI – Chief Guest

Felicitation of Guests
Tea break

Session-1 (11:15 am – 12:35 pm)

Chairperson

Dr. Renu Swaroop,
Former Secretary, DBT

Co-Chair

Dr. D. Srinivasa Reddy, Director, CSIR
IICT, Hyderabad

Lecture-1
(11:15 am -11:35 am)

Prof. N. Rajmuhon Singh, Vice
Chancellor, Dhanamanjuri University,
Imphal

Lecture-2
(11:35 am -11:55 am)

Prof. Asish Mukherjee, Director, IASST,
Guwahati

Lecture-3
(11:55 am -12:15 pm)

Dr. P. Trivedi, Director, CIMAP,
Lucknow.

Lecture-4
(12:15 pm -12:35 pm)

Dr. Sanjay Kumar, Director, IHBT,
Palampur

Discussion (12:35-1:00 pm)
Lunch (1:00 - 1:45 pm)

Session-2 (1:45 – 3:05 pm)

Chairman

Dr. S.K. Barik, Director,
CSIR, NBRI, Lucknow

Co-Chair

Dr Sunitibala Devi, Scientist, IBSD,
Imphal

Lecture- 5
(1:45 -2:05 pm)

Smt. Homila Hongrei, Director,
Department of Science & Technology,
Govt. of Manipur

Lecture- 6
(2:05 - 2:25 pm)

Dr. Purnima Sharma, MD, BCIL, New
Delhi

Lecture- 7
(2:25 - 2:45 pm)

Prof. Paramjit Khurana, JC Bose Fellow,
Delhi University, New Delhi.

Lecture- 8
(2:45 - 3:05pm)

Dr. T.R. Sharma – DDG, ICAR, Govt. of
India.

Session-3 (3:05-4:30 PM)

Chairperson

Dr. Latha Rangan,
IIT Guwahati

Co-Chair

Dr Pardeep Bhardwaj, Scientist, IBSD,
Imphal

Lecture-9
(3:05 - 3:25pm)

Prof. Madhoolika Agarwal - Dean - Life
Sciences, BHU

Lecture-10
(3:25 - 3:55pm)

Prof. G. A. Shantibala Devi, Former
Dean, Department of Life Sciences,
Manipur University, Imphal.

Discussion

**‘Bioeconomy from Bioresources’- based entrepreneurship
development in NER’ (3:55-4:30 pm)**

Prof. Pulok K. Mukherjee, Director, IBSD, Imphal

Day-2: October 12, 2022

<https://ibsd.webex.com/ibsd/j.php?MTID=m70226e14a6da94362cd52cfb7a4d1f0e>

Session-4 (10:00 a.m. – 12:40 pm)

Chairman	Prof. Akhilesh Tyagi, Department of Molecular Biology, South campus, Delhi University, New Delhi
Co-Chair	Prof. Madhoolika Agarwal - Dean - Life Sciences, BHU
Lecture-11 (10:00 a.m. - 10:20 am)	Dr Yogesh Shouche, Emeritus Scientist, NCCS SSPU Campus, Pune
Lecture-12 (10:20 a.m. - 10:40 am)	Prof. Goutam Sutradhar, Director, National Institute of Technology, Imphal.
Lecture-13 (10:40 a.m. - 11:00 am)	Dr. G. Narahari Sastry, North East Institute of Science and Technology (NEIST), Jorhat
Lecture-14 (11:00 a.m.- 11:20 am)	Dr. G. Taru Sharma, Director, National Institute of Animal Biotechnology (NIAB), Hyderabad
Lecture-15 (11:20 a.m.-11:40 am)	Dr. Arun Bandyopadhyay, Director CSIR IICB, Kolkata
Lecture-16 (11:40 am-12:00 noon)	Dr. Prathama Mainkar, CSIR, ICT, Hyderabad
Lecture-17 (12 noon -12:20 pm)	Dr. Deepa Tiku, Patent Attorney and Partner, K&S Partners, Gurgaon
Lecture-18 (12:20 pm-12:40 pm)	Prof. S. R. Joshi, Head, Department of Biotechnology & Bioinformatics, NEHU, Shillong, Meghalaya

Comments by experts/speakers (5 mins each)

**Concluding Session & Panel Discussion
(to be joined by all experts/speakers)
(12:40 pm -1:00 p.m.)**

Chairman

Dr. Manju Sharma
Former Secretary to the Govt. of India,
DBT;
Chairperson, NASI's New Initiatives

