APA 2023
Goa

G20
भारत 2023 INDIA

International Conference on
Polymers for Advanced Technology

February 23-25, 2023 | Goa, India

Organised by

Asian Polymer Association

Supported by

सत्यमेव जयते

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DEPARTMENT OF
CHEMICALS & PETRO-CHEMICALS

Souvenir

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Message from the President, Asian Polymer Association

Asian Polymer Association (APA) is a professional platform and has achieved the distinction of being a dynamic association of polymer scientists. It is a multinational society involving members from different countries across the world. The vision of APA is to bring together polymer scientists and technologists from different countries on a single platform for a dynamic interaction among them and has organized several conferences in and outside India in the past.

APA is now organizing International Conference on Polymers for Advanced Technology in Goa during February 23-25, 2023. This conference would felicitate a close interaction of polymer fraternity from various domains at the international level and would be the focal point of discussion among delegates. The conference has very inspiring programmes for the young generation where they would complete for different categories of the awards under various contests. The special sessions under APA Bioforum, APA Nano Forum and APA Sustainability Forum are the key attraction of the event. On behalf of APA, I welcome the participants in Goa and wish this conference to be high profile and visionary event.

Bhuvanesh Gupta

APA 2023
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Vice Chancellor
Ravenshaw Univ. Cuttack, India

Bhuvanesh Gupta
APA President
IIT Delhi, India

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Anup K Ghosh
Professor
IIT Delhi, India

Manohar Badiger
Scientist
CSIR-NCL, Pune, India

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Universiti Putra
Malaysia

Pranee Phinyocheep
Mahidol University
Thailand

Anupama Sharma
Panjab University
India

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APA Secretary
Amity Univ., India

M. Sarwar Alam
Jamia Hamdard
New Delhi

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Susheel Kalia
IMA, Dehradun
India

Jt. Secretary

Chetna Verma
IIT Delhi
India

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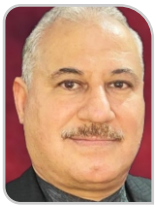
Plenary Speaker(s)

Frédéric Guittard
University Côte d'Azur, France

Pedro Fardim
KU Leuven, Belgium

Daniel Grande
CNRS Thiais, France



MM Nasef
Universiti Teknologi Malaysia

Sabu Thomas
MG Univ. Kerala, India

Santanu Dasgupta
RIL, Mumbai

Niall Dunne
Polymateria, UK

APA Awards 2022

APA Distinguished Award

Frédéric Guittard
University Côte d'Azur, France

APA Icon Awards

Pranee Phinyocheep
Mahidol Univ. Thailand

Anup K Ghosh
IIT Delhi, India

APA Social Award

Deepak Pathania
Central Univ. Jammu, India

APA Young Scientist Awards

Bimlesh Lochab
SNU, India

Suryasarathi Bose
IISC Bangalore India

Asish Pal
INST Mohali, India

APA Young Researcher Awards

Surabhi Singh
Indianapolis, US

Wasan Tessanan
Bangkok, Thailand

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APA Distinguished Award

Frédéric Guittard

University Côte d'Azur, France

Dr. Guittard received his PhD in organic chemistry in 1994 from University of Nice (France) working in the research laboratory of Professor A. Cambon. Then, Dr. Guittard went as postdoctoral fellow in the University of Padova (Italy) in the research Group of Professor Gambaretto for the development of bisammoniums as alternative of conventional biocides, then in University of Preston (UK) in the research group of Professor M. Holmes and then in the Physic institute of Prague (Czech Rep.) in the research group of Professor M. Glogarova and in the Theramex pharmaceutical group (Monaco), named now Merck inc., on various projects. He joined University of Nice (France) as associated professor, in 2020 as full professor. In 2012 and created a new team on advanced materials, entitled "surfaces & interfaces". His main research concerns the conception and development of new active surface materials inspired by biomimetic approaches and biobased chemistry. NanoTech, BioTech and SmartTech are the three axes of his research Group. The research has also opened up the field of novel surface materials, being both superhydrophobic and superoleophobic. In 2017, he was ranked first in Europe, in USA and second in the world for superoleophobic properties. Another theme is to find alternatives to fluorinated low energy surface materials using hydrocarbon biomimetic surfaces. In 2017, a new Lab has been created for the research activities of his team on Bioinspiration and Biobased Chemistry and Materials.

He was Director of the chemistry department from 2004 to 2010 at Nice University. He is authored or co-authored of 280 articles, 74 invited conferences and leader on adhesion (or anti- wetting) and surface properties. Between 2010 and 2022, he was visiting researcher at Bristol University (UK), at the Institute of physics (Czech Rep.) in Porto Alegre (Brazil) & at University California Riverside, CA (USA) for 5 years. Since 2012, he is the founder & the chairperson of the international conferences on Biobased and Biomimetic, Materials & Chemistry a biannual (Summer-Winter) conference in Nice. He is director, 2020-2024, of the CNRS national network initiative group for Biomimetic named "GDR-2088-biomim", 98 Laboratories, 700 researchers/members. APA is pleased to confer APA Distinguished Award to such an excellent scientist at the international level.

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APA Icon Award

Pranee Phinyocheep

Mahidol Univ. Thailand

Associate Professor Dr. Pranee Phinyocheep is a polymer chemist working on polymer synthesis and also structural modification of polymeric materials, and an expert on the modification of natural rubber. She has been working on chemical modifications of natural rubber for about three decades investigating various types of chemical modification of natural rubber in both latex and organic phases. She has applied the prepared functionalized natural rubbers for making the PU film for bacterial detection, antibacterial composites, being a toughening agent for compostable plastic of poly(lactic acid), thermoplastic vulcanizates and recently a mechanical modifier applied in ultraviolet-curable resin for the light-based 3D printing technology. She also works on natural fibers obtained from waste biomass and the use of supercritical fluid CO2 for producing natural rubber foam in view of environmental awareness. Dr Phinyocheep did her Ph.D. in Polymer Chemistry at Le Mans University, France. She has been working at Mahidol University since 1988 up to now. As an administrative, she dedicated herself as the Head of the Department of Chemistry, Faculty of Science, Mahidol University, Bangkok, Thailand, for two terms (Jan. 2008-Jan. 2012, and Jan. 2016- Jan 2020) and also the President of the Polymer Society of Thailand (November 2016-Jan 2022).

For her contribution to chemistry and polymer science and technology internationally, she was the Chairman of the Organising Committee; The Pure and Applied Chemistry International Conference (PACCON) 2019, Bangkok, Thailand, and the Chairman of the Organising Committee; The International Polymer Conference of Thailand (PCT) from PCT-7 (2017) to PCT-11 (2021). She has been advising more than 30 students (M.Sc and Ph.D) and published about 70 publications in peer review international journals. She has also collaborated in multidisciplinary research with physicists, technologists, and microbiologists in different departments at Mahidol University and also other universities in Thailand, Japan, France, Korea, and Australia, including the industries in Thailand and Japan. She is an active member of the Chemical Society of Thailand, the Polymer Society of Thailand (PST), and the Asian Polymer Association (APA). She has been very impactful in spreading APA activities at the Asian level. APA is proud of her support to the society and confers APA ICON Award on her.

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APA Icon Award

Anup K Ghosh

IIT Delhi, India

Prof. Ghosh is the professor at Department of Materials Science and Engineering at Indian Institute of Technology Delhi. Prof. Ghosh did his PhD in Chemical Engineering from Buffalo, New York and joined IIT Delhi as faculty in 1993. Professor Ghosh is a well-recognised faculty in the field of polymer processing and has been very well connected with polymer industries in India and abroad. Prof. Ghosh has been an excellent force in developing Institute-Industry interaction platform in the country. His pioneering work in the field of bio-based polymers and sustainable polymeric materials is one of the most attractive outcome in the recent days.

Prof. Ghosh has several patents to his credit and has been on several administrative positions in IIT Delhi. Prof. Ghosh has several awards to his credit and the vice president of APA. He has also been on several boards in government organisations and industries. Prof. Ghosh has been associated with Asian Polymer Association since its birth in 2007 and has been an active pillar of the APA as the international society in bringing it as a vibrant platform for the dynamic interaction of the polymer fraternity. It has been his dedicated efforts that has created a very special place for APA at the international level. Very keen on creating newer option for encouraging our young students from polymer domain makes him very supportive of the newer dimensions in this interesting domain. APA is glad that he is around us and deserves to be conferred with the APA ICON award.

APA Social Award

Deepak Pathania

Central Univ. Jammu, India

Deepak Pathania is Professor and Dean Research Studies at Central University of Jammu, Jammu & Kashmir. He is also serving as President of Him Science Congress Association, Himachal Pradesh, a Scientific society working for promotion of sciences in state. He also served as Dean Students' welfare and Dean Life Sciences at central University of Jammu. He also served for 2 years on deputation as Academic Affairs, and Dean Planning and Development at Sardar Patel University, Mandi, Himachal Pradesh. He is member of University Court, Executive council, Academic Council and Board of Studies of different Universities. He is awarded with D.Sc Degree from Jaunpur University in 2021. He has about 23 years of teaching and research experience. He has been figured among 2% Scientists of the world continuously for 3rd years (2020, 2021 and 2022) as per survey Stanford University USA. He is Member of Technical committee of Ministry of Environment Govt. of India. He has received distinguished alumni award from National Institute of Technology, Jalandhar, Punjab for dedications, contribution and achievements in the field of teaching, Innovations and Research on 4th October, 2021.

He has completed many research projects funded by AICTE and UGC. He had guided 16 Ph.D and 14 M.Phil and 42 M.Sc research projects for their respective degrees. He had about 180 publications in reputed Journals and 148 publications in conferences to his credit. He has been awarded 3 International and 3 National patents. His research h-index is 50 and i10-index is 105. He has authorized 15 books in different areas of interest from believed publishers. He has published 24 book chapters in reputed national and international books. He is reviewers of different international journals. He is life members of different scientific societies.

Dr Pathania has been very active and instrumental in social development in Himachal Pradesh. Under his presidentship, the association has conducted many inspiration lecturers for school children in the remote part of the State. Association has adoptded one school and planned to two more school in the month of April 2023. Association has Children Science Congress organized by Department of Science & Technology, Shimla has also supported many national and international seminar organized by other department or institutions in different parts of state. Prof Pathania has made a big impact on the spread of polymer education and its technological innovations among students and farmers. APA is pleased to offer APA Social Award to Prof. Pathania and wish that his contribution to the society would be more intensive in the future.

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APA Young Scientist Award

Bimlesh Lochab
SNU, India

Bimlesh Lochab obtained M.Sc. Chemistry (1997–1999), M. Tech. in Polymer Science and Technology (1999–2000) from IIT Delhi, India and D. Phil. (2002–2005) from the University of Oxford and PDF at the University of Oxford and University of Nottingham, UK. She is the recipient of the Young Scientist Award in 2009. She joined, Shiv Nadar University/ Institution of Eminence (SNU/Shiv Nadar IoE), UP, in 2012/2022 and working in the Department of Chemistry (Professor & Head). She is a recipient of several research grants, awarded as the first Most Creative Research Award International Symposium, Luxembourg, Research Excellence Award, Shiv Nadar University, 2021, selected by Chemical research Society of India for CRSI Bronze award 2021 for outstanding achievements in the field of 'Materials Science'. Her pioneering work on Green Chemistry more specifically inverse vulcanization copolymers for Li-S battery application cited in several newspapers (PTI, 24th Aug 2020).

