

## NANOTECHNOLOGY FOR BETTER LIVING

In Association with:





























NIT Srinagar

MRSI

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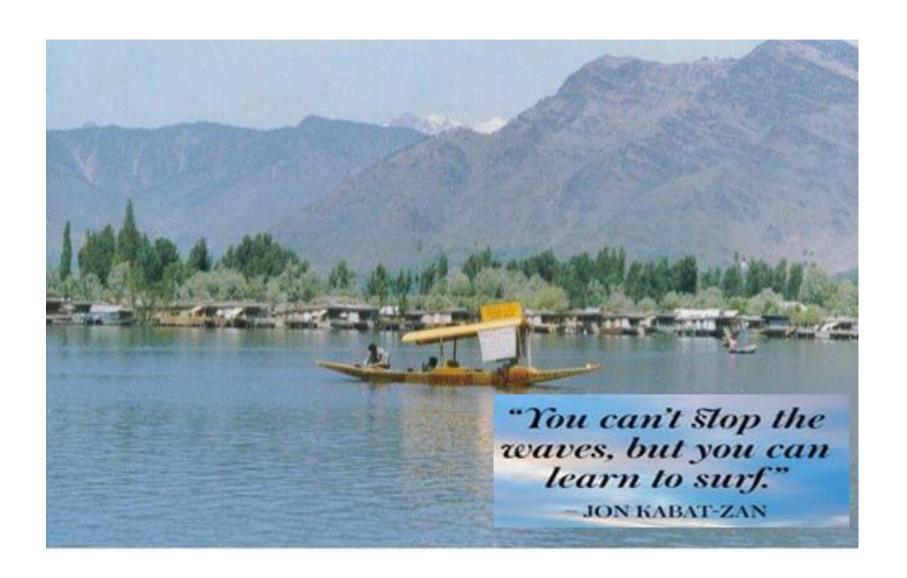
Mizoram SU Chennai SKIMS

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Central

IIT-Delhi



## The Modest Journey of NBLConvention

www.icnbl.org





International Conference on

## "Nanotechnology for Better Living"

NBL-2021

The first was the industrial revolution in late 18th and early 19th century, when mankind 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. Within country, 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, along with reduction of pollution. 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.

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 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 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 to carry NBL forward.

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 7<sup>th</sup> 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
- (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 legendries 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 Meenakashi will deliver Memorial Lecture on Shri Shahi, an eminent social reformer.

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 a memorable event!

Dr Shah M A Convener &Co-Founder

## 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.

# Messages

**MESSAGE FROM HON'BLE LG** 

### **MESSAGE FROM HON'BLE DIRECTOR**

National Institute of Technology Srinagar

No.: NITIDO 21 523

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

Professor Rakesh Sehgal Director

Date: 20.08.20

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 07-11<sup>th</sup> 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 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 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 CO-PATRONS**



## 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

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 PATRONS**

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 THE FOUNDER/ADVISORS DESK



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 THE CHAIRMAN'S DESK



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-20121 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 THE CONVENER'S DESK



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 7<sup>th</sup> 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

# Our Hon'ble Speakers



## 7<sup>th</sup> 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



Prof. C. Jagadish, Australian National Uni



Prof. Mohamed Henina, University of Nottingham



Prof. Ian Ferguson, Kennesaw State University



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** 



























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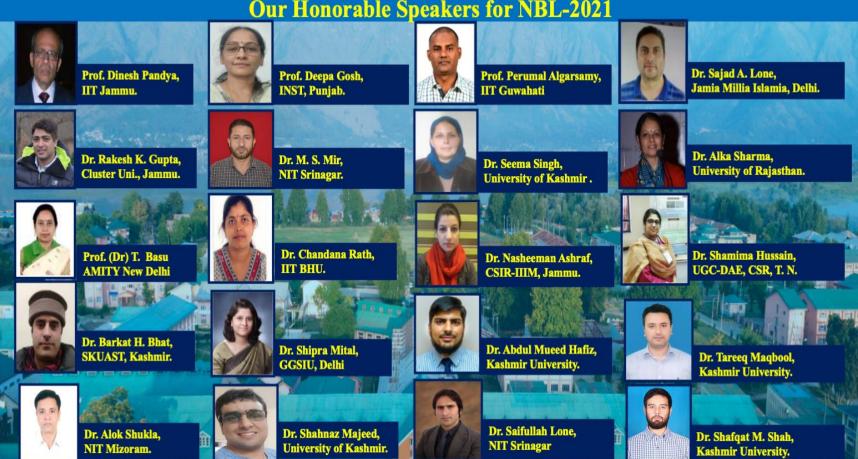
SSM

## **Our Honorable Speakers for NBL-2021** Prof. Ahmad I. Ayesh, Prof. A G Ahangar, Prof. A D Sahasrabudhe, Shri. Khurshid A Ganai, Qatar University, Qatar. SKIMS Srinagar. Chairman AICTE IAS, Former Advisor. Prof. M. V. Reddy, CETEES, Canada. Prof. S. K. Sharma, Prof. Wahajuddin, Prof. S. Javaid, CSIR-CDRI MIET, Jammu. Kashmir University. Dr. N. Vijayan, CSIR-NPL, Delhi. Dr. Hagar Alm El Din, Prof. Tokeer Ahmad, Prof. K. Khasanov, Tanta University, Egypt. Jamia Millia Islamia. Samarkand University. Dr. Sayed A. Hussain, RAPE Dr. Himanshu Ojha, Dr. Mrinal Pal, Tripura University. Prof. Md. K. A. Khan, DRDO, Delhi. CSIR-CGCRI, Kolkata. Jaganath University. Dr. Adil Gani, Dr. Kishor K. Sadasivuni, Dr. Pratima Solanki, Dr. Suriya Rehman, IIABF Uni., K. S. A. Kashmir University. **Qatar University** JNU-New Delhi

Best Presentations Supported by: Jagadish vidya foundation/ LMN Award

## INTERNATIONAL CONFERENCE ON "Nanotechnology for Better Living"

**Our Honorable Speakers for NBL-2021** 



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

#### **Our Honorable Speakers for NBL-2021** Dr. Ranjita Misra, Dr. Khalid Sultan, Dr. Indra Sulania, Dr. Iqra Reyaz Hamdani, SIST, Tamil Nadu Central Uni. Kashmir IUAC, Delhi. IIT Delhi. Dr. M. Irfan, Dr. J. M. Sam Gnanaraj, Dr. Rajendra K. Varma, Dr. Ashok Bera, IIT Jammu. IIT Hyderabad. National College, T. N. IIT Jammu. Dr. Vishal Choudhary, Dr. Kiesar Bhat, Dr. Mudasir A. Yatoo, Dr. Rehan Khan, Delhi University. Imperial College London. NTU, Singapore **INST, Punjab** Dr. Hilal A. Punoo, Dr. Padmini Pandey, Dr. Faheem Arjamend, Dr. Sajad Hussain Din, University of Kashmir. South Korea. **Kashmir University** SSM College, Srinagar Dr. Chandana Rath, Dr. Anita R. Gandhee, Dr. Wakeel A. Dar, Dr. Aashima Shah, UoH, Karnataka. IIT BHU. IIT Madras. Kashmir University.