Remarks

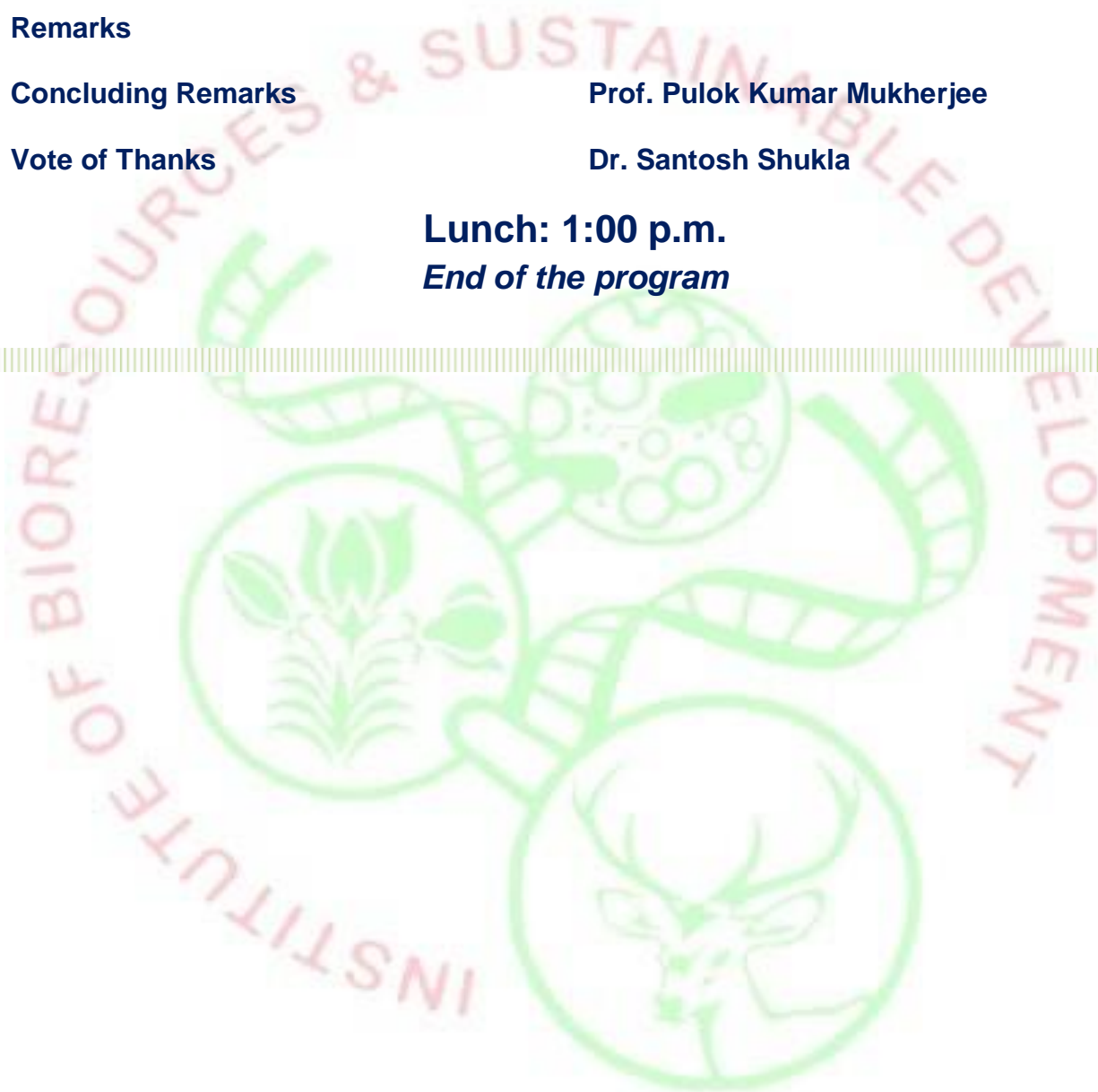
Concluding Remarks

Prof. Pulok Kumar Mukherjee

Vote of Thanks

Dr. Santosh Shukla

Lunch: 1:00 p.m.
End of the program





The National Academy of Sciences, India (Mumbai Chapter)

in association with

Atomic Energy Junior College, Anushaktinagar, Mumbai

organizes

INSPIRE LECTURE

TITLE: CHEMISTRY FOR HEALTHCARE

**SPEAKER: Dr. Sharmistha Dutta Choudhury
Chemistry Group, BARC**

**DATE & TIME: 15th October, 2022 (Saturday)
at
8:30 h**

**VENUE: Atomic Energy Junior College
Anushaktinagar
Mumbai 400094**



Lecture Abstract & Speaker profile

TITLE: **“CHEMISTRY FOR HEALTHCARE”**

ABSTRACT:

“Good Health and Well-being” is one of the 17 Sustainable Development Goals established by the United Nations. The chemical sciences contribute in improving healthcare through basic research that helps in understanding the mechanisms underlying disease, through development of improved means of diagnosis and through optimizing the development of effective drugs. This lecture will discuss through simple examples how chemistry plays a role in all stages of healthcare—from prevention and detection of diseases, to their cure. Glimpses of the work carried out in Chemistry Group, BARC, will be provided to motivate students and make them aware of the exciting opportunities for research in this area.

BIOGRAPHY:

Dr. Sharmistha Dutta Choudhury is a Scientific Officer at Bhabha Atomic Research Centre, Mumbai. She obtained her M. Sc. degree in Chemistry with gold medal from Jadavpur University, Kolkata and carried out her Ph. D. research at Saha Institute of Nuclear Physics, Kolkata. She was a visiting researcher at University of Maryland, Baltimore, USA. Her research interests include study of photophysical processes in supramolecular and plasmonic systems and investigating new luminescent materials. She is the recipient of Young Scientist Awards from the National Academy of Sciences India (NASI), Department of Atomic Energy (DAE), and Indian National Science Academy (INSA). She also received Women Excellence Research grant from SERB, DST.

About The National Academy of Sciences, India (Mumbai Chapter)

The National Academy of Sciences, India (NASI), one of the oldest Science Academies in India, was established in 1930 by *Prof. Meghnad Saha*. It is located in Prayagraj, Uttar Pradesh. Currently the Academy has more than 1900 Fellows, honorary Fellows and foreign Fellows from various disciplines of Science and Technology. The Academy has been effectively pursuing its mandate '*Science & Society*' since its inception through its various scientific programmes/ activities by involving a large number of scientists, academicians, educationists and industrialists from all across the country with the support of its 22 Local Chapters spread all across the country to disseminate and communicate the scientific knowledge in different regions/parts of the nation.

NASI - envisions the cultivation and promotion of Science & Technology in all its branches through - (a) promoting scientific and technological research related to the problems of societal welfare; (b) publication of proceedings, journals, memoirs, transactions and other works as may be considered desirable; (c) organizing meetings and hold discussions on scientific and technological problems; (d) undertaking, through properly constituted committees and bodies, the scientific work(s) of technological or public importance; (e) cooperating with other organizations in India and abroad, having similar objects, and to appoint representatives of the Academy to act on national and international bodies; (f) securing and managing funds and endowments for the promotion of science and technology; (g) organizing a Science Library; (h) performing all other acts, matters and things that may assist in, conduce to, or be necessary for the fulfillment of the above mentioned aims and objects of the Academy; (i) creating an adequate impact of the Academy all over the country.

Mumbai Chapter (NASI-MC) is one such chapter of the NASI. In sync with the vision and mission of the Academy, the NASI-MC organizes a number of activities throughout the year in different institutions in Mumbai and adjoining areas. (For further details of the Academy, please browse through the official website of the Academy: <http://www.nasi.org.in>)

Report NASI Nagpur Chapter



Inaugural Function: Pro-VC, Dr Sanjay Dudhe, Dr A K Tyagi, Dr Santosh Shukla, Dr N S Gajbhiye, Dr B P Bhaskar, Dr P. Khedekar, Dr Smita Acharya



We are glad that we got overwhelming response from young researchers and faculty members from Vidarbha region as well as from other parts of Maharashtra and Chhattisgarh. Over 400 researchers participated in these three days Symposium.

About **30** oral presentations and **178** poster presentations were given in 4 oral sessions and 2 poster sessions by young researchers' faculty members and students. In three days deliberations, one keynote address and 7 plenary addresses 5 invited talk and one Introductory talk was given.

This shows growing interest of students and researchers in basic and applied science in Vidarbha region, this is indeed good for the development of this region.

Day one, (10th October), two inaugural talks, One keynote and three Plenary talks.

Inaugural talks were delivered by Dr Manju Sharma, Former- president, NASI and Prof Ajoy Ghatak, President NASI. Both the talks highlighted role of Science in sustainable development and emphasized university prospective plan to rationalize this in near future. Welcome Address was given by Dr N S Gajbhiye, Chairperson, NASI Nagpur Chapter and programme was conducted by Dr Smita Acharya, Secretary, NASI Nagpur Chapter.