She has been invited as an expert for a recording programme on "लीथियम ऑयन बैटरी" for Panel discussion, Vigyan Prasar, Department of Science and Technology, Govt. of India, 24 Oct, 2019. Her several videos are available on YouTube. Media outreach on invitation including DD News Tejaswini 11 June, 2022, Newspapers Indian Express, Hindustan Times etc. She is recently awarded for outstanding achievements "Distinguished alumna award 2020", Maitreyi College, University of Delhi, 16th June 2020. She is a scholarship holder throughout her career, received many honors such as Fellow of Royal Science of Chemistry (FRSC), BIRAC-SRISTI GYTI 2019, Young Scientist Award (DST), Fellowship from C. R. Barber Trust Fund (IoP, UK,), Felix Scholarship (UK) and Radha Sai Ram Memorial prize (1995). Membership of ACS, APA (Lifetime), CRSI (Lifetime) and the Society for Polymer Science (India) SPS (Lifetime). She is Chief Executive member of Sustainability Forum and Her research interests include green and sustainable chemistry: Synthesis of polymers sourced from agricultural wastes, nanocomposites, energy storage devices, drug delivery applications, & antibacterial applications. She has published 57 articles, 7 patents, 1 book and 4 book chapters. APA confers Young Scientist Award to such an excellent scientist at the international level.

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APA Young Scientist Award

Suryasarathi Bose
IISC Bangalore India

Dr. Suryasarathi Bose is a Professor in the Department of Materials Engineering at the Indian Institute of Science (IISc) Bangalore. Prior to joining IISC Bangalore as a faculty member in 2011, he was a postdoctoral researcher (2008-2011) at Katholieke University of Leuven (Belgium), where he was hosted by Prof. Paula Moldenaers. He received his PhD in Materials Engineering from the Indian Institute of Technology (IIT) Bombay. Prof. Bose's research interests include the design of membranes for water remediation and desalination, hybrid nanostructured material for heavy metal adsorption, structure-property correlation in polymer blends and nanocomposites, concentration fluctuation and segmental dynamics in multiphase systems, directed self-assembly using demixing in polymer blends as a tool, and materials for EMI shielding and microwave absorption.

Prof. Bose has published numerous highly cited research articles in reputed international conferences and journals. He is the recipient of many awards and accolades, including the prestigious NASI Scopus Young Scientist, Swarnajayanti Fellowship from the Department of Science and Technology (DST), Government of India, Prof. Kaushal Kishore Award of the SPSI, the Young Engineer Award from the Indian National Academy of Engineering (INAE), the Indian National Science Academy (INSA) Medal for Young Scientist, the Polymer Processing Society Young Scientist Award, the DAE-BRNS Young Scientist Research Award, and the Distinguished Young Rheologist Award from TA Instruments, USA.

His research has been recognized by several esteemed bodies of national importance, including a Young Associate position with the INAE, and memberships of the Indian National Young Academy of Science (INYAS) and National Academy of Sciences India (NASI). He has served on the editorial boards of many high-impact national and international journals. APA confers Young Scientist Award to such an excellent scientist at the international level.

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APA Young Scientist Award

Asish Pal

INST Mohali, India

Prof. Asish Pal, is presently working as Scientist-F (Professor) at Institute of Nano Science & Technology, Mohali, Punjab. He completed his BSc from University of Calcutta prior to joining as Integrated PhD from Indian Institute of Science, Bangalore. He has obtained his PhD in Soft nanomaterials and hydrogels under the supervision of Prof. Santanu Bhattacharya from Dept. of Organic Chemistry, IISc in 2009. He did his postdoctoral work at Eindhoven University of Technology with Prof. Rint P. Sijbesma and at University of Groningen with Prof. Sijbren Otto in the Netherlands during the period 2009-2015. During his abroad stint, he worked mainly in the field of supramolecular polymer for tissue regeneration, and dynamic combinatorial library of self-replicating peptides.

He started his independent research career with INST in 2015 and started working on biomimetic materials based on his keen interest to learn from nature. His research interests include Self-assembled Peptide and Polymeric Biomaterials, Functional Amyloids and Supramolecular Chemistry, Self-healing and Functional Nanomaterials, Bio-nanocomposite, Strain-stiffening hydrogels for Tissue Engineering, Mechano-responsive polymers and Chiroptical Polymeric Material, Polymeric hydrogels for Drug and Agrochemical Delivery.

He has secured several research grants from multiples funding agencies such as DST-SERB, DBT-BIRAC and UGC-DAE apart from an international travel grant from ICMS to spend 1 month at UC, Santa Barbara. He has published more than 40 high impact journals in the relevant fields and applied for a number of patents. He has delivered more than 60 invited lectures in different conferences and institutes. Moreover, in a bid to popularize science among the students he delivered more than 30 outreach lectures in different schools and colleges across the country. APA confers Young Scientist Award to such an excellent scientist at the international level.

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APA Young Researcher Award

Surabhi Singh
Indianapolis, US

Surabhi Singh is a National Institute of Health (NIH) postdoctoral fellow at Indiana center for regenerative medicine and engineering (ICRME), Indiana university-Purdue University, United States. Working on patterned electroceutical wound dressings, biofilm gene expression studies and clinical trials on diabetic patients in collaboration with U.S Dept. of Defense and U.S Methodist Hospital. She is leading a team working on introducing very recent CODEX technology for multiplexed tissue imaging at ICRME, Indiana, US.

Surabhi Singh did her integrated Master' in Nanotechnology at Amity University (2006-2012) and received best poster award 2009 at international conference at Gurgaon, was selected for master's dissertation at Cornell University, New York, USA (2011), was awarded fellowship for a research project at Tamil Nadu Agricultural University in 2011-2012, and was awarded Stanford-India Biodesign (SIB) fellowship in 2013 for project at IIT Delhi. Subsequently, she joined PhD in IIT Delhi (2013-2017) and received best poster award, young scientist award by Minister of Health and Family Welfare of India, received IIT Delhi Alumini Association award for best PG project 2017 and received fellowship for industry project with Gujarat Fluorochemical Limited (GFL) and IIT Delhi in 2017. She was project associate at Institute of Nuclear medicine and allied sciences, DRDO, New Delhi (2018-2019) and received DRDO research associate fellowship in 2019-2021 to work at INMAS, DRDO, first prize 'Springer Oral Award' at STERMI 2019, received first prize in Individual category (hemostatic agents) under Kalam Vision: Dare to Dream Innovation contest. Awarded by Defence Minister of India, 2019. She has 13 conferences (national and international), 13 papers in international journals (some published in impact factor 8), 1 patent, 4 book chapters. APA confers Young Researcher Award to such an excellent scientist at the international level.

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APA Young Researcher Award

Wasan Tessanan
Bangkok, Thailand

Dr. Wasan Tessanan has received a Bachelor's degree in Chemistry from Mahasarakham University (Thailand), then a Master of Science degree in Polymer Science and Technology from Mahidol University (Thailand). He then furthered his study to a Ph.D. level and completed a Ph.D. degree under a joint degree program (Cotutelle program) in Polymer Science and Technology from Mahidol University (Thailand) and in Physical Chemistry and Theoretical Chemistry from Le Mans University (France). He has experience in several areas including modification of polymeric materials such as chemical modifications of natural rubber and utilization of natural rubber derivatives to improve the physical and mechanical properties of polymer materials such as poly(lactic acid). Moreover, he has also worked in the rheological and dynamic mechanical studies of polymer blends and composites. He has also dedicated himself to exploring the supercritical fluid CO2 for producing natural rubber foam and, more recently, to studying photo-sensitive material derived from natural rubber for utilization in stereolithography 3D printing technology. He is the author of 9 publications in peer-reviewed journals.

Dr. Wasan is an active member of the Polymer Society of Thailand. He did not only participate as a presenter in the International Polymer Conference of Thailand (PCT) organized by the Polymer Society of Thailand but he has been on a supporting staff team of the organizing committee of the International Polymer Conference of Thailand (PCT) from 2019 to the present. APA is proud of his contributions and confers APA Young Researcher Award on him.

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Somani Manali	IIT Delhi, New Delhi
Verma Rohini	IIT Delhi, New Delhi
Vipula	IIT Delhi, New Delhi

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Panelist	
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Deepak Pathania	CU Jammu, India
Shamayita Patra	SVVV, Indore, India
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Sunita Rattan	Amity Univ., India
Satyendra Mishra	NMU Jalgaon, India
Garima Agarwal	IIT Mandi, India
Dhiraj Sud	SLIET Punjab, India

Springer Oral Contest

Chairs:	
Susheel Kalia	IMA, Dehradun, India
Deepak Pathania	CU Jammu, India
Jyoti Chaudhary	MSU, Udaipur, India

Name of the Participants	
Ashish Raghavan	CIPET, Bhubaneswar, India
Rupali Kakaria	National Institute of Fashion Technology, New Delhi, India
Ria Sen Gupta	Indian Institute of Science, Bangalore, India
Anoop Singh	Indian Institute of Technology Ropar, India
Sazzadur Rahman	Institute of Advanced Study in Science and Technology, Guwahati, India
Monalisha Samanta	University of Calcutta, India
Archana Kumari	Indian Institute of Technology Bombay, India
Diksha Sharma	Indian Institute of Technology Ropar, India
Kalpana Rathore	Indian Institute of Technology Kanpur, India
Doli Hazarika	KTH University, Sweden
Manoj Kumar Dhal	Indian Institute of Technology Guwahati, India
Saksham Handa	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, India
Soumya S Smita	National Institute of Technology Rourkela, India

Wisdom Contest

24th Feb. 2023
Time: 03:20-04:20
On the spot Registration of participants

Programme

International Conference on
Polymers for Advanced Technology

February 23-25, 2023 | Goa, India

22nd Feb 2023

17:00-19:00 | Registration

Day-1 | 23rd Feb, 2023 | Programme

Registration
Time: 08:00

Inauguration | Venue: Mandovi & Abolim Hall

Welcome Address
Manohar Badiger (Organising Chair)
Time: 09:00-09:05

APA Address
Bhuvanesh Gupta (APA, President)
Time: 09:05-09:10

Conference Address
Sanjay K Nayak, (Conference Chair)
Time: 09:10-09:15

Theme Address
Frédéric Guittard, University Côte d'Azur, France (Guest of Honor)
Time: 09:15- 09:25

Special Address
Puneet Kumar Goel, Chief Secretary, Govt. of Goa (Guest of Honor)
Time: 09:25-09:45

Inaugural Address
Arun Baroka, Secretary, DCPC, GOI, New Delhi (Chief Guest)
Time: 09:45-10:10

Vote of Thanks
Sunita Rattan (APA Secretary)
Time: 10:10-10:20

10:20-10:45 | Inaugural Tea Break

Session 1 | Venue: Mandovi & Abolim Hall

Plenary Session

Chairs: Anup Ghosh, IITD, India & Günther G Scherer, PSI, Switzerland

Plenary Talk-1

Frédéric Guittard, University Côte d'Azur, France (APA Distinguished Award Talk)
Biomimitic surfaces
Time: 10:45-11:20