## **Peers & Patrons Chief Patrons** Prof. Rajat Gupta Prof. A. M. Wani Prof. R. Sehgal **Prof. Sabu Thomas** Prof. Neeraj Khare Prof. V. R. Rao **Patrons & Partners** Prof. M. S. R. Rao Prof. Vinita Prof. M. Ul Hassan Prof. S. K. Bukhari Prof. J. Kumar Mrs. Dilafroze Qazi **Advisors & Coordinators** Prof. G. A. Harmain Dr. Dilafroze Dr. Kowsar Majeed Prof. N. A. Sheikh Prof. M. S. Mir Prof. Kamal Kar Chairpersons & Organizing team Prof. S. Rubab Dr. P. A. Ganai Dr. Vijay Kumar Prof. M. Ikram Dr. Harkirat Singh

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)





## Off-Line

# "Nanotechnology for Better Living"

From 7-11 Sept,2021

# Day wise Programme

## **NBL 2021 Convention**

#### Welcome from Conveners Desk

ICNBL-2021 marks the 7<sup>th</sup> 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 35Keynote 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 285 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)

## Day 1- Tuesday, 7 September 2021 (Tutorials + Inauguration)

	Registration in SKUAST, Shalimar Srinagar (Registration Team headed by: Dr. Hamida and team)				
Session S1	Conference	e tutorials: Delegates+ Students+ other invited guests: I/C			
3622011 2 1	Time	Name & Affiliation	Title of the talk		
T-1	9.30am to 10:00am	Professor Nguyễn T. K. Thanh FRSC FInstP FIMMM FRSB, Chair in Nanomaterials, UCL London (VIDEO RECORDING)	Synthesis and biofunctionalization of Plasmonic and Magnetic Nanoparticles for Biomedical Application/ video		
T-2	10:00am- 11:00am	Shri Khurshid Ahmad Ganai(IAS) Former Adviser	Global warming and Climate Change; How human activities impact global warming		
T-3	11.01am - 11.40 am	Dr. Saifullah Lone(Scientist-C) Department of Chemistry, NIT Srinagar	Relation of Nanotechnology with Good Life		
T-4	11.40am - 12.00 pm	Dr. IqraReyaz Hamdani IIT Delhi	Principle of nano-engineering and applications.		
T-5	12.00 pm- 12.30pm	Prof. S Rubab Dept. Physics, NIT Srinagar	Bright career opportunities in nanotechnology		
12:30pm to 02:3	0pm	LUNCH			
INAUGURATIO	N CEREMON'	Y OF ICNBL-21 From 2:30 PM			
Inauguration &P-1.	2.30 pm - 4.30pm	Program under construction and consents sought from guests/ speakers	Minute to Minute Programme under Construction by Dr Shah		
	4:30 pm – 5:00 pm	Prof. Sabu Thomas Vice Chancellor, Mahatma Gandhi University, Kerala.	New Opportunities in Sustainable Nano Materials		
	5.00 pm	Concluding remarks by chairperson of the session	Prof G A Harmain, Dean R & C		

Day 2- Wednesday, Session Chairman/Co-Chairman: Prof N A Sheikh

8<sup>th</sup>Sept, 2021 (Morning) Coordinator of the day/Co-Coordinator: Dr. Harkirat Singh

	Keynote/Invited Speakers				
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation	
	09:30- 09:50	Ab-initio method in many body problems.	Prof. S. Javaid	Former V. Chancellor, Cluster University, presently prof. at University of Kashmir.	
	09:51- 10:10	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	
	10:11- 10:30	Intervention of <i>Bacillus haynesii</i> for One Pot Synthesis of Zinc Oxide Nanoparticles of Biomedical Application	Dr. Suriya Rehman	Department of Epidemic Disease Research Institute for Research and Medical Consultation(IRMC) Imam Abdulrahman Bin Faisal University (IAU), KSA	
	10:31- 10:50	Functional characterization of CsBGlu12, a βglucosidase from Crocus sativus provides insights into its role in abiotic stress through accumulation of antioxidant flavonols	Dr. Nasheeman Ashraf	Academy of Scientific and Innovative Research, CSIR—Indian Institute of Integrative Medicine, Canal Road, Jammu Tawi 180 001, India	
	10:51- 11:11	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, India	
	11:11- 11:30	Plant mediated sulphur nanoparticles and their efficacy evaluated against fruit rot of chilli (Colletotrichum capsici)	Dr. Tariq A. Sofi	SKUAST-Kashmir.	

Tea Break Followed by ORAL Session-1a (10 min each)

Incharge: - Dr Tariq Maqbool (KU)

Paper ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
NBL21-OL-001	11:51- 12:00	IoT Based Indoor Pollutant Controller	Akshit Kumar	Dept. of ECE, Model Institute of Engineering and Technology KotBhalwal, Jammu, 181122 (J&K), India
NBL21-OL-002	12:01- 12:10	Dietary Nano zinc oxide (ZnO) and vitamin E supplementation helps to alleviate cold stress in broiler chickens	PeerzadaTajamul Mumtaz	Division of Veterinary Biochemistry, Faculty of Veterinary Sciences and Animal Husbandry, Shuhama, Sher-e- Kashmir University of Agricultural Sciences and Technology – Kashmir, India -19006.

NBL21-OL-003	12:11- 12:20	RESERVED		
NBL21-OL-005	12:21- 12:30	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-007	12:31- 12:40	Structural Rietveld Refinement and Estimation of Crystallite Size and Strain of Bismuth Molybate (Bi2MoO6) Nanoplates Synthesized via Solvothermal Method	D. TrixyNimmy Priscilla	PG & Research Department of Physics, Government Arts College for Men, Nandanam, University of Madras, Chennai-600035, Tamil Nadu, India.
NBL21-OL-008	12:41- 12:50	RE Dysprosium and Europium co-doped Lithium Fluoride Bismuth Borate Luminescent Glasses: Potential material for WLEDs	Jyoti Dahiya	Department of Physics, DeenbandhuChhotu Ram University of Science and Technology, Murthal, Haryana India
NBL21-OL-009	12:51- 01:00	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-010	01:01- 01:10	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-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
		Lunch followed by K	eynote/Invited Speakers	
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
	02:30- 02:50	Importance and use of nanomaterials against different aphids for their management	Dr. Barkat Hussian	SKUAST- Kashmir
	02:51- 03:10	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
	03:11- 03:30	Nanoscience: Jammu and Kashmir Perspective and a way Forward	Dr. Sanjeev Rana	School of Biotechnology, Shri Mata Vaishno Devi University, Kakriyal, Katra

