

ACTIVE MATTER

ORAL PRESENTATION

ACTIVE MATTER SESSION 1 - 19-12-2023

Time	Speaker	Title	Abstract ID
9:00 AM	Snigdha Thakur	Collapse Dynamics of Flexible Active Polymer	AM - 010
9:30 AM	Nitin Kumar	Active Matter with Robots	AM - 02
10:00 AM	Bibhu Ranjan Sarangi	An active particle at a soft interface	AM - 07
11:00 AM	Soumik Das	Bioinspired Soft Matter Using Solitons in Liquid Crystals	AM - 03
11:30 AM	Arnab Saha	Microscopic Gyration with Dissipative Coupling	AM - 05
12:00 PM	Vijayakumar Chikkadi	Phase separation of passive particles in active liquids	AM - 06

ACTIVE MATTER SESSION 2 - 20-12-2023

8:30 AM	Akash Choudhary	How viscoelasticity influences the orbital dynamics, microstructure and rheology of dilute active suspensions	AM - P18
9:00 AM	Harinadha Gidituri	Swimming Efficiently by Wrapping	AM - 04
9:30 AM	Sunil Pratap Singh	Characteristic features of self-avoiding active polymers under shear flow	AM - P19
10:30 AM	H R Vutukuri	Sculpting vesicles with active particles: Less is more	AM - P47
11:00 AM	Debasish Chaudhuri	How do activity and inertia control non-equilibrium features of active Brownian particles?	AM - P46
11:30 AM	Rajesh Ganapathy	TBD	

ACTIVE MATTER SESSION 3 - 20-12-2023

2:00 PM	Jason Picardo	How turnover triggers nonlinear waves in the active actomyosin cortex	AM - P40
2:30 PM	Tapan C. Adhyapak	Controlled dynamics of microbes in confinements: how to exploit shape and flexibility	AM - P38
3:00 PM	Arvin Subramaniam	Emergent rigidity in chemically self-interacting active polymers	AM - P6
4:00 PM	Sayan Das	Spontaneous motion of isotropic particles in a Carreau fluid	AM - P1
4:30 PM	Dileep Mampallil	Dynamics of Nucleating Microdroplets at the Contact Line of Evaporating Multicomponent Drops	AM - P13
5:00 PM	Suchismita Das	Flocking by turning away	AM - P48

POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Biswajit Das	Collapse Dynamics of Flexible Active Polymer	AM - P2
2	Simran Kapoor	Active Particle Suspensions In Viscoelastic Fluids	AM - P3
3	Rishish Mishra	Interfacial Pusher Bacterium	AM - P4
4	Surabhi Jaiswal	Particle-based mesoscopic model for phase separation in a binary fluid	AM - P5
5	Alakesh Upadhyaya	Stochastic migration dynamics of Marangoni surfers between two chambers	AM - P7
6	Sandeep Kumar	Local Polar and Long-Range Isotropic Activity Assisted Swelling and Collapse Dynamics of an Active Ring Polymer	AM - P8
7	Chandranshu Tiwari	Collective Dynamics of Active Janus Colloids Using Computer Simulations	AM - P9
8	Pawan Kumar	Active droplets dynamics and collective behavior in a capillary	AM - P10
9	Shubhadeep Mandall	Active Droplets in Gravity	AM - P11