Plenary Talk-2

Pedro Fardim, KU, Belgium
Topochemical Engineering of Polysaccharide-based Gels and Surfaces: Opening New Frontiers for Future Sustainable Materials
Time: 11:20-11:55

Plenary Talk-3

Daniel Grande, CNRS, France

Functional Polymers with Controlled Pore Morphology: From Design to Application

Time: 11:55-12:30

13:00 -14:00 -Lunch Break

Session 2 Polymer Synthesis & Modification

Chairs: Pranee Phinyocheep, MU, Thailand & Anupama Sharma, PU, India Venue: Mandovi Hall

Time		Lecture Title/Author
14:00-14:20	KN	Radiation Grafting: A Versatile Technique for Development of Advanced Materials **Sunita Rattan** *Amity University, Noida, India*
14:20-14:35	IL	Gamma Radiation & Plasma Engineered Advanced Functional Materials for Water Purification **Virendra Kumar** *Bhabha Atomic Research Centre, Mumbai, India*
14:35-14:45	OL	Tailoring surface functionalized polymeric templates for healthcare applications using Plasma and Gamma irradiation techniques **Nilanjal Misra** *Bhabha Atomic Research Centre, Mumbai, India*
14:45-14:55	OL	Subtle Features in Lactide Polymerization: Effect of Metal, Ligand(s) and Geometry of Catalyst in PLA Synthesis **Debashis Chakraborty** *Indian Institute of Technology Madras, India*
14:55-15:05	OL	Preparation of Ultra-High Molecular Weight Poly-Î±-olefins using Ziegler-Natta Catalyst **Monikangkana Talukdar** *HPCL-R&D Devanagonthi, Bengaluru, India*
15:05-15:15	OL	Radiation Grafted Functional Adsorbent for Remediation of Toxic Metal Ions **Swarnima Rawat** *Bhabha Atomic Research Centre, Mumbai, India*

Symposium on Packaging

Session 3 Polymers for Packaging

Chairs: S Chattopadhyay, MoC&F, Govt of India, India & Satyendra Mishra, NMU, India Venue: Zuari Hall

Time		Lecture Title/Author
14:00-14:20	KN	Sustainable flexible packaging solutions **Mohammed Nadeem** *Paharpur 3P Pvt. Ltd., India*
14:20-14:40	KN	Advancement in Polyolefin – to meet packaging need **Alkesh Ghosh** *HPCL- Mittal Energy Limited, India*
14:40-15:00	KN	Biodegradeable plastic packaging mitigate single use plastic packaging **Vimal Katiyar** *Indian Institute of Technology Guwahati, India*

APA Bio Forum Symposium

Session 4 Functional Biopolymers

Chairs: BS Kaith, NITJ, India & M S Alam, JH, India Venue: Sal Hall

Time		Lecture Title/Author
14:00-14:20	KN	Are Biomaterials Responsible for Global Warming ? Why Have We Been So Slow To Act ! **Thomas Webster** *Hebei University of Technology, USA*
14:20-14:35	IL	Supramolecular Polymers towards Spatio-temporal, Precision Structure-Function Control for mimicking ECM **Asish Pal** *Institute of Nano Science & Technology, Mohali, India*
14:35-14:50	IL	Biopolymers as versatile templates for directed synthesis of metal oxide nanostructures with regulated morphological and tuneable properties **Dhiraj Sud** *Sant Longowal Institute of Engineering & Technology, Longowal, India*
14:50-15:00	OL	Modification of Wheat Gluten with Itaconic acid and its potential application as Superabsorbent in Female Sanitary Napkins **Tapaswini Jena** *CIPET, Bhubaneswar, India*
15:00-15:10	OL	Modification of polysaccharides through the Grafting of vinyl monomers with Potassium Bromate/ Thiourea Redox System **Arpit Sand** *Manav Rachna University, Faridabad, India*
15:10-15:20	OL	Exploration of supercritical CO2 as an eco-friendly blowing agent for preparation of microcellular natural rubber foam **Wasan Tessanan** *Mahidol University, Bangkok, Thailand*

Session 5 Biomaterials & Bioengineering

Chairs: Daniel Grande, CNRS, France & Biman B Mandal, IITG, India Venue: Abolim Hall

Time		Lecture Title/Author
14:00-14:20	KN	Mice model of wound healing for polymeric material **Amlan Gupta** *Sikkim Manipal Institute of Medical Sciences, Sikkim, India*
14:20-14:35	IL	Functionalized β-Cyclodextrin for Various Biomedical Applications **Sagar Pal** *Indian Institute of Technology (ISM) Dhanbad, India*
14:35-14:45	OL	Biobased Superabsorbent Foam for hygiene Application **Sukanya Pradhan** *CIPET, Bhubaneswar, India*
14:45-14:55	OL	Development of Surface Functiontionalised Carfilzomib Containing Protein Nanoarticles as Biotherapeutics for The Treatment of Ovarian Cancer **Ashaben Mehulkumar Patel** *Parul Institute of Pharmacy, Vadodara, India*
14:55-15:05	OL	Biogenic Synthesis of Sulphur Nanoparticles Using Ocmum canum leaves for Antimicrobial Application towards Gram positive and Gram negative Pathogens **Giriraj Tailor** *Mewar University Chittorgarh, India*

Session 6 Polymers for Advanced Technology

Chairs: MM Nasef, UKM, Malaysia & Dhiraj Sud, SLIET, India Venue: Mandovi Hall

Time		Lecture Title/Author
15:20-15:40	KN	Two-step chemical modification of natural rubber for property improvement and its application **Pranee Phinyocheep** *Mahidol University, Bangkok, Thailand*
15:40-15:55	IL	Conducting Polymer Nanocomposites as Highly Active Visible Light Photocatalysts **Prem Felix Siril** *Indian Institute of Technology Mandi, India*
15:55-16:05	OL	Pervaporation of acetic acid water solution using ABPBI-based membranes **Saroj Shivram Gawas** *CSIR-NCL, Pune, India*
16:05-16:15	OL	Morphology and Structural-Property Correlations of a Model Ionomeric Elastomer: Effect of Curing Systems **Prakash Vislavath** *Naval Materials Research Laboratory, Maharashtra, India*
16:15-16:25	OL	Multifunctional Properties of PVDF/GO Nanocomposites film for Defence Application **Shikha Chouhan** *Indian Institute of Technology Delhi, India*
16:25-16:35	OL	Ion-exchange membranes and a vanadium redox flow battery **Rajaram Nagarale** *CSIR-Central Salt and Marine Chemicals Research Institute Bhavnagar, India*

Symposium on Packaging

Session 7 Polymers for Packaging

Chairs: Tanweer Alam, IIP, India & Vimal Katiyar, IITG, India Venue: Zuari Hall

Time		Lecture Title/Author
15:20-15:40	KN	Prospects of PET packaging **Abdul Jebbar P B** *Hot Pack, UAE*
15:40-16:00	KN	Concerns regarding proliferation of additive based Bio-degradable plastics for sustainable Packaging **Nidhi R** *Sealed Air Pvt.Ltd., India*
16:00-16:20	KN	Equipment Innovations – Insights on New Machines and Manufacturing Capabilities in Packaging Machine **Sharayu Sawant** *IPMMAI, India*

APA Bio Forum Symposium

Session 8 Functional Biopolymers

Chairs: MS Alam, JH, India & Ishak Ahmed, UKM, Malaysia Venue: Sal Hall

Time		Lecture Title/Author
15:20-15:40	KN	Ecofriendly Materials – Fabrication and Prospective Applications **Balbir Singh Kaith** *Dr. B R Ambedkar National Institute of Technology Jalandhar, India*
15:40-15:55	IL	Revolutionary Role of polymers in Water and Waste Water Treatment and Recycling **Sujit Kumar** *Grannus Water Pvt.Ltd., India*
15:55-16:05	OL	Synthesis, characterization and swelling properties of Guggul gum based moisture retaining hydrogels for agricultural applications **Shabnum Saleem** *CT University, Punjab, India*
16:05-16:15	OL	Molecularly imprinted adsorbents (MIA) for selective recovery of Ellagic acid from Pomegranate peels **Anupama Kumar** *Visvesvaraya National Institute of Technology, Nagpur, India*
16:15-16:25	OL	Enhancing mechanical and thermal properties of melt processed starch formulations via temperature optimization **Kshitij Madhu** *Indian Institute of Technology Guwahati, India*

Session 9 Tissue engineering

Chairs: Amlan Gupta, SMIMS, India & MV Badiger, NCL, India Venue: Abolim Hall

Time		Lecture Title/Author
15:20-15:40	KN	Bioengineered Human Tissues & Organs: The way forward **Biman B. Mandal** *Indian Institute of Technology Guwahati, India*
15:40-15:55	IL	Injectable, Self-healing Hydrogels for Cartilage Tissue Engineering **Deepa Ghosh** *Institute of Nano Science and Technology, Mohali, India*
15:55-16:05	OL	Development of Plasticizer Free Acrylic Denture Softliners using Nanogel Additives **Manju Saraswathy** *Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India*
16:05-16:15	OL	Platelet rich plasma-based tissue engineered construct for articular cartilage defect reconstruction: An in-vitro & in-vivo study to evaluate clinical potential for chondral tissue construct for osteoarthritic knee repair **Bhisham Narayan Singh** *Manipal Academy of Higher Education, Manipal, India*
16:15-16:25	OL	Novel treatment strategy utilizing bi-layered scaffold design incorporating bioactive factors for wound healing **Mamatha M Pillai** *Indian Institute of Technology Bombay, India*

16:30-17:00 | Tea Break

18:00 - 18:15 | Assembling at ICG Porch area for Cruise Dinner Departure

19:00 - Onwards | Conference Cruise Dinner & APA Award Ceremony

Day-2 | 24th Feb, 2023 | Programme

Session 10 | Venue: Mandovi & Abolim Hall

Plenary Session: APA Sustainability Forum Symposium

Chairs: VK Gupta, RIL, India & Pedro Fardim, KU, Belgium

Plenary Talk-1

Santanu Dasgupta, RIL India

Sustainable production of food, feed, advance biomaterials and energy through Green Synthetic Biology

Time: 09:00-09:35

Plenary Talk-2

Niall Dunne, Polymateria, UK

Time: 09:35-10:10

10:10-10:20 | Tea Break

APA Sustainability Forum Symposium

Session 11 Sustainable Plastic Materials

Chairs: Harshid Patil, RIL, India & Ishak Ahmed, UKM, Malaysia Venue: Mandovi Hall

Time		Lecture Title/Author
10:20-10:40	KN	Sustainability Challenges in Elastomers Industry **V K Rathod** *GRP Ltd., India*
10:40-11:00	KN	Biodegradable and compostable packaging materials from oil palm agricultural wastes **Mohammad Jawaid** *INTROP, Universiti Putra Malaysia, Malaysia*
11:00-11:15	IL	High-Performance Waste-Sourced Polymers: Conventional to Unconventional Applications **Bimlesh Lochab** *Shiv Nadar Institution of Eminence, Greater Noida, India*
11:15-11:25	OL	Enzyme-embedded aliphatic polyesters for accelerated bio(degradation) **Naba Kumar** *KTH University, Sweden*
11:25-11:35	OL	Sustainable Solution Processable Benzoxazine-Sulfur Copolymer: Scope for Waste Utilization and Transparent Optics Application **Sangeeta Sahu** *Shiv Nadar Institution of Eminence, Uttar Pradesh, India*