Incharge: Dr. Mu	ood (KII)	ORAL Session	n-1b (10 min each)	
ID Incharge. Dr. Muc	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
NBL21-OL-016	03:31- 03:40	In vitro evaluation of antibacterial activity of copper nano particles on pure culture of Staphylococcus aureus	AmatulMuhee	Division of Veterinary Medicine, Faculty of Veterinary Sciences and Animal Husbandry, Srinagar, Jammu and Kashmir, India
NBL21-OL-019	03:41- 03:50	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, India.
NBL21-OL-021	03:51- 04:00	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, India
NBL21-OL-022	04:01- 04:10	Nutraceutical Preparation Through Nano-Food Delivery System	Anam Aijaz	Food Science and Technology, Shere Kashmir University of Agricultural Sciences and Technology, Kashmir, India
NBL21-OL-023	04:11- 04:20	Efficacy Evaluation of Different Waterproofing Compounds in Concrete	ParahSalsabeel Jalal	Research Scholar, Department of Civil Engineering, Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj(U.P.), India
	•	04:20-04:	40 Tea Break	
Incharge: (Dr. Mu	ızaffar Roda		session-1	
NBL21-PO-003	4:40	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	4:40	Comparative study of chemically and biologically synthesized silver nanoparticles on seed germination assay	MeghaBiware	Post-graduate and Research Centre, Department of Chemistry, MES AbasahebGarware College, Pune, India.
NBL21-PO-007	4:40	A novel study on the synthesis of metalloresin through non-conventional approach to explore its flame retardancy	IramFayaz	Department of Chemistry, University of Kashmir, Srinagar, India
NBL21-PO-009	4:40	A review on emerging use of nanoparticles in anthelmintics	Ishrat Ara	Department of Zoology, University of Kashmir Srinagar-190006, India
NBL21-PO-011	4:40	Impact of vehicular Pollution on edaphic features along Tangmarg- Magam Road, Kashmir Valley	Jallalud-din Najar	Uttaranchal College of Science and Technology
NBL21-PO-012	4:40	EFFECT OF NANOCLAY ON BARRIER AND MECHANICAL PROPERTIES OF CHITOSAN BASED FILMS	Aiman Zehra	Division of Food Scienec and Technology, SKUAST-K Shalimar J&K.

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NBL21-PO-013	4:40	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	4:40	Nutritional Analysis (Fatty Acid Profile) In Cereal Food Products Using GCMS/FID	Taha Mukhtar	Division of Food Science and Technology, Faculty of Horticulture SKAUST-K-190025
NBL21-PO-017	4:40	Chitosan-Gelatin nanocomposite matrix for Biomedical Applications	Sheril Ann Mathew	Department of Nuclear Physics, University of Madras, Guindy Campus, Chennai 600025, India
NBL21-PO-020	4:40	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
NBL21-PO-021	4:40	Trends in Dielectric and Ferroelectric properties of Rare Earth doped Barium Titanate: A Review	Saima Jahan	Department of Physics, Central University of Kashmir, Tulmullah-Ganderbal,190015(J&K), India.
NBL21-PO-022	4:40	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-023	4:40	Double perovskite La2CoMnO6 as efficient oxygen evolution electrocatalyst	Kritika Sood	Insititute of Nano Science and Technology, Knowledge city, Sector-81, Mohali
NBL21-PO-025	4:40	Study of Structural and Thermal Properties of Alkali Borate Glasses Containing Titanium ions	Vikas	Department of Physics, DeenbandhuChhotu Ram University of Science and Technology, Murthal,
NBL21-PO-027	4:40	Physical and structural properties of Zirconium doped bioactive material: Suitable for dentistry	Rajesh	Material Research Laboratory, Department of Physics, DeenbandhuChhotu Ram University of Science & Technology, Murthal 131039, India
NBL21-PO-028	4:40	A review on structural and experimental dielectric Properties of Nd2 NiMnO6 and its first principal study of dielectric properties	ShohaibAbass	Department of Physics, Central University of Kashmir, Tulmulla Campus, Ganderbal, 191131.
NBL21-PO-029	4:40	Dielectric and Refraction trends in La2NiMnO6 Double Pervoskite 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	4:40	Microbiological and physiochemical evaluation of various skim milk and whole milk powders in Kashmir Valley	Snober Irshad	1Division of Livestock Products Technology, 2Division of Veterinary Medicine, Faculty of veterinary Sciences and Animal Husbandry, SKUAST-Kashmir, Jammu and Kashmir, India
NBL21-PO-031	4:40	Nanotechnology in Agriculture: A Future Technology for Sustainable Agriculture.	Bushra Bashir	Division of Food Science and Technology SKUAST, Shalimar
NBL21-PO-034	4:40	Synthesis of biodegradable Chitosan/Polyvinylpyrrolidone nanocomposite for the remediation of two fluoroquinolone antibiotics from their aqueous solution	DivyanshiMangla	Bio/Polymer Research Laboratory, Department of Chemistry, Jamia Millia Islamia, New Delhi-110025, India

## Day 3 (Thursday) Session Chair/ Co-Chairman: Prof M S Mir

## 9th Sept, 2021 Coordinator of the day/ Co-Coordinator: Dr. Vijay Kumar

	Keynote/Invited Speakers					
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation		
	09:30- 09:50	A quick overview of facilities at Nanoscale research facility.	Prof. Neeraj Kharee	IIT Delhi		
	09:51- 10:10	Innovative nanomaterial for sustainable environment	Dr. Alka Sharma	Centre of advanced studies, Department of chemistry, University of Rajasthan Jaipur.		
	10:11- 10:30	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 (J&K), India		
	10:31- 10:50	Effect of SHI irradiation of Ca Doped LaMnO3 thin films	Dr. Khalid Sultan	Department of Physics, CUK		
	10:51- 11:11	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		
	11:11- 11:30	Mxene-polyaniline nanocomposites based high performance chemo resistors ammonia reduction	Dr. Vishal Choudhary	Dehli university		
	ı	Too followed by ODAL	Session 2a (10 min each)			

Tea followed by ORAL Session-2a (10 min each)

Incharge: Dr. Ashaq Sofi (KU)

Paper ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
NBL21-OL-025	11:51- 12:00	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	12:01- 12:10	CdSe QDs as an antifungal and bioimaging probe	Irshad A Mir	School of physical sciences, Jawaharlal Nehru University, Delhi, India
NBL21-OL-027	12:11- 12:20	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, India
NBL21-OL-028	12:21- 12:30	Use of Dandelion (Taraxacum officinale) Leaf Powder for the Development of Functional Chicken Meat Loaves	SadiyaSajad	Division of Livestock Products Technology, Faculty of Veterinary Sciences & Animal Husbandry, SKUAST-K
NBL21-OL-030	12:31- 12:40	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-031	12:41- 12:50	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	12:51- 01:00	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, India
NBL21-OL-033	01:01- 01:10	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	01:11- 01:20	Non-Linearities in Long-haul Optical Communication and its Mitigation	Zahid G Khaki	Department of Electronics & Communication Engineering, National Institute of Technology Srinagar, Hazratbal-Srinagar, 190006 (J&K), India
NBL21-OL-035	01:21- 01:30	Carbon cloth-based flexible nanobio platform toward sensitive and label-free detection of vitmin-D3	Deepika Chauhan	Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi-110067
		Lunch followed by K	Keynote/Invited Speakers	
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
	02:30- 02:50	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, PattanBaramulla, Jammu and Kashmir.
	02:51- 03:10	Nanomaterials in roads and building- A new revolution in civil engineering.	Prof. M. S. Mir	Dept. of Civil Eng., NIT Srinagar
	03:11- 03:30	Effect of ultrasonication on physico-chemical and rheological properties of soy yoghurt	Hilal Ahmad Punoo	university of Kashmir Hazratbal srinagar
Incharge: Dr. Far	oog Ahmad		n-2b (10 min each)	
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
NBL21-OL-038	03:31- 03:40	Nanotechnology and its application in Nutraceuticals	Aafreen Naseer	Division of Food Science and Technology, Sher-e- Kashmir University of Agricultural Sciences and technology, Shalimar
NBL21-OL-039	03:41- 03:50	MoS2/CdS heterojunctions and their I-V characteristics	Siddhartha Dam	UGC-DAE CSR, Kalpakkam Node, Tamil Nadu- 603104, India (affiliated to the University of Madras)
NBL21-OL-040	03:51- 04:00	Plasmonic metal-semiconductor nanostructure for hydrogen evolution and dye water treatment	Shomaila Khanam	Physics Departement, BIT Mesra, Ranchi, Jharkhand, 835215.