Keynote address was delivered by Dr A.K. Tyagi of BARC Mumbai on topic of title "**Material and Sustainable Developments**". He emphasized the need of development of green Hydrogen, designing of catalyst for green hydrogen production and need of synthesis of green Ammonia.



In Plenary speech, **Dr Umesh Waghmare** from Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore talked on **Predictive Models of Materials Based on Quantum Physics and Machine learning**. He explained

about model of designing material by quantum physics and Machine learnings and limitations associated with it.

Dr Santosh Shukla, Secretary NASI, Prayagraj very nicely explained about history of NASI, objectives and various activities of NASI and involvement of NASI in various activities for students, teachers and villages. Main aim of NASI is promotion of science for society.

In Plenary talk, Prof. **Sayan Bhattacharya**, ISSER Kolkata talked on **Economic Green Hydrogen by two metal Combination**. He nicely explained about making of green hydrogen, catalysts used in it and how they work.

Prof Ajoy Ghatak President, NASI who joined online gave a very nice talk on **Science and Technology in India**. He gave glimpses of development of Science in India, right from Aryabhata, great Mathematician to Sam Patroda, who initiated the Information technology and computer revolution in India. He also talked about the development of biotechnology, green revolution, white revolution. He also emphasised that because of our scientific developments, India is now the largest producers of various vaccines.

Day 2 (11th October), two plenary talk and three Invited talk

First plenary talk was by Dr Raghmani Singh from BARC Mumbai, on **Rare earth doing phosphors for light emitting display and biological applications**.

and second talk was by Dr A. K. Singh former, Professor of Chemistry IIT Mumbai, **Uncovering the challenges and opportunities for the newer imperatives for design and development of chemicals**.

In the invited talk

Dr Pramod Khedekar, Professor and Head Department of Pharmaceuticals RTMNU talked on the **Role of Green Chemistry in good health and well being**. He explained, what is green chemistry and its importance to our society and synthesis of green paracetamol in their laboratory.

In second invited talk, Prof M.L. Khan, H.S. Gaur Central University Sagar talked on the topic **Rethinking and Rebuilding: stepping towards environment sustainability and Ecosystem services**. He emphasised that need of the hour is to think how to use our natural resources judiciously as over exploitation of these resources is linked to our health and life in general.

In plenary talk, Dr. K. R. Randive, Professor and Head, Department of Geology, RTM Nagpur university delivered talk on **Minerals and sustainable developments**. He talked about various metallic and non-metallic minerals and their significance in global economics. He very nicely explained how the minerals are lifeline of economy of any country but, if our mineral resources are not exploited judiciously they become curse for the areas from where they are exploited.

Another plenary talk was by **Prof S. Sinha** from AIIMS, Delhi on **Post Covid care and Long covid**. This talk was very close to all of us, because since last two years everyone on this planet was directly or indirectly was affected by it. He talked about what is long covid and what care should be taken while having long term effects of covid and post Covid care.

Day three(12th October), 4 invited talks

First by Professor G. P. Singh Head Dept of Mathematics, VNIT Nagpur on **Recent Developments in Cosmology**. He very nicely explained evolution and expansion of our 13.8 billion years universe. In a very simple language, he explained what is dark matter, dark energy and concept of accelerated expansion of universe.

Second Invited talk was by Dr B.P. Bhaskar, Director, NBSS on **Geospatial Technology in advancement of agricultural research**. He talked on new developments in geospatial Technology. He emphasized that the new technology and knowledge should be provided to the farmers for increasing the agriculture output and how NBSS is involved in the dissemination of this knowledge to the end users.

In third invited talk Prof. Shubha Daughtery, Prof and Head Department of Mathematics, LIT, Nagpur talked of **Matlab for array and graphics**. She talked on the significance of software Matlab for researchers and students. She also gave basic idea how to run this software and applications of software.

Fourth talk was by Dr Suresh Umare, Department of Chemistry, VNIT, Nagpur on **Environmental issues and sustainable developments**. He talked, how we developed various materials for making the life better, but now their non judicious use and exploitation is becoming curse for the human life. We need

to take action before it is too late. He talked about development of green carbon dioxide.

Summarising It is our need to develop functional green material. Our development should be sustainable for the future generations and towards pollution free environment.

Our father of nation said that the “The Earth has enough resources for our need but not for our greed”.

Best Poster, Best oral and best Ph.D thesis presentation award will be delivered to participants. The programme was concluded by Valedictory talk delivered by Dr Raju Mankar, Director, LIT, Nagpur.