APA Nano Forum Symposium

Session 12 Nanomaterials & Nanoengineering

Chairs: Smita Mohanty, CIPET, India & Ashwini Agrawal, IITD, India Venue: Zuari Hall

Time		Lecture Title/Author
10:20-10:40	KN	Hemicellulose and cellulose derived from waste lignocellulosic biomass as versatile and inexpensive substrate for wastewater remediation **Anupama Sharma** *Panjab University, Chandigarh, India*
10:40-10:55	IL	Multi-layered Polymer Nanocomposites: A New Class of Materials for Screening Electromagnetic Radiation **Suryasarathi Bose** *Indian Institute of Science, Bengaluru, India*
10:55-11:05	OL	Wastewater Treatment by Clay-Polymer Nanocomposites and Clay-Gemini Hybrid Materials **Ajmal Koya Pulikkal** *National Institute of Technology Mizoram, India*
11:05-11:15	OL	Thermal properties of hexagonal Boron nitride based thermoplastic polyurethane nanocomposites **Rishabh Tiwari** *Indian Institute of Technology Delhi, India*
11:15-11:25	OL	Preparation of Solution blown PVDF for energy Harvesting **Srishti Bajpai** *Indian Institute of Technology Delhi, India*

Session 13 GFL Session on Hydrogen Storage & Energy Devices

Chairs: Yash Gupta, GFL, India & Jyoti Chauhan, GFL, India Venue: Sal Hall

Time		Lecture Title/Author
10:20-10:40	KN	The world of Membranes for fuel cell application **J K Rathour** *GFL, India*
10:40-10:55	IL	Polypyrrole/MoS2 nanocomposites as flexible electrodes material for supercapacitors **Surinder P. Singh** *CSIR-NPL, New Delhi, India*
10:55-11:05	OL	Polymer Membrane Fuel Cells: Ab Initio Quantum Chemical and Density Functional Theory Perspective **Anant D. Kulkarni** *S. K. Somaiya College, Mumbai, India*
11:05-11:15	OL	Designing of PANI/VS2 Composite Materials for Higher Power Density and Energy Density Electrochemical Devices **Saad Zafar** *Shiv Nadar University, Delhi, India*
11:15-11:25	OL	Crosslinked polyvinyl alcohol separator for harnessing power from wastewater using Microbial Fuel Cells **Bhanupriya Das** *Indian Institute of Technology Guwahati, India*

Session 14 Advanced Textile Materials

Chairs: RS Rengasamy, IITD, India & Satyendra Mishra, NMU, India Venue: Abolim Hall

Time		Lecture Title/Author
10:20-10:40	KN	Characteristicks of composities made from carbon/PP hybrid yarns using electrostatic spray coating **Apurba Das** *Indian Institute of Technology Delhi, India*
10:40-10:55	IL	Development of Polypyrrole Coated Textile for Solar Evaporation **Arun Kumar Patra** *U P Textile Technology Institute, Kanpur, India*
10:55-11:05	OL	Investigation of the effect of reflective fabric layer on radiative heat loss from human body in cold weather clothing **Gourav Mishra** *Indian Institute of Technology Delhi, India*
11:05-11:15	OL	Response surface methodology and optimized synthesis of novel Hing gum-based hydrogel for the efficient removal of cationic dyes **Samiksha Gautam** *National Institute of Technology Srinagar, J&K*
11:15-11:25	OL	Deciphering the three-dimensional (3D) porous structure of absorptive glass mat (AGM) separators **Siddharth Shukla** *Indian Institute of Technology Delhi, India*
11:25-11:35	OL	Highly efficient photocatalytic degradation of Cationic dye over SrVO4 under natural solar irradiation for emerging contaminants **Karthiga Rajendaran** *CPA College, Tamil Nadu, India*

Session 15 Polymer & Nanocomposite

Chairs: Ashish Pal, INST, India & Sunita Rattan, Amity Univ., India Venue: Mandovi Hall

Time		Lecture Title/Author
11:45-12:05	KN	Bio-nanocomposite starch/polyaniline/cellulose nanocrystals (CNC) Film as Potential Intelligent Food Packaging with Colourimetric Ammonia Sensor **Ishak Ahmed** *Abdul Rahman University College, Kuala Lumpur, Malaysia*
12:05-12:20	IL	Effect of Conducting Polymer on Enhancing the Supercapacitor Performance of Mxene and Graphene Oxide **Amar Prasad Yadav** *Tribhuvan University, Kathmandu, Nepal*
12:20-12:30	OL	Investigation of dye-doped electrospun polyvinylidene fluoride fiber mats for random lasing application **Nideesh P K** *Mahatma Gandhi University, Kottayam, India*
12:30-12:40	OL	Polyolefin/Natural Fibre Composite by High Energy Radiation **Atanu Jha** *Bhabha Atomic Research Centre, Navi Mumbai, India*
12:40-12:50	OL	Bio-based Epoxy/Polyurethane/Silica nanocomposite Applicable as Automobile Sealer **Debasmita Mohanty** *CIPET, Bhubaneswar, India*

12:50-13:00	OL	Studies on electroactive properties of PVDF/PEI blend films for energy harvesting **Sukumar Roy** *Indian Institute of Technology Delhi, New Delhi, India*

Session 16 Nanomaterials & Nanoengineering

Chairs: S Bose, IISc, India & SP Singh, NPL, India Venue: Zuari Hall

Time		Lecture Title/Author
11:45-12:05	KN	Nanomodification of textiles for enhanced functionality: Recent developments at IIT Delhi **Ashwini Kumar Agrawal** *Indian Institute of Technology Delhi, India*
12:05-12:20	IL	Chitosan based Redox Responsive Nanoparticles for Dual Drug Delivery for Colorectal Cancer **Garima Agrawal** *Indian Institute of Technology Mandi, India*
12:20-12:30	OL	Eco-friendly blowing agent based rigid polyurethane nanocomposite foams: Evaluation of Physico-mechanical Properties **Sakti Ranjan Acharya** *CIPET Bhubaneswar, India*
12:30-12:40	OL	Anti-biofilm coatings for central venous catheters using Zinc Oxide Nanoparticles **Akshit Malhotra** *Tripura University, Tripura, India*
12:40-12:50	OL	Electrically conductive composite fibers of nylon6 and nanostructures derived from intrinsically conducting polymers (ICP) for smart textiles **Kiran Rana** *Indian Institute of Technology Delhi, India*
12:50-13:00	OL	All polymer based flexible and stretchable piezoelectric nanogenerators (S-PENG) for wearable energy harvesting **Gurneet Kaur** *Indian Institute of Technology Delhi, India*

Session 17 Springer Student Oral Contest

Chairs: Susheel Kalia, IMA, India & Jyoti Chaudhary, MSU, India Venue: Sal Hall

Time		Lecture Title/Author
11:45-11:55	OL	Biomedical Waste-Based Thermoplastic Recycled Blends: Evaluation of Properties and Value-addition **Ashish Raghavan** *CIPET, Bhubaneswar, India*
11:55-12:05	OL	Microencapsulation of Moringa oleifera Essential Oil for Antibacterial Properties on Cotton **Rupali Kakaria** *National Institute of Fashion Technology, New Delhi, India*
12:05-12:15	OL	Copper-substituted polyoxometalate-in -situ decorated sequential interpenetrating polymeric network membranes for effective water decontamination **Ria Sen Gupta** *Indian Institute of Science, Bangalore, India*
12:15-12:25	OL	Chitosan and poly-vinyl alcohol (PVA); hybrid backbone grafted with ionic liquid; a cationic hydrogel for toxic removal from wastewater **Anoop Singh** *Indian Institute of Technology Ropar, India*
12:25-12:35	OL	Biopolymer nanocomposite film as a smart food packaging material **Sazzadur Rahman** *Institute of Advanced Study in Science and Technology, Guwahati, India*
12:35-12:45	OL	Developing, Characterizing, and Efficiency Evaluation of Several insitu(nano)Ag/PVA Membranes for Pervaporative Separation of Benzene from Synthetic Pyrolysis Gasoline **Monalisha Samanta** *University of Calcutta, India*
12:45-12:55	OL	Delivery of anticancer drugs to the local region of pancreatic tumor through chitosan-PVA composite polymeric implant **Archana Kumari** *Indian Institute of Technology Bombay, India*

Session 18 Advanced Textile Materials

Chairs: AK Patra, UPTTI, India & Apurba Das, IITD, India Venue: Abolim Hall

Time		Lecture Title/Author
11:45-12:05	KN	Biodegradable nonwoven sorbents from waste cotton and Kapok fibres to remove oil from oily waste water **R S Rengasamy** *Indian Institute of Technology Delhi, India*
12:05-12:20	IL	Supersonic Nanoblown Nanofiber Texture for Thermal Management of Microelectronics **Sumit Sinha Ray** *Indian Institute of Technology Delhi, India*
12:20-12:30	OL	Macro-mechanical analysis of unidirectional biocomposites under tensile stress **Parna Nandi** *Indian Institute of Technology Delhi, India*
12:30-12:40	OL	Study On Thermal Insulation of Thermal Bonded High Bulk Hollow Fibre Nonwoven Under the Extreme Cold Weather Condition **Vikrant Uday Dupade** *Indian Institute of Technology Delhi, India*
12:40-12:50	OL	Photocatalytic Degradation of Starch Polymer for Sustainable Textile Desizing **Sanjay Kumar Bhikari Charan Panda** *Indian Institute of Technology Delhi, India*
12:50-13:00	OL	Silk Nanodisc: A Nano-biopolymeric Material for Edible Food Packaging Application **Tabli Ghosh** *Tezpur University, Assam, India*

13:00 -14:00 -Lunch Break

Session 19 Biomaterials & Bioengineering

Chairs: MV Badiger, NCL, India & Shamayita Patra, SVVV, India Venue: Mandovi Hall

Time		Lecture Title/Author
14:00-14:15	IL	In-situ Mineralized Decellularized Matrix-Alginate Bioink System for Injectable Bone graft/ 3D Printing Applications **Sumit Murab** *Indian Institute of Technology Mandi, India*
14:15-14:25	OL	Coating of HPMC & Cu-doped ZnO Nanoparticles composite against biofilms formed by clinically relevant bacteria on hernia mesh **Sangita Jana** *Tripura University, Tripura, India*
14:25-14:35	OL	Experimental investigations on micro-hole dental drilling of Perspex crown **Nitin Kumar Lautre** *Visvesvaraya National Institute of Technology (VNIT), Nagpur, India*
14:35-14:45	OL	To evaluate the Anti-Microbial activity of Synthesized Drug Loaded Keratin Nanoparticles **Himanshi Diwan** *Dr. B.R. Ambedkar National Institute of Technology Jalandhar, India*
14:45-14:55	OL	Antimicrobial activities, dyeing properties and corrosion inhibition studies of lanthanide(III) complexes of 2-amino-5[(3-carboxyethyl-4,5-dimethylthiophen-2-yl)azo]-4-phenylthiazoles of **Athira Chempakam Janardhanan** *MMNSS College, Kollam, India*