NBL21-OL-042	04:01- 04:10	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	04:11- 04:20	Low temperature reduction with tuned electrical conductance of porous graphene oxide film: correlating electrical conductance and infrared modes	T. Anusuya	Department of Physics, Indian Institute of Information Technology, Design and Manufacturing, Melakottaiyor, Kancheepuram, Chennai– 600 127, India
Inchange Dr. Kala			y Poster session-2	
Incharge: Dr. Kale	em Anmad		T	
NBL21-PO-036	4:40	Changes in pyruvic acid, quercetin, physicochemical properties and microbiological stability of Brown Spanish Onion (Allium cepa, L) Paste during different thermal treatment combinations	Saadiya	Research Scholar, Department of Food technology, SKUAST-K
NBL21-PO-037	4:40	A Study on Synthesis of Thermo-responsive Poly (N-isopropylacrylamide) - ZnO Hybrid Hydrogel through Nonconventional 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-039	4:40	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	4:40	Memory Applications using Protamine Sulfate assembled onto thinfilms.	HritinavaBanik	Thin Film and Nanoscience laboratory, Department of Physics, Tripura University (Suryamaninagar-799022), Tripura, India
NBL21-PO-044	4:40	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), Tripura, India
NBL21-PO-047	4:40	Nanoparticle based drugs in reversing multiple drug resistance in Cancer	Suhail Ahmad Mir	Departement of Pharmaceutical Sciences, University of Kashmir, Srinagar, 190006
NBL21-PO-048	4:40	Applications of nanotechnology in food safety	Mariya Nayeem	Division of Food Science and Technology Sher –e- Kashmir University of Agricultural Sciences and Technology of Kashmir, 190025
NBL21-PO-049	4:40	Self-Sorting of micelles using amphiphilic polymers for drug delivery application	ShaifaliSartaliya	Institute of Nano Science and Technology, Mohali Sector-81, Knowledge City, Sahibzada Ajit Singh Nagar, Punjab, 140306, Punjab, India
NBL21-PO-050	4:40	Development and application of nanochitosan based coating for enhancement of shelf life of fresh plum.	SearatShowkat	Division of Food Science and Technology, Sher-e- Kashmir University of Agricultural Sciences and Technology, Shalimar Srinagar,190025(J&K), India.

NBL21-PO-051	4:40	Micronization and it's role in food processing	Aiman Farooq	Division of Food Science and Technology Sher-e-Kashmir University of Agricultural Sciences and Technology, Kashmir
NBL21-PO-052	4:40	Little hinges swing big doors, Nanotechnology for the human betterment	NajeebulTarfeen	Centre of Research for Development (CORD), University of Kashmir Hazratbal, Srinagar
NBL21-PO-053	4:40	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-057	4:40	Mn doped CsPbBr3 Perovskite Nanoplatelet Architecture and Its Exciton Dynamics	Kaliyamoorthy Justice Babu	Institute of Nano Science and Technology, Knowledge City, Sector 81, SAS Nagar, Mohali, Punjab-140306, India.
NBL21-PO-058	4:40	Nanotechnology and its Role in Solar Energy Harvesting	Syed Mubashir Ahmad	Department of Physics, Central University of Kashmir, Kashmir India
NBL21-PO-059	4:40	Green synthesis and characterization of silver nanoparticles using Aspergillus niger and its efficacy against pathogenic fungi.	Nusrat Ahmad	Section of Mycology and Plant Pathology, Department of Botany, University of Kashmir, Srinagar 190006 J&K, India
NBL21-PO-060	4:40	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), Knowledge city, Sector -81 Manauli, SAS Nagar, 140306 Mohali, Punjab, India
NBL21-PO-061	4:40	N-Enriched Metal Free Heptazine Based Porous Polymeric Network as Highly Efficient Catalyst for CO2 Capture and Conversion	Neha Sharma	Advanced Functional Nanomaterials, Energy and Environment Unit, Institute of Nano Science and Technology (INST), Knowledge city, Sector-81, Manauli, SAS Nagar, 140306 Mohali, Punjab, India
NBL21-PO-062	4:40	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-063	4:40	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-PO-064	4:40	Nanotechnology as a remedy in controlling Plant Parasitic Nematodes: A Review	Ishfaqmajeed	Department of Zoology University of Kashmir, Srinagar- 190006, Kashmir.

Day 4 (Friday) Session Chair/Co-Chairman: Prof M A Rather

10<sup>th</sup>Sept, 2021 Coordinator of the day/Co-Coordinator- Dr. Mohd Zubair

ID	T:		vited Speakers	Authoria Affliction
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
	09:30- 09:50	Gallium Nitride based Buried Oxide Current Aperture Vertical Electron Transistor (B-CAVET)	Prof S. A. Lone	Professor, VLSI and Nanoelectronics Electronics and Communication Engineering, Jamia Millia Islamia (Central University), New Delhi-110025
	09:51- 10:10	Photothermal steam generation; a greener way of water purification	Dr Ashok Bera	Department of Physics, Indian Institute of Technology Jammu, Nagrota-Jammu, 181221 (J & K), India
	10:11- 10:30	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 Srinagar J&K INDIA.
	10:31- 10:50	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.
	10:51- 11:11	Green synthesis and characterization of silver nanoparticles using Aspergillus and its efficacy against pathogenic fungi	Mehrajud Din Talie	University of kashmir
	11:11- 11:30	Efficient Thermoelectric for Home Appliances Waste Heat Conversion to Electrical Energy	Dinesh Pandya	Departments of Materials Engineering and Physics, Indian Institute of Technology Jammu, Jammu 181221

Tea followed by ORAL Session-3 (10 min each)

Incharge:Dr S A Akhoon

Paper ID	Time	Title of Paper/Poster	Presenting Author	Author's 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
NBL21-OL-080	12:01- 12:10	Growth and Characterization of Ag2S Semiconductor Nanoparticles	S. C. Sharath	Department of Studies in Physics, Davangere University, Davangere-577 007, Karnataka, India
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, Nizampet, Hyderabad 500090, India
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-	Fabrication of electrochemical biosensors for chronic	Payal Gulati	Special Centre for Nanoscience, Jawaharlal Nehru

