



# 6th International Conference on Soft Materials (ICSM-2024)

November 17-20, 2024

Universitat Rovira i Virgili, Tarragona, Spain



UNIVERSITAT  
ROVIRA I VIRGILI

## Scientific Program

### 6th International Conference on Soft Materials (ICSM 2024)

	Day 1 (Sunday 17 November)	Day 2 (Monday 18 November)	Day 3 (Tuesday 19 November)	Day 3 (Tuesday 19 November) [parallel session]	Day 4 (Wednesday 20 November)
9:00 a. m.		<b>Conference Opening Ceremony</b>	Keynote 3: Prof. Volker Abetz Helmholtz-Zentrum Hereon, Germany		Keynote 6: Prof. Beatriz Prieto ICIQ, Spain
9:40 a. m.		Keynote 1: Prof. Adreas Fery IPFDD, Germany	Keynote 4: Prof. Holger Stark TU-Berlin, Germany		Keynote 7: Prof. F. Faupel, Kiel Univ., Germany
10:20 a. m.		Keynote 2: Prof. Katja Loos University of Groningen, The	Keynote 5: Prof. Myung Han Yoon, GIST, South Korea		<b>TEA BREAK &amp; POSTER SESSION 2</b>
11:00 a. m.		<b>TEA BREAK</b>	<b>TEA BREAK</b>		
11:30 a. m.		Inv: Prof. M. Leocmach U Lyon 1, France	Inv: Porf. K. Zakrzewska AGH, Poland		Inv: Prof. Hélène Debéda U Bordeaux, France
11:50 a. m.		Inv: Prof. K.K. Dey IITGN, India	Inv: Prof. M. Rodríguez-Méndez UVA, Spain		Inv: Dr. S. Vallejos IMB-CNM-CSIC, Spain
12:10 p. m.		Inv: Prof. Dr. M. Schmiedeberg, Friedrich-Alexander-Universität	Inv: Dr. M. Quintana U San Luis Potosí, Mexico		Inv: Prof. Biplab Kuita, BHU, India
12:30 p. m.		Inv: Prof. K. Sankhala IITJ, India	Inv: Dr. J. Kim Yonsei U, South Korea		Inv: Prof.D. Sarkar, MNIT, India
12:50 p. m.		<b>Oral 1</b>	<b>Oral 9</b>		Inv: Dr. A. Awasthi, UoR, India
1:00 p. m.		<b>LUNCH BREAK</b>	<b>LUNCH BREAK</b>	<b>LUNCH BREAK</b>	<b>LUNCH BREAK</b>
2:00 p. m.		Inv: Prof. F. Güell, UB, Spain	Inv: Dr. C. Bittencourt UMONS, Belgium	Inv: Prof. S. Sharma, IIT Mandi, India	
2:20 p. m.		Inv: Dr. Q. Besford, IPFDD, Germany	Inv: Prof. P. Roy, IITR, India	Inv: Prof. NS Rao, MNIT, India	
2:40 p. m.		Inv: Prof. S. Sinha Roy, SNU, India	Inv: Prof. Sujin Babu, IIT Delhi, India	Inv: Prof. R Singh, IIT Mandi, India	
3:00 p. m.		<b>Oral 2</b>	<b>Oral 10</b>	Inv: Prof. Prabhat K Dwivedi, India	
3:10 p. m.		<b>Oral 3</b>	<b>Oral 11</b>	Inv: Prof. Harsh Pandey, Manipal, India	
3:20 p. m.		<b>Oral 4</b>	<b>Oral 12</b>	Inv: Prof. K. Awasthi, MNIT, India	
3:30 p. m.		<b>TEA BREAK</b>	<b>TEA BREAK</b>	<b>TEA BREAK</b>	
4:00 p. m.		Inv: Prof. D. Samanta, Texax, USA	Inv: Prof. R. Dhiman, MNIT, India		
4:20 p. m.		Inv: Prof. C. Synatschke, Germany	Inv: Dr. M. Islam, IMDEA, Spain		
4:40 p. m.		Inv: Prof. Sunita Srivastava, India	Inv: Dr. Ankur Gupta, IIT Jodhpur, India		
5:00 p. m.	<b>WELCOME RECEPTION</b>	<b>Oral 5</b>	<b>Oral 13</b>		
5:10 p. m.		<b>Oral 6</b>	<b>Oral 14</b>		
5:20 p. m.		<b>Oral 7</b>	<b>Oral 15</b>		
5:30 a. m.		<b>Oral 8</b>	<b>Oral 16</b>		
5:40 a. m.		<b>ICSM INT. ADV. COMM. MEETING</b>	<b>Oral 17</b>		
5:50 a. m.			<b>Oral 18</b>		
6:00 p. m.		<b>SOCIAL PROGRAM: TOWN TOUR</b>	<b>POSTER SESSION 1</b>		
7:00 p. m.					
8:00 p. m.			<b>CONFERENCE DINNER</b>		