Session 20 Nanomaterials & Nano engineering

Chairs: M Jawaid, UPM, Malaysia & SP Singh, NPL, India Venue: Zuari Hall

Time		Lecture Title/Author
14:00-14:15	IL	Optically responsive transparent cellulose composites **Archana Samanta** *Indian Institute of Technology Delhi, New Delhi, India*
14:15-14:25	OL	Biosynthesis of multi metallic nanoconjugates using Elaeocarpus granitrus and their biomedical applications **Milind Sagar** *Shobhit Institute of Engineering & Technology, Meerut, India*
14:25-14:35	OL	Efficient photocatalytic degradation of organic pollutants by nanocomposite of cellulose nanofiber with amino acid functionalized nanohybrid **Aditi Saikia** *Institute of Advanced Study in Science and Technology, Guwahati, India*
14:35-14:45	OL	Dynamic rheological and dynamic mechanical properties of multiwalled carbon nanotubes reinforced polyamide-6 composites **Sangita Tripathy** *CSIR-NPL, New Delhi, India*
14:45-14:55	OL	Assessment of Nano-Reinforced Epoxy Coatings for Enhanced Corrosion Inhibition in Reinforcing Bars in Concrete Structures **Rajeev Mehta** *Thapar Institute of Engineering and Technology, Patiala, India*
14:55-15:05	OL	N95 filter media performance enhancement using fine coating of PVDF nanofibres **Bhavesh Thakur** *Indian Institute of Technology Delhi, India*

Session 21 Springer Student Oral Contest

Chairs: Deepak Pathania, CU, India & Jyoti Chaudhary, MSU, India Venue: Sal Hall

Time		Lecture Title/Author
14:00-14:10	OL	Self-assembled and self-healable polymers for the self-stratifying coating applications **Diksha Sharma** *Indian Institute of Technology Ropar, India*
14:10-14:20	OL	Agar-based bilayer structure with antioxidant electrospun layer on antibacterial film as a potential wound dressing **Kalpana Rathore** *Indian Institute of Technology Kanpur, India*
14:20-14:30	OL	Photocurable hydroxyethyl cellulose (HEC) hydrogels **Doli Hazarika** *KTH University, Sweden*
14:30-14:40	OL	Melt processing of Sawdust reinforced Polylactic acid/Polycaprolactone biocomposites **Manoj Kumar Dhal** *Indian Institute of Technology Guwahati, India*
14:40-14:50	OL	Avian eggshell derived hydroxyapatite-based hydrogels for tissue engineering and biomedical applications **Saksham Handa** *Dr. B R Ambedkar National Institute of Technology, Jalandhar, India*

14:50-15:00	OL	Development of nanofibrous polymeric scaffolds for corneal tissue engineering by electrospinning method **Soumya Shuvra Smita** *National Institute of Technology Rourkela, India*

Session 22 Advanced Textile Materials

Chairs: Sumit S Ray, IITD, India & Satyendra Mishra, NMU, India Venue: Abolim Hall

Time		Lecture Title/Author
14:00-14:15	IL	Imparting Multifunctional Properties in Cotton Fabric by In-Situ Deposition of Copper Oxide nanoparticles **Anu Mishra** *Indian Institute of Carpet Technology Bhadohi, India*
14:15-14:25	OL	Biodegradation and dye adsorption behavior of novel AG-g-poly(acrylamide) based hydrogels **Kibrya Farooq** *CT University, Punjab, India*
14:25-14:35	OL	Design and development of outer shell of extreme cold weather jacket **Ranjna Kumari** *Indian Institute of Technology Delhi, India*
14:35-14:45	OL	Investigating consolidation quality of KevlarÂ®/PP thermoplastic composites made through different towpregs techniques **Ganesh Jogur** *Indian Institute of Technology Delhi, India*
14:45-14:55	OL	Design and development of a flurocarbon coated acquisition cum barrier layer for incontinence application **Rupali** *NITRA, New Delhi, India*

Session 23 Biomaterials & Bioengineering

Chairs: MS Alam, JH, India & Sumit Murab, IIT Mandi, India Venue: Mandovi Hall

Time		Lecture Title/Author
15:20-15:35	IL	Carbene Cross-linked Adhesive Biomaterials for Tissue Fixation **Himansu Sekhar Nanda** *Indian Institute of Information Technology Design and Manufacturing, Jabalpur, India*
15:35-15:50	IL	Biaxial Characterization of Novel Anisotropic Skin Simulants **Arnab Chanda** *Indian Institute of Technology Delhi, India*
15:50-16:00	OL	MEH-PPV light emitting based polymer synthesis and characterization for bacteria detection applications **Stephen Jose** *CIPET, Chennai, India*
16:00-16:10	OL	Dual technology Oral Fast Dissolving Films for Controlled Levodopa Therapy in Dysphagic Parkinson's Patients **Anoop Narayanan** *Nitte (Deemed to be University), Mangalore India*
16:10-16:20	OL	Enzyme Responsive Hydrogel Formulation for Sustained Release of Selective MMP-13 Inhibitor to Prevent Cartilage Damage in Osteoarthritis **Himadri Shekhar Roy** *Institute of Nano Science and Technology, Mohali, India*

Session 24 Smart Polymeric Materials

Chairs: S Sindhu, BITS Pilani, India &
Rajeev Mehta, Thapar Institute of Engineering & Technology, Patiala, India Venue: Zuari Hall

Time		Lecture Title/Author
15:20-15:35	IL	Biobased Smart Self-healing Anticorrosive Polyurethane Coatings Made up of Non-edible Vegetable Oils **Vikas Gite** *Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon, India*
15:35-15:50	IL	Fabrication of Electrochromic Devices based on Electropolymerized PEDOT-Ions Enriched Graphene Film **Sindhu S** *Birla Institute of Technology and Science Pilani, Bangalore, India*
15:50-16:00	OL	Thermosetting Poly(Urethane-Urea) With Simultaneous Self-Healing, Reprocessability and Multiple Shape-Memory Effect **Srikanth Bhaskar Billa** *Naval Materials Research laboratory, Bhiwandi, India*
16:00-16:10	OL	Multiphase gradient self-stratified coating with multi-responsive self-healing polymer **Debaprasad Mandal** *Indian Institute of Technology Ropar, India*
16:10-16:20	OL	Natural Polymer Based pH and Redox Responsive Microgels for Controlled Agrochemicals Delivery **Ankita Dhiman** *Indian Institute of Technology Mandi, India*

Session 25

Wisdom Contest

Session 26 Polymers for Advanced Technology

Chairs: PF Siril, IIT Mandi, India & Archana Samanta IITD, India Venue: Abolim Hall

Time		Lecture Title/Author
15:20-15:35	IL	Self Healing Elastomers: A smart material for future **Subhra Mohanty** *RIL, India*
15:35-15:50	IL	Modern AFM methods for complex analysis of polymers **Ivan Bykov** *Forevision Instruments Pvt. Ltd., India*
15:50-16:00	OL	Photo-thermal Actuators Based on Polyaniline Incorporated Liquid Crystal Elastomers **S Umadevi** *Alagappa University, Karaikudi, India*
16:00-16:10	OL	Effect of Processing Conditions on Structure Development and Properties of PP-Nylon Blends with and without Compatabilizer **Anagha Khare** *MIT-WPU, Pune, India*
16:10-16:20	OL	In-situ atmospheric pressure plasma synthesis of nanodiamonds for functionalization of poly(ethylene)terephthalate fabrics **Karan Chandrakar** *Indian Institute of Technology Delhi, India*
16:20-16:30	OL	Insulation systems for keeping cold **Karapet Armenovich Ter-Zakaryan** *TEPOFOL LLC, Russia*

16:40-18:00 | Tea & Poster Session

Chairs: MS Alam , Jamia Hamdard, India

Panelists: S Mohanty, Susheel Kalia, D Pathania, Shamayita Patra, BS Kaith

Day-3 | 25th Feb, 2023 | Programme

Session 27 | Venue: Mandovi & Abolim Hall

Plenary Session

Chairs: MV Badiger, NCL, India & Deepak Pathania, CU, India

Plenary Talk-1

MM Nasef, UTM, Malaysia

Towards development of new generations of functional copolymers for energy conversion and environmental remediation by radiation graft copolymerization

Time: 09:00-09:35

Plenary Talk-2

Sabu Thomas, MG Univ., India

Nanostructured Polysaccharides Materials for Water Purification

Time: 09:35-10:10

Session 28

10:10-11:30 | Tea & Poster Session

Chair: M S Alam, Jamia Hamdard, India

Panelists:

Anupama Sharma, Sunita Rattan, Satyendra Mishra, Garima Agrawal, Dhiraj Sud

Session 29 Advanced Materials

Chairs: Vikas Gite, NMU, India & Subita Bhagat, SLIET, India Venue: Mandovi Hall

Time		Lecture Title/Author
11:30-11:45	IL	Nanostructured Metal Oxide/PANI-Biomass Composite as Supercapacitor Electrode Material **Dipak Gupta** *Tri-Chandra Multiple Campus, Kathmandu, Nepal*
11:45-11:55	OL	Design, Synthesis and Study of Mechanical Behavior of Strong, Stretchable and Self-healing Polymer Hydrogel Materials **Rajat Kumar Das** *Indian Institute of Technology Kharagpur, India*
11:55-12:05	OL	Synthesis and thermal evaluation of novel hydrazide-substituted phthalonitrile resins for high temperature applications **Jeetendra Kumar Banshiwal** *DMSRDE, Kanpur, India*
12:05-12:15	OL	ZIF-8 and ZIF-67 functionalized cotton Textiles for Air Purification applications **Hardeep Singh** *Indian Institute of Technology Delhi, India*
12:15-12:25	OL	Electrospun Membrane: A multifunctional and efficient platform in water remediation **Jaspreet Kaur Randhawa** *Indian Institute of Technology Mandi, India*
12:25-12:35	OL	Bio-inspired polyethylenimine based benzoxazine designs for their use as structural adhesive **Pratibha Sharma** *Amity Institute of Applied Sciences, Noida, India*

Session 30 Nanomaterials & Nanocomposites

Chairs: Sabu Thomas, MG Univ., India & Satyendra Mishra, NMU, India Venue: Zuari Hall

Time		Lecture Title/Author
11:30-11:45	IL	Preparation of Porous Polycaprolactone Tubular Matrix by Salt Leaching Process: A tale of failure_ the mother of new invention **Shamayita Patra** *SVITT, SVVV, Indore, M.P., India*
11:45-11:55	OL	Enhancement in optical properties of PVA films embedded with CdSe nanorods for packaging application **Sangeeta Garg** *Dr. B.R. Ambedkar NIT Jalandhar, India*
11:55-12:05	OL	Biogenic Synthesis and Characterization of Zinc Oxide Nanoparticles **Murtuza Zoebbhai Channiwala** *Maharaja Sayajirao University Baroda, Surat, India*
12:05-12:15	OL	Tribological behaviour of GNP Reinforced Nr Composite **Resmi B.P** *TKM Institute of Technology, Kollam, India*
12:15-12:25	OL	Square wave voltammetry analysis for detection of nitrate by using ZnO/PANI composite decorated Ni-foam sensor electrode **Sarla Kashiram Pawar** *KBCNMU, Jalgaon, India*
12:25-12:35	OL	Fabrication of Zinc oxide nanomaterial coating using sputtering for orthopedic implants to enhance antiadhesive activity **Jyoti Raghuvansh Pandey** *BML Munjal University, Haryana, India*