	12:40	myeloid leukemia detection using different types of carbon nanotubes and comparison of their efficiencies		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 (TMAO)	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-0	01:01- 01:10			
NBL21-OL-0	01:11- 01:20			
NBL21-OL-0	01:21- 01:30			
		Lunch followed by K	eynote/Invited Speakers	
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
	02:30- 02:50	MORTIERELLA ALPINA CS10E4, AN OLEAGINOUS FUNGAL ENDOPHYTE OF CROCUS SATIVUS L. ENHANCES APOCAROTENOID BIOSYNTHESIS AND STRESS TOLERANCE IN THE HOST PLANT	Zahoor Ahmed Wani	Government Degree College Kishtwar, Kishtwar, 182204, India.
	02:51- 03:10	Computer vision based portable fruit grading using multiple physical quality parameters.	Abdul Mueed Hafiz	Dept of E&C Engineering, Institute of Technology, University of Kashmir, Srinagar, J&K-190006, India
	03:11- 03:30	TITLE	Dr. Seema Singh	Department of Botany, University of Kashmir
	1		VITED	
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
	03:31- 03:55	βGLUCAN NANOPARTICLES AS A CARRIER FOR BIOACTIVES.	Aasima Shah	Food and Technology, University of Kashmir.
	03:56- 04:20	Highlights of the Book: Engineering Materials for Stem Cell Regeneration – Springer – Nature	Faheem Arjamand	Nanotechnology center, University of Kashmir.
Incharge: Dr Mud	lasir Ahmad		y Poster session-3	
NBL21-PO-065	4:40	Anthelmintic activity of biologically synthesized nanoparticles (NPs) against helminth parasites in livestock:	Fayaz Hussain Mir	Department of Zoology, University of Kashmir- 190006

		A Review		
NBL21-PO-066	4:40	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-071	4:40	Unravelling endophytic fungal assemblages of a high- altitude medicinal plant	Aroosa Jan Mattoo	Department of Botany, University of Jammu, Jammu, 180006.
NBL21-PO-072	4:40	Data Analytics in a converging IoT-Fog-Cloud Architecture and Nanotechnology	Kalimullah Lone	1Department of Information Technology, National Institute of Technology, Hazratbal-Srinagar, 190006(J&K), India
NBL21-PO-073	4:40	Visual Learning and Nanotechnology: State-of-the-art and part in Pandemic (COVID-19)	Nadeem Yousuf Khanday	Research Scholar, Department of Information Technology, National Institute of Technology Srinagar, Hazratbal-Srinagar, 190006 (J&K), India
NBL21-PO-074	4:40	Dual-Mode, Color-Tunable, Lanthanide-Doped composite nanoparticles for Anti-Counterfeiting Inks	Satish Kumar Samal	Institute of Nano Science and Technology, Knowledge City, Sector-81, Mohali, Punjab-140306
NBL21-PO-082	4:40	Holey reduced graphene oxide for supercapacitor application	Mukesh Kumar	Advanced Nanoengineering Materials Laboratory, Materials Science Programme, Indian Institute of Technology Kanpur, Kanpur-208016, India.
NBL21-PO-087	4:40	Magnetic Composites for a cleaner environment entrapping harmful pollutants from wastewater	Atul Sharma	Department of Chemistry, Jamia Millia Islamia, New Delhi
NBL21-PO-091	4:40	Synthesis and application of Nano-urea on Vigna radiata- An In vitro study	Avimanu Sharma	Department of Environmental Science, School of Earth Sciences, Central University of Rajasthan, Kishangarh, Ajmer-305817, Rajasthan, India.
NBL21-PO-093	4:40	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-094	4:40	NANOTECHNOLOGY AND DIABETES	KANEEZ FATIMA	KASHMIR UNIVERSITY
NBL21-PO-095	4:40	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, 191131 (J & K) India
NBL21-PO-0	4:40			

Day 5 (Saturday) Session Chair/ Co-Chairman: Prof M Ikram

#### 11th Sept, 2021 Coordinator of the day/ Co-Coordinator- Dr P A Ganai

	CERTIFICATE INCHARGE:				
	Time	Name & Affiliation	Title of the talk		
	10:00am to 10:30am	Tariq Maqbool Nanotechnology Center, Kashmir University	Insights from Nanotechnology in combating Covid-19 and Applications in Regenerative Medicine		
	10:30am – 11:00am	Shahnaz Majeed Uni-KL, Malaysia.	In vitro study of anticancer and apoptotic activity of silver nanoparticles against bone and breast cancer cells		
	11:00am – 11:30am	Shafqat M. Shah Nanotechnology center, University of Kashmir.	Microwave Chemistry: Novel Route for Nanomaterial Synthesis		
S2					
VALEDICTORY C	CEREMONY OF ICNBL-19	From 12:00 PM 1.00 PM			
Valedictory & P-1.	12.30 pm -2.30pm	Program to be displayed			

# Day wise Programme On-Line

"Nanotechnology for Better Living"

### **NBL** Convention

DAY 2 (Wednesday),

Session Chairperson/ Co-Chairman: Dr. Shamima Hussain Technical Session 3:

8th Sept, 2021

Coordinator of the day/ Co-Coordinator:Dr Irfana Zahoor

			te/Invited Speakers	
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
	9:30-9:50	TITLE	Prof. Absar Ahmad Director	Director, AMU
	9:51-10:10	Internet of Things (IoT) ENABLED BIOSENSOR FOR MILK QUALITY EVALUATION	Prof. J. Kumar	J. KUMAR, Crystal Growth Centre, Anna University, Chennai-25
	10:10- 10:30	Nanotechnology for Civil Engineering	Prof. Na (Luna) Lu	USA
	10:30- 10:45	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.
	10:46- 11:00	Freestanding biocompatible composite films for futuristic bandage material	Dr. Shamima Hussain	UGC-DAE Consortiumfor Scientific Research, K. alpakkam Node, Kokilamedu, TN-603104
	11:01- 11:15	Organo – clay hybrid: promising candidate for optoelectronics applications	Professor Syed Arshad Hussain	Department of Physics, Tripura Univesity, Suryamaninagar - Tripura, India, 799022
	11:16- 11:30	Nanocatalysts for H2 Energy Generation and Organic Transformations	Dr. Towkeer Ahmad	Department of Chemistry, Jamia Millia Islamia, Delhi.
	11:31- 11:45	Nanotechnology facilities and application provisions at Amity University, Noida.	Dr. T. Basu	Nanotechnology Center, Amity University, Noida.
	11:46- 12:00	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

12:01- 12:15	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	
12:16- 12:30	Synthesis of gold nanoparticles from Boswellia serrata (gum resin) and its biological potential	Madhulika Bhagat	School of Biotechnology, University of Jammu, Jammu, J&K-180006, India	
(12:31- 12:45) pm	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.	
	LUNCH (1:	2:45-01:30) pm		
(01:30- 02:00) pm	Trust, Fairness and Justice in Medicine	Professor Emeritus Tan Sri Dato' Dzulkifli Abdul Razak,	Rector, International Islamic University Malaysia	

#### ORAL Session-1 (10 min each)

Incharge: Dr. Suriya Rehman

Paper ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
NBL21-OL-006	02:01- 02:10	Hydrothermal Synthesis Of Cnt-Ga2o3 Nanoparticals 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, Manasagangotri, Mysore 570006, India.
NBL21-OL-012	02:11- 02:20	Analysis of Mancozeb Pesticide in Apple Jam using GC/MS and QuEChERS sample preparation	MaeenaNamanShafiee	Department of Food Science and Technology, University of Kashmir
NBL21-OL-013	02:21- 02:30	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	02:31- 02:40	Twenty-Five Years of Nanotechnology: A Bibliometric Analysis	Javaid Ahmad Wani	Department of Library and Information Science, University of Kashmir, Hazratbal-Srinagar, 190006 (J&K), India
NBL21-OL-017	02:41- 02:50	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	02:51- 03:00	Preparation of Indian Reference Materials to get Accurate and Precise Measurements for Calibration of Powder X-Ray Diffractometer	Manju Kumari	CSIR – National Physical Laboratory, Dr K.S. Krishnan Road, New Delhi 110012, India
NBL21-OL-020	03:01- 03:10	Cross-linked green eco-friendly cellulose film for wrapping purpose.	KulsoomKoser	Department of Chemistry, Jamia Millia Islamia New Delhi (India) - 110025

