



International Conference on
“Nanotechnology for Better Living”

NBL- 2021

FROM: 7-11 SEPTEMBER, 2021

Organized by

National Institute of Technology Srinagar

IN ASSOCIATION WITH PRESTIGIOUS UNIVERSITIES



NIT Srinagar



MRSI



H.E (J&K)



Anna Uni



SSM



NIT
Mizoram



SU Chennai



SKIMS



SKUAST-K



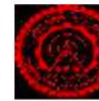
IITM



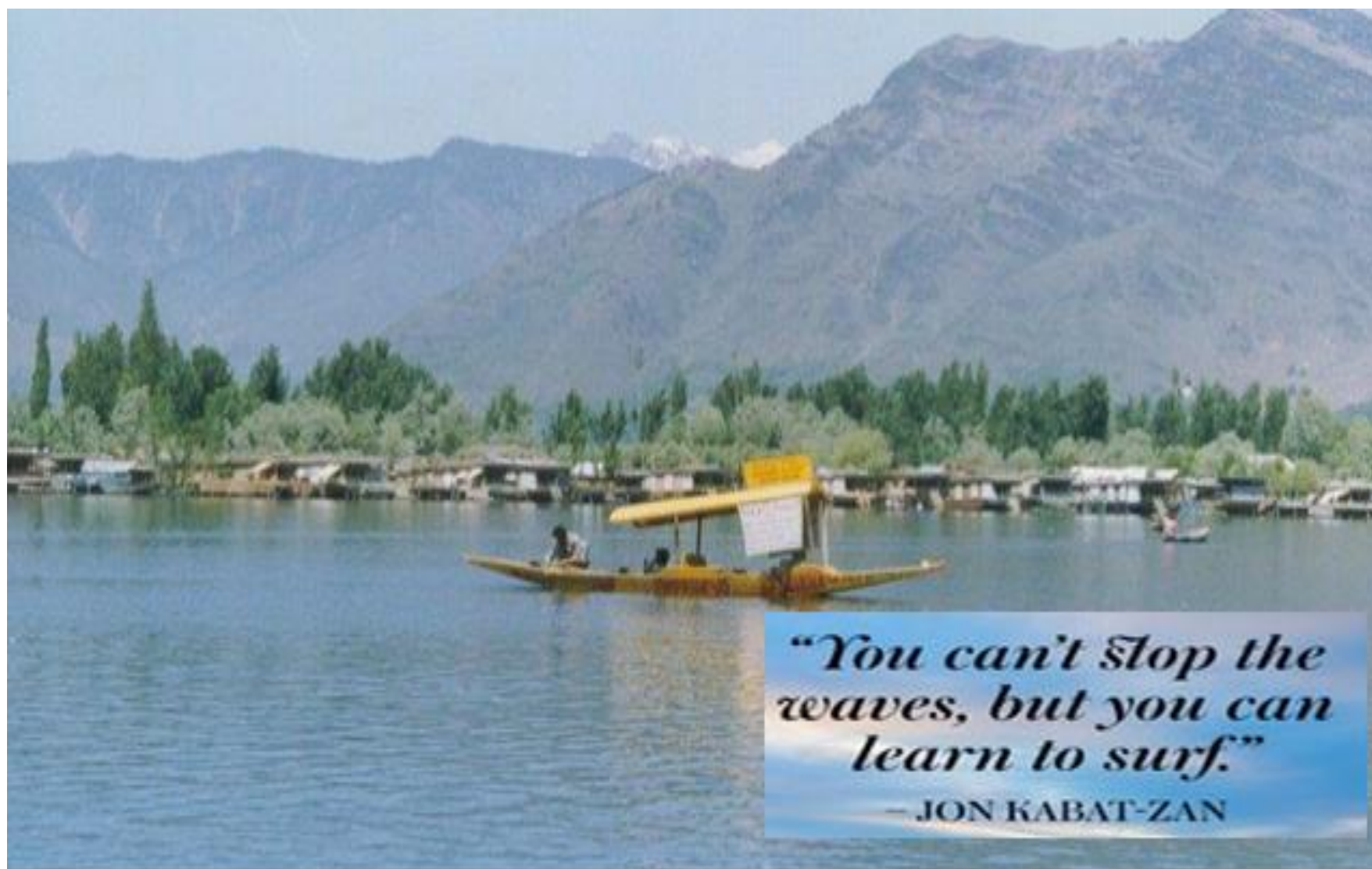
MGU
KOTTAYAM



Central
& UT



IIT-Delhi



*"You can't stop the
waves, but you can
learn to surf."*

— JON KABAT-ZAN

The Modest Journey of NBL Convention

www.icnbl.org



International Conference on “Nanotechnology for Better Living”

NBL-2021

From: 07-11 September 2021

The first was the industrial revolution in late 18th and early 19th century, when man learned to harness matter at the millimeter scale (thousandth of a meter) with the invention like steam engine and spinning. The second technological revolution occurred in the mid twentieth century with the microelectronics, when man learned to harness matter at the micrometer scale (millionth of a meter). The twentieth century has witnessed major revolution in science and technology. The invention of computers and transistors has resulted in new technologies that have transformed life, which we are witnessing, including the World Wide Web and the integrated networking. Quantum computing, relativity, new dimensions in time and space and expanding universe are examples that have transformed human thought and are the basis for the new quests for new frontiers. The third technological revolution has already been taking place in the **twenty first** century with the rise of nanotechnology (Science of Small), which will enable man to control matter at the atomic scale that is at **billionth of a meter**. In brief, we have learned to manipulate matter atom by atom and molecule by molecule. This is the first time in the history of science.

Materials and devices at the nanoscale hold vast promise for innovation in every industry and public endeavor including health, food, transportation, environment, electronics and have been heralded as the next industrial revolution.

The **nano era** may remove the barrier and life may acquire a seamless link with nature. It will offer better built, longer lasting, cleaner, safer and smarter products for home, for communication, for medicine, for engineering, for agriculture and for industry in general. Such potential strides explain why nanotechnology is viewed as key to future economic growth and why technologically advanced and developing countries are earnestly pursuing its development. Almost all states have established centers of excellence of Nanotechnology, supported by DST, New Delhi. Most of the industries have already begun to establish a significant share in the global market and are expected to exert a major beneficial impact on every sphere of life through this new technology.

Recently Hon'ble LG of Jammu and Kashmir has launched Nano- Fertilizer, which is expected to bring revolution in agriculture sector. Nano urea is a revolutionary product, the faster the common farmers of the country adopt it, the sooner they will see its positive effects. In the interest of the country, this technology transfer has been done by the company (IFFCO) without any royalty. We were the first to launch the product, which has been covered by the media meticulously. There are many new breakthroughs during Covid-19 in this interdisciplinary field of science particularly in health sector.

This new area of science is still in its infancy and there are significant challenges which need to be addressed for the benefit of humanity. This is the main driving force for organizing scientific events on this emerging area of science in this part of the country. The **International Conference on Nanotechnology for Better Living** is being organized after every two years with a unique aim to provide a platform for the young scientists for stimulating deliberations which may culminate into collaborative research atmosphere mutually beneficial to all of us. These collaborations in turn will boost not only economic strength but also prosperity of the society. Every time we are making our best efforts to bring together eminent scientists, researchers, academicians and policy makers from across globe to exchange ideas, advance knowledge and discuss key issues on nanotechnology.

As we all know that the **7th edition of hybrid NBL-21** is being organized in Collaboration with **Nanoscale Research Facility IIT Delhi** and in association with Anna University, SKUAST-K, NIT Mizoram, SSM College of Engineering, IIT Madras, SU Chennai, M G University, SKIMS Srinagar and Higher Education. It is pertinent to mention that the event is being organized in the backdrop of NBL series, which were marvelous and memorable joint event between IIT Kanpur/IIT

Kharagpur under the Co-chair and mentorship of Prof. Kamal K Kar, which were subsequently supported and carried forward by the visionary administration of NIT Srinagar. The prominent supporters are Dr. M J Zarabi, Chairman, Board of Governors, Prof Rajat Gupta, Former Director and Prof. Rakesh Sehgal, Director of NIT Srinagar, including from the colleagues Prof G A Harmain, Prof N A Sheikh, Prof S K Bukhari, Prof Prince Ahmad and Prof S Rubab. This time, NBL 21 has been blessed by great personalities like Prof. C. Jagdish, Australian National University, Prof. J Kumar, Anna University, Prof M S R Rao IIT M, Prof A G Ahangar, Director SKIMS and the administration of SKUAST Kashmir, Mrs Dilafroze Qazi, Chairperson, including Prof. Masood-ul-Hassan Balkhi, Prof. M A Malik and Prof M Syed Puktha. I am hopeful that their partnership and patronage will continue and the support from the administration of NIT Srinagar will flourish the NBL Convention in years to come.

During this convention from 07-11 September 2021, we have made arrangements for the pre-conference tutorials and special lectures on crucial area of Climate Change by Shri Khurshid Ahmad Ganai (alumni of BITs/IITD) for our bright UG/PG students who are supposed to work on innovative projects and discuss/ address the solutions for Sustainable Development Goals (SDGs). A group of school and college children shall take part in the inaugural function on 7th of September 2021. Thus, dedicated sessions, **“Nurturing young minds for a better world”** shall be conducted during the conclave, thus handing over this multidisciplinary science to our young and smart generation. **For best presenters we have instituted the following awards.**

- (i) NBL-21 Innovation Award for patents and technology transfer
- (ii) NBL-21 Young Scientists Award for publications in high impact journals
- (iii) NBL-21 UG/PG Students Award for best poster presentation
- (iv) NBL-21 Woman Researchers Award for unique contribution in sciences
- (v) NBL-21 Best Scientists Award for his/her contribution Sciences
- (vi) NBL-21 Best teachers Award in Basic and Engineering Science
- (vii) NBL-21 Visionary Leadership and meticulous Administrator Award

This year, in five days convention, we have more than 20 Keynote eminent speakers, who will address on issues related to healthcare, agriculture, engineering and about clean atmosphere. In addition, 50 invited talks, 100 oral and 100 for

poster presentations are planned as an integral part of conference. There are other scientific activities covered in the convention, besides three Memorial Lectures for three legends whom we lost in second wave of Covid-19. Prof. Pandaya from IIT Jammu will deliver Memorial Lecture on Padmashri Prof K L Chopra, Prof Sajad from JMI New Delhi will Deliver Memorial Lecture on Prof G M Bhat and Miss Meenakshi will deliver Memorial Lecture on Shri Shahi.

Bringing together more than 250 researchers and scientists from around 20 countries and almost from all states of the country with research interests in diverse areas is expected to enhance scientific collaborations which may take the nanotechnology a step closer to realizing its enormous potential for the betterment of mankind. The impact of this scientific gathering will provide an ample opportunity to young students to learn about new inventions in this new and interdisciplinary field. In addition, the endeavor will put the state of Jammu and Kashmir into scientific map of the country and beyond. In a vicinity of natural paradise and in the lap of Zabarwan hills (SKUAST-K), we all thought the whole nature live in valley of Kashmir.

LMN Team to make NBL memorable events!

Dr Shah M A
Convener & Co-Founder

**“I would rather have questions that can’t be answered
than answers that can’t be questioned”
R.P. Feynman**

MESSAGE FROM HON'BLE LG

LIEUTENANT GOVERNOR
JAMMU & KASHMIR



N
0001

I am pleased to learn that National Institute of Technology Srinagar is organizing 7th edition of hybrid "International Conference for Nanotechnology for Better Living-NBL 2021", in collaboration with Nanoscale Research Facility, IIT Delhi.

Nanotechnology is making a greater impact on the lives of people. It holds the promise of new solutions to problems and is hailed as having the potential to increase the efficiency of energy consumption and solve major health problems.

I trust that this important conference in which more than 250 eminent researchers, and scientists from across the globe are participating shall provide a valuable opportunity to deliberate on new ideas and concepts behind nanoscience and nanotechnology.

I believe that the dedicated session for school and college students- "Nurturing young minds for a better world" during the conclave, will acquaint our young generation with various aspects of multidisciplinary science.

I hope that this International Conference will take Nanotechnology a step closer to realizing its enormous potential for the betterment of mankind.

29 August, 2021
Srinagar.

Manoj Sinha
(Manoj Sinha)

MESSAGE FROM HON'BLE MINISTER FOR EDUCATION

धर्मेन्द्र प्रधान
ଧର୍ମେନ୍ଦ୍ର ପ୍ରଧାନ
Dharmendra Pradhan



मंत्री
शिक्षा; कौशल विकास
और उद्यमशीलता
भारत सरकार

Minister
Education; Skill Development
& Entrepreneurship
Government of India

MESSAGE

I am delighted to know that the National Institute of Technology, Srinagar is organising the 7th edition of the hybrid "International Conference for Nanotechnology for Better Living". Today, nanotechnology is being hailed globally as the key for the next technological revolution of the 21st century. With a convergence of science and the growing diversity of its application, the potential of nanotechnology to produce new materials and products is thriving. While nanotechnology is revolutionising healthcare, energy and electronics, it is bound to provide exceptional benefits to the society in future.

I am proud that NIT Srinagar is not only working to enhance scientific collaborations through this conclave, but it is also organising a dedicated session for school and college children, thereby imparting this knowledge to our young generations.

I am sure that the ideas that emerge from the brainstorming sessions during this conclave will take us a step closer to realising the enormous potential of nanotechnology for the betterment of humankind.


(Dharmendra Pradhan)

New Delhi,
Dated 25th August, 2021

सबको शिक्षा, अच्छी शिक्षा



कौशल भारत, कुशल भारत

MOE - Room No. 3, 'C' Wing, 3rd Floor, Shastri Bhavan, New Delhi-110 115, Phone : 91-11-23782387, Fax : 91-11-23382365
MSDE - Room No. 516, 5th Floor, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001, Phone : 91-11-23465810, Fax : 011-23465825
E-mail : minister.sm@gov.in, minister-msde@gov.in

MESSAGE FROM HON'BLE MINISTER S & T

डॉ० जितेन्द्र सिंह

राज्य मंत्री (स्वतंत्र प्रभार),
विज्ञान एवं प्रौद्योगिकी मंत्रालय;
राज्य मंत्री (स्वतंत्र प्रभार) पृथ्वी विज्ञान मंत्रालय;
राज्य मंत्री, प्रधान मंत्री कार्यालय;
राज्य मंत्री कार्मिक, लोक शिकायत एवं पेंशन मंत्रालय;
राज्य मंत्री परमाणु ऊर्जा विभाग तथा
राज्य मंत्री अंतरिक्ष विभाग
भारत सरकार



MESSAGE


National Institute of Technology Srinagar is organising 7th edition of hybrid "International Conference for Nanotechnology for Better Living" NBL 2021 in collaboration with Nanoscale Research Facility of IIT Delhi and in association with Anna University, SKUAST Kashmir, NIT Mizoram, IIT Madras, SKIMS Srinagar, Sathyabama, SSM College of Engineering and M G University, under the aegis of Materials Research society of India (MRSI). A group of school and college children shall take part in the inaugural function and for them, a dedicated session; "Nurturing young minds for a better world" shall be conducted during the conclave, thus handing over this multidisciplinary science to our young and bright generation.

More than 300 scientists are joining NBL-2021 this time and it covers wide range of topics in all areas of science, engineering and medicine with an aim to gather well known National & International scientists to share new knowledge, current breakthrough and discuss practical challenges in this interdisciplinary field.

The convention will witness important presentations by the extensive range of eloquent speakers, policy makers and scientific leaders around the world who will assemble in Srinagar both in virtual and in person with a common objective of making this world a better place by providing the solution to some of the crucial problems.

This may also serve as a crucial motivation for young Scientists in the UT of Jammu & Kashmir where this important Conference is being held.

I congratulate the administration of NIT Srinagar and convey best wishes to Convener Dr M A Shah for his scientific and academic endeavors in Kashmir.


(Dr. Jitendra Singh)
MBBS (Stanley, Chennai)
MD Medicine, Fellowship (AIIMS, NDL)
MNAMS Diabetes & Endocrinology

Anusandhan Bhawan, 2, Rafi Marg
New Delhi-110001
Tel. : 011-23316766, 23714230,
Fax. : 011-23316745

South Block, New Delhi-110011
Tel. : 011-23010191 Fax : 011-23017931
North Block, New Delhi-110001
Tel. : 011-23092475 Fax : 011-23092716

MESSAGE FROM HON'BLE DIRECTOR

National
Institute of
Technology
Srinagar

राष्ट्रीय प्रौद्योगिकी संस्थान श्रीनगर
हजैरतबल | श्रीनगर | जम्मू और कश्मीर | 190006
www.nitsri.ac.in

Professor Rakesh Sehgal
Director



No.: NIT/D-21/523

Date: 20.08.2021



MESSAGE

The 7th edition of "International Conference for Nanotechnology for Better Living" NBL 2021 is being organized in Collaboration with Nanoscale Research Facility IIT Delhi and in association with prestigious universities from 07-11th September 2021, first time in Hybrid mode.

I feel confident that the academia, students, scientists at both universities and industry will benefit from the conference activities as well as from expected academic interactions. The programme in the convention includes Plenary lectures/ Key note addresses/ Invited Talks/ Oral and Poster Presentations/ science movies/ hands on operations/ tutorials for UG/PG students and few practical demonstrations. A group of school and college children shall take part in the inaugural function and for them, a dedicated session, "Nurturing young minds for a better world" shall be conducted during the conclave, thus handing over this multidisciplinary science to our young and bright generation. Former Hon'ble Advisor Shri Khurshid Ahmad Ganai (IAS) will deliver one lecture on career counseling and emerging areas for bright career.

By bringing together more than 270 eminent researchers (virtually and in person) and scientists from around 20 countries and almost all states of the country with research interests in diverse areas is expected to enhance scientific collaborations which may take the Nanotechnology a step closer to realize its enormous potential for the betterment of mankind.

I extend my warm greetings to all conference participants and hope that they will find it academically rewarding. I would also like to extend my appreciation to all Hon'ble speakers and the organizers.