Session 31 Miscellaneous Applications

Chairs: HS Nanda, IITDM, India & Bimlesh Lochab, SNU, India Venue: Sal Hall

Time		Lecture Title/Author
11:30-11:40	OL	Poly(aminoamide)s: A Class of Smart Functional Polymers for Diverse Applications **Subrata Chattopadhyay** *Indian Institute of Technology Patna, India*
11:40-11:50	OL	To investigate Ordered Structure of Modified Rice Starch using spectroscopic tools: FTIR, XRD, and DSC **Nirmal Mazumder** *Manipal Academy of Higher Education, India*
11:50-12:00	OL	Iron Carbide (Fe3C) Encapsulated into Heteroatom Co-Doped Graphitic Carbon as a Non-precious Metal Catalyst for Electrocatalytic Oxygen Reduction **Aniruddha Jaiswal** *Indian Institute of Technology (BHU), Varanasi, India*
12:00-12:10	OL	Polymer formation with comparative analysis of Metallocene catalyst at varying temperature **Subita Bhagat** *SLIET LONGOWAL, Sangrur, India*
12:10-12:20	OL	Molecular Simulation of PLA/PBAT Blends: Mechanical and Barrier Properties **Kumar Shanu** *Indian Institute of Technology Guwahati, India*
12:20-12:30	OL	Waste Plastics to bricks **Vinoth Kumar** *Hindustan Petroleum Green R&D Centre, India*
12:30-12:40	OL	PCR Purification using Digital Microfluidics **Neeti Kalyani** Technical University of Denmark, Denmark

Session 32 Miscellaneous Applications

Chairs: Deepa Ghosh, INST, India & Rekha Lagarakha, BU, India Venue: Abolim Hall

Time		Lecture Title/Author
11:30-11:40	OL	Sustainable Biodegradable Polymeric Packaging Materials **Vivek Verma** *Indian Institute of Technology Kanpur, India*
11:40-11:50	OL	Synergistic Effect of Graphene oxide and Graphite with Silica in Natural Rubber Nanocomposites **Jibin K P** *Mahatma Gandhi University, India*
11:50-12:00	OL	Thermal, structural, and rheological modifications in Recycled Polyethylene Terephthalate for a sustainable alternative source for additive manufacturing **Nikhil Ram Patra** *Indian Institute of Technology Roorkee, India*
12:00-12:10	OL	Epidermal inspired Flexible Sensor with Buckypaper/PDMS Interfaces **Prakash Chandra** *Bundelkhand University Jhansi, India*
12:10-12:20	OL	Synthesis and Application of Nanoemulsion for the development of Multifunctional Textiles **Prachity Shishupal Wankhade** *Veermata Jijabai Technological Institute, Mumbai, India*
12:20-12:30	OL	VOC and Odor reduction in polymeric materials used in packaging and automotive applications **Sampat Singh Bhati** *Indian Institute of Technology Roorkee, India*
12:30-12:40	OL	Development and characterization of agriculture waste fibre reinforced polymer biocomposite film for active packaging **Vishal Srivastava** *Indian Institute of Technology Delhi, India*

Valedictory Session | Venue: Mandovi & Abolim Hall)

Welcome Address
Manohar Badiger, Organising Chair
Time: 13:00-13:05

APA Address
Bhuvanesh Gupta, APA President
Time: 13:05-13:10

Conference Address
Virendra K Gupta, SVP, RIL, Mumbai
Time: 13:10-13:20

Valedictory Address
Mayank Dwivedi, Director, DMSRDE, India (Chief Guest)
Time: 13:20-13:45

Award Presentation
By Chief Guest
Time: 13:45-13:55

Vote of Thanks
Susheel Kalia, Conference Secretary
Time: 13:55-14:00

14:00 | Lunch Break

15:00 | CONFERENCE ENDS

Poster Presentations

S. No	ABS No.	Title	Presenting Author	Institution	City
P1	742	Humidity Sensing Studies of Polyaniline-Transition Metal Dichalcogenide Composites	S. Manjunatha	VVSI PU College	Ballari
P2	743	Humidity sensing performance of nanorods of polyaniline-Yttrium oxide composite prepared by mechanical mixing method	Y.T. Ravikiran	VVSI PU College	Ballari
P3	719	Investigation of Biomolecule-Modified PVDF Electrospun Nanofibers for E-Textiles	Akhilesh K Sharma	IIT Delhi	New Delhi
P4	641	Up-scalable synthesis of ZnO nanostructures using Microwave and CVD for applications in functional textiles	Pranay Ahuja	IIT Delhi	New Delhi
P5	638	Mesoporous SnO2 fibers derived from gradient electrospinning of two Immiscible polymers (PVP/PAN) for Energy storage applications	Vaishali Tanwar	IIT Delhi	New Delhi
P6	617	Comfort and radiative heat protective performance of multi-layer extreme heat protective clothing of firefighters	Sudhanshu Maurya	IIT Delhi	New Delhi
P7	524	pH responsive drug delivery of PLA-based nanoparticles for breast cancer therapy	Priya Gupta	IIT Delhi	New Delhi
P8	525	Redox responsive Biodegradable Polymeric Nanoformulation for Cancer therapy	Harshdeep Kaur	IIT Delhi	New Delhi
P9	477	Polyurethane based adhesive functionalized with UV-additives for inflatable laminated textiles	Shuchita Tomar	IIT Delhi	New Delhi
P10	480	Multifunctional Thermoplastic Polyurethane Nanocomposites for Inflatables	Bharti Rana	IIT Delhi	New Delhi
P11	324	Relation between immersion precipitation bath conditions and crystalline content of porous poly(vinyledeneflouride) films	Nitish Yadav	IIT Delhi	New Delhi
P12	345	Development of Chitosan /PEO Membranes for Biomedical applications	Rohini Verma	IIT Delhi	New Delhi
P13	388	Concomitant Delivery of Pirarubicin and Anti-MUC 1 in Biodegradable Polymeric Nanoparticles: A Novel Targeted Drug Delivery approach for Breast Cancer Therapy	Ankushi Bansal	IIT Delhi	New Delhi
P14	526	Revealing the unexplored effect of residual iron oxide on the photoreforming activities of polypyrrole nanostructures on plastic waste and photocatalytic pollutant degradation	Rituporn Gogoi	IIT Mandi	Himachal
P15	535	Synthesis and characterization of bipolar membrane for self-humidifying hydrogen fed fuel cell	Amit Suhag	IIT Roorkee	Saharanpur
P16	517	Separation and optimization of proteins from eggshell membrane for biomedical applications	Preeti Sharma	IIT Roorkee	Saharanpur
P17	410	Synergistic effect of hybrid hydroxylated boron nitride and cellulose nanocrystals for enhancing the thermal, mechanical, and hydrophobic properties of composite film	Manoj Sathwane	IIT Roorkee	Saharanpur

S. No	ABS No.	Title	Presenting Author	Institution	City
P18	347	Surface Functionalization of Polypropylene via RF Plasma	Vipula	IIT Delhi	New Delhi
P19	409	Agriculture waste derived cellulose nanocrystals: Isolation and Characterization	Shakshi Bhardwaj	IIT Roorkee	Saharanpur
P20	360	Chemically tailored liquid crystalline nanocellulose composites featuring elliptical birefringence for photonic applications	Shiva Singh	IIT Roorkee	Saharanpur
P21	320	Studies on Encapsulation of ionic liquids and antioxidant in metal organic frameworks to achieve high proton conductivity and chemical durability of proton exchange membranes	Madhuparna Ray	IIT Roorkee	Saharanpur
P22	520	Infrared reflective and hydrophobic polymer encapsulation to render organic perovskite photovoltaics moisture repellant and durable	Aneela Perumalla	IIT Madras	Chennai
P23	376	Oil-Water Separation Using Eco-friendly Membranes; Synergistic Application of Superhydrophobicity and Photocatalysis	Santhra Krishnan P	IIT Madras	Chennai
P24	315	Thermodynamic Phase Behavior studies and Molecular Dynamics simulations on Poly(sodium 4-styrenesulphonate)- Water- 1, 4- Butanediol system	Rinsha Padmarajan P. V	IIT Madras	Chennai
P25	357	Gold Nanorod Decorated Graphitic Carbon Nitride with improved Electrochemical properties for NS1 Dengue Biomarker Sensing	Priya Singh	IIT (BHU)	Varanasi
P26	775	Evaluating NiS film electrode for efficient photo-electrochemical dye degradation of Methylene Blue: A photo-electrochemical and Operando spectroelectrochemical study	Sarvatej Kumar Maurya	IIT (BHU)	Varanasi
P27	472	Cu (II) Encapsulated Thiazole-Based Porous Organic Polymers: As Efficient Catalysts for the Synthesis of Quinolines and Benzothiazoles	Ajay Kumar Sahoo	IIT Kanpur	Kanpur
P28	755	Improving osteogenic and antibacterial bone regeneration by encapsulating Sr and Ag nanoparticles in TiO2 nanotubes	Konduru A K Raju	NIT Rourkela	Odisha
P29	757	Development of Herbal Scaffold for Bone Tissue Regeneration	Samapti Padhihary	NIT Rourkela	Odisha
P30	573	An Equivalent GNF Model as an Efficient Approximation for Flow Analysis Of Polymer Solutions	Indranil Saha Dalal	IIT Kanpur	Kanpur
P31	523	Mechanically Deformed Covalent Organic Framework as Efficient Photocatalyst for Reduction of Hexavalent Chromium and Fenton reaction under visible light	Swadhin Kumar Jena	IIT Mandi	Mandi
P32	785	Thermoacoustic textiles and its applications	Siddhi V S Rao	IIT Delhi	New Delhi

S. No	ABS No.	Title	Presenting Author	Institution	City
P33	773	Evaluating Zn ferrite (ZnxFe3-xO4 ; 0 ≤ x ≤ 1) for alkaline water oxidation: An electrochemical and Operando spectroelectrochemical study	Amisha Soni	IIT (BHU)	Varanasi
P34	628	Enhancement of ammonia gas sensitivity and selectivity at room temperature by PBTTT-C14/MoS2-QDs hybrid film based OFET fabricated via Floating Film Transfer method	Shipra Gupta	IIT (BHU)	Varanasi
P35	558	The utilization of Low-cost natural mucilage as a binder for dry compaction of quartz waste	Jyoti Kumari	IIT (BHU)	Varanasi
P36	416	Li-Al based Nanostructured Inorganic Layered Double Hydroxide for efficient drug delivery for cancer treatment	Swapan Maity	IIT (BHU)	Varanasi
P37	722	Effect of UHMWPE blending on its foam processability using supercritical carbon dioxide (sc-CO2) technology	Prashant Mani Shandilya	IIT Delhi	New Delhi
P38	721	Crystallinity Studies of PP-TiO2 Nanocomposites under Supercritical CO2 treatment	Mayank Prakash	IIT Delhi	New Delhi
P39	691	Development of antimicrobial dressing coated with alginate/glycerol/tannic acid blend	Ankita Sharma	IIT Delhi	New Delhi
P40	614	Design of a Cost-Effective water Heating System by using Nonwoven Textile Material as A Substrate	Sudhanshu Singh	NIT Jalandhar	Jalandhar
P41	459	Development of fenugreek gum-based hydrogels as an adsorbent for wastewater treatment	Jyotendra Nath	NIT Srinagar	Srinagar
P42	325	Reduced Phosphorene Incorporated Biopolymer Composite Based Electronic Biosensors for the Detection of Uric Acid	Nasrin Sultana	IASST	Guwahati
P43	362	Designing of Infection Resistance Polyurethane Biomedical Implant	Manali Somani	IIT Delhi	New Delhi
P44	349	ZnO/chitosan Sacrificial Composite Template for Synthesis of High Surface Area Porous ZnO	Rahul Chaudhari	DIAT	Pune
P45	675	PET like Plastic: New Generation of Bioplastics from Corn-starch	Ketaki Samanta	IISC Bangalore	Bangalore
P46	402	Harvesting of energy from real waste water using micron scale Microbial fuel Cell	Aparajita Roy	IIT Guwahati	Guwahati
P47	607	Polyoxometalates immobilized carbon nanotube constructs triggered through host-guest assembly results in excellent electromagnetic interference shielding	Kunal Manna	IISC Bangalore	Bangalore
P48	475	Imidazole integrated porous organic polymer: a highly efficient organocatalyst for one-pot synthesis of 2-amino3-cyano-4H-pyrans and spirochromenes	Alka Karn	IIT Kanpur	Kanpur