NBL21-OL-024	03:11- 03:20	Heterogeneous Fenton process for dye degradation employing clay coated Manganese oxide nanoparticles	VarunaWatwe	Post-graduate and Research Centre, Department of Chemistry, MES AbasahebGarware College, Pune, India.
NBL21-OL-029	03:21- 03:30	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
NBL21-OL-036	03:31- 03:40	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	03:41- 03:50	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	03:51- 04:00	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	04:01- 04:10	Structural and Electrical Characteristics of Mechanothermally Synthesized Bi(Co0.40Ti0.40Fe0.20)O3 Nanoceramic	P. C. Lalngilneia	Department of Physics, National Institute of Technology Mizoram, Aizawl-796012, India
NBL21-OL-045	04:11- 04:20	Electron Beam Evaporated WO3 Thin Film as UV-A Photodetector	Rajshree Rajkumari	Department of Electronics and Communication Engineering, National Institute of Technology Nagaland, Dimapur 797103, India
NBL21-OL-046	04:21- 04:30	Influence of Ag nanoparticles on the photocatalytic activity of vertically oriented CeO2 nanorods using GLAD technique	Ngasepam Monica Devi	Department of Electronics and Communication Engineering, National Institute of Technology Nagaland, Chumukedima, Dimapur, Nagaland, India- 797103
Incharge: Dr. Sha	amima Hussair		on-1 (5 min each)	
NBL21-PO-001	04:31- 04:35	Radiofrequency heating- an emerging innovative heating method in food processing	Ufaqfayaz	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	04:36- 04:40	Fabrication and characterization of Vitamin D3 encapsulated gum arabicnanoemulsions	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	04:41- 04:45	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	04:46- 04:50	New process of conversion of waste paper to nanostructured CaCO3	Ritika Wadhwa	Institute of Nano Science and Technology, Knowledge City, Sec-81, Mohali, 140306, Punjab, India
NBL21-PO-008	04:51- 04:55	Storage studies of modified rice flour extrudates	Beenish	SKUAST-K
NBL21-PO-010	04:56- 05:00	High amylose rice and carboxymethyl cellulose increases resistant starch with simultaneous reduction of glycemic	Bazila Naseer	Division of Food Science and Technology, Sher-e-Kashmir University of Agriculture Sciences and Technology of

		index in gluten-free cookies		Kashmir, Shalimar, 190025, India
NBL21-PO-015	05:01- 05:05	Towards development of Nano-agrochemicals for crop improvement	Aneesa Batool	Bhagwant university of Ajmer,Rajisthan,Sikar Road,Ajmer-305004, Rajasthan (INDIA)
NBL21-PO-016	05:06- 05:10	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	05:11- 05:15	Green Energy Generation from Multiferroics NBT-MnFe2O4 based Hydroelectric Cell	Monika Dhall	Material Research Laboratory, Department of Physics, DeenbandhuChottu Ram University of Science & Technology, Murthal – 131039 (Sonipat), Haryana, India
NBL21-PO-019	05:16- 05:20	CNTs/Ag2Wo4/Ga2O3 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	05:21- 05:25	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	05:26- 05:30	Nanoencapsulation of Phytochemicals: Necessity for Effective Delivery	Mumtahin ul Kousar	SKUAST-K, Division of Food Sciences & Technology
NBL21-PO-032	05:31- 05:35	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	05:36- 05:40	Chemotherapeutic efficacy of nutraceutical-based Myricetin silver nanoparticles (mAgNPs) against HCT116 cell line	Syed TauqeerAnwer	Genome Biology Lab, Department of Biosciences, jamiaMillia Islamia, New Delhi – 110025, India
NBL21-PO-035	05:41- 05:45	Cryptosporidium: Prevalence and Epidemiology	Pooja Bharti	Department of Zoology, University of Kashmir, Srinagar-190006, Kashmir.
NBL21-PO-038	05:51- 05:55	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

Day 3 (Thursday) Session Chair/Co-Chairman: Prof Sajad A lone

9th Sept, 2021 Coordinator of the day/ Co-Coordinator- Dr Sajad

	Plenary/Keynote/Invited Speakers				
ID Ti	ïme	Title of Paper/Poster	Presenting Author	Author's Affiliation	
9:	:30-9:50	Development of Advanced Semiconductor Materials and Devices	Prof. Mohamed Henini Chair	School of Physics and Astronomy, University of Nottingham, Nottingham NG7 2RD, U. K.	
9:	:51-10:10	Quantum Information @ Room Temperature for Better Living	Prof. lan Fergusen	Department of Electrical and Computer Engineering, Missouri S&T, USA	
	0:10- 0:30	Nanomaterials in Energy and batteries.	Prof. M. S. R. Rao	Dept. of Physics, IIT Madras	
	0:30- 0:45	Recent Advances in Nano Materials for Energy Storage and Conversion technologies	Dr. M. V. Reddy	Institute of Research Hydro-Québec, Centre of Excellence in Transportation Electrification and Energy Storage (CETEES), Hydro-Québec, Canada	
	0:46- 1:00	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, Guwahati - 781 039, Assam, INDIA.	
	1:01- 1:15	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, India	
	1:16- 1:30	Nanotechnology for Power Production	Dr. Md. Kamrul Alam Khan	Department of Physics, Jagannath University, Dhaka-1100, Bangladesh	
	1:31- 1:45		Dr. Alok Shukla	Dept. of Physics, NIT Mizoram.	

12:01- 12:15	50 keV ion beam processing of InP-Studies of formation of self-organized nanodots and understanding their evolution with surface properties	Dr. Indra Sulaniya	Inter University Accelerator Centre, Aruna Asaf Ali Marg, New Delhi 110067, India.
12:16- 12:30	p-Cu2O nanowires-based photocathodes for efficient current density towards solar-water splitting	Dr. IqraReyaz Hamdani	Department of Chemical Engineering, IIT Delhi.
(12:31- 12:45) pm			
(12:46- 01:00) pm	Smart Traffic Signal Light Activation System	Mrs. Dakshayani. R	Assistant Professor, Department of computer Engineering, Fr.C.Rodrigues Institute of technology, Vashi-Navi Mumbai 400703

Lunch
ORAL Session-2 (10 min each)