## Scientific Program

Oral 1	Nerea	Alcázar-Cano	Mesoscopic modeling and analysis of microbubble dynamics in ultrasound-driven complex fluid
Oral 2	Arnab	Maiti	Activity-induced diffusion recovery in crowded colloidal suspensions
Oral 3	Sebastian	Uppapalli	Electrophoresis in Viscoelastic Microfluidics: Towards Novel Drug delivery systems
Oral 4	Tirthankar	Banerjee	Hydrodynamics of dense pulsating matter
Oral 5	Roshan	Singh	Why do symmetrically placed food sources give rise to dynamic clusters of microorganisms?
Oral 6	Jagat	Singh	Confinement-Induced Self-Assembly of Diblock Copolymers
Oral 7	Rik	Chakraborty	Propagation of Enzyme-driven Active Fluctuations in Crowded Milieu
Oral 8	Mintu	Yadav	2D lattice animal formation in the irreversible aggregation of patchy particles
Oral 9	Kaustubh	Rane	Effect of anisotropy on the structures of clusters in suspensions and cavities in precipitates of nanoparticles
Oral 10	Xueying	Guo	Bacterial lipid Langmuir monolayer challenged by an X-peptide: Insights into bacterial membrane rupture mechanisms
Oral 11	Kamakshi	Pandey	Nanoporous ZIF-67 embedded polymer nanocomposite membranes for selective hydrogen separation
Oral 12	Lou	Kondic	Network-based modeling of fluid flow through membranes
Oral 13	Coral	Salvo	Optimization of Polyvinyl Chloride (PVC) Membrane Sensors for Enhanced Ion Selectivity and Sensitivity
Oral 14	Foad	Salehnia	Indirect Laser Writing for Transferring Graphene- Based Sensing material to MEMS
Oral 15	Jyayasi	Sharma	UV-light assisted hybrid InSe-Graphene gas sensors for NO <sub>2</sub> detection
Oral 16	Jayasi	Dontabhaktuni	Liquid Crystal driven multi-functional metasurfaces
Oral 17	Joanna	Banaś-Gac	THIN FILM HETEROSTRUCTURES FOR GREEN HYDROGEN GENERATION AND LOW TEMPERATURE GAS SENSING
Oral 18	Houyem	Trabelsi	Synthesis and gas sensing characterization of Cu <sub>2</sub> S flake-like structures deposited by AACVD
Poster 1	Vaisakh	N P	Influence of substrate wettability on ordered assembly of gold nanorods at various length scales
Poster 2	Càndid	Reig	Monolithic Integration of GMR Devices onto CMOS for Neuromorphic Perception
Poster 3	Rosa	Garriga	Anti-corrosion peptide coatings for applications in flexible and transparent silver nanowire-based optoelectronics
Poster 4	Edgar	Muñoz	Tectomer/gold nanoparticle-based colorimetric sensors for tyramine detection
Poster 5	Murat	Gunes	Field Validation of Chemoresistive Micromachined Gas Sensors for Real-Time Wine Monitoring
Poster 6	Zohre	Hamzei	Gas sensing characterization of PEDOT:PSS films
Poster 7	Kaushiki	Roy	Understanding the role of steroid hormones in the regulation of Nanog: A crosstalk for the differentiation of embryonic stem cells
Poster 8	Ankush	Agrawal	Incorporation of green synthesized ZnO with support of rGO sheets into PVDF membranes to improve their filtration and antibiofouling properties for wastewater treatment
Poster 9	Priyanka	Aggarwal	One-step electrodeposition of Binder-free Mo-doped NiSe <sub>2</sub> /CoSe <sub>2</sub> Heterostructures on Ni foam: High current density bifunctional catalysts for water splitting
Poster 10	Shiv Dutta	Lawaniya	Polypyrrole and Carbon Nano-Onions composite based Flexible Room Temperature Ammonia Sensor
Poster 11	Devendar	Chauhan	Novel biomimetic patterned membrane surfaces with enhanced antifouling performance in water treatment: A computational study
Poster 12	Ankit	Sharma	PMMA/PC polymer blended membranes for H <sub>2</sub> gas separation applications
Poster 13	Himanshu	Gupta	Realising Zinc Ion Hybrid Supercapacitors with High Energy Density and Enhanced Longevity using Ultrathin Porous Carbon Nanosheets derived from Chilli-Stem
Poster 14	Deepika	Choudhary	High Performance Gel-Polymer Based Zn-Air Batteries using Cobalt oxide Bifunctional Electrocatalyst
Poster 15	Fatima	Annanouch	Highly Sensitive 2D TMDs Based NO <sub>2</sub> Gas Sensors via AACVD and APCVD Combination