Prof (Dr.) Rakesh Sehgal
(Patron of NBL 21)

MESSAGE FROM HON'BLE CHAIRMAN AICTE



प्रो. अनिल डी. सहस्रबुद्धे
अध्यक्ष
Prof. Anil D. Sahasrabudhe
Chairman



सत्यमेव जयते

अखिल भारतीय तकनीकी शिक्षा परिषद्

(भारत सरकार का एक सांविधिक निकाय)

(शिक्षा मंत्रालय, भारत सरकार)

नेल्सन मंडेला मार्ग, वसंत कुंज, नई दिल्ली-110070

दूरभाष : 011-26131498

ई-मेल : chairman@aicte-india.org

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

(A STATUTORY BODY OF THE GOVT. OF INDIA)

(Ministry of Education, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070

Phone : 011-26131498

E-mail : chairman@aicte-india.org

MESSAGE

The National Institute of Technology Srinagar is organizing 7th edition of hybrid "International Conference for Nanotechnology for Better Living" NBL 2021 in Collaboration with Nanoscale Research Facility IIT Delhi and in association with Anna University Chennai, Sher-i-Kashmir University of Agricultural Science and Technology Kashmir, National Institute of Technology Mizoram, SSM College of Engineering, Pattan, Kashmir, Indian Institute of Technology Madras, Sathyabama Institute of Science and Technology Chennai, Mahatma Gandhi University Kerala, Sher-i-Kashmir Institute of Medical Sciences, Kashmir. The programme includes Key note addresses/ Plenary lectures/ Invited Talks/ Oral and Poster Presentations/ science movies/ hands on operations/ tutorials and few practical demonstrations. A group of school and college children shall take part in the inaugural function and for them, a dedicated session, "Nurturing young minds for a better world" shall be conducted during the conclave, thus handing over this multidisciplinary science to our young and bright generation. This International Conference will bring together more than 250 eminent researchers (virtually /in person) and scientists from around 20 countries and almost all states of the country with research interests in diverse areas to enhance scientific collaborations which may take the Nanotechnology a step closer to realizing its enormous potential for the betterment of mankind.

(Prof. Anil D. Sahasrabudhe)

MESSAGE FROM HON'BLE SECRETARY DST



प्रो. आशुतोष शर्मा
Prof. Ashutosh Sharma



सचिव
भारत सरकार
विज्ञान एवं प्रौद्योगिकी मंत्रालय
विज्ञान एवं प्रौद्योगिकी विभाग
Secretary
Government of India
Ministry of Science and Technology
Department of Science and Technology

23rd August, 2021



MESSAGE

National Institute of Technology Srinagar is organizing 7th edition of hybrid **"International Conference on Nanotechnology for Better Living" NBL 2021** in Collaboration with **Nanoscale Research Facility IIT Delhi** and in association with Anna University Chennai, Sher-i-Kashmir University of Agricultural Science and Technology Kashmir, National Institute of Technology Mizoram, SSM College of Engineering, Pattan, Kashmir, Indian Institute of Technology Madras, Sathyabama Institute of Science and Technology Chennai, Mahatma Gandhi University Kerala and Sher-i-Kashmir Institute of Medical Sciences Kashmir.

The programme in the convention includes Key note addresses/ Plenary lectures/ Invited Talks/ Oral and Poster Presentations/ Science movies/ Hands on operations/ Tutorials and few Practical Demonstrations. A group of school and college children shall take part in the inaugural function and for them, a dedicated session, **"Nurturing young minds for a better world"** shall be conducted during the conference, thus handing over this multidisciplinary science to our upcoming young generation.

This International Conference will bring together more than **250 eminent** researchers and scientists (virtually /in person) from around 20 countries and almost all states of India with research interests in diverse areas to enhance scientific collaborations, which would take Nanotechnology a step closer to realizing its enormous potential for the betterment of mankind.

(Ashutosh Sharma)

Technology Bhavan, New Mehrauli Road, New Delhi - 110016

Tel: 0091 11 26511439 / 26510068 | Fax: 00 91 11 26863847 | e-mail: dstsec@nic.in | website: www.dst.gov.in

MESSAGE FROM HON'BLE FORMER CHAIRPERSON



I am very happy to learn that NIT Srinagar is organising the 7th edition of “International Conference on Nanotechnology for Better Living”, NBL 2021, in Collaboration with Nanoscale Research Facility IIT Delhi and in association with Anna University, SKUAST Kashmir, NIT Mizoram, SSM College of Engineering Kashmir, IIT Madras, SU Chennai, M G University, SKIMS Srinagar and Department of Higher Education, J&K Government. This prestigious Conference and flagship event of NIT Srinagar has been gaining credibility over the years.

I am also pleased to learn that few groups of school and college children shall take part in the inaugural function and that a dedicated session, Nurturing Young Minds for a Better World, shall also be conducted for them during the Conference.

Among others, the Conference envisages faculty members and students from academia to present their latest research work in both modes, virtual as well as through physical presence, and to interact with a fairly large audience. The Conference, I am sure, will play a prominent role in not only enhancing the profile of NIT Srinagar but also greatly contribute in improving the academic outlook of the participants.

I compliment Prof. M A Shah, who I have known as being highly knowledgeable in his field of Nanotechnology research and an exceptionally inspirational teacher, as well as his greatly motivated team for organizing this Conference.

I wish the Conference all success.

Dr M J Zarabi
Former Chairman, BOG NIT Srinagar

MESSAGE FROM HON'BLE FORMER DIRECTOR



It gives me immense pleasure to learn that the National Institute of Technology Srinagar (J & K) in association with various other organizations including NIT Mizoram is organizing the 7th edition of “International Conference for Nanotechnology for Better Living” (NBL 2021) during 7th – 11th September, 2021.

This International Conference will bring together about 250 eminent researchers and scientists (virtual and in person) from around 20 countries. Moreover, a group of young school and college going students will also take part in the session ‘Nurturing young minds for a better world’ which has been dedicated for them during the conference. The International Conference is interdisciplinary in nature which is extremely relevant in today’s world and specially when our New Education Policy has emphasized on interdisciplinary/multidisciplinary research.

I highly appreciate the efforts of Dr M A Shah, the Convener, for being able to make so many organizations as the joint organizers of this international conference. I congratulate and compliment the organizers for this International Conference and I wish the NBL 2021 a grand success.

RAJAT GUPTA

HAG Professor/ Former director NIT Srinagar/NIT Mizoram

MESSAGE FROM PROF J KUMAR



**CRYSTAL GROWTH CENTRE
ANNA UNIVERSITY, CHENNAI – 600 025.**

Prof. Dr. J. Kumar
UGC-BSR Faculty Fellow

Tel: 0091-44-22358329; 9444125128
E-mail: marsjk@gmail.com, marsjk@annauniv.edu

09th August 2021

MESSAGE

I am very glad that the 7th edition of hybrid biennial, International Conference on Nanotechnology for Better Living (NBL-21) shall be organized from 07-11, September, 2021 in collaboration with Nanoscale Research Facility, IIT Delhi and in association with Anna University, SKUAST-K, NIT Mizoram, SSM College of Engineering, IIT Madras, M G University, Higher Education and SKIMS Srinagar.

I wish to place on record the great continuous efforts of Prof Ashraf Shah and his team for the organization of this biennial International conference for better living.

It's indeed a matter of pride that Anna University is part of the initiatives and plays significant role in the organization of the conference.

Special mention is to be made for the seven awards instituted to encourage active participation from across the society.

I wish the program a grand success as it will benefit society at large considering the broad coverage of topics and the excellent speakers.

Dr. J. Kumar

MESSAGE FROM HON'BLE DIRECTOR SKIMS

Message

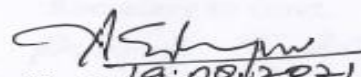


I am immensely pleased to know that **National Institute of Technology Srinagar** is organizing 7th edition of hybrid “**International Conference on Nanotechnology for Better Living**” NBL-2021 in collaboration with **Nanoscale Research Facility IIT, Delhi** and in association with Anna University Chennai, Sheri-i-Kashmir University of Agricultural Science and Technology Kashmir, National Institute of Technology Mizoram, SSM College of Engineering, Pattan, Kashmir, Indian Institute of Technology Madras, Sathyabama Institute of Science and Technology Chennai, Mahatma Gandhi University Kerala, Sheri-i-Kashmir Institute of Medical Sciences, Kashmir.

It is quite fascinating to note that the programme in the convention includes Key note addresses/plenary Lectures/Invited Talks/Oral and Poster Presentations/Science Movies/Hands on Operation/Tutorials and few practical demonstrations. A group of School and College Children shall be taking part in the inaugural function and for them, a dedicated session, “**Nurturing Young Minds for a Better World**” shall be conducted during the conclave, thus handing over this multidisciplinary science to our young and bright generation.

I hope and pray that this International Conference brings together more than **250 Eminent Researchers** (Virtually/in Person) and scientists from around 20 Countries and almost all States of the Country with research interests in diverse areas to enhance scientific collaborations which may take the Nanotechnology a step closer to realize its enormous potential for the ‘**Betterment of Mankind**’. The technology in any form on enhancement is merely an advancement of Science that makes life on this planet an amazing venture that keeps on parring to generation next!

My Best Wishes to the Organizers.


[Prof. A.G. Ahangar]
Director SKIMS & Ex-Officio
Secretary to Govt.

MESSAGE FROM HON'BLE REGISTRAR

Message for Programme Souvenir

From the desk of Registrar,
National Institute of Technology, Srinagar.
Prof. S. Kaiser Bukhari



It is my pleasure to welcome you to 7th edition of hybrid "International Conference for Nanotechnology for Better Living" NBL 2021, being organized in collaboration with Nanoscale Research Facility IIT Delhi and in association with Anna University, SKUAST-K, NIT Mizoram, SSM College of Engineering, IIT Madras, SU Chennai, M G University, SKIMS Srinagar and Department of Higher Education.

I would like to express my personal gratitude to all the prestigious institutions, research sponsors, alumni and friends for their continued support, as well as to our students, faculty and staff, whose work and dedication have provided significant contributions to this conference's continued growth and success.

I look forward to and wish success to the faculty members who shall present their latest research work at this conference. I am sure it will help not only in enhancing the profile of the institution but also play a prominent role in the academic life of scientific fraternity.

I look forward to joining all of you on the 7th of September.

Patron,
International Conference for Nanotechnology for Better Living,
NBL 2021

MESSAGE FROM PROF KAMAL K KAR



Materials reduced to the nanoscale shows different properties compared to what they exhibit on a macro-scale, enabling unique properties and applications. An important feature of this new technology- the nanotechnology is its ability to bridge the crucial dimensional gap between the atomic and molecular scale of fundamental sciences and the micro structural scale of engineering and manufacturing. Accordingly, a vast amount of true multidisciplinary fundamental knowledge is to be explored and linked. It will lead to a fantastic amount of new understanding as well as the fabrication of novel high technologies in many fields from electronics to medicine and from agriculture to environment.

Our institute has a distinct record of achievements in the field of teaching, training and research. It has always been active in establishing collaborative linkage with reputed industries, international academic institutions and with R & D organizations for achieving excellence. Having a proven and marvelous record of organizing mega academic events in past, IIT Kanpur has decided to join hands with NIT Srinagar to organize the International conferences on, Nanotechnology for Better Living NBL 2021" in the world famous paradise (Kashmir) from 07-11 September 2021.

I am sure that this conference, 7th in series will give significant contribution to the achievements of scientific knowledge in the areas of nanomaterials and their applications in various sectors. I highly appreciate the efforts of Dr M A Shah, the Convener, for being able to make so many organizations as the joint organizers of this international conference. I congratulate and compliment the organizers for this International Conference and I wish the NBL 2021 a grand success.

I wish good luck to convention!

(Prof. Kamal K Kar)

MESSAGE FROM HON'BLE DEAN R & C



National Institute of Technology Srinagar is organising 7th edition of hybrid "International Conference for Nanotechnology for Better Living" **NBL 2021** in collaboration with Nanoscale Research Facility of IIT Delhi and in association with Anna University, SKUAST Kashmir, NIT Mizoram, IIT Madras, SKIMS Srinagar, Sathyabama, SSM College of Engineering and M G University, under the aegis of Materials Research society of India (MRSI).

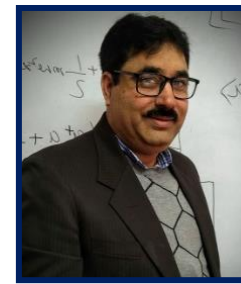
A group of school and college children shall take part in the **inaugural function** and for them, a dedicated session; **"Nurturing young minds for a better world"** shall be conducted during the conclave, thus handing over this multidisciplinary science to our young and bright generation. **This time NBL 21 covers wide range of topics in all areas of science, engineering and medicine with an aim to gather well known National & International scientists to share new knowledge, current breakthrough and discuss practical challenges in this interdisciplinary field.**

The convention will witness important presentations by the extensive range of eloquent speakers, policy makers and scientific leaders around the world who will assemble in Srinagar both **in virtual and in person** with a common objective of making this world a better place by providing the solution to some of the crucial problems. **I congratulate and convey best wishes to Convener Dr M A Shah for his scientific and academic endeavors in Kashmir.**

Prof G A Harmain

Hon'ble Dean R & C

MESSAGE FROM HON'BLE CHAIRPERSON NBL



Nanotechnologies are regarded and acknowledged as a triumph of human ingenuity in modern times and this emerging field is leading to a technological revolution in the world. Keeping in view its importance and realizing the need for stock of such developments, it was planned by many prestigious institutions of the country to host an Scientific event on, "Nanotechnology for Better Living (NBL-2021)" from 07-11 2021 in world famous tourist destination-Kashmir. Its prime location and proximity to Srinagar naturally make it one of the choices for the selection of venue.

NBL-2021 is aimed to provide a platform for the genius scientists across the globe for stimulating deliberations which may culminate into collaborative research atmosphere mutually beneficial to all. An event of this magnitude will provide an ample opportunity for young students also to learn about new inventions in these areas

I am sure that the scientists will enjoy academic by the great stalwarts. I am further sure that this conference will give significant contribution to the achievements of scientific knowledge in the areas of nano-materials and their applications in various sectors. I compliment and congratulate Dr. Shah and his dynamic team for his scientific and social endeavors at NIT Srinagar, making us proud and privileged.

(Dr.P A Ganaie)

MESSAGE FROM HON'BLE CONVENER/ FOUNDER OF NBL



Human History is ample with daring and inspiring scientific feats and accomplishments that kindle one's heart and mind. In this century, human kind defiantly will face a new challenge for the betterment of the quality of life on this planet. What seems to be more thought provoking and formidable source of optimism and enthusiasm is the fact that new technologies will provide real global opportunities for all but those who may fail to recognize its potential, may therefore miss the revolution!

The 7th edition of hybrid "International Conference for Nanotechnology for Better Living" NBL 2021 is being organized in Collaboration with Nanoscale Research Facility IIT Delhi and in association with Anna University, SKUAST-K, NIT Mizoram, SSM College of Engineering, IIT Madras, SU Chennai, M G University, SKIMS Srinagar and Higher Education. Many more institutions were interested to join hands and with time the biennial scientific convention is gaining immense credibility.

The scientific contributions of more than 300 participants from all across globe in the form of Plenary, keynote, invited, oral and poster presentations will play a profound role in exchanging of novel ideas both in virtual and in person mode. It enables presenters and delegates to enjoy the state of the art oral/poster presentations covering the in-depth findings and the extraordinary advances for various applications and innovation in the area of nanotechnology. We are pleased to share that few groups of students from schools and colleges shall take part in the inaugural function and for them, a dedicated session, "Nurturing young minds for a better world" shall be conducted during the conclave.

As a convener of the summit, I am indebted to all speakers and participants for making the conference a successful scientific event, as always. I look forward for forging a long term professional collaboration with each and every one who kindly responded to our call and contributed to our convention. This is not only a great honour to the institute but also a source of inspiration for the organizers of the summit. The full details can be had from www.icnbl.org/www.shahnit.org.

Dr Shah M A
Convener/Co-founder of NBL 21
HOD Physics

Our Hon'ble Speakers For NBL-2021



7th edition of Hybrid International Conference on “Nanotechnology for Better Living”

The Leading Technology of 21st Century
From 7-11 September, 2021



Our Honorable Speakers for NBL-2021



Prof. Dzulkifli A. Razak,
International Islamic Uni.
Malaysia



Prof. C. Jagadish,
Australian National Uni
Australia



Prof. Mohamed Henina,
University of Nottingham
UK



Prof. Ian Ferguson,
Kennesaw State University
USA



Prof. J. Kumar,
Anna University



Prof. M. S. R. Rao,
IIT Madras.



Prof. Neeraj Khare,
IIT Delhi.



Prof. Sabu Thomas,
Mahatma Gandhi University



Prof. Absar Ahmad,
Aligarh Muslim Uni.



Prof. Nguyễn Than,
University College London



Prof. Na (Luna) Lu,
Purdue University



Prof. Sultana. N. Nahar,
Ohio State University



NIT Srinagar



MRSI



H.E (J&K)



Anna Uni



SSM



NIT
Mizoram



SU Chennai



SKIMS



SKUAST-K



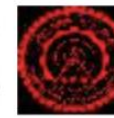
IITM



MGU
KOTTAYAM



Central
& UT



IIT-Delhi

Our Honorable Speakers for NBL-2021



Prof. A D Sahasrabudhe,
Chairman AICTE



Shri. Khurshid A Ganai,
IAS, Former Advisor.



Prof. A G Ahangar,
SKIMS Srinagar.



Prof. Ahmad I. Ayesh,
Qatar University, Qatar.



Prof. S. Javaid,
Kashmir University.



Prof. Wahajuddin,
CSIR-CDRI



Prof. M. V. Reddy,
CETEES, Canada.



Prof. S. K. Sharma,
MIET, Jammu.



Dr. Hagar Alm El Din,
Tanta University, Egypt.