Incharge: Dr. Nasheeman Ashraf

Paper ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
NBL21-OL-047	02:01- 02:10	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	02:11- 02:20	Black Cotton Soil Stabilization Using Nanocomposite Based Hydrogels	Madhusudhana R	Centre for Nanotechnology, Department of Mechanical Engineering, The National Institute of Engineering(NIE), Mysuru – 570 008, Karnataka, India
NBL21-OL-049	02:21- 02:30	Nanostructured Anti-Glare Coatings to Automobile Glasses	Sushma K L	Centre for Nanotechnology, Department of Mechanical Engineering, The National Institute of Engineering, Mysuru- 08
NBL21-OL-050	02:31- 02:40	ZrO2 – TiO2 Multilayered Nanostructured Coatings on AA5052 Substrates as Corrosion Resistant Coatings	Navyashree K C	Centre for Nanotechnology, Department of Mechanical Engineering, The National Institute of Engineering (NIE), Mysuru – 570 00 8, Karnataka, India
NBL21-OL-051	02:41- 02:50	Template-free High Surface Area Mn2O3 Nanomaterials for photochemical Water Oxidation Activity	Ravi K. Kunchala	Energy and Environment Unit, Institute of Nano Science and Technology (INST), Phase 10, Sector 64, Mohali, Punjab-160062, India.
NBL21-OL-052	02:51- 03:00	Employing Nanoparticles as a Remedy to Mitigate Gastrointestinal Nematodes	Farah Naaz	Department of Zoology University of Kashmir, Srinagar-190006, Kashmir.
NBL21-OL-053	03:01- 03:10	Effect of slice thickness and drying temperature on the development and characterisation of lotus (Nelumbo nucifera Gaertn) rhizome powder	Qazi Showkat Ashraf	Research Scholar, Department of Food Technology, IUST, Awantipora, J&K, India

NBL21-OL-054	03:11- 03:20	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- 600119, India
NBL21-OL-055	03:21- 03:30	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, 721302, India.
NBL21-OL-056	03:31- 03:40	EFFECT OF CURING ON MACHENICAL PROPERTIES OF CONCRETE	Indra Kumar Pandey	Research scholar, Department of civil engineering, National institute of Technology, Jamshedpur, Jharkhand, India
NBL21-OL-057	03:41- 03:50	Self-healing and Flexible Supercapacitor for Wearable and Portable Electronics	Kapil Dev Verma	Advanced Nanoengineering Materials Laboratory, Materials Science Programme, Indian Institute of Technology Kanpur, Kanpur-208016, India
NBL21-OL-058	03:51- 04:00	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, Kanpur-208016, 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	Department of Mechanical Engineering, 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	Advanced Nanoengineering Materials Laboratory, Materials Science Programme, 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	Advanced Nanoengineering Materials Laboratory, Materials Science Programme and Department of Mechanical Engineering, Indian Institute of Technology Kanpur, Kanpur-208016, India.
Incharge: Dr. Indi	ra Sulania	Poster session	on-2 (5 min each)	
NBL21-PO-040	04:31- 04:35	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	04:36- 04:40	Highly Selective Room Temperature SnSe Thin Film based NO2 Sensor	Sanju Rani	CSIR-National Physical Laboratory, Dr K. S. Krishnan Marg, New Delhi-110012, India
NBL21-PO-042	04:41- 04:45	Pulsed light technology and its application in food industry	Tabeen Jan	Research scholar SKUAST- Kashmir, Division of Food Science and Technology
NBL21-PO-045	04:46- 04:50	Design of Self-Assembled Anisotropic Cobalt-based Nanostructures: An efficient electrocatalyst for O2 and Cl2 Evolution Reaction	Supriya Rana	Energy and Environmental Unit, Institute of Nano Science and Technology, Knowledge city, Sector-81, Mohali

NBL21-PO-046	04:51- 04:55	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	04:56- 05:00	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	05:01- 05:05	Endophytes – The Prospective Biogenic Nanomachines	Misbah Majid	Department of Botany, University of Kashmir, Hazratbal Srinagar, J&K
NBL21-PO-056	05:06- 05:10	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	05:11- 05:15	Toxoplasmosis a zoonotic disease -A REVIEW	Bilkees Nazir	Department of Zoology University of Kashmir
NBL21-PO-068	05:16- 05:20	Histomoniasis in poultry-A review	Nazima Maqbool	Department of Zoology, University of Kashmir
NBL21-PO-069	05:21- 05:25	Effect of gastrointestinal helminths on the health of hosts-A review	Naheeda Rehman	Department of Zoology University of Kashmir
NBL21-PO-070	05:26- 05:30	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	05:31- 05:35	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	05:36- 05:40	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	05:41- 05:45	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-078	05:51- 05:55	Novel electron rich Polycarbazole conjugated 2D Mo2N nanocomposite for supercapacitor application	P. Praveena	Department of Nuclear Physics, University of Madras, Chennai-600025, India

Day 4 (Friday) Session Chair/Co-Chairman: Dr Suriya Rehman

10th Sept, 2021 Coordinator of the day/ Co-Coordinator: Dr Irfana Zahoor

	Plenary/Keynote/Invited Speakers				
ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation	
	9:30-9:50	Semiconductor nanostructures for optoelectronic applications	Prof. C. Jagadish	Australian national university	
	09:51- 10:10	Spectroscopy of lanthanides	Prof. Sultana N. Nahar	Department of Astronomy, The Ohio State University, Columbus, OH 43210, USA	
	10:10- 10:30	Evolution of Magnetic Properties in Hydrothermally Synthesized MnO2 Functional Oxide	Prof. Chandana Rath	Dept. of Physics, IIT, BHU	
	10:30- 10:45	Nanocomposite flexible membranes for high response x-ray detectors	Prof Ahmad Ibrahim Ayesh	Physics, Qatar University, Doha, Qatar	
	10:46- 11:00	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.	
	11:01- 11:15	Nanomaterials and green environment sustainability	Dr. Hagar Alm El Din Mohamad	Department- Faculty of Engineering- Tanta University, Tanta, Egypt	
	11:16- 11:30	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	
	11:31- 11:45	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.	
	11:46- 12:00	Fluorometric Nanosensors for the detection of antibiotics in food samples	Dr. Pratima Solanki	Special Centre for Nanoscience Jawaharlal Nehru University, New Delhi - India	
	12:01- 12:15	The effect of non-drug spacers on a true drug-polymer and their antimicrobial activity	GovindasamyJayamurgan	Institute of Nano Science and Technology, Knowledge City, Sector 81, Mohali, Punjab 140306, India	
	12:16- 12:30	Alkaline air: changing prespectives on nitrogen and air pollution in an ammonia rich world	Dr. M Irfan	Edinburgh research station UK	
	(12:31- 12:45) pm				
	(12:46- 01:00) pm				

#### Lunch followed by ORAL Session-3 (10 min each)

Incharge: Dr. Alka Sharma

Paper ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
NBL21-OL-062	02:01- 02:10	Study of matrix–filler interaction through correlations between structural and viscoelastic properties of carbonous-filler/polymer-matrix composites	Tanvi Pal	Advanced Nanoengineering Materials Laboratory, Materials Science Programme, Indian Institute of Technology Kanpur, 208016, India
NBL21-OL-064	02:11- 02:20	Length weight relationship and condition factor of Schizothoraxniger inhabiting Manasbal lake, Kashmir, India.	Tabasum Yousuf	Fish Biology and Limnology Research Laboratory, Department of Zoology, University of Kashmir, Srinagar- 190006, Jammu and Kashmir, India
NBL21-OL-065	02:21- 02:30	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- 190006, Jammu and Kashmir, India
NBL21-OL-066	02:31- 02:40	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, India
NBL21-OL-067	02:41- 02:50	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, Ipoh 30450 Perak Malaysia
NBL21-OL-068	02:51- 03:00	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	03:01- 03:10	Dielectric studies of free-standing, flexible, composite thin films of MoS2/PVDF	Mandeep Jangra	UGC-DAE CSR, Kalpakkam Node, Kokilamedu, Tamil Nadu-603104 (Affiliated to University of Madras.)
NBL21-OL-070	03:11- 03:20	Antibacterial potential of ZnO nanoparticles synthesized via green approach	Tanvir Kaur	Department of Microbiology, School of Bioengineering and Biosciences, Lovely Professional University, Phagwara 144411, Punjab, India
NBL21-OL-071	03:21- 03:30	Zirconium dioxide nanoparicles for modern healthcare, environmental protection and material sciences-synthesis routes and characterizations	Vidhya C. V.	Inorganic and Bioinorganic Research Laboratory, Department of chemistry, National Institute of Technology, Calicut
NBL21-OL-072	03:31- 03:40	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-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, India
NBL21-OL-074	03:51- 04:00	Wearable Microfluidic-based E-skin Sweat Sensors	Nikita	Department of Chemistry, National Institute of Technology (NIT) Srinagar, India, 190006