S. No	ABS No.	Title	Presenting Author	Institution	City
P49	476	Continuous flow synthesis of disordered covalent organic framework for ultra-high removal of industrial pollutants in flow	Astha Singh	IIT Mandi	Mandi
P50	407	Polyoxometalates based inorganic-organic hybrid polymeric materials for underwater adhesion	Ganga Singh	IIT Ropar	Ropar
P51	341	Biopolymer Immobilization on Hydrophilic and Hydrophobic Surfaces	Sanu Sarkar	IASST	Guwahati
P52	329	High drug loading nanoparticles stabilized with autologous serum proteins passively inhibits tumor growth	Mimansa	INST	Mohali
P53	654	Green Synthesis and characterization of a novel bio-based membrane for female hygiene application	Roshni Pattanayak	CIPET	Bhubaneswar
P54	657	Development of a novel modified Polyurethane based composite for vascular graft tissue engineering application	Tusharkanta Nayak	CIPET	Bhubaneswar
P55	358	Designing of Biopolymer Based Functional Nanomaterial For Biomedical Applications	Chetna Verma	IIT Delhi	New Delhi
P56	468	Plant derived graphite synthesis and characterized for detoxification of Industrial toxic chemicals	Siddhartha Dan	NIT Jalandhar	Jalandhar
P57	372	Synthesis, Characterization, and visible-light-driven photocatalysis of organic pollutant using heterostructure oxides	Aarti Sharma	SLIET Longowal	Sangrur
P58	368	Synthesis of PAN/Fe-MOF electrospun nanofibre and application as fluoroprobe for detection of carbonyl group	Gagandeep Kaur	SLIET Longowal	Sangrur
P59	650	Piezoelectric and calcium ion synergistic approach for UCMSC differentiation into cardiomyocytes for Cardiac Tissue Engineering	Navita Salaria	INST	Mohali
P60	789	Synthesis and study of mechanical strength in phenol-naphtholic derived epoxy and vinyl ester resins	Nirmal Rathore	MLS Univ.	Udaipur
P61	790	Polyacrylamide based hybrid hydrogel derivatives for their various sustainable environmental applications	Pooja Badsara	MLS Univ.	Udaipur
P62	788	Phytochemical screening and Antimicrobial evaluation of Nickel Nanoparticles derived from Ixora Coccinea (Leaves) via facile and sustainable synthesis approach	Megha Yadav	MLS Univ.	Udaipur
P63	706	Phytochemical Screening; Green Synthesis, characterization and Biological significance of Cadmium Nanoparticles from using Nyctanthes arbor-tristis (Leaves)	Chetna	MLS Univ.	Udaipur
P64	787	Biogenic Synthesis of Iron Nanoparticles using Ficus benjamina leaf extract for validating their in-vitro Antibacterial and Antifungal susceptibility	Chesta Mehta	MLS Univ.	Udaipur

S. No	ABS No.	Title	Presenting Author	Institution	City
P65	710	Branched Flourinated Polymer Gold Nanoclusters for cancer theranostics	Priyanka Sharma	INST	Mohali
P66	612	Comparative study on surface functionalization of PTFE by plasma treatment with different gases for biomedical applications	Shimna M	CIPET	Bhubaneswar
P67	602	Carboxymethylated chitosan/cellulose acetate nanocomposite for biomedical applications	Sumi Vincent	CIPET	Bhubaneswar
P68	542	Development and analysis of polylactic acid/Polybutylene succinate based blown films towards mulching application	Anupam Kumar Gupta	CIPET	Bhubaneswar
P69	546	Development of Poly (lactic Acid) (PLA) based Blend Films as a Substitute for the Petroleum based Plastic Films in the Field of Plasticulture	Manmath Parida	CIPET	Bhubaneswar
P70	547	Development of polymeric biocomposite scaffolds via 3D printing technology for bone tissue engineering application	Ipsita Pattanayak	CIPET	Bhubaneswar
P71	550	Characterisation and Distribution of inflow of microplastics from Damanganga and Tapi river and Dumas beach, Gujarat, India	Girija Prasad	CIPET	Bhubaneswar
P72	551	Development of Bio-based Multilayer Packaging film for Food packaging Application	Baba Linkanmani Sahoo	CIPET	Bhubaneswar
P73	553	Plasma treated bio derived sisal reinforced flame retardant Thermoplastic Polypropylene composites: A study on mechanical, thermal, morphological, Acoustic and flammability characteristics	Malaya Ranjan Parida	CIPET	Bhubaneswar
P74	555	Efficiency enhancement of solid-state dye sensitized solar cell by incorporation of SWCNT into electrolyte system	Manoj Kumar Mallick	CIPET	Bhubaneswar
P75	556	Diketopyrrolopyrrole based D-A Copolymers: Synthesis, Characterization and their Photophysical Properties	Pranshula Panigrahi	CIPET	Bhubaneswar
P76	503	Enhancement of Barrier and antimicrobial properties of Sodium-metasilicate Modified Guar-gum/PVA film for packaging application	Pooja Priyadarsini	CIPET	Bhubaneswar
P77	394	Studies of Synergetic Effect of Zirconium and Magnesium on Structural and Biological Properties of Mesoporous Bioactive Glass	Pragyan Aparajita Dash	CIPET	Bhubaneswar
P78	393	Flexible Polymer Substrate for Mechanical Energy Harvesting Using a Coating of BCT-based Piezoelectric Ink	Bibhudutta Das	CIPET	Bhubaneswar
P79	570	Preparations of carrageenan-PEG-Lecithin hydrogel membranes enriched with Moringa oleifera as a wound dressing material	Pratibha Singh	IIT Delhi	New Delhi

S. No	ABS No.	Title	Presenting Author	Institution	City
P80	389	An Overview on Design and Biomechanical Analysis of Uncemented 3D printed Structurally Porous Auxetic Femur Meta-implants	Lakshyajit Behera	CIPET:SARP-LARPM	Bhubaneswar
P81	448	UHMWPE Impregnated CNT Macrostructures with Improved Packing Density for Superior Mechanical Performances	Mamta Rani	NPL New Delhi	New Delhi
P82	627	Enhanced mechanical stability and sustained release performance of nanoclay reinforced microcapsules	Yogeshwar Aher	CSIR-NCL	Pune
P83	665	Indigenous Bipolar Plate Development for Hydrogen Fuel Cell Application	Prashant Arvind Patil	CSIR-NCL	Pune
P84	658	Controlling Material & Process Defects in Extrusion Film Casting Using Polymer Composites	Dhammaraj S. Rokade	CSIR-NCL	Pune
P85	649	3D printing of modified nanocellulose/PLA nanocomposites	Animesh Gopal	CSIR-NCL	Pune
P86	488	A study on synthesis of carbon fibers from mixture of coal tar pitch and petroleum pitch using chemical stabilization process	Sonu Rani	CSIR-NPL	New Delhi
P87	445	Solid-state linear supercapacitor based on CNT yarn with multi-featured properties for wearable devices	Mayank Pal	CSIR-NPL	New Delhi
P88	533	Thermoelectric Properties of MWCNTs: Effect of Gaseous Environment and Doping	Manoj Sehrawat	CSIR-NPL	New Delhi
P89	560	ZnO doped alginate membrane fabrication for Congo red dye removal from wastewater	Sachin	CSIR-NPL	New Delhi
P90	563	Structural changes in toluene insoluble fraction of pitch polymer with different processing conditions	Khushboo Kumari	CSIR-NPL	New Delhi
P91	594	Dehydration of Tetrahydrofuran using ABPBI based Hollow Fiber Membranes	Lavanya Alladi	CSIR-NCL	Pune
P92	566	Avidin-Biotin functionalized Self-Assembled Protein Nanoparticles as Egfr Targeted Therapeutics for The Treatment of Lung Cancer: Characterization and Cell Viability	Drishti Sunil Panjwani	Parul Institute of Pharmacy	Vadodara
P93	565	Development of Surface Conjugated Block Co Polymeric Micelles as Targeted Therapeutics: Characterization And In-Vitro Cell Viability	Shrutiben Patel	Parul Institute of Pharmacy	Vadodara
P94	634	Carbon Black Distribution Driven by Its Concentration And Its Effect on Physico-Mechanical Properties of Styrene Butadiene Rubber and Butadiene Rubber Miscible Rubber Blends	Abitha V K	Mahatma Gandhi Univ.	Kottayam
P95	625	Graphene silica conjugate reinforced epoxy coatings for the corrosion protection of aluminum alloy	Jesiya Susan George	Mahatma Gandhi Univ.	Kottayam
P96	635	Effect of graphene oxide-silica hybrid fillers on the static and dynamic mechanical properties of natural rubber nanocomposites	Prajitha V	Mahatma Gandhi Univ.	Kottayam