Prof. K. Khasanov,
Samarkand University.



Dr. N. Vijayan,
CSIR-NPL, Delhi.



Prof. Tokeer Ahmad,
Jamia Millia Islamia.



Dr. Sayed A. Hussain,
Tripura University.



Prof. Md. K. A. Khan,
Jaganath University.



Dr. Himanshu Ojha,
DRDO, Delhi.



Dr. Mrinal Pal,
CSIR-CGCRI, Kolkata.



Dr. Adil Gani,
Kashmir University.



Dr. Pratima Solanki,
JNU-New Delhi



Dr. Suriya Rehman,
IABF Uni., K. S. A.



Dr. Kishor K. Sadasivuni,
Qatar University

Best Presentations Supported by: Jagadish vidya foundation/ LMN Award

INTERNATIONAL CONFERENCE ON "Nanotechnology for Better Living"

Our Honorable Speakers for NBL-2021



Prof. Dinesh Pandya,
IIT Jammu.



Prof. Deepa Gosh,
INST, Punjab.



Prof. Perumal Algarsamy,
IIT Guwahati



Dr. Sajad A. Lone,
Jamia Millia Islamia, Delhi.



Dr. Rakesh K. Gupta,
Cluster Uni., Jammu.



Dr. M. S. Mir,
NIT Srinagar.



Dr. Seema Singh,
University of Kashmir .



Dr. Alka Sharma,
University of Rajasthan.



Prof. (Dr) T. Basu
AMITY New Delhi



Dr. Chandana Rath,
IIT BHU.



Dr. Nasheeman Ashraf,
CSIR-IIIM, Jammu.



Dr. Shamima Hussain,
UGC-DAE, CSR, T. N.



Dr. Barkat H. Bhat,
SKUAST, Kashmir.



Dr. Shipra Mital,
GGSIU, Delhi



Dr. Abdul Mueed Hafiz,
Kashmir University.



Dr. Tareeq Maqbool,
Kashmir University.



Dr. Alok Shukla,
NIT Mizoram.



Dr. Shahnaz Majeed,
University of Kashmir.



Dr. Saifullah Lone,
NIT Srinagar



Dr. Shafqat M. Shah,
Kashmir University.

Best Presentations Supported by: Khagendranath Kar Memorial Award/NIT Mizoram.

Our Honorable Speakers for NBL-2021



Dr. Khalid Sultan,
Central Uni. Kashmir



Dr. Indra Sulania,
IUAC, Delhi.



Dr. Iqra Reyaz Hamdani,
IIT Delhi.



Dr. Ranjita Misra,
SIST, Tamil Nadu



Dr. Ashok Bera,
IIT Jammu.



Dr. J. M. Sam Gnanaraj,
National College, T. N.



Dr. Rajendra K. Varma,
IIT Jammu.



Dr. M. Irfan,
IIT Hyderabad.



Dr. Vishal Choudhary,
Delhi University.



Dr. Mudasir A. Yattoo,
Imperial College London.



Dr. Kiesar Bhat,
NTU, Singapore



Dr. Rehan Khan,
INST, Punjab



Dr. Hilal A. Punoo,
University of Kashmir.



Dr. Padmini Pandey,
South Korea.



Dr. Sajad Hussain Din,
SSM College, Srinagar



Dr. Faheem Arjamend,
Kashmir University



Dr. Chandana Rath,
IIT BHU.



Dr. Wakeel A. Dar,
IIT Madras.



Dr. Anita R. Gandhee,
UoH, Karnataka.



Dr. Aashima Shah,
Kashmir University.

For Queries contact: **On-line:** Mr. Nikhilesh K. Dilwaliya (7838591359/nikhilesh_02msc19@nitsri.net) / **Off-line:** Mr. Jaffar Farooq (7006595391/jaffar_01phd18@nitsri.ac.in)

Peers & Patrons

Chief Patrons



Prof. R. Sehgal



Prof. V. R. Rao



Prof. Neeraj Khare



Prof. Sabu Thomas



Prof. Rajat Gupta



Prof. A. M. Wani

Patrons & Partners



Prof. S. K. Bukhari



Prof. M. S. R. Rao



Prof. M. Ul Hassan



Prof. J. Kumar



Mrs. Dilafroze Qazi



Prof. Vinita

Advisors & Coordinators



Prof. G. A. Harmain



Prof. Kamal Kar



Dr. Dilafroze



Dr. Kowsar Majeed



Prof. M. S. Mir

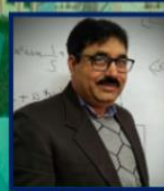


Prof. N. A. Shelkh

Chairpersons & Organizing team



Prof. S. Rubab



Dr. P. A. Ganai



Prof. M. Ikram



Dr. Vijay Kumar



Dr. Harkirat Singh



Dr. M. Z. Ansari

For Queries contact: On-line: Mr. Nikhilesh K. Dilwaliya (7838591359/nikhilesh_02msc19@nitsri.net)/ Off-line: Mr. Jaffar Farooq (7006595391/jaffar_01phd18@nitsri.ac.in)

Offline Team Members

Behind the Scene

Online Team Members



Mr. Aalim Malik



Mr. Arshid Mir



Mr. Jaffar Farooq



Dr. M. A. Shah



**Mr. Nikhilesh K.
Dilwaliya**



**Miss. Surbhi
Rajpoot**



**Miss. Irfana
Zahoor**



Mr. Showkat Mir



Mr. Amir Suhail



**Mr. Reyaz
Sheergojri**



**Miss. Tanzeela
Hassan**



**Mr. Abdul
Wakeel**



Mr. Anil

Hospitality Team

Media Team



Mr. Raj J. Jivani



Mr. Adil Hassan



Mr. Arun



Miss. Shaista



Mr. Mudassir Malik



Mr. Aasim Rashid

For Queries contact: On-line: Mr. Arshid (7006929782/ arshid.jmi@gmail.com) Off-line: Mr. Aalim (8825075634/aalimmushtaq@gmail.com)

“Nanotechnology for Better Living”



Convention

**INTERNATIONAL CONFERENCE ON
“Nanotechnology for Better Living”**

From 7-11 Sept,2021

Off-line Mode

Programme of ICNBL-21

NBL 2021 Convention

Welcome from Conveners

ICNBL-2021 marks the 7th Edition of International Conference on Nanotechnology for Better Living (ICNBL-21) and this time in hybrid mode. The objective of the summit is to have in-depth discussions on the fundamental sciences and applications of Nanostructured Materials and to provide a platform for the young scientists for stimulating deliberations which may culminate into collaborative research atmosphere mutually beneficial to all of us. These collaborations in turn will boost not only economic strength but also materialistic prosperity of the society. Future developments in nanotechnologies will need an understanding and interdisciplinary approaches. Thus, a nursery of future researchers with an understanding of the physical, biological, chemical and technological aspects will contribute to new solutions for the major challenges facing the world.

Most of the industries have already begun to establish a significant share in the global market and are expected to exert a major beneficial impact on every sphere of life. Recently Hon'ble LG Jammu and Kashmir has launched Nano Fertilizer, which is expected to bring revolution in agriculture sector. We were the first to introduce the product all across the country.

Five days programme of NBL 21 includes **35 Keynote Lectures** by a group of world leaders in advanced materials, who will address topics dealing with new methods of fabrications, nano-medicine for improved diagnostics, nano pesticides used in agriculture and climate change. In addition to lectures, **50 invited talks by eminent scientists, 200 presentations, 100 for oral and 100 for poster** are planned as an integral part of conference programme.

The synergism produced by bringing together more than **300 researchers and scientists from around 20 countries and 28 states of the country** with research interests in diverse areas is expected to enhance scientific collaborations which may take the nanotechnology a step closer to realizing its enormous potential for the betterment of mankind. The impact of this scientific gathering will provide an ample opportunity to young students to learn about new inventions in this new and interdisciplinary field. In addition, the endeavor will put the state of Jammu and Kashmir into scientific map of the country and beyond.

Firm to make the NBL Convention a grand success!

Yours Sincerely
(Dr. Shah M A)



Nanotechnology for Better Living - 2021

Hybrid Scientific NBL convention aim to offer the best of in-person and virtual meetings

Hazratbal-Srinagar-06 (J&K)



30-08-2021

Esteemed Delegates and dear Students

Greetings from NIT Srinagar,

NBL-2021 marks the 7th Edition of **International Conference on Nanotechnology for Better Living (NBL-21)** and due to pandemic, this time it is being solemnized in **hybrid mode** from **07- 11 September 2021 in common Hall/ Hi Tech Rooms, NIT Srinagar**. The in-person and virtual mode presentations have been arranged separately and have been uploaded. Some of the key pinnacles of NBL 21 are:

1. Lectures from Scientists of Top-Ranking Universities and from Renowned Speakers
2. Speakers from 10 countries and participation from 28 states of the country
3. Young scientists from more than 75 universities and institutes
4. More than 11 institutions are associated and are collaborating
5. More than 03 foundations are at back of NBL 2021 for best presentations
6. NBL Special session on Women in Science and Technology
7. NBL Special Session for School/UG/PG Students
8. NBL Young Researcher Awards for best work
9. NBL women's Researcher Awards in Nanotechnology
10. NBL Best teachers Award in Basic and Engineering Science
11. E-Publications of abstracts with ISBN No

We are attaching **Day/Time/ Session wise Schedule of off-Line and on-line Presentations/ talks**. To avoid large gatherings, we respectfully request you to follow the schedule and mark your attendance for presentation as per the **Slot allotted to you**. You will be received by the student coordinators of the Session at the entrance of NIT Srinagar upto venue, where Session Chairpersons will welcome you individually.

Please feel free to contact Mr. Nikhilesh (7838591359) for any change in slot, if needed and for other local assistance, please contact Mr Jaffar (7006595391) or you can reach to me through my Handset-9419018195. In case of any pre-assignment, you can join us on-line. The Link shall be shared and web ex may be used, most probably. Please download. For updates, Please visit us at: www.icnbl.org for updates or or www.nitsri.ac.in.

Sincerely yours

Dr. M. A. Shah

Convener, NBL-21/HOD Physics



“Nanotechnology for Better Living”

Session-1 (Pre-Conference)

NBL Convention From 7-11 September 2021 in Hybrid Mode (Common Hall)

Day 1- Tuesday,

7 September 2021

(Tutorials + Inauguration)

Over all I/C: **Prof. B A Mir/Prof S Rubab**

Time: 8.30 AM

Students Coordinator: **Ms. Sanna Showkat/ Miss. Irfana/Nowsheena/ Aanisa**

Chairperson: **Prof. N A Sheikh (HoD Mechanical)/ Prof. M S Mir (Dean Alumni)**

	(Registration Team Headed by: Dr. Hamida and Dr. Mehraj-u-din): Supported by Mr. Nikhilesh/ Mr. Aalim/ Mr. Reyaz/ Miss. Irfana/		
Session S1	Conference Delegates+ Students+ other invited guests: I/C Dr. Vijay Kumar and Dr Mohd. Zubair		
	FORMAL INAUGURATION OF TUTORIALS		
	Time	Name & Affiliation	Title of the talk
T-1	09.00am to 9.45am On-Line	Professor Meyya Meyyappan Ex-Chief NASA Lab	Printed and Flexible Electronics.
T-2	09.45am to 10:20am On-Line	Professor Nguyễn T. K. Thanh FRSC FInstP FIMMM FRSB, Chair in Nanomaterials, UCL London	Nanomaterials from Bench to Bedside / video
T-3	10:20am- 11:10am	Shri Khurshid Ahmad Ganai (IAS) Former Adviser to Hon'ble Governor	Global warming and Climate Change
T-4	11.10am -11.30 am	Dr. Saifullah Lone (Scientist-D) Department of Chemistry, NIT Srinagar	Relation of Nanotechnology with Good Life
T-45	11.30am -11.45 am	Prof. Seemin Rubab Dept. Physics, NIT Srinagar	Bright Career Opportunities in Nanotechnology in Research and Industry
INAUGURATION CEREMONY OF ICNBL-21 From: 12:00 PM - 1.00 PM			
Lunch/ Interaction/ Group Photo			Dr. Harkirat Singh



“Nanotechnology for Better Living”



Session-2 (Inauguration)

NBL-2021 Convention From 7-11 September 2021 in Hybrid Mode

Programme of NBL 21 Inauguration in Common Hall NIT Srinagar from 12.00 PM to 1 PM on 7th Sept., 21

Day 1- Tuesday, 7 September 2021

Over all I/C: **Prof. M. Ikram/ Dr P A Ganaie**

Students Coordinator: **Ms. Sanna Showkat/ Miss. Irfana/Nowsheena/ Aanisa**

	(Registration Team Headed by: Dr. Hamida and Dr. Mehraj-u-din)		
Session	Conference Delegates+ Faculty+ Students+ other invited guests: I/C Dr. Vijay Kumar and Dr Mohd Zubair		
	Time	INAUGURATION CEREMONY OF ICNBL-21 From: 12:00 PM - 1.00 PM	
Arrival of Guests in Common Hall			
Felicitations of Guests by Prof S Rubab and Dr. P A Ganaie			
S-1	12:05 pm to 12:10pm	Glimpses of ICNBL-2021 Journey and Importance of NBL for Region	Dr. M A Shah, Convener / HOD Physics
S-2	12:10pm to 12.15pm	Opening Address of NBL- 2021	Prof. G A Harmain, Dean R & C, NIT Srinagar
S-3	12:15pm to 12:25pm	Formal Welcome Address to the Hon’ble Minister and Esteemed Guests of NBL 21	Prof. Rakesh Sehgal, Director NIT Srinagar
S-4	12:25pm to 12:35pm	Address by Guest of Honour	Prof. Anil Sahasrabudhe Chairman AICTE , New Delhi
S-5	12:35pm to 12:55pm	Address by Chief Guest: Science and Technologies Initiatives	Dr. Jitendra Singh Hon’ble Union Minister of State (Independent Charge) in Ministry of Science & Technology and Earth Sciences, Minister of State in Prime Minister's Office, New Delhi
S-6	12:55pm to 01:00pm	Vote of Thanks by Registrar	Prof. S K Bukhari, Registrar NIT Srinagar
GROUP PHOTO FOLLOWED BY LUNCH			Brief Interaction with Faculty and Students-I/C Dr. Harkirat S

CONCLUSION OF INAUGURAL FUNCTION AT 2.30PM



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Special Session -3 (For Women)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 1- Tuesday, 7 September 2021

Over all I/C: **Dr. Zamrooda (Former HOD Maths)**

Students Coordinator: **Nazima/Farah Shah**

Chairperson: **Prof. S Rubab/ Prof. Seema Singh**

	Time	Name & Affiliation	Title of the talk
S-1 OL	02.30pm - 02:50pm	Dr. Alka Sharma Department of Chemistry, University of Rajasthan	Innovative nanomaterials for sustainable environment
S-2	02.50pm - 03:05pm	Dr. Nasheeman Ashraf IIIM, Sanat Nagar, Srinagar	Functional characterization of CsBGlu12, a β -glucosidase from <i>Crocus sativus</i> provides insights into its role in abiotic stress through accumulation of antioxidant flavonols
S-3	03.05pm - 03:20pm	Dr. Irfana Zahoor Jaipur National University	Biogenic synthesis of silver nanoparticles using <i>Viburnum nervosum</i> leaf extract: a viable approach for cancer therapeutics
S-4	03.20pm - 03:35pm	Dr. Ashima Shah University of Kashmir	B-glucan nanoparticles as a carrier for bioactives.
S-5	03.35pm - 03:50pm	Miss. Shomaila Khanam BIT, Jharkhand	Plasmonic metal-semiconductor nanostructure for hydrogen evolution and dye water treatment
S-6	03.50pm - 04:00pm	Miss. Farah Naqash IUST Awantipora.	Delivery of polyphenols mediated through nanoemulsions for increased stability and bioavailability
S-7	04.00pm - 04:10pm	Dr. Iqra Reyaz Hamdani IIT Delhi	p-Cu ₂ O nanowires based photocathodes for efficient current density towards solar- water splitting
S-8	04.10pm - 04:20pm	Miss. Shemilah Fayaz Department of Food Technology, IUST	Biodegradable polymers in food packaging - A review
S-9	04.20pm - 04:35pm	Dr. Seema Singh Department of Botony, KU	Future perspectives of nanotechnology in plants conservation.
S-10	04:35pm-04:55pm	Professor Nguyễn T. K. Thanh FRSC FInstP FIMMM FRSB, Chair in Nanomaterials,	Synthesis and biofunctionalization of plasmonic and magnetic nanoparticles for biomedical application
S-11	04:55pm-05.10pm	Miss. Meenakshi Super 30, Delhi.	Memorial Lecture on Shri Shahi.
		Concluding Remarks by chairpersons & written report	Certificate Distribution I/C:



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Special Session -4 (For Memorial Lecture)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr. Harkirat Singh**

Students Coordinator: **Showket A Mir/ Dr. Aarif-ul-Islam**

Chairperson: **Dr. G A Harmain (Dean Research)/ Shri. Sanjeev Rana**

	Time (am)	Title of the talk	Name	Affiliation
S-1	09:30 - 09:45	Efficient thermoelectric for home appliances waste heat conversion to electrical energy	Prof Dinesh Pandya (Prof K L Chopra Sb Memorial Lecture)	Departments of Materials Engineering and Physics, Indian Institute of Technology Jammu,
S-2	09:46 - 10:00	Insights from nanotechnology in combating covid-19 and applications in regenerative medicine	Dr. Tariq Maqbool	Nanotechnology Center, Kashmir University
S-3	10:01 - 10:15	Importance and use of nanomaterials against different aphids for their management	Dr. Barkat Hussian	SKUAST, Shalimar Kashmir
S-4	10:16 - 10:30	Shape-reconfigurable and recyclable 4D smart plastics	Dr. Kisar Bhat	School of Chemical and Bio-medical Engineering and Hp-NTU Corporate Laboratory, Nanyang Technological University
S-5	10:31 - 10:45	Plant mediated sulphur nanoparticles and their efficacy evaluated against fruit rot of chilli (Colletotrichum)	Dr. Tariq A. Sofi	SKUAST-Shalimar Kashmir.
S-6	10:46 - 11:00	Effect of ultrasonication on physico-chemical and rheological properties of soy yoghurt	Dr. Hilal Ahmad Punoo	University of Kashmir Hazratbal Srinagar
S-7	11:00 - 11:15	Chemistry of atomically precise nobel metal nanoclusters	Dr. Wakeel A. Dar	Department of Chemistry, IIT Madras
S-8	11:15 - 11:30	Nanoscience: Jammu and kashmir perspective and a way forward	Dr. Sanjeev Rana	School of Biotechnology, Shri Mata Vaishno Devi University, Kakriyal
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Oral Session -5