NBL21-OL-075	04:01- 04:10	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 695012, Kerala, India.			
NBL21-OL-076	04:11- 04:20	FERROFLUID BASED COOLING SYSTEM: A SMART SOLUTION FOR HEAT TRANSPORT	Jaswinder Singh Mehta	UIET, PU, Chandigarh, India.			
NBL21-OL-077	04:21- 04:30	Control of Tractor Seat Vibrations with Self-Tuning PID Controller	Harbhinder Singh	Research Scholar, School of Mechanical Engineering, Lovely Professional University, Phagwara			
Incharge: Dr Khal	Poster session-3 (5 min each) Incharge: Dr Khalid Sultan						
NBL21-PO-079	04:31- 04:35	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-080	04:36- 04:40	Gastrointestinal parasitic screening of domestic livestock in Tatakuti Wildlife Sanctuary	Rouf Ahmad Bhat	Department of Zoology University of Kashmir			
NBL21-PO-081	04:41- 04:45	Nanotechnology: a double-edged sword for environment	Khair ul nisa	Department of Environmental Science, University of Kashmir			
NBL21-PO-083	04:46- 04:50	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	04:51- 04:55	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	04:56- 05:00	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	05:01- 05:05	Avian coccidiosis-A critical review	Shagufta Iqbal	Department of Zoology University of Kashmir			
NBL21-PO-088	05:06- 05:10	Unravelling the synthesis and characterization of nanoparticles: a critical update to nanoparticle chemistry	HumairahTabasum	Department of Chemistry, National Institute of Technology, Srinagar, 190006			
NBL21-PO-089	05:11- 05:15	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	05:16- 05:20	Cu2AgInS4 quantum dot sensitized Zinc doped Titania as the high efficient Photoanode for QDSC	RoopakalaKottayi	Department of Physics, KanchiMamunivar Govt. Institute for PG Studies and Research, Puducherry-605008, India			
NBL21-PO-0	05:21- 05:25						

#### Day 5 (Friday) Session Chair/Co-Chairman: Dr. Barkat Hussain Bhat

#### 11th Sept 2021 Coordinator of the day/ Co-Coordinator- Dr. Shahnaz Majeed

Plenary/Keynote/Invited Speakers				
D	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
	9:30-9:50	Green Synthesis of Copper NanoParticle by Flower bud Extract.	Dr. Anita Rajkumar Gandhee	Department of Soil Science & Agriculture Chemistry, University of Horticultural Science, Bagalkot-587 104, Karanataka
	9:51-10:10	Carbon Nanomaterials based Ultrasensitive and Real- time Sensors for Health and Environment Monitoring	Rakesh Kumar Gupta, PhD (Engg)	National Graphene Institute School of Electronics and Electrical Engineering Sackville Building, Floor D, Room 30 University of Manchester, Manchester M1 3BB
	10:10- 10:30	Influence of Iron on the structural and optical properties of Zinc Oxide nanoparticles for Nanophotonic applications	J. MARTIN S. GNANARAJ	National College (Autonomous), Tiruchirappalli
	10:30- 10:45	Analyzing the need and importance of Nanotechnology education in education system	Dr. (Ms.) Anupam	R.L.S College of Education, Sidhrawali, Gurugram, Haryana
	10:46- 11:00	Photoluminescence quenching and charge transfer dynamics in CsPbBr3-Ti3C2Tx MXene QD/QD system and application as On-Off-On photoluminescence probe for Cd ion detection	Padmini Pandey	Department of Physics and Centre for Energy Science, Indian Institute of Science Education and Research (IISER), Pune, Dr. Homi Bhabha Road, Pune, 411008, India.
	11:01- 11:15	Nanocomposites of polysaccharides with Ca2+and their applications in sensors and catalytic conversion of Cr(VI) to Cr(III).	Dr. Farid Khan	Nanomaterials Discovery Laboratory, Department of Chemistry, Dr. HariSinghGour Central University, SAGAR-MP
	11:16- 11:30			
	11:31- 11:45	CATHODE MATERIALS FOR INTERMEDIATE- TEMPERATURE SOLID-OXIDE FUEL CELLS	Dr. Mudasir A. Yatoo	Imperial College London, UK
	12:01- 12:15	Design verification of safety critical embedded systems	Dr. Lalit Kumar Singh	NPCIL-BARC, Mumbai

ORAL Session-4 (10 min each)

#### Incharge: Dr. Shipra Mital Gupta

Paper ID	Time	Title of Paper/Poster	Presenting Author	Author's Affiliation
NBL21-OL-078	02:01- 02:10	IMPROVED PROPERTIES OF PHOTONIC CRYSTAL FIBERS- A REVIEW	Sabahat Sakinah	BTech., Department of Electronics and Communication, Islamic University of Science and Technology, Awantipora-Pulwama, 192122(J&K), India
NBL21-OL-079	02:11- 02:20	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-081	02:21- 02:30	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	02:31- 02:40	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 Srinagar, Hazratbal-Srinagar, 190006 (J&K), India
NBL21-OL-083	02:41- 02:50	Biogenic Synthesis of Silver Nanoparticles Using Viburnum nervosum leaf extract: a viable approach for cancer therapeutics	Irfana Zahoor	School of Life Sciences, Jaipur National University, Jaipur
NBL21-OL-086	02:51- 03:00	Analysis of Cancer Gene Expression Data Using Topological Mapper	Omar Rafique	Machine Learning Lab, Department of Electronics and Communication Engineering, National Institute of Technology Srinagar, Hazratbal-Srinagar, 190006 (J&K), India
NBL21-OL-090	03:01- 03:10	Epigenetic Polycomb Regulation of Acute Myeloid Leukemia: Linking Underlying Mechanism to Multimodal Nanotherapy	Babitakaundal	Institute of Nano Science and Technology, Knowledge city Sector-81, Mohali Punjab - 140306, India.
NBL21-OL-092	03:11- 03:20	REMOVAL OF FLUORIDE FORM AQUOUS SOLUTION USING COCONUT HUSK AS BIO-ADSORBENT	Abhishek Kumar	Department of Civil Engineering, National Institute of Technology Patna, Bihar (India) - 800005.
NBL21-OL-093	03:21- 03:30	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, India



#### INTERNATIONAL CONFERENCE ON



## NANOTECHNOLOGY FOR BETTER LIVING NBL-2021

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