S. No	ABS No.	Title	Presenting Author	Institution	City
P97	663	Obtaining micro and nanocrystalline cellulose from agricultural waste by the soft organo-solvent method	Paul Jacob	Mahatma Gandhi Univ.	Kottayam
P98	499	Fluorescence probe synthesised from biomass that is bifunctional, highly selective, and sensitive for detecting and eliminating arsenic (III) in water	Preeti Tewatia	Panjab University	Chandigarh
P99	481	Effective biocatalyst developed via genipin mediated acetylcholinesterase immobilization on rice straw derived cellulose nanofibers for detection and bioremediation of organophosphorus pesticide	Kavita Sharma	Panjab University	Chandigarh
P100	469	Combining cellulose nanofibres with microporous organic polymer for mercury detection and removal	Sumit Sharma	Panjab University	Chandigarh
P101	411	Greening Biobased Polybenzoxazine Network: Phytic Acid as an Initiator, Flame Retardant, & Adhesive Modulator	Vaishaly Duhan	Shiv Nadar University	New Delhi
P102	732	Synthesis and Characterization of Bimetallic-Semi-Aromatic Polyester Nanocomposite for Biomedical and Environmental Applications	Shaily Chauhan	Sharda University	Greater Noida
P103	395	In Vivo Toxicological Analysis of MnFe2O4@poly (tBGE-alt-PA) Composite as A Novel Hybrid Nanomaterial for Possible Biomedical Use	Rohit Kumar	Sharda University	Greater Noida
P104	377	Investigation of Electrical and Mechanical Properties of DMF Doped PEDOT:PSS/PVA Stretchable Polymeric Films	Sanjib Sau	IASST	Guwahati
P105	363	Cellulose Nanocrystal Embedded Liquid Crystal Elastomers for Soft Actuation	N Santhiya	Alagappa University	Karaikudi
P106	541	Ipriflavone as an emerging solution for Osteoporosis: In vitro, In vivo Screening and Formulation of a Nano Emulsion	Anish John	NGSMIPS	Mangalore
P107	536	Alginate microspheres containing polymer-induced liquid exfoliated tungsten disulfide for bone tissue engineering	Pandurang Dalavi	Yenepoya Research Centre	Mangalore
P108	518	Synthesis of an Advanced Self-Healing Polymer Electrolyte for Li-ion batteries (LIBs)	Asish Kumar Sahu	Ravenshaw University	Cuttack
P109	507	Fabrication of AgNP/Pectin Composite For Biomedical Applications	Aashi Singh	BCAS	New Delhi
P110	492	A case study on circular bioeconomy through valorization of Pomegranate Peels (Punica granatum)	Shivali Singh Gaharwar	VNIT	Nagpur
P111	432	Synthesis and Characterization of Hydrophilic/ Hydrophobic Nanogels for its Application in Acrylic Denture Softliners	Anusree V S	SCTIMST	Calicut

S. No	ABS No.	Title	Presenting Author	Institution	City
P112	423	Polypeptide-based electrically conductive hydrogel scaffolds for neural tissue engineering	Supriya Jain	Yenepoya	Mangaluru
P113	417	Study of applications of Chitosan/Gelatin based Hydrogels in sustained release of Nitrogenous fertilisers into soil	Sreedev P	Government College Kasaragod	Kasaragod
P114	412	Thermal, Structural, Spectroscopic, and Optical Properties of Calcium Doped ZnO Nanoparticles Synthesized by Co-Precipitation Method	Ganesha K N	Yuvaraja'S College	Mysore
P115	593	A new bio-based plasticizer for poly(vinyl chloride) based on epoxidized Cassia fistula Seed oil	Chetan Vijaysing Rajput	S P Univ. Anand	Gujarat
P116	596	Bio-Based Hyperbranched Polymer Nanocomposites for Coating Application	Amardip Murlidhar Patil	KBCN Maharashtra Univ.	Jalgaon
P117	544	Influence of Surfactant on Electrospinnability of Polycaprolactone Solution and its Properties	Vandana Kumari	IIT Delhi	New Delhi
P118	730	Development of Polyvinyl Alcohol/Alginate membranes for Biomedical Applications	Shiv Kumar Upadhyay	IIT Delhi	New Delhi
P119	762	Antimicrobial Silicone Catheter by In-situ grafting of Nanosilver Nanohydrogel	Bhuvanesh Gupta	IIT Delhi	New Delhi
P120	697	ZnO nanoparticles/ethyl cellulose-based nanocomposite coating solution for the extended storage life of tomatoes: a study of phytochemicals and proximate analysis	Susheel Kalia	Army Cadet College	Dehradun
P121	643	Preparation and characterization of PDMS coated PVDF based durable hydrophobic membrane for water desalination	Mahendiravarman Elangovan	Annamalai University	Cuddalore
P122	626	Electroactive Shape memory Polyurethanes (eSMPUs) based on optimized Graphene nanoplatelets (GNP) composites	Yadagiri Naik Banothu	DYSL-SM (DRDO)	Hyderabad
P123	677	Polysaccharide-based injectable Hydrogel for Bone Tissue Engineering	Malika	INST	Mohali
P124	624	Development of Zn-Hydroxyapatite/Carbon Nanofiber/Alginate composite for the potential orthopedic application	Sivaraj D	INST	Mohali
P125	500	Synthetic Peptideâ€“Polymer Conjugates to Mimic Actinomyosin Network for Muscle Contraction	Debasish Nath	INST	Mohali
P126	452	Excellent Ferroelectric and Retention Response of β-PVDF thin film Prepared by Heat-Controlled Spin Coating	Pinki Malik	INST	Mohali

S. No	ABS No.	Title	Presenting Author	Institution	City
P127	623	Hydrogen production by water electrolysis using nickel hydroxide as a redox mediator	Riddhi Devendra Agrawal	BV College of Engg.	Mumbai
P128	355	Biaxial Characterization of Auxetic Skin Graft Simulants	Vivek Gupta	IIT Delhi	New Delhi
P129	729	Biomechanical Modeling and Characterization of Kidney Tissue Surrogates	Gurpreet Singh	IIT Delhi	New Delhi
P130	427	Modulation of topochemical polymerisation with changing functional groups in chiral diacetylenes towards thermo-, acido- and halochromism	Antarlina Maulik	INST	Mohali
P131	703	Antimicrobials and anticancerious potential of tragacanth gum based materials	Sarita Kumari	SPU Mandi	Mandi

List of Delegates

S. No	Name	Institute	City	Country
1	Aditi M Chavan	Somaiya Vidyavihar University	Mumbai	India
2	Akanksha Gupta	Indian Institute of Technology	Delhi	India
3	Amit Kumar	Reliance Industries Limited	Navi Mumbai	India
4	Anup K Ghosh	Indian Institute of Technology	Delhi	India
5	Anupam Gupta	Indian Institute of Technology	Delhi	India
6	Avadhesh Yadav	Indian Institute of Technology	Delhi	India
7	Deepak Pathania	Central University Jammu	Jammu & Kashmir	India
8	Dhammanand Shirale	Kavayitri Bahinabai Chaudhari North Maharashtra University	Jalgaon	India
9	Günther G. Scherer	PSI	Switzerland	Switzerland
10	Hariharan Sekar	Indian Institute of Technology Bombay	Mumbai	India
11	Harshad Patil	Reliance Industries Limited	Navi Mumbai	India
12	Irina R Zaretskaia		Moscow	Russia
13	Jyoti Chaudhary	MSU	Udaipur	India
14	Jyoti Chauhan	GFL	Noida	India
15	Komal Yadav	Mewar University	Chittorgarh	India
16	Machhindra	Reliance Industries Ltd	Mumbai	India
17	Manohar V Badiger	NCL	Pune	India
18	Mousami Gupta	SMIMS	Gangtok	India
19	MS Alam	Jamia Hamdard	New Delhi	India
20	Neeraj Malik	MRSPTU	Bathinda	India
21	Nethravathi Ganiga	National Institute of Technology	Mangalore	India
22	Nisha Mishra	NMU	Jalgaon	India
23	Nirmala Verma		Mandi	India
24	Prem Sukh Verma		Mandi	India
25	P Satishkumar	NIT Karnataka Surathkal	Surathkal	India
26	Pallavi K C	NITK	Alankar	India
27	Ramesh Premnath			
28	Rekha Lagarkha	Bundelkhand University	Jhansi	India
29	Rupesh Kumar	DYSL-SM (DRDO)	Hyderabad	India
30	S Chattopadhyay	MoCF	New Delhi	India
31	Sagar Pal	IIT (ISM) Dhanbad	Dhanbad	India
32	Sangeeta Badiger	NCL	Pune	India
33	Satyendra Mishra	NMU	Jalgaon	India
34	SK Nayak	Ravenshaw University	Cuttack	India
35	Smita Mohanty	CIPET	Bhubaneswar	India
36	S Dinanath Pandey	ACG associated capsules	Kandivali	India
37	Sonali R Kamble	Somaiya Vidyavihar University	Mumbai	India
38	Sooraj S Nayak	NIT Karnataka	Surathkal	India
39	Soundarya Mahalingaiah	Elionix.Inc		Japan
40	Swati Meherishi			India

S. No	Name	Institute	City	Country
41	Tanweer Alam	Indian Institute of Packaging	New Delhi	India
42	Varun Poonia	DCPC	New Delhi	India
43	Virendra K Gupta	Reliance Industries Ltd	Mumbai	India
44	Voskan B Melkonyan		Moscow	Russia
45	Yash Gupta	GFL	Noida	India
46	Yogeshwar Thakare	Reliance Industries Ltd	Navi Mumbai	India

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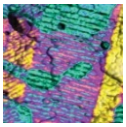
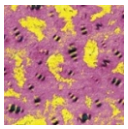


Thin piezoelectric film
Scan size: 5x5 µm



Adhesive map on bitumen
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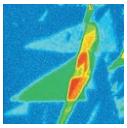
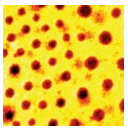


Graphene flakes
30 X 30 um



PC-PVAC film
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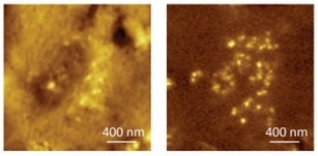

Height (left) and IR reflection (right) images of TPV sample

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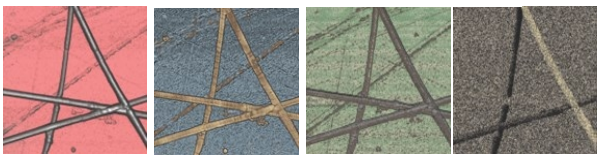

Non-destructive electromechanical study of diphenylalanine peptide nanotubes

Scan size: 7x7 µm, nanotubes diameter: 70÷100 nm

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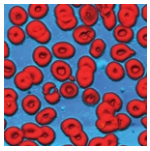
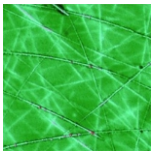
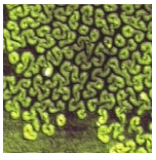


Blood Cells
Scan Size 50 x 50 µm
AM -AFM



Silver Nanowires
Scan Size 4 x 4 nm
AM -AFM



Fluoroalcanes
Scan size 500 x 500 nm
AM-AFM

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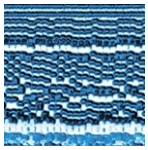
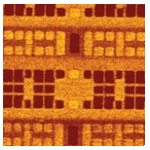
Topography of microchip, scan size is 70 x 46 µm



Magnetic domains of high-density HDD. Scan size is 4x4 µm



Surface potential of SRAM Scan size is 40x40 µm

HOPG atomic resolution
Scan size is 6x6 nm

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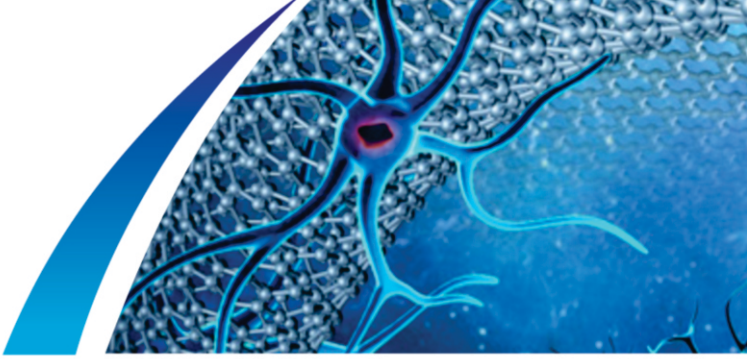

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