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr. Harkirat Singh**

Students Coordinator: **Mr. Gowhar H. Rahter/Dr. Mudasir Mir**

Chairperson: **Dr. Gausia Qazi/ Dr. Tabassum (Former HoD Chemistry)**

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-001	11:50 - 12:00	IoT based indoor pollutant controller	Akshit Kumar	Dept. of ECE, Model Institute of Engineering and Technology Kot Bhalwal, Jammu, 181122
NBL21-OL-002	12:01 - 12:10	Dietary nano zinc oxide (ZnO) and vitamin E supplementation helps to alleviate cold stress in broiler chickens	Peerzada Tajamul Mumtaz	Division of Veterinary Biochemistry, Faculty of Veterinary Sciences and Animal Husbandry, SKUAST Kashmir, India -19006.
NBL21-OL-003	12:11 - 12:20	Enhancement of thermal and ion exchange properties of bio-nanocomposite with substantial photocatalytic behavior	Jahangir Ahmad War	Department of Chemistry, National Institute of Technology, Srinagar-190006
NBL21-OL-016	12:21 - 12:30	In vitro evaluation of antibacterial activity of copper nano particles on pure culture of Staphylococcus aureus	Amatul Muhee	Faculty of Veterinary Sciences and Animal Husbandry, Srinagar,
NBL21-OL-007	12:31 - 12:40	structural refinement and estimation of crystallite size and strain of bismuth molybdate (Bi ₂ MoO ₆) nanoplates synthesized via solvothermal method	D. Trixy Nimmy Priscilla	PG & Research Department of Physics, Government Arts College for Men, Nandanam, University of Madras, Chennai-600035,
NBL21-OL-019	12:41 - 12:50	Designing cellulose based functional materials for applications in energy and health care	Sourav Sen	Institute of Nano Science and Technology, Sector-81, Manauli, Mohali, Punjab-140306.
NBL21-OL-022	12:51 - 01:00	Nutraceutical preparation through nano-food delivery system	Anam Aijaz	Food Science and Technology, SKUAST-Shalimar Srinagar
NBL21-OL-023	01:01 - 01:10	Efficacy evaluation of different waterproofing compounds in concrete	Parah Salsabeel Jalal	Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj(U.P.).
NBL21-OL-011	01:11 - 01:20	Immune modulating and anti viral properties of mushrooms and the control of covid -19	Mohd. Manzoor ul Haq	Research Scholar Department of Microbiology Gulbarga university
NBL21-OL-015	01:21 - 01:30	Evaluation of cell line toxicity of copper nanoparticles for intramammary treatment of mastitis in rat mastitis model	Reyaz Ahmad Bhat	Division of Veterinary Medicine, Faculty of Veterinary Sciences and Animal Husbandry, Srinagar, Jammu and Kashmir, India
Concluding Remarks by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Poster Session -6a

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr. Harkirat Singh**

Students Coordinator: **Dr. Ashiq Sofi/ Mr. Umar Altaf**

Chairpersons: **Dr. Javaid Ahmad (Former HoD Chemistry)/ Dr. Barkat Hussain Bhat**

	Time	Title of the talk	Name	Affiliation
NBL21-PO-003	03:00 – 04:30	Leveraging nanotechnology for enhancement of oral bioavailability: Design and characterization of solid lipid nanocarrier system for artemether	Divya Chauhan	Pharmaceutics and Pharmacokinetics Division, CSIR - Central Drug Research Institute, Lucknow 226001, Uttar Pradesh, India.
NBL21-PO-005	03:00 – 04:30	Comparative study of chemically and biologically synthesized silver nanoparticles on seed germination assay	Megha Biware	Post-graduate and Research Centre, Department of Chemistry, MES Abasaheb Garware College, Pune, India.
NBL21-PO-007	03:00 – 04:30	A novel study on the synthesis of metalloresin through non-conventional approach to explore its flame retardancy	Iram Fayaz	Department of Chemistry, University of Kashmir, Srinagar, India
NBL21-PO-009	03:00 – 04:30	A review on emerging use of nanoparticles in anthelmintics	Ishrat Ara	Department of Zoology, University of Kashmir Srinagar-190006, India
NBL21-PO-011	03:00 – 04:30	Impact of vehicular pollution on edaphic features along tangmarg- magam road, kashmir valley	Jallal ud-din Najar	Uttaranchal College of Science and Technology
NBL21-PO-012	03:00 – 04:30	Effect of nanoclay on barrier and mechanical properties of chitosan based films	Aiman Zehra	Division of Food Science and Technology, SKUAST-K Shalimar J&K.
NBL21-PO-013	03:00 – 04:30	Efficacy of banana peel as unexplored source of antioxidants in meat based products: a review	Shubli Bashir	Division of Food Science and Technology, Faculty of Horticulture, SKUAST-K-190025
NBL21-PO-014	03:00 – 04:30	Nutritional analysis (fatty acid profile) in cereal food products using GCMS/FID	Taha Mukhtar	Division of Food Science and Technology, SKAUST-K-190025
NBL21-PO-017	03:00 – 04:30	Chitosan-gelatin nanocomposite matrix for biomedical applications	Sheril Ann Mathew	Department of Nuclear Physics, University of Madras, Chennai 600025, I
NBL21-PO-020	03:00 – 04:30	Prospects of using dendrimers as nano-delivery vehicle for beta-carotene, safety and security	Nusrat Jan	Division of Food science and Technology, SKUAST-Kashmir, 190025 (J&K), India
Concluding Remarks by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Poster Session -6b

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr. Harkirat Singh**

Students Coordinator: **Dr. Farooq A. Dar/ Mr. Reyaz A. Shergojri**

Chairpersons: **Dr. Atik-U-Rahman/Dr. Shahnaz Majid**

(Registration Team Headed by: Dr. _____ and Dr. _____)/ Supported by Mr. Nikhilesh/Mr. Jaffar				
ID	Time	Title of the talk	Name	Affiliation
NBL21-PO-021	03:00 – 04:30	Trends in dielectric and ferroelectric properties of rare earth doped barium titanate: A review	Saima Jahan	Department of Physics, Central University of Kashmir, -Ganderbal, 190015(J&K), India.
NBL21-PO-022	03:00 – 04:30	Synthesis of iron oxide from scrap iron thereby harnessing its potential in environment remediation	Arushi Arora	Institute of Nano Science and Technology, Knowledge City, Sec-81, Mohali, 140306, Punjab, India
NBL21-PO-028	03:00 – 04:30	A review on structural and experimental dielectric properties of $\text{Nd}_2\text{NiMnO}_6$ and its first principal study of dielectric properties	Shohaib Abass	Department of Physics, Central University of Kashmir, Tulmulla Campus, Ganderbal, 191131.
NBL21-PO-029	03:00 – 04:30	Dielectric and refraction trends in $\text{La}_2\text{NiMnO}_6$ double perovskite substitutionally doped by gadolinium: a first principle study	Feroz A. Najar	Department of Physics, Central University of Kashmir, Tullmullah-Ganderbal , 190015(J&K), India
NBL21-PO-030	03:00 – 04:30	Microbiological and physiochemical evaluation of various skim milk and whole milk powders in kashmir valley	Snober Irshad	1Division of Livestock Products Technology, Faculty of veterinary Sciences and Animal Husbandry, SKUAST-K
NBL21-PO-031	03:00 – 04:30	Nanotechnology in agriculture: A future technology for sustainable agriculture.	Bushra Bashir	Division of Food Science and Technology SKUAST-K
NBL21-PO-125	03:00 – 04:30	Comparative studies of Ba and Sr doped bulk $\text{La}_2\text{NiMnO}_6$ double perovskites and their temperature dependent dielectric response	Shah Aarif Ul Islam	Department of Physics, National Institute of Technology Srinagar, 190006, J&K, India.
NBL21-PO-126	03:00 – 04:30	Biopolymer based packaging materials: A review	Sadaf Dur	Department of Food Technology, IUST, Awantipora, 192122, J&K, India.
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Poster Session -6c

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr. Harkirat Singh**

Students Coordinator: **Mr. Irfan Ayoub/ Dr. Kaleem**

Chairpersons: **Dr. Tariq Sofi/Dr. Vishal Choudhary**

(Registration Team Headed by: Dr. _____ and Dr. _____) / Supported by Mr. Nikhilesh/Mr. Jaffar				
ID	Time	Title of the talk	Name	Affiliation
NBL21-PO-114	03:00 – 04:30	Investigation of response and recovery time of humidity sensor based on nanopores anodic alumina.	Mudassir A. Mir	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-115	03:00 – 04:30	Microwave workstation used to synthesize spherical nanoparticles of iron oxide (Fe_2O_3) and its applications in plant tissue culture	Sabreena Jan	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-116	03:00 – 04:30	In vitro and in vivo MRI imaging and photothermal therapeutic properties of hematite ($\alpha\text{-Fe}_2\text{O}_3$) nanorods	Aanisa, Nowsheena	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-117	03:00 – 04:30	Optical study of pure copper oxide (CuO) nanoparticles	Shabnam, Shafiq	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-136	03:00 – 04:30	Rapid detection of SARS COV2 RNA using graphene based electrochemical biosensors.	Surbhi Rajpoot	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-122	03:00 – 04:30	Nanotechnology and it’s utilisation in the healthcare industry	Zubaid ul khazir Rather	Department of Chemical Engineering, National Institute of Technology Srinagar
NBL21-PO-123	03:00 – 04:30	Transport of dirac like particles through graphene	Showkat Ahmad Mir	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-124	03:00 – 04:30	In vitro anticancer activity of chalcone derivative of 4-hydroxy coumarin	Zubaid ul khazir Rather	Department of Chemical Engineering, National Institute of Technology Srinagar
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Speaker Session -7 (CSIR Session)

Over all I/C: **Dr. Vijay Kumar**

Students Coordinator: **Mr. Abdul Mateen/Dr. Shabir A. Akhoun**

Chairpersons: **Prof. B. A. Mir / Dr. Tariq Maqbool**

	Time (am)	Title of the talk	Name	Affiliation
S-1	09:30 - 09:45	Pharmaceutical nano formulations for anti-malarials and herbal bio-actives: Endeavors for enhancing systemic exposure and optimizing therapeutic outcome.	Dr. Wahajuddin	CSIR, CSIR-Central Drug Research Institute, Lucknow.
S-2	09:46 - 10:00	Carbon nanomaterials based ultra sensitive and real time sensor for health and environment monitoring	Dr. Rakesh Kumar Gupta	University of Manchester/ Higher Education J & K
S-3	10:01 - 10:15	Encapsulation and delivery of bioactive compounds using polysaccharide based micro and nanoparticles	Dr. Adil Gani	Department of Food Science and Technology, University of Kashmir, Srinagar 190006, India
S-4	10:16 - 10:30	Effect of SHI irradiation of Ca doped LaMnO ₃ thin films	Dr. Khalid Sultan	Department of Physics, CUK
S-5	10:31 - 10:45	Mxene-polyaniline nanocomposites based high performance chemo resistors ammonia reduction	Dr. Vishal Chaudhary	Delhi university
S-6	10:46 - 11:00	A simulative analysis for heat transfer enhancement using rectangular wing & winglet type vortex generator in a triangular channel	Dr. Sajad Hussain Din	Principal SSM College of Engineering & Technology, SSM College of Engineering, Baramulla,
S-7	11.00 - 11.15	Generalized harmonic oscillator algebra	Dr Salman Wani	Canadian Quantum Research Center
S-8	11:15 - 11:30	Use of Nanomaterials in Spectroscopic Analysis	Dr. Jignesh kumar V. Rohit	Dept. of Chemistry, NIT, Srinagar
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Oral Session -8

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Over all I/C: **Dr. Vijay Kumar**

Students Coordinator: **Mr. Aalim/Mr. Nissar Hussain**

Chairpersons: **Dr. M A Rather/Dr. Adil Gani**

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-025	11:30 - 11:40	Use of nanomaterial- an attempt to reduce carbon footprint of highway constructions	Ambikesh Singh	Assistant Quality cum Material Expert, SA Infrastructure Consultants Pvt. Ltd.
NBL21-OL-026	11:41 - 11:50	CdSe QDs as an antifungal and bioimaging probe	Irshad A Mir	School of physical sciences, JNU
NBL21-OL-027	11:51 - 12:00	Bioactive metabolites of medicinal plants in cancer prevention and treatment: a review	Umer Majeed Khaja	Department of Zoology/ School of Bioengineering and Biosciences, Lovely Professional University, Punjab,
NBL21-OL-028	12:01 - 12:10	Use of dandelion (<i>Taraxacum officinale</i>) leaf powder for the development of functional chicken meat loaves	Sadiya Sajad	Division of Livestock Products Technology, Faculty of Veterinary Sciences & Animal Husbandry, SKUAST-K
NBL21-OL-031	12:11 - 12:20	Improved antimicrobial and enhanced osteogenic properties of reduced graphene oxide and hydroxyapatite based cryogels	Vianni Chopra	Institute of Nano Science and Technology Knowledge City, Sector-81, SAS Nagar, Mohali-140306, Punjab
NBL21-OL-032	12:21 - 12:30	disentangle temperature and dielectric environment dependent electron-phonon coupling in plasmonic gold nanoparticles embedded in glassy films	Nandan Ghorai	Institute of Nano Science and Technology, Knowledge City, Sector 81, SAS Nagar, Mohali, Punjab-140306, In
NBL21-OL-033	12:31 - 12:40	Green synthesis, characterization and antimycotic activities of silver nanoparticles (AgNPs) from basidiomycetous mushroom	John Mohd War	Plant Pathology and Mycology, Department of Botany, University of Kashmir, Srinagar 190006.
NBL21-OL-034	12:41 - 12:50	Non-linearities in long-haul optical communication and its mitigate	Zahid G Khaki	Department of ECE, NIT, Srinagar,
NBL21-OL-098	12:51 - 01:00	Electrospun Nanofiber Mats as “Smart Surfaces” for Desorption Electropray Ionization Mass Spectroscopy (DESI)	Dr. M.Azharuddin Ganai	IIT Madras
NBL21-OL-040	01:01 - 01:10	Plasmonic metal-semiconductor nanostructure for hydrogen evolution and dye water treatment	Shomaila Khanam	Physics Departement, BIT Mesra, Ranchi, Jharkhand,
NBL21-OL-042	01:11 - 01:20	Organometal halide perovskite solar cells: a review of fundamental concepts, opportunities and challenges	Romana Yousuf	Department of Electronics & Communication Engineering, NIT Srinagar, 190006 (J&K), India
NBL21-OL-043	01:21 - 01:30	Low temperature reduction with tuned electrical conductance of porous graphene oxide film: Correlating electrical conductance	T. Anusuya	Department of Physics, Indian Institute of Information Technology, Design and Manufacturing Chennai- 600
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Poster Session -9a

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Over all I/C: Dr. Vijay Kumar

Students Coordinator: Mr. Junaid Rather/Mr. Anil

Chairpersons: Dr. M S Charoo/Dr. Tanvir

	Time	Title of the talk	Name	Affiliation
NBL21-PO-036	03:00 – 04:30	Changes in pyruvic acid, quercetin, physicochemical properties and microbiological stability of brown spanish onion (<i>Allium cepa</i> , l) paste during different thermal treatment combinations	Saadiya	Research Scholar, Department of Food technology, SKUAST-K
NBL21-PO-037	03:00 – 04:30	A study on synthesis of thermo-responsive poly (n-isopropylacrylamide) - ZnO hybrid hydrogel through non-conventional approach to explore its thermo-mechanical properties and other appl.	Shafia Lateef	Department of Chemistry, University of Kashmir Srinagar (J&K) India 190006.
NBL21-PO-047	03:00 – 04:30	Nanoparticle based drugs in reversing multiple drug resistance in cancer	Suhail Ahmad Mir	Departemnt of Pharmaceutical Sciences, University of Kashmir, Srinagar, 190006
NBL21-PO-048	03:00 – 04:30	Applications of nanotechnology in food safety	Mariya Nayeem	Division of Food Science and Technology SKUAST-K.
NBL21-PO-050	03:00 – 04:30	Development and application of nanochitosan based coating for enhancement of shelf life of fresh plum.	Searat Showkat	Division of Food Science and Technology, SKUAST-K.
NBL21-PO-051	03:00 – 04:30	Micronization and it’s role in food processing	Aiman Farooq	Division of Food Science and TechnologySKUAST-K
NBL21-PO-064	03:00 – 04:30	Nanotechnology as a remedy in controlling plant parasitic nematodes: a review	Ishfaq majeed	Department of Zoology University of Kashmir, Srinagar- 190006, Kashmir.
NBL21-OL-038	03:00 – 04:30	Nanotechnology and its application in nutraceuticals	Aafreen Naseer	Division of Food Science and Technology, SKUAST-K
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Poster Session -9b

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Over all I/C: **Dr. Vijay Kumar**

Students Coordinator: **Mr. Towseef Ahmad/Mr. Showkat A. Bhat**

Chairpersons: **Dr. Ashok Bera/Dr. Hanief**

(Registration Team Headed by: Dr. and Dr.)/ Supported by **Mr. Nikhilesh/Mr. Jaffar**

	Time	Title of the talk	Name	Affiliation
NBL21-PO-052	03:00 – 04:30	Little hinges swing big doors, nanotechnology for the human betterment	Najeebul Tarfeen	Centre of Research for Development (CORD), University of Kashmir Hazratbal, Srinagar
NBL21-PO-053	03:00 – 04:30	Co-targeting epidermal growth factor receptor and PI3K/AKT/mTOR signaling pathways in cancer a novel therapeutic intervention.	Lateef Ahmad Dar	Department of Pharmaceutical Sciences, University of Kashmir, Hazratbal Srinagar, 190006.
NBL21-PO-058	03:00 – 04:30	Nanotechnology and its role in solar energy harvesting	Syed Mubashir Ahmad	Department of Physics, Central University of Kashmir,
NBL21-PO-059	03:00 – 04:30	Green synthesis and characterization of silver nanoparticles using <i>Aspergillus niger</i> and its efficacy against pathogenic	Nusrat Ahmad	Department of Botany, University of Kashmir, Srinagar 190006 J&K, India
NBL21-PO-060	03:00 – 04:30	Photocatalytic integrated production of hydrogen and imines from aromatic amines via Ni-mesoporous carbon nitride: an acceptorless dehydrogenative pathway	Deepak Kumar Chauhan	Advanced Functional Nanomaterials, Energy and Environment Unit, Institute of Nano Science and Technology (INST), Mohali
NBL21-PO-061	03:00 – 04:30	N-enriched metal free heptazine based porous polymeric network as highly efficient catalyst for CO ₂ capture and conversion	Neha Sharma	Advanced Functional Nanomaterials, Energy and Environment Unit, Institute of Nano Science and Technology (INST),
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Poster Session -9c

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Over all I/C: **Dr. Vijay Kumar**

Students Coordinator: **Miss. Sabreen Jan/Miss. Sebiha Rehman**

Chairpersons: **Dr. S A Sofi/Dr. Khalid Sultan**

	Time	Title of the talk	Name	Affiliation
NBL21-PO-104	03:00 – 04:30	Recent advances in near persistent luminescent nanomaterials for biomedical applications: a review	Umar Mushtaq	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-105	03:00 – 04:30	3D flower like nickel oxide (NiO) nanostructures for gas-sensing application	Reyaz A Shergojri	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-106	03:00 – 04:30	Photoelectrochemical performance of Ti 3+ self-doped TiO ₂ nanotube arrays	Arshid Ahmad	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-107	03:00 – 04:30	Nanotechnology enabled next-generation LED lights: A brief review	Irfan Ayoub	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-108	03:00 – 04:30	Zincoxide based activated carbon nanofiber composites for advanced supercapacitors	Ab. Mateen	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-109	03:00 – 04:30	Recent development of oxyapatite based phosphors in solid-state lighting.	Nisar Hussain rana	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-110	03:00 – 04:30	Micromagnetic study of Fe thin Films	Junaaid Rather	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-111	03:00 – 04:30	Antimony doped tin oxide and their effect on structural and optical properties	Tawseef Ahmad	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-112	03:00 – 04:30	Synthesis and characterization Pure Copper Oxide (CuO) Nanoparticles by simple edible Vinegar	Arun Kumar	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-113	03:00 – 04:30	Optical and magnetic properties of Iron oxide nanospheres prepared via hydrothermal route.	Aalim Mushtaq	Department of Physics, National Institute of Technology Srinagar
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Speaker Session - 10

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Over all I/C: **Dr. Zubair Ansari**

Students Coordinator: **Ms. Nowsheena/Ms. Aanisa**

Chairpersons: **Prof. Dinesh Pandya/Dr. Yashwant Mehta**

	Time (am)	Title of the talk	Name	Affiliation
	09:30 - 09:45	Ab-initio method in many body problems.	Prof. S. Javaid	Former V. Chancellor, Cluster University, presently prof. at University of Kashmir.
	09.46 - 10.00	Nanomaterials in roads and building- A new revolution in civil engineering.	Prof. M. S. Mir	Dept. of Civil Eng., NIT Srinagar
	10.00 - 10:15	Microwave chemistry: Novel route for nanomaterial synthesis	Dr. Shafqat M. Shah	Nanotechnology center, University of Kashmir.
	10:15 - 10:30	Green synthesis and characterization of silver nanoparticles using <i>Aspergillus</i> and its efficacy against pathogenic fungi	Dr. Mehrajud Din Talie	University of kashmir
	10.30 - 10.45	Structural, morphological and dielectric studies of rare-earth (RE=Ce, Sm, Eu, Dy, and Ho) substituted YMnO ₃ pervoskite	Dr. Mir Hashim Rasool	Dept. of Physics, IUST, J&K.
	10:45 - 11.00	Nanostructured liquisolid delivery systems for controlled delivery of poorly water-soluble bioactive components	Dr. Tawheed Amin	Division of Food Science and Technology, SKUAST-Kashmir Shalimar
	11:01 - 11:15	<i>Mortierella Alpina</i> Cs10e4, an oleaginous fungal endophyte of <i>Crocus sativus</i> L. enhances apocarotenoid biosynthesis and stress tolerance in the host plant	Dr. Zahoor Ahmed Wani	Government Degree College Kishtwar, Kishtwar, 182204, India.
	10:15 - 11:30	Computer vision based portable fruit grading using multiple physical quality parameters.	Dr. Abdul Mueed Hafiz	Dept of E&C Engineering, Institute of Technology, University of Kashmir, Srinagar, J&K-190006, India
	11:30 - 11:45	DNA: it’s exploration by different physical methods	Dr. Feroz A. Mir	Department of Physics, Baba Ghulam Shah Badshah University Rajouri (J&K)-185234
	11:45 - 12:00	Highlights of the Book: Engineering Materials for Stem Cell Regeneration – Springer – Nature	Dr. Faheem Arjamand	Nanotechnology center, University of Kashmir.
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Oral Session -11

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Over all I/C: **Dr. Zubair Ansari**

Students Coordinator: **Ms. Shabnam/Ms. Shafiq**

Chairpersons: **Dr. Mohammad Mursaleen/ Dr. Rakesh K. Gupta**

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-063	11:51-12:00	Antioxidant potential of Zinc oxide nanostructures prepared by facile green synthesis	Arpita Dey	Department of Ecology & Environmental Sciences, Pondicherry University, Puducherry, India
	12:01-12:10			
NBL21-OL-084	12:11-12:20	Enhancement of evaporation using hierarchical structures in comparison to plane and rough structures in solar distillation	Siva Ram Akkala	Department of Mechanical Engineering, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad
NBL21-OL-085	12:21-12:30	Nanoparticles as antiparasitic agents: A review	Humira Rashid Khan	Department of Zoology, University of Kashmir, Srinagar- 190006, India
NBL21-OL-087	12:31-12:40	Fabrication of electrochemical biosensors for chronic myeloid leukemia detection using different types of carbon nanotubes and comparison of their efficiencies	Payal Gulati	Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi, India
NBL21-OL-088	12:41-12:50	A highly sensitive, label free and non-invasive molecularly imprinted polymer based electrochemical sensor for the detection of Gut microbiota derived trimethylamine N-oxide	Amit K. Yadav	Special Center for Nanoscience, Jawaharlal Nehru University, New Delhi, India.
NBL21-OL-089	12:51-01:00	Development of reduced graphene oxide-molybdenum trioxide nanocomposite sensor platform for highly sensitive and selective BPA detection: an endocrine disruptor	Damini Verma	Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi, India
NBL21-OL-094	01:01-01:10	Single step oleic-acid assisted solution combustion method for the synthesis of Bi-doped LiMn_2O_4 nanostructures	Rayees Ahmad Khan	B. S. Abdur Rahman Crescent Institute of Science and Technology, Chennai-600048,
NBL21-OL-095	01:11-01:20	Photoelectrochemical stability response of hydrothermally synthesized iron oxide nanostructures	Jaffar Farooq Mir	Department of Physics, National Institute of Technology Srinagar
NBL21-OL-096	01:21-01:30	Characterization and annealing of graphene	Nikhilesh K. Dilwaliya	Department of Physics, NIT Srinagar
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Session -12a (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Over all I/C: **Dr. Zubair Ansari**

Students Coordinator: **Mr. Asif A/Mr. Suhail Iqbal**

Chairpersons: **Dr. Sajad Ud Din/Dr. Faheem A. Sheikh**

	Time	Title of the talk	Name	Affiliation
NBL21-PO-065	03:00 – 04:30	Anthelmintic activity of biologically synthesized nanoparticles (NPs) against helminth parasites in livestock: A review	Fayaz Hussain Mir	Department of Zoology, University of Kashmir- 190006
NBL21-PO-066	03:00 – 04:30	Anthelmintic drug resistance in ruminants; Medicinal plants – an alternative novel approach for treatment: A review	Laraibah Hamid	Department of Zoology, University of Kashmir- 190006, Srinagar
NBL21-PO-072	03:00 – 04:30	Data analytics in a converging IoT-fog-cloud architecture and nanotechnology	Kalimullah Lone	Department of Information Technology, NIT Srinagar
NBL21-PO-073	03:00 – 04:30	Visual learning and nanotechnology: State-of-the-art and part in pandemic (COVID-19)	Nadeem Yousuf Khanday	Research Scholar, Department of Information Technology, NIT Srinagar
NBL21-PO-074	03:00 – 04:30	Dual-mode, color-tunable, lanthanide-doped composite nanoparticles for anti-counterfeiting inks	Satish Kumar Samal	Institute of Nano Science and Technology, Knowledge City, Mohali,
NBL21-PO-091	03:00 – 04:30	Synthesis and application of nano-urea on <i>Vigna radiata</i> - An in vitro study	Avimanu Sharma	Department of Environmental Science, Central University of Rajasthan
NBL21-PO-093	03:00 – 04:30	Electrochemical detection of ciprofloxacin using lanthanum oxide nanoparticle as bio sensing platform.	Navneet Chaudhary	Special Centre for Nanoscience, JNU, New Delhi-110067, India
NBL21-PO-097	03:00 – 04:30	Green synthesis and characterization of silver nanoparticles using <i>Aspergillus niger</i> and its efficacy against pathogenic fungi.	Nusrat Ahmad	Section of Mycology and Plant Pathology, Department of Botany, University of Kashmir, Srinagar 190006
NBL21-PO-098	03:00 – 04:30	"Enhancing regenerative approaches using nanotechnology–A review."	Ibtisam Mumtaz	Laboratory of Nano-therapeutics and Regenerative Medicine, Department of Nanotechnology, University of Kashmir
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Session -12b (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Over all I/C: Dr. Zubair Ansari

Students Coordinator: Mr. Syed Ishtiyak/ Mr. Umar Mushtaq

Chairpersons: Dr. Alka Sharma/Dr. Shafqat M Shah

	Time	Title of the talk	Name	Affiliation
NBL21-PO-094	03:00 – 04:30	Nanotechnology and diabetes	Kaneez Fatima	Kashmir University
NBL21-PO-095	03:00 – 04:30	Brief review on the synthesis and properties of pure and doped nickel ferrites	Mudasir Rashid Rather	Department of Physics, Central University of Kashmir, Tulmulla Campus, Ganderbal,
NBL21-PO-096	03:00 – 04:30	A study on synthesis of thermo-responsive poly (N-isopropylacrylamide) - ZnO hybrid hydrogel through non-conventional approach to explore its thermo-mechanical properties and other applications.	Shafia Lateef	Department of Chemistry, University of Kashmir Srinagar (J&K) India 190006
NBL21-PO-099	03:00 – 04:30	Microwave-assisted synthesis of titanium oxide nanoparticles and their characterization	Umar	Department of Biochemistry University of Kahmir, Srinagar.
NBL21-PO-100	03:00 – 04:30	"Nanotechnology promissing tool for nonhealing wounds"	Ifrah Manzoor	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-101	03:00 – 04:30	Mott conductivity in particulate multiferroic Ba 0.99 Tb 0.02 Ti 0.99 O 3 – CoFe 1.8 Tb 0.2 O 4 composites	Gowher Hamid Rather	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-102	03:00 – 04:30	Effect of non-factorizable background geometry on thermodynamics of galaxy clusters	Abdul Wakeel Khanday	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-103	03:00 – 04:30	Optical and electrical properties of tin oxide nano particles	Umar Altaf	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-134	03:00 – 04:30	Potential use of Solar Energy for Drying: A case study	Sebiha Rehman	Department of Physics, National Institute of Technology, Srinagar
NBL21-PO-135	03:00 – 04:30	Delivery of polyphenols mediated through nanoemulsions for increased stability and bioavailability	Farah Naqash	Department of Food Technology, IUST Awantipora.
NBL21-PO-137	03:00 – 04:30	Solar-light Induced Photocatalytic Degradation of Emerging Contaminants	Aarif Hussain Shah	Department of Chemical Engineering, NIT Srinagar
NBL21-PO-138	03:00 – 04:30	Application of nanomaterials in construction works: A Review.	Gowhar Aziz	Department of Civil Engineering, National Institute of Technology Srinagar,J&K-190006, India.
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Session -12c (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Over all I/C: **Dr. Zubair Ansari**

Students Coordinator: **Dr. Mushtaq Magray/Mr. Arshid**

Chairpersons: **Dr. Nasheeman Ashraf/Dr. Ashima Shah**

(Registration Team Headed by: Dr. _____ and Dr. _____) / Supported by Mr. Nikhilesh/Mr. Jaffar				
	Time	Title of the talk	Name	Affiliation
NBL21-PO-127	03:00 – 04:30	A Study on structural, optical, electrical and dielectric properties of nickel doped PrFeO_3 perovskite.	Mohd Asif Bhat	Baba Ghulam Shah Badshah University, Rajouri -185234 (J&K)
NBL21-PO-128	03:00 – 04:30	Structural, morphological and electrical studies of polythiophene	Mudasir Hussain Rather	Dept. of Physics, Baba Ghulam Shah Badshah University Rajouri (J&K)
NBL21-PO-129	03:00 – 04:30	A Study on fabrication and characterization of dye sensitized solar cell with <i>Ipomoea purpurea</i> (morning glory flower) as sensitizer.	Peerzada Ajaz Ahmad	Dept. of physics, Baba Ghulam Shah Badshah University, Rajouri (J&K)
NBL21-PO-130	03:00 – 04:30	Nanotechnology and it’s utilisation in the healthcare industry	Muneeb Shabir Qazi	Department of Chemical engineering, N.I.T S
NBL21-PO-131	03:00 – 04:30	Pharmacological significance of synthetic benzothiazole derivatives	Tanzeela Qadir	Department of Chemistry, Lovely Professional University, Phagwara, Punjab,
NBL21-PO-132	03:00 – 04:30	A natural attenuation model of complexation modulated iron redox systems for waste water treatment.	Mustafa Rabbani	Ph.D. Research Scholar, Department of Chemistry, University of Kashmir
NBL21-PO-133	03:00 – 04:30	Studies of magneto-dielectric properties of multiferrioc composites of samarium doped BaTiO_3 and CoFe_2O_4	Showket ahmad bhat	Department of physics, national Institute of Technology srinagar, srinagar-190006,
NBL21-PO-137	03:00 – 04:30	Synthesis, Characterization And Biological Activity Of Platinum, Gold And Silver Nanoparticles: A Green Approach	Riayz Bashir Wani	A. P. S. University Rewa, M. P.
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Session-13 (Valedictory)

Over all I/C: Prof S Rubab/ Prof. Gausia

Day 5- Saturday, 11 September 2021

Qazi

Students Coordinator: Miss Irfana/ Miss Tanzeela/

Time	VALEDICTORY OF ICNBL-21 From: 11:05 AM 1.30 PM	
Arrival and Felicitation of Guests in Common Hall		
11:05 am to 11:10am	Brief Report ICNBL-2021	Dr. M. A Shah, Convener / HOD Physics
11:10am to 11.15am	Welcome Address of NBL- 2021	Dr P A Ganaie, Former HOD, NIT Srinagar
11.15 am to 11. 25am	MoU Between Pairing States J & K and Tamil Nadu : How to Move Forward!	Prof J Kumar, UGC-BSR Faculty Fellow
11.25 am to 11. 35am	Jagadish-Vidya Foundation: A Brief Introduction	Prof. Chennupati Jagadish, Australian National University
11.35 am to 11. 45am	Our Nobel Initiative of Providing Science Platforms for Bright Students of Valley	Prof Kamal K Kar, Chair/ Founder , IIT Kanpur
11.45 am to 11. 55am	National Research Facility, IIT Delhi Special MoU with NIT Srinagar	Prof. Neeraj Kharee, Coordinator NRF, IIT Delhi
11.55 am to 12. 05pm	Forum for International Physics- APS Membership A Brief Appraisal	Prof. S Nahar, The Ohio State University
12.05 pm to 12. 15pm	Special Provisions for NIT Students at M G University Kerala	Prof Sabu Thomas, Hon’ble Vice Chancellor MG University
12.15 pm to 12. 25pm	NBL Convention: How it Started and Flourished In my Tenure	Prof Rajat Gupta, Former Director NIT Srinagar/ NIT Mizoram
12.25 pm to 12. 35pm	MRSI: Local Chapter for J & K	Prof M S Rao, Head MSRC, Department of Physics, IIT Madras
12.35 pm to 12. 45pm	Formal Address	Prof. Rakesh Sehgal, Director NIT Srinagar
12.45 pm to 12. 55pm	Address by Guest of Honour	
12.55 pm to 01. 15pm	Address by Chief Guest:	
01.15 pm to 01. 20pm	Vote of Thanks by Registrar	Prof S K Bukhari, Registrar NIT Srinagar
	GROUP PHOTO FOLLOWED BY LUNCH	Brief Interaction with Faculty and Students-I/C Dr. Harkirat

“Nanotechnology for Better Living”



Convention

From 7-11 Sept, 2021

On-line Mode



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Special Session (POST INAUGURAL - ONLINE)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 1- Tuesday,

7 September 2021

Over all I/C:

Students Coordinator:

Chairperson:

	Time	Name & Affiliation	Title of the talk	
S-1	02.30pm - 02:45pm	Photothermal steam generation; a greener way of water purification	Dr. Ashok Bera	Department of Physics, Indian Institute of Technology Jammu, Nagrota-Jammu, 181221
S-2	02.45pm - 03:00pm	An Urgent Need for Accurate and precise Measurements for Advanced Scientific Research	Dr. N. Vijayan	CSIR-National Physical Laboratory, Dr KS Krishnan Marg, New Delhi – 110 012.
S-3	03.00pm - 03:15pm	Fluorometric Nanosensors for the detection of antibiotics in food samples	Dr. Pratima Solanki	Special Centre for Nanoscience Jawaharlal Nehru University, New Delhi - India
S-4	03.15pm - 03:30pm	The effect of non-drug spacers on a true drug-polymer and their antimicrobial activity	Dr. Govindasamy Jayamurgan	Institute of Nano Science and Technology, Knowledge City, Sector 81, Mohali, Punjab.
S-5	03.30pm - 03:45pm	TITLE	Dr. Alok Shukla	Dept. of Physics, NIT Mizoram.
S-6	03.45pm - 04:00pm	Design verification of safety critical embedded systems	Dr. Lalit Kumar Singh	NPCIL-BARC, Mumbai-94
S-7	04.00pm - 04:15pm	Ag/CNT hybrid nanofluid- Preparation and Characterization for Heat transfer Applications	Dr. Shipra Mittal Gupta	USBAS Guru Gobind Singh Indraprastha University, New Delhi 110078, India.
S-8	04.15pm - 04:30pm	Evolution of Magnetic Properties in Hydrothermally Synthesized MnO ₂ Functional Oxide	Prof. Chandana Rath	Dept. of Physics, IIT, BHU
S-9	04.30pm - 04:45pm	50 keV ion beam processing of InP-Studies of formation of self-organized nanodots and understanding their evolution with surface	Dr. Indra Sulaniya	Inter University Accelerator Centre, Aruna Asaf Ali Marg, New Delhi 110067, India.
S-10	04:45pm-05:00pm	Chitosan-Gelatin nanocomposite matrix for Biomedical Applications	Prof. Deepa Ghosh, PhD. Scientist F,	Institute of Nano Science and Technology, Sector-81, Knowledge City, Mohali, SAS Nagar 140306
S-11	05:00pm-05:15pm	CATHODE MATERIALS FOR INTERMEDIATE-TEMPERATURE SOLID-OXIDE FUEL CELLS	Dr. Mudasir A. Yattoo	Imperial College London, UK
S-12	05:15pm-05:30pm	Gallium Nitride based Buried Oxide Current Aperture Vertical Electron Transistor (B-CAVET)	Prof S. A. Lone	ProfesVLSI and Nanoelectronics, Electronics and Communication Engineering, Jamia Millia Islamia (Central University), New Delhi-110025
S-13	05:30pm-05:45pm	Growth and Characterization of Single Crystal Alumina using 3N Pure Alumina Powder	Dr. Priyanka Nayar	Jawaharlal Nehru Aluminium Research Design and Development Centre, Wadi, Nagpur, Maharashtra, India
S-14	05:45pm-06:00pm	Highly flexible sodium ion conducting polyvinyl alcohol (PVA)-polyethylene glycol (PEG) blend composites material for energy storage applications	Dr. Mohd Sadiq	Department of Physics, Jamia Millia Islamia (A Central University), New Delhi-110025, India
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Session – 1(Speaker)

Over all I/C: **Dr Farooq A Dar**

Students Coordinator: **Surbhi/Tanzeela**

Chairperson:

	Time (am)	Title of the talk	Name	Affiliation
S-1	09:30 - 09:45	Eco - Fabrication of Nanomaterials, and their applications in healthcare, agriculture, environment, energy and life sciences.	Prof. Absar Ahmad	Director, AMU
S-2	09:46 - 10:00	Nanotechnology for Civil Engineering	Prof. Na (Luna) Lu	USA
S-3	10:01 - 10:15	Freestanding biocompatible composite films for futuristic bandage material	Dr. Shamima Hussain	UGC-DAE Consortium for Scientific Research, K. alpakam Node, Kokilamedu, TN
S-4	10:16 - 10:30	Organo – clay hybrid: promising candidate for optoelectronics applications	Prof. Syed Arshad Hussain	Department of Physics, Tripura Uni., Suryamaninagar - Tripura, India, 799022
S-5	10:31 - 10:45	Nanocatalysts for H ₂ Energy Generation and Organic Transformations	Dr. Tokeer Ahmad	Department of Chemistry, Jamia Millia Islamia, Delhi.
S-6	10:46 - 11:00	Intervention of Bacillus haynesii for One Pot Synthesis of Zinc Oxide Nanoparticles of Biomedical Application	Dr. Suriya Rehman	Dept. of Epidemic Disease Research, Institute for Research & Medical Consultations, (IRMC), Imam Abdulrahman Bin Faisal University, Saudi Arabia
S-7	11:00 - 11:15	Green Synthesis of Copper NanoParticle by Flower bud Extract	Dr. Anita Rajkumar Gandhee	Department of Soil Science & Agriculture Chemistry, University of Horticultural Science, 104, Karanataka
S-8	11:15 - 11:30	Smart Traffic Signal Light Activation System	Mrs. Dakshayani. R	Fr.C.Rodrigues Institute of technology, Vashi-Navi Mumbai
S-9	11:31 - 11:45	Analyzing the need and importance of Nanotechnology education in education system	Dr. (Ms.) Anupam	R.L.S College of Education, Sidhrawali, Gurugram, Haryana
S-10	11:46 - 12:00	Photoluminescence quenching and charge transfer dynamics in CsPbBr ₃ -Ti ₃ C ₂ Tx MXene QD/QD system and application as On-Off-On photoluminescence probe for Cd ion detection	Dr. Padmini Pandey	Indian Institute of Science Education and Research (IISER), Pune, Dr. Homi Bhabha Road, Pune,
S-11	2:00 – 2:30	Trust, Fairness and Justice in health and pharmaceuticals sciences	Professor Emeritus Tan Sri Dato' Dzulkifli Abdul Razak,	Rector, International Islamic University Malaysia
Concluding Remarks by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Session –2 (Oral)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr A H Sofi**

Students Coordinator: **Mudasir/Durakshan**

Chairperson:

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-006	12:01 - 12:10	Hydrothermal Synthesis Of Cnt-Ga ₂ O ₃ Nanoparticles And Their Application On Photocatalytic Activity, A Platform To Quick & Detect Volatile Organic Compound	Akshatha Gab	Department of Studies in Environmental Science, University of Mysore, Manasgangotri, Mysore 570006, India.
NBL21-OL-012	12:11 - 12:20	Analysis of Mancozeb Pesticide in Apple Jam using GC/MS and QuEChERS sample preparation	Maeena Naman Shafiee	Department of Food Science and Technology, University of Kashmir
NBL21-OL-013	12:21 - 12:30	Evaluation of Therapeutic Efficacy of Copper Nano particles in Staphylococcus aureus induced rat mastitis model	S. Taifa	Division of Veterinary Medicine, Faculty of Veterinary Sciences and Animal Husbandry, Srinagar, Jammu and Kashmir, India
NBL21-OL-014	12:31 - 12:40	Twenty-Five Years of Nanotechnology: A Bibliometric Analysis	Javaid Ahmad Wani	Department of Library and Information Science, University of Kashmir, Hazratbal-Srinagar
NBL21-OL-017	12:41 - 12:50	Growth, Optical, Laser damage threshold and Third harmonic generation studies of bulk Itaconic acid single Crystal: A potential Candidate for Laser applications	Debabrata Nayak	CSIR – National Physical Laboratory, Dr. K.S. Krishnan Road, New Delhi – 110012, India
NBL21-OL-018	12:51 - 01:00	Preparation of Indian Reference Materials to get Accurate and Precise Measurements for Calibration of P-X-Ray Diffractometer	Manju Kumari	CSIR – National Physical Laboratory, Dr K.S. Krishnan Road, New Delhi 110012, India
NBL21-OL-020	01:01 - 01:10	Cross-linked green eco-friendly cellulose film for wrapping purpose.	Kulsoom Koser	Department of Chemistry, Jamia Millia Islamia New Delhi (India) - 110025
NBL21-OL-024	01:11 - 01:20	Heterogeneous Fenton process for dye degradation employing clay coated Manganese oxide nanoparticles	Varuna Watwe	Post-graduate and Research Centre, Department of Chemistry, MES Abasaheb Garware College, Pune.
NBL21-OL-029	01:01 - 01:30	Occurrences and virulence gene profile of Methicillin Resistant Staphylococcus aureus (MRSA) from Humans and Bovines	Fajar Farooq	Department of Veterinary Public Health, FVSC&A.H SKUAST-K
Concluding Remarks by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Session –3 (Oral)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr Mudasir A Mir**

Students Coordinator: **Raj/Adil**

Chairperson:

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-036	02:30 – 02:40	Curcumin Loaded Nanoemulsions: Formulation, characterization and in vitro release properties	Neha Sharma	Department of Food Science and Technology, Punjab Agricultural University, Ludhiana, Punjab, India
NBL21-OL-037	02:41 – 02:50	Shelf-life extension of muffins coated with cinnamon and clove oil nanoemulsions	Prastuty	Department of Food Science & Technology, Punjab Agricultural University, Ludhiana, Punjab 141001
NBL21-OL-041	02:51 – 03:00	Heterogeneous Fenton Catalyst for Removal of Malachite Green	Sandra Ann Jacob	Department of Chemical Engineering, Amal Jyothi College of Engineering, Kanjirapally, Kottayam, Kerala
NBL21-OL-044	03:01 – 03:10	Structural and Electrical Characteristics of Mechanothermally Synthesized Bi(Co _{0.40} Ti _{0.40} Fe _{0.20})O ₃ Nanoceramic	P. C. Lalngilneia	Department of Physics, National Institute of Technology Mizoram, Aizawl-796012, India
NBL21-OL-045	03:11 – 03:20	Electron Beam Evaporated WO ₃ Thin Film as UV-A Photodetector	Rajshree Rajkumari	Department of Electronics and Communication Engineering, NIT, Nagaland, Dimapur
NBL21-OL-046	03:21 – 03:30	Effect of interface state density and series resistance in GLAD synthesized Ag sandwiched CeO ₂ nanorod array	Ngasepam Monica Devi	Department of Electronics and Communication Engineering, National Institute of Technology Nagaland, Chumukedima, Dimapur, Nagaland, India- 797103
NBL21-OL-005	03:31 – 03:40	Fabrication and Characterization of ZnO/PEDOT: PSS based UV photodetector	Rishibrind Kumar Upadhyay	Department of Electronics Engineering, Indian Institute of Technology (BHU), Varanasi, Uttar Pradesh, India, 221005
NBL21-OL-008	03:41 – 03:50	RE Dysprosium and Europium co-doped Lithium Fluoride Bismuth Borate Luminescent Glasses: Potential material for WLEDs	Jyoti Dahiya	Department of Physics, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana India
NBL21-OL-009	03:51 – 04:00	Maneuvering fluid motion and flow induced detection of toxins by enzyme multilayer film	Arshdeep Kaur Gill	Institute of Nano Science and Technology (INST), Sector-81, Knowledge city, SAS Nagar, Mohali 140306, Punjab, India
NBL21-OL-081	04:01 - 04:10	Effectiveness of Amla essential oil-based nano-coatings for improvement of shelf life and overall quality of Amla fruit.	Amandeep Kaur Braich	Dept. of Food Science and Technology, Punjab Agricultural University, Ludhiana
NBL21-OL-082	04:11 - 04:20	A discussion on linear and non-linear dimensionality reduction of high dimensional gene expression data.	Omar Rafique	Machine Learning Lab, Department of Electronics and Communication Engineering, National Institute of Technology
NBL21-OL-098	04:21 - 04:30	Experimental evaluation of synthetic coated carbide cutting inserts in severe machining of AISI-4340 steel alloy.	Dr. Kaleem A. Najar	IOT, Zakura, University of Kashmir.
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Session – 4a (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr Kaleem A Najar**

Students Coordinator: **Asif/Anisa**

Chairpersons:

	Time	Title of the talk	Name	Affiliation
NBL21-PO-001	04:30 – 06:00	Radiofrequency heating- an emerging innovative heating method in food processing	Ufaq fayaz	Division of Food Science and Technology, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Shalimar-Srinagar, 190025 (J&K), India.
NBL21-PO-002	04:30 – 06:00	Fabrication and characterization of Vitamin D3 encapsulated gum arabic nanoemulsions	Iqra Bashir	Division of Food Science and Technology, Sher-e-Kashmir University of Agricultural Sciences and Technology, Shalimar Srinagar, 190025(J&K), India.
NBL21-PO-004	04:30 – 06:00	Organoids: A New Approach in Toxicity Testing of Nanotherapeutics	Sofi Imtiyaz Ali	Division of Veterinary Biochemistry, Faculty of Veterinary Sciences and Animal Husbandry, Sher-e-Kashmir
NBL21-PO-006	04:30 – 06:00	New process of conversion of waste paper to nanostructured CaCO ₃	Ritika Wadhwa	Institute of Nano Science and Technology, Knowledge City, Sec-81, Mohali, 140306, Punjab, India
NBL21-PO-008	04:30 – 06:00	Storage studies of modified rice flour extrudates	Beenish	SKUAST-K
NBL21-PO-016	04:30 – 06:00	Image processing and its applicability in food processing	Nazrana Rafique Wani	Division of Food Science & Technology, SKUAST-Kashmir, Shalimar J&K India 190025
NBL21-PO-018	04:30 – 06:00	Green Energy Generation from Multiferroics NBT-MnFe ₂ O ₄ based Hydroelectric Cell	Monika Dhall	Material Research Laboratory, Department of Physics, Deenbandhu Chottu Ram University of Science & Technology, Haryana, India
NBL21-PO-019	04:30 – 06:00	CNTs/Ag ₂ WO ₄ /Ga ₂ O ₃ Heterostructure Synthesis, characterization and their potential application on industrial wastewater treatment & biological importance	Madura N Talwar	Department of Studies in Environmental Science, University of Mysore, Manasagangotri, Mysore 570006, India
NBL21-PO-024	04:30 – 06:00	Synthesis and characterization of nonlinear optical material of Dipotassium boro maleate (DKBM) Single Crystal	Kiran	CSIR- National Physical Laboratory, Dr. K.S. Krishnan Road, New Delhi 110- 012, India.
NBL21-PO-026	04:30 – 06:00	Nanoencapsulation of Phytochemicals: Necessity for Effective Delivery	Mumtahn ul Kousar	SKUAST-K, Division of Food Sciences & Technology
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Session – 4b (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 2- Wednesday,

8 September 2021

Over all I/C: **Dr Shabir A Akhoo**

Students Coordinator: **Taha/Nowsheena**

Chairpersons:

(Registration Team headed by: Dr. _____ and Dr. _____) / Supported by Mr. Nikhilesh/Mr. Jaffar				
ID	Time	Title of the talk	Name	Affiliation
NBL21-PO-010	04:30 – 06:00	High amylose rice and carboxymethyl cellulose increases resistant starch with simultaneous reduction of glycemic index in gluten-free cookies	Bazila Naseer	Division of Food Science and Technology, Sher-e-Kashmir University of Agriculture Sciences and Technology of Kashmir, Shalimar, 190025, India
NBL21-PO-040	04:30 – 06:00	Ultrafast dynamics of tin selenide for exploring optoelectronics application	Manoj Kumar	Indian Reference Materials (BND) Division, CSIR-National Physical Laboratory, Dr. K. S. Krishnan Marg, New Delhi-110012, India
NBL21-PO-041	04:30 – 06:00	Highly Selective Room Temperature SnSe Thin Film based NO ₂ Sensor	Sanju Rani	CSIR-National Physical Laboratory, Dr K. S. Krishnan Marg, New Delhi-110012, India
NBL21-PO-042	04:30 – 06:00	Pulsed light technology and its application in food industry	Tabeen Jan	Research scholar SKUAST- Kashmir, Division of Food Science and Technology
NBL21-PO-045	04:30 – 06:00	Design of Self-Assembled Anisotropic Cobalt-based Nanostructures: An efficient electrocatalyst for O ₂ and Cl ₂ Evolution Reaction	Supriya Rana	Energy and Environmental Unit, Institute of Nano Science and Technology, Knowledge city, Sector-81, Mohali
NBL21-PO-046	04:30 – 06:00	Promoting electrocatalytic oxygen reduction in a model composite using selective metal ions	Zubair Ahmed	Institute of Nano Science and Technology, Habitat Centre, Mohali, Punjab- 160062
NBL21-PO-054	04:30 – 06:00	Polymer Multilayer Films Trigger Autonomous Fluid Flow and Power Microfluidic Device	Mujeeb Alam	Institute of Nano Science and Technology, Sector 81, knowledge city, SAS Nagar, Mohali 140306, Punjab, India
NBL21-PO-055	04:30 – 06:00	Endophytes – The Prospective Biogenic Nanomachines	Misbah Majid	Department of Botany, University of Kashmir, Hazratbal Srinagar, J&K
NBL21-PO-032	04:30 – 06:00	Incorporation of microencapsulated probiotic bacteria in a cereal bar, an in vitro study	Mifftha Yaseen	Division of Food Science and Technology, Faculty of Horticulture, SKUAST-K-190025
NBL21-PO-033	04:30 – 06:00	Chemotherapeutic efficacy of nutraceutical-based Myricetin silver nanoparticles (mAgNPs) against HCT116 cell line	Syed Tauqeer Anwer	Genome Biology Lab, Department of Biosciences, jamia Millia Islamia, New Delhi – 110025, India
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Session – 5(Speaker)

Over all I/C: **Miss. Misbah Fahad**
Students Coordinator: **Shaistha/Asif**

Chairpersons:

	Time (am)	Title of the talk	Name	Affiliation
S-1	09:30 - 09:45	Development of Advanced Semiconductor Materials and Devices	Prof. Mohamed Henini Chair	School of Physics and Astronomy, University of Nottingham, Nottingham NG7 2RD, U. K.
S-2	09:46 - 10:00	Quantum Information @ Room Temperature for Better Living	Prof. Ian Fergusen	Department of Electrical and Computer Engineering, Missouri S&T, USA
S-3	10:01 - 10:15	Advanced Materials and Diamond coatings for energy, sustainability and other technological applications.	Prof. M. S. R. Rao	Dept. of Physics, IIT Madras
S-4	10:16 - 10:30	Recent Advances in Nano Materials for Energy Storage and Conversion technologies	Dr. M. V. Reddy	Institute of Research Hydro-Québec, Hydro-Québec, Canada
S-5	10:31 - 10:45	Giant magnetoresistance sensors: Approach to Linear type over Non-linear sensors	Dr. Perumal Alagrsamy	Head of the Department of Physics, Indian Institute of Technology Guwahati,
S-6	10:46 - 11:00	Adsorption of phosmet by ‘reduced graphene oxide’: kinetic, isotherm and thermodynamic studies	Dr. Himanshu Ojha	Institute of Nuclear Medicine and Allied Sciences, Defence Research and Development Organisation, Timarpur, Delhi 110054
S-7	11.01 - 11.15	Nanotechnology for Power Production	Dr. Md. Kamrul Alam Khan	Department of Physics, Jagannath University, Bangladesh
S-8	11:15 - 11:30	Synthesis of gold nanoparticles from Boswellia serrata (gum resin) and its biological potential	Dr. Madhulika Bhagat	School of Biotechnology, University of Jammu, Jammu, J&K-180006, India
S-9	11:31 - 11:45	Dual drug-encapsulated Modified Polymeric-coated gelatin nanoparticles attenuate experimental rheumatoid arthritis.	Dr. Rehan Khan	Institute of Nano Science and Technology, Sector 81, Mohali, Punjab 140306, India.
S-10	11:46 - 12:00	Influence of Iron on the structural and optical properties of Zinc Oxide nanoparticles for Nanophotonic applications	Dr. J. Martin S. Gnanaraj	National College (Autonomous), Tiruchirappalli
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Session – 6 (Oral)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Over all I/C: **Dr Shah Arif-ul-Islam**

Students Coordinator: **Shabnam/Shafiq**

Chairpersons:

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-047	12:01 - 12:10	Investigation of EDFA based DFB Laser Source Optical Link	Abeena Gulzar	Department of Electronics and Communication Engineering, National Institute of Technology, Srinagar 190006, India
NBL21-OL-048	12:11 - 12:20	Black Cotton Soil Stabilization Using Nanocomposite Based Hydrogels	Madhusudhana R	Centre for Nanotechnology, Dept. of Mechanical Engineering, National Institute of Engineering(NIE), Mysuru – Karnataka,
NBL21-OL-049	12:21 - 12:30	Nanostructured Anti-Glare Coatings to Automobile Glasses	Sushma K L	Centre for Nanotechnology, Dept. of Mechanical Engineering, National Institute of Engineering(NIE), Mysuru – Karnataka,
NBL21-OL-050	12:31 - 12:40	ZrO ₂ – TiO ₂ Multilayered Nanostructured Coatings on AA5052 Substrates as Corrosion Resistant Coatings	Navyashree K C	Centre for Nanotechnology, Dept. of Mechanical Engineering, National Institute of Engineering(NIE), Mysuru – Karnataka,
NBL21-OL-051	12:41 - 12:50	Template-free High Surface Area Mn ₂ O ₃ Nanomaterials for photochemical Water Oxidation Activity	Ravi K. Kunchala	Energy and Environment Unit, (INST), Mohali, Punjab-India.
NBL21-OL-052	12:51 - 01:00	Employing Nanoparticles as a Remedy to Mitigate Gastrointestinal Nematodes	Farah Naaz	Department of Zoology University of Kashmir, Srinagar-190006, Kashmir.
NBL21-OL-053	01:01 - 01:10	Effect of slice thickness and drying temperature on the development and characterisation of lotus (<i>Nelumbo nucifera Gaertn</i>) rhizome powder	Qazi Showkat Ashraf	Research Scholar, Department of Food Technology, IUST, Awantipora, J&K, India
NBL21-OL-054	01:11 - 01:20	Synthesis and characterization of Psyllium hydrogel loaded with silver nanoparticles and it’s in vitro antimicrobial activity.	Aswini Priya E K	Centre for Nanoscience and Nanotechnology Sathyabama Institute of Science and Technology, Chennai
NBL21-OL-055	01:01 - 01:30	Design and Simulation of Graphene-based Microelectrode for Efficient Stimulation and Low Power Dissipation in the Retinal Prosthesis	Sharique Ali Asghar	School of Nano Science and Technology, Indian Institute of Technology Kharagpur, West Bengal,
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Session – 7 (Oral)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Over all I/C: **Dr Mushtaq B Shah**

Students Coordinator: **Umer Habib/Arun**

Chairperson:

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-010	02:30 – 02:40	Tweaking the self-assembly of amyloid-like peptide fibres to hierarchical functional materials	Deepika Gupta	Chemical Biology Unit, Institute of Nano Science & Technology, Mohali, Punjab
NBL21-OL-030	02:41 – 02:50	Development of injectable hydrogel augmented by ECM-mimetic functionalities for cartilage tissue engineering	Jijo Thomas	Chemical Biology Unit, Institute of Nano Science and Technology, Knowledge City, Sector 81, Mohali, Punjab 140306, India.
NBL21-OL-035	02:51 – 03:00	Carbon cloth-based flexible nanobio platform toward sensitive and label-free detection of vitamin-D3	Deepika Chauhan	Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi-110067
NBL21-OL-059	03:01 – 03:10	Experimental investigation and process parameter optimization in nano polishing of helical gear using abrasive flow finishing	Irfan Ahmad Ansari	Department of Mechanical Engineering, Indian Institute of Technology Kanpur, Kanpur-208016, India.
NBL21-OL-021	03:11 – 03:20	A Facile and Efficient Process for Rufinamide Drug Synthesis	Abdul Selim	Institute of Nano Science and Technology (INST), Knowledge City, Sector 81, Mohali, Punjab 140306,
NBL21-OL-092	03:21 – 03:30	REMOVAL OF FLUORIDE FROM AQUEOUS SOLUTION USING COCONUT HUSK AS BIO-ADSORBENT	Abhishek Kumar	Department of Civil Engineering, National Institute of Technology PATNA.
NBL21-OL-093	03:31 – 03:40	Effects of Xe ion Irradiation on Structural, Microstructural and Magnetic Properties of Mn/Al Bilayer Thin Films	H. Khanduri	CSIR-National Physical Laboratory, New Delhi - 110012,
NBL21-OL-073	03:41 – 03:50	Effect of Iron oxide Nanoparticles based nanofluid on transformer cooling	Muzafar Hussain	Department of EERE, Baba Ghulam Shah Badshah University (BGSBU) Rajouri Jammu and Kashmir-185234
NBL21-OL-074	03:51 – 04:00	Wearable Microfluidic-based E-skin Sweat Sensors	Nikita	Dept of Chemistry, (NIT) Srinagar, India, 190006
NBL21-OL-086	04:01 - 04:10	Analysis of Cancer Gene Expression Data Using Topological Mapper	Omar Rafique	Machine Learning Lab, Department of Electronics and Communication Engineering, NIT.
NBL21-OL-090	04:11 - 04:20	Epigenetic Polycomb Regulation of Acute Myeloid Leukemia: Linking Underlying Mechanism to Multimodal Nanotherapy	Babita kaundal	Institute of Nano Science and Technology, Knowledge city Sector-81, Mohali Punjab - 140306, India.
NBL21-OL-039	04:21 - 04:30	MoS ₂ /CdS heterojunctions and their I-V characteristics	Siddhartha Dam	UGC-DAE CSR, Kalpakkam Node, Tamil Nadu-603104, India (affiliated to the University of Madras)
Concluding Remarks by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Session – 8a (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Over all I/C: Mr. Younus

Students Coordinator: Umer Altaf/Gulzar

Chairpersons:

	Time	Title of the talk	Name	Affiliation
NBL21-PO-056	04:30 – 06:00	EFFECT OF NANO SILICA ON MECHANICAL PROPERTIES OF CONCRETE: A REVIEW	Abhishek Priyadarshi	Department of Civil Engineering, Sam Higginbottom University of Agriculture, Technology and Sciences
NBL21-PO-067	04:30 – 06:00	Toxoplasmosis a zoonotic disease -A REVIEW	Bilkees Nazir	Department of Zoology University of Kashmir
NBL21-PO-068	04:30 – 06:00	Histomoniasis in poultry-A review	Nazima Maqbool	Department of Zoology, University of Kashmir
NBL21-PO-069	04:30 – 06:00	Effect of gastrointestinal helminths on the health of hosts- A review	Naheeda Rehman	Department of Zoology University of Kashmir
NBL21-PO-070	04:30 – 06:00	Functional Characterization of Fibers from Rice Cultivars of Indian Temperate Region	Nafiya Qadir	Department of Food Science & Technology, University of Kashmir, Hazratbal, Srinagar-190006 (J&K), India.
NBL21-PO-075	04:30 – 06:00	PHYSICOCHEMICAL STUDIES ON PHARMACEUTICALLY KNOWN NICOTINAMIDE BASED SOME BINARY ORGANIC EUTECTICS	SUMIT CHAUDHARY	Department of Chemistry, Institute of Science, Banaras Hindu University, Varanasi-221005, INDIA
NBL21-PO-076	04:30 – 06:00	Amoxicillin loaded Chitosan/PCL combined Zinc doped Bismuth Oxide hydrogel for diabetic wound healing application	D. Prema	Department of Nanotechnology, SRM Institute of Science and Technology, Kattankulathur, Chengalpattu District, Tamil Nadu, India - 603 203
NBL21-PO-077	04:30 – 06:00	Design of process to synthesize nickel manganese oxide from electronic waste	Sapna Devi	Institute of Nano Science and Technology, Mohali 140306 (Punjab), India
NBL21-PO-035	04:30 – 06:00	Cryptosporidium: Prevalence and Epidemiology	Pooja Bharti	Department of Zoology, University of Kashmir, Srinagar-190006, Kashmir.
NBL21-PO-015	04:30 – 06:00	Towards development of Nano-agrochemicals for crop improvement	Aneesa Batool	Bhagwant university of Ajmer, Rajasthan, Sikar Road, Ajmer-305004, Rajasthan (INDIA)
NBL21-OL-080	04:30 – 06:00	Growth and characterization of Ag ₂ S semiconductor nanoparticles	S. C. Sharath	Department of Studies in Physics, Davangere University, Karnataka, India
Concluding Remarks by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



Session – 8b (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 3- Thursday,

9 September 2021

Over all I/C: **Miss. Yasmeen**

Students Coordinator: **Nazima/Gulzar Ah.**

Chairpersons:

(Registration Team headed by: Dr. and Dr.)/ Supported by **Mr. Nikhilesh/Mr. Jaffar**

	Time	Title of the talk	Name	Affiliation
NBL21-PO-078	04:30 – 05:30	Novel electron rich Polycarbazole conjugated 2D Mo ₂ N nanocomposite for supercapacitor application	P. Praveena	Department of Nuclear Physics, University of Madras, Chennai-600025, India
NBL21-PO-039	04:30 – 05:30	Designing Collagen Mimetic Ionic Complementary Peptide Hydrogels for Biomedical Applications	Vijay K. Pal	Institute of Nano Science and Technology, Habitat Centre, Mohali, Punjab-160062, India
NBL21-PO-043	04:30 – 05:30	Memory Applications using Protamine Sulfate assembled onto thinfilms.	Hritinava Banik	Thin Film and Nanoscience laboratory, Department of Physics, Tripura University (Suryamaninagar-799022)
NBL21-PO-044	04:30 – 05:30	Non-volatile memory applications using Indole derivative Langmuir-Blodgett (LB) films	Surajit Sarkar	Thin Film and Nanoscience laboratory, Department of Physics, Tripura University (Suryamaninagar-799022),
NBL21-PO-049	04:30 – 05:30	Self-Sorting of micelles using amphiphilic polymers for drug delivery application	Shaifali Sartaliya	Institute of Nano Science and Technology, Mohali Sector-81, Knowledge City, Sahibzada Ajit, Punjab, 140306, Punjab, India
NBL21-PO-038	04:30 – 05:30	In vitro anti-cancer efficacies of walnut (Juglans regia) leaf extract against colorectal cancer cells	Abida Samad	Genome Biology Lab, Department of Biosciences, Jamia Millia Islamia, New Delhi-110025
NBL21-PO-079	04:30 – 05:30	CNT Based Field Effect Transistor: An Alternative To Silicon Based Transistor - A Review	Younus Ahmad Dar	Department of Electronics and Instrumentation Technology, University of Kashmir, Hazratbal-Srinagar, 190006 (J&K), India
NBL21-PO-023	04:30 – 06:00	Double perovskite La ₂ CoMnO ₆ as efficient oxygen evolution electrocatalyst	Kritika Sood	Institute of Nano Science and Technology, Knowledge city, Sector-81, Mohali
NBL21-PO-025	04:30 – 06:00	Study of Structural and Thermal Properties of Alkali Borate Glasses Containing Titanium ions	Vikas	Department of Physics, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana India
NBL21-PO-027	04:30 – 06:00	Physical and structural properties of Zirconium doped bioactive material: Suitable for dentistry	Rajesh	Material Research Laboratory, Department of Physics, Deenbandhu Chhotu Ram University of Science & Technology.
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”

Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings



NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Session – 9(Speaker)

Over all I/C: **Mr. Anil Maini**

Students Coordinator: **Sabreena/Arun**

Chairpersons:

	Time (am)	Title of the talk	Name	Affiliation
S-1	09:30 - 09:45	Semiconductor nanostructures for optoelectronic applications	Prof. C. Jagadish	Australian national university
S-2	09.46 - 10.00	Spectroscopy of lanthanides	Prof. Sultana N. Nahar	Dept of Astronomy, The Ohio State University, Columbus, USA
S-3	10.00 - 10:15	Nanocomposite flexible membranes for high response x-ray detectors	Prof Ahmad Ibrahim Ayesh	Physics, Qatar University, Doha, Qatar
S-4	10:15 - 10:30	Nanomaterials and green environment sustainability	Dr. Hagar Alm El Din Mohamad	Department- Faculty of Engineering- Tanta University, Egypt
S-5	10.30 - 10.45	Web-based Pollutant Controller For making Indoor Environments Disease free	Prof. S. K. Sharma	Director Academics, Model Institute of Engineering and Technology, KotBhalwal, Jammu, 181122
S-6	10:45 - 11.00	Semiconductor Nanostructured based Gas Sensor for Monitoring Human Health by Analyzing Exhale Breath: Fundamental to Application	Dr. Mrinal Pal	CSIR-Central Glass and Ceramic Research Institute, Kolkata - 700032
S-7	11:01 - 11:15	Colorimetry Based Detection of Nitric Oxide from Exhaled Breath for Quantification of Oxidative Stress in Human Body	Prof. Kishore Kumar Sadasivuni	Center for Advanced Materials Building H10, Zone 6, Office E133, Qatar University, Qatar.
S-8	10:15 - 11:30	Alkaline air: changing perspectives on nitrogen and air pollution in an ammonia rich world	Dr. M Irfan	Edinburgh research station UK
S-9	11:30 - 11:45	Sustained and enhanced delivery of therapeutic drug and gene for improved disease management	Dr. Ranjita Mishra	Centre for Molecular and Nanomedical Sciences, Sathyabama Institute of Science of Technology, Chennai- 600119, Tamil Nadu, India
S-10	11:45 - 12:00	Chlorin e6 decorated doxorubicin encapsulated chitosan nanoparticles for photo-controlled cancer drug delivery	Prof. Krishnamoorthy Ganesan	Department of Medical Biochemistry, Muthayammal Centre for Advanced Research (MCAR), Muthayammal College of Arts and Science, Rasipuram- 637 408, Tamil Nadu, India
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Session – 10(Oral)

Over all I/C: **Mr. Aqib**

Students Coordinator: **Latief/Suhail**

Chairpersons:

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-062	12:01 - 12:10	Study of matrix–filler interaction through correlations between structural and viscoelastic properties of carbonous-filler/polymer-matrix composites	Tanvi Pal	Advanced Nanoengineering Materials Laboratory, Indian Institute of Technology Kanpur, 208016, India
NBL21-OL-064	12:11 - 12:20	Length weight relationship and condition factor of Schizothorax niger inhabiting Manasbal lake, Kashmir, India.	Tabasum Yousuf	Fish Biology and Limnology Research Laboratory, Department of Zoology, University of Kashmir, Srinagar
NBL21-OL-065	12:21 - 12:30	Studies on macrobenthic invertebrates in relation to stream ecology from Kashmir Himalaya	Zahoor Ahmad Mir	Fish Biology and Limnology Research Laboratory, Department of Zoology, University of Kashmir, Srinagar
NBL21-OL-066	12:31 - 12:40	Genetic Polymorphism of Foot rot Gene Marker DQA2 Gene in Kashmir Merino sheep	Shayista Akhter	Division of Animal Genetics and Breeding, FVSc & AH, SKUAST-K; Shuhama, Srinagar, Jammu and Kashmir.
NBL21-OL-067	12:41 - 12:50	Facile synthesis of Iron oxide nanoparticles from Penicillium species and their antibacterial properties	Norul Aini Zakariya	Faculty of Pharmacy and Health Sciences, Universiti Kuala Lumpur-Royal College of Medicine Perak, Malaysia
NBL21-OL-068	12:51 - 01:00	Temperature dependent Raman studies of free-standing, flexible, composite thin films of GaN/PVDF	Abhishek Thakur	UGC-DAE CSR, Kalpakkam Node, Kokilamedu, Tamil Nadu-603104 (Affiliated to University of Madras.)
NBL21-OL-069	01:01 - 01:10	Dielectric studies of free-standing, flexible, composite thin films of MoS ₂ /PVDF	Mandeep Jangra	UGC-DAE CSR, Kalpakkam Node, Kokilamedu, Tamil Nadu-603104 (Affiliated to University of Madras.)
NBL21-OL-070	01:11 - 01:20	Antibacterial potential of ZnO nanoparticles synthesized via green approach	Tanvir Kaur	Department of Microbiology, School of Bioengineering and Biosciences, Lovely Professional University, Punjab,
NBL21-OL-071	01:01 - 01:30	Zirconium dioxide nanoparticles for modern healthcare, environmental protection and material sciences- synthesis routes and characterizations	Vidhya C. V.	Inorganic and Bioinorganic Research Laboratory, Department of chemistry, NIT Calicut
Concluding Remarks by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Session – 11(Oral)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Over all I/C: **Dr. Showkeen Muzzamil**

Students Coordinator: **Hilal/Mehboob**

Chairperson:

	Time (pm)	Title of the talk	Name	Affiliation
NBL21-OL-056	02:30 – 02:40	EFFECT OF CURING ON MACHENICAL PROPERTIES OF CONCRETE	Indra Kumar Pandey	Research scholar, Department of civil engineering, National institute of Technology, Jharkhand, India
NBL21-OL-057	02:41 – 02:50	Self-healing and Flexible Supercapacitor for Wearable and Portable Electronics	Kapil Dev Verma	Materials Science Programme, Indian Institute of Technology Kanpur,
NBL21-OL-058	02:51 – 03:00	Coal Fly Ash Cenospheres and its Application in Polymer Composites	Shania Zehra Naqvi	Advanced Nanoengineering Materials Laboratory, Materials Science Programme, Indian Institute of Technology Kanpur,
NBL21-OL-072	03:01 – 03:10	Green Synthesis of Silver nanoparticles: a review based on plant leaf extract as reducing agents	Jyothika V. G.	Department of Physics, Sree Narayana College, Nattika, Thrissur, Kerala
NBL21-OL-075	03:11 – 03:20	Investigation on the antibacterial activity and in vitro cytotoxicity of curcumin-silver nanoparticle complex as a potent therapeutic	C. S. Dhanya	Division of Polymeric Medical Devices, Biomedical Technology Wing, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum
NBL21-OL-076	03:21 – 03:30	FERROFLUID BASED COOLING SYSTEM: A SMART SOLUTION FOR HEAT TRANSPORT	Jaswinder Singh Mehta	UIET, PU, Chandigarh, India.
NBL21-OL-077	03:31 – 03:40	Control of Tractor Seat Vibrations with Self-Tuning PID Controller	Harbhinder Singh	Research Scholar, School of Mechanical Engineering, Lovely Professional University, Phagwara
NBL21-OL-078	03:41 – 03:50	IMPROVED PROPERTIES OF PHOTONIC CRYSTAL FIBERS- A REVIEW	Sabahat Sakinah	BTech., Department of Electronics and Communication, IUST
NBL21-OL-079	03:51 – 04:00	Morphological and Optical conductivity Study of Amine Functionalized Ceria Nanoparticles	G. H. Nagaveni	Dept. of Studies in Physics, Davangere University, Davangere-577 007, Karnataka, India.
NBL21-OL-059	04:01 – 04:10	Experimental investigation and process parameter optimization in nano polishing of helical gear using abrasive flow finishing	Irfan Ahmad Ansari	Indian Institute of Technology Kanpur, Kanpur-208016, India.
NBL21-OL-060	04:11 – 04:20	Zero value waste human hair to high value functional carbon nanosheets for superior charge storage supercapacitor	Prerna Sinha	Indian Institute of Technology Kanpur, Kanpur-208016, India.
NBL21-OL-061	04:21 – 04:30	Triphenylamine and terpyridine–zinc (II) complex-based donor–acceptor soft hybrid as a visible light driven hydrogen evolution photocatalyst	Sugandha Singh	Indian Institute of Technology Kanpur, Kanpur-208016, India.
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Session – 12a (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Over all I/C: **Ms. Shemila**

Students Coordinator: **Irshad/Umer Mushtaq**

Chairpersons:

	Time	Title of the talk	Name	Affiliation
NBL21-PO-119	04:30 – 06:00	Synthesis and characterization of Antimony doped tin oxide Using Sono-chemical Precipitation Method to Enhance the Heat Shielding	Sachin	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-118	04:30 – 06:00	Changes of properties due to defects in graphene.	Vikash	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-120	04:30 – 06:00	Effect of Annealing temperature on ZnO thin films grown by hydrothermal method.	Suhail	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-0121	04:30 – 06:00	Safe Smart Shoes for differently abled persons using devices and functional nanomaterials	Sandeep Singh Rana	Safe Smart Shoes for differently abled persons using devices and functional nanomaterials
NBL21-PO-071	04:30 – 06:00	Unravelling endophytic fungal assemblages of a high-altitude medicinal plant	Aroosa Jan Mattoo	Department of Botany, University of Jammu, Jammu, 180006.
NBL21-PO-082	04:30 – 06:00	Holey reduced graphene oxide for supercapacitor application	Mukesh Kumar	Advanced Nanoengineering Materials Laboratory, IIT Kanpur, Kanpur-208016, India.
NBL21-PO-087	04:30 – 06:00	Magnetic Composites for a cleaner environment entrapping harmful pollutants from wastewater	Atul Sharma	Department of Chemistry, Jamia Millia Islamia, New Delhi
NBL21-PO-136	04:30 – 06:00	Rapid detection of SARS COV2 RNA using Graphene based electrochemical biosensors.	Surbhi Rajpoot	Department of Physics, National Institute of Technology Srinagar
NBL21-PO-057	04:30 – 06:00	Mn doped CsPbBr ₃ Perovskite Nanoplatelet Architecture and Its Exciton Dynamics	Kaliyamoorthy Justice Babu	Institute of Nano Science and Technology, Knowledge City, Sector 81, Mohali, Punjab-140306, India.
NBL21-PO-062	04:30 – 06:00	Structural design of Cobalt phosphide nanorods for efficient hydrogen generation	Ankush	Institute of Nano Science and Technology, Knowledge City, Sector -81, Mohali, Punjab 140306.
NBL21-PO-034	04:30 – 06:00	Synthesis of biodegradable Chitosan/Polyvinylpyrrolidone nanocomposite for the remediation of two fluoroquinolone antibiotics from their aqueous solution	Divyanshi Mangla	Bio/Polymer Research Laboratory, Department of Chemistry, Jamia Millia Islamia, New Delhi-110025, India
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	



“Nanotechnology for Better Living”



Hybrid’ scientific NBL convention aim to offer the best of in-person and virtual meetings

Session – 12b (Poster)

NBL Convention From 7-11 September 2021 in Hybrid Mode

Day 4- Friday

10 September 2021

Over all I/C: **Ms. Farah Naqash**

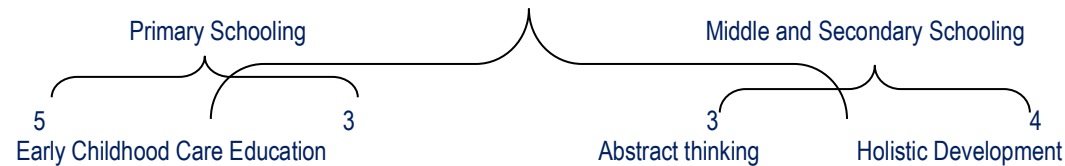
Students Coordinator: **Junaid/Nissaar Rana**

Chairpersons:

	Time	Title of the talk	Name	Affiliation
NBL21-PO-080	04:30 – 06:00	Gastrointestinal parasitic screening of domestic livestock in Tatakuti Wildlife Sanctuary	Rouf Ahmad Bhat	Department of Zoology University of Kashmir
NBL21-PO-081	04:30 – 06:00	Nanotechnology: a double-edged sword for environment	Khair ul nisa	Department of Environmental Science, University of Kashmir
NBL21-PO-083	04:30 – 06:00	2D simulation of St. Jude Med. Heart Valve	Meraj Ahmed	Department of Mechanical Engineering, Indian Institute of Technology Kanpur, Kanpur-208016, India.
NBL21-PO-084	04:30 – 06:00	Flexible Hybrid Carbon based Nanocomposite for EMI Shielding Application	Jitendra tahalyani	Materials Science Programme, Indian Institute of Technology Kanpur, Kanpur-208016, India.
NBL21-PO-085	04:30 – 06:00	Fluorescence tuning behavior of Carbon Quantum Dots with Gold Nanoparticles via novel intercalation effect of Aldicarb	Reena K. Sajwan	Special Centre for Nanoscience, Jawaharlal Nehru university, New Delhi-110067, India
NBL21-PO-086	04:30 – 06:00	Avian coccidiosis-A critical review	Shagufta Iqbal	Department of Zoology University of Kashmir
NBL21-PO-088	04:30 – 06:00	Unravelling the synthesis and characterization of nanoparticles: a critical update to nanoparticle chemistry	Humairah Tabasum	Department of Chemistry, National Institute of Technology, Srinagar, 190006
NBL21-PO-089	04:30 – 06:00	Unravelling the role of nanotechnology to enhance the efficacy of crop plants: a way forward to sustainable agriculture growth	Basharat Ahmad Bhat	Department of Bioresources, School of Biological Sciences, University of Kashmir, Srinagar-190006
NBL21-PO-090	04:30 – 06:00	Cu ₂ AgInS ₄ quantum dot sensitized Zinc doped Titania as the high efficient Photoanode for QDSC	Roopakala Kottayi	Department of Physics, Kanchi Mamunivar Govt. Institute for PG Studies and Research, Puducherry-605008, India
NBL21-PO-063	04:30 – 06:00	Non-enzymatic, rapid detection of glucose on PVA-CuO thin film using ARDUINO UNO based capacitance measurement unit	Mirnal Poddar	Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi-110067
NBL21-OL-080	04:30 – 06:00	Growth and characterization of Ag ₂ S semiconductor nanoparticles	S. C. Sharath	Department of Studies in Physics, Davangere University, Karnataka, India
Concluding Remakes by chairpersons & written report			Certificate Distribution I/C:	

NEP-2020-Steps at a Glance: Shah M A

NEP -20 for School Education



Integrated concept of 5+3+3+4 Education

Systematic Steps for Implementation of NEP 2020

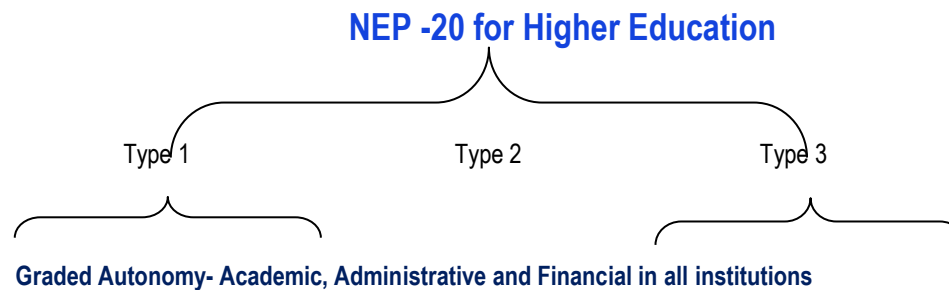
- Step 1:- Formation of School Complexes/Clusters and mentorship of Primary Schools in its periphery through complexes
- Step 2:- Establishment of State Council of Educational Research and Training (SCERT) and its units within one campus for better coordination
- Step 3:- National Curricular Framework for School Education, NCFSE- Taking into account frontline curriculum
- Step 4:- National Curriculum framework for Teacher Education (NCFTE)- Preparing professionals and humane teachers
- Step 5:- Focus on curriculum to core concepts- Emphasis on conceptual understanding- Goodbye to rote learning & development of scientific temper, communication, ethical reasoning, knowledge of critical issues and digital literacy
- Step 5:- Digital education and technology in education- extensive use of technology in learning and teaching for both online & offline
- Step 6:- Assessment Reforms and Board Examinations- Report cards will include self-assessment by students in addition to existing teachers' evaluation sheet. The culture of assessment shall shift from rote memorization to that promotes learning and tests higher order skills.
- Step 7:- National Assessment Center for Performance, Review and analysis of Knowledge for Holistic development- PARAKH- a new National Assessment Centre will be set up as a standard-setting body.
- Step 8:- Internships and Vocational Education from class 6- Have to be integrated
- Step 9:- Freedom of choice is another ingredient in the policy.
- Step 10:- Multilingualism and power of language has cognitive benefits
- Step 11- Following four parameters need to be critically assessed on priority

Core Essentials

Critical Thinking

Interactive Classes

Experiential Learning

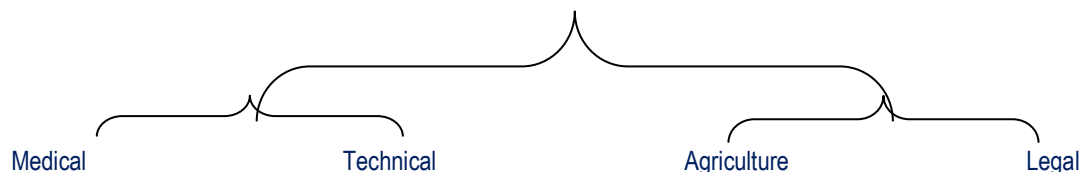


Systematic steps for implementation of NEP 2020

- Step 1:- Architecture of Higher Education into three types - Type 1, 2 and 3 - The definition of university will now range from Research-intensive Universities to Teaching-intensive Universities and Autonomous degree-granting Colleges.
- Step 2:- Multidisciplinary and Holistic Education- **Stand-alone** Institutions including Professional have to evolve into multidisciplinary
- Step 3:- *Setting up Multidisciplinary Education and Research University (MERUs) as a Model in every district*
- Step 4:- Constitution of Board of Governors (BoG). The BoG shall be responsible and accountable to the stake holders through transparent mechanism and shall be empowered to govern the institution free of any external interference.
- Step 5:- 3-4 year Undergraduate degree with multiple entry-exit options and common entrance examination for admissions
- Step 6:- Transfer of Credits, the Academic Bank of Credits have to be established. - An Academic Bank of Credit (ABC) shall be established which would digitally store the academic credits earned from various recognized HEIs.
- Step 7:- National Education Technology Forum (NETF) - To improve digital infrastructure for both school and higher education
- Step 8:- Effective Empowered Governance and Effective Leadership - To create culture of excellence and innovation
- Step 9:- National Research Foundation (NRF) will be created as an apex body for fostering a strong research culture and building research capacity
- Step 10:- Disadvantaged geographies will be a priority- there shall be atleast one type of institution
- Step 11:- Establishment of Higher Education Council of India (HECI) and having four independent verticals

(i) National Higher Education Regulatory Council (NHERC) for regulation-Only regulator for all higher education including professional (ii) General Education Council (GEC) for standard setting (iii) Higher Education Grants Council (HEGC) for funding (iv) National Assessment & Accreditation Council (NAC) for accreditation: Accreditation as basis for regulation It will be a single overarching umbrella body.

NEP -20 for Professional Education



Professional Educational- An Integral part of overall higher education system

Health Science Universities, Technical Universities, Agriculture Universities and Legal Universities shall aim to become multidisciplinary institutions offering holistic and multidisciplinary education. They should offer both (Professional and General Education) seamlessly and in an integrated manner.

Systematic steps for implementation of NEP 2020

Step 1:- Medical Education: All MBBS graduates must possess (i) Medical Skills (ii) Diagnostic Skills (iii) Surgical Skills (iv) Emergency skills. They must be assessed at regular intervals on well defined parameters. The compulsory rotation internships should be made robust and effective. Allied health care education has to be improved and institutions be established in all districts. Increasing intake capacity and expanding postgraduate education should be priority.

Step 2:- Technical Education: Preparing professionals in cutting edge areas that are fast gaining prominence, such as Intelligent automation, Artificial Intelligence, Energy and Environmental Engineering, Materials, Synthesis and Processing, 3-D Metal Printing, Nano-electromechanical Systems (NEMS), Wearable Electronics, Spintronics, Semiconductor Physics and Devices, Industrial Internet of Things, Building Information Modeling, Cloud and Mobile Technology, Wireless Power Transfer, Wireless Wearable technology, Energy-saving lighting technologies, Electrical transport, Data Sciences, Climate Science, Aerospace Engineering, Machine Learning, Biotechnology, Nanotechnology and Biomedical instrumentation with applications to health, environment and sustainable living. Industry linkage is mandatory.

Step 3:-Agriculture Education: Through better skilled graduates increase agriculture productivity. These institutions should benefit local community directly. Set up Agriculture Technology Parks to promote technology incubation and dissemination and promote sustainable methodologies.

Step 4: -Legal education: This education should be competitive globally, adopting best practices and embracing new technologies for timely delivery of justice. Universities must ensure that the curriculum reflects in an evidence based manner, the history of legal thinking, principles of justice and practice of jurisprudence and other related content appropriately and adequately.

Hibbs's Idea on Nanotechnology in Medicine

Albert R. Hibbs -a noted mathematician was fascinated by self-actuated machines. **According to Feynman, Hibbs originally suggested to him (circa 1959) the idea of a *medical* use for Feynman's theoretical micromachines:**

"A friend of mine (Albert R. Hibbs) suggests a very interesting possibility for relatively small machines. He says that... it would be interesting in surgery if you could swallow the surgeon. You put the mechanical surgeon inside the blood vessel and it goes into the heart and ``looks'' around ... It finds out which valve is the faulty one and takes a little knife and slices it out. Other small machines might be permanently incorporated in the body to assist some inadequately-functioning organ". – Richard Feynman, *"There's Plenty of Room at the Bottom"*.

• What Feynman and Hibbs considered a possibility, today 51 years later, is becoming a reality.





INTERNATIONAL CONFERENCE ON NANOTECHNOLOGY FOR BETTER LIVING **NBL-2021**

Jointly organized by NIT Srinagar and IIT Delhi
From: 7-11 September 2021