10	Arindam Panda	Characteristic features of self-avoiding active Brownian polymers under linear shear flow	AM - P12
11	Suwendu Kumar Panda	Light-activated rod-shaped colloidal microswimmers for exhibiting multimode dynamics	AM - P14
12	Megha. Varma	Self-propulsion behaviour of cubic shape Janus particles: Effect of shape anisotropy on longer range ballistic motion	AM - P15
13	Siji S. Saju	Tumbling dynamics of an active filament in simple shear flow	AM - P16
14	Srikanta Debata	Self-propelled microrobot for pH sensing applications	AM - P17
15	Sumant Pandey	Nematic Droplets in Structured Optical Field	AM - P20
16	Pradeep Kumar Yadav	Effect of real-space circulating currents on the bubble phase separation of active particles	AM - P21
17	Abhishek Sharma	Phase Transition In Active Nematics	AM - P22
18	Ann Rosna George	RODROLLS: Self Rolling Rods powered by Light and Chemical gradients	AM - P23
19	Harishwar Raman	Pair and Collective Dynamics of Active SiO ₂ -Pt Active Janus Colloids	AM - P24
20	Dhananjay Gautam	Enhanced Activity Reduces the Duration of Intermittent Lévy Walks in Bacterial Turbulence	AM - P25
21	Hemlata Meena	Universal scaling underlying the evolution of bacterial interfaces: A case study on swimmers vs. non-swimmers	AM - P26
22	Uttam Kumar	Dynamics of Bacterial Swarming on a Solid Porous Media	AM - P27
23	Smita S. Sontakke	Soft makes it hard to swim: Role of microconfinement elasticity in active swimmer dynamics	AM - P29
24	Shreyas A. Shenoy	Dynamics of an active Belousov-Zhabotinsky droplet in shear flow	AM - P31
25	Baburao Simma	Dynamics of the asymmetrical self propelled particle in a ordered crowded environment	AM - P32

26	Biswajit Maji	Coarsening arrest by active-rotor turbulence in a binary-fluid system	AM - P33
27	Devi Prasad Panigrahi	Motility Induced Phase Separation in Quorum Sensing Particles	AM - P34
28	Shubhendu Shekhar Khali	When does an active bath behave as an equilibrium one?	AM - P35
29	Jaideep Vaidya	Spontaneous flow transition of active nematics in a wavy walled channel	AM - P36
30	Byjesh Nalini Radhakrishnan	Measuring entropy production in active turbulence	AM - P37
31	Sanatan Halder	Ergodicity breaking in harmonically bound active dynamics	AM - P39
32	Arjun S R	A Study on the Transport Properties of Active Brownian Particles in Asymmetric Ratchet Potential	AM - P41
33	Mayurakshi Deb	Colloidal transport by active dimers	AM - P42
34	Ambareesh Shrivastav	Hydrodynamics of flagellated microswimmers in confined fluids	AM - P44
35	Thilak Raj	Unveiling the propulsion dynamics of active patchy colloids using optical tweezers	AM - P45

BIOLOGICAL MATTER

ORAL PRESENTATION

BIOLOGICAL MATTER SESSION 1 - 18-12-2023

Time	Speaker	Title	Abstract ID
9:00 AM	Madan Rao	The effervescent cell membrane: nonequilibrium driving and active emulsions	BM-012
9:30 AM	Soudamini Sahoo	Influence of non-equilibrium switching of segmental states on chromatin compaction	BM - 01
10:00 AM	Ranjith Padinhateeri	Computing polymer properties of chromatin from contact map data	BM-08
11:00 AM	Shivprasad Patil	Viscoelasticity of single-folded protein using dynamic atomic force microscopy	BM-04
11:30 AM	Mahipal Ganji	Biophysical approaches to understand genome organization	BM-09
12:00 PM	Deepak Bhat	Speed variation of bacterial replisomes	BM-02

BIOLOGICAL MATTER SESSION 2 - 18-12-2023

Time	Speaker	Title	Abstract ID
2:30 PM	Tapomoy Bhattacharjee	Single-cell morphology dictates bacterial population growth under 3D confinement	BM-013
3:00 PM	Tripti Bhatia	Lipid Vesicles Adhesion mediated by Sugar-Cleaving Enzyme Invertase	BM-03
3:30 PM	Srividhya Parthasarathi	Antibiotic-Induced Bacterial Membrane Dynamic Alterations unraveled by Super-Resolution Nanoscopy	BM-010
3:45 PM	Sandeep K. Rai	Elucidating the Multifaceted Nature of Multiphasic Condensates in Neuronal Diseases	BM-011
4:30 PM	Philip Pearce	Pattern formation by living droplets in chemoattractant gradients	BM-05

5:00 PM	Ushashi Roy	Emergent spatiotemporal multistability enabled by the bio-mechanical underpinnings of different gene regulatory network motifs	BM-O6
5:30 PM	Ramya Koduvayur	The hierarchical structure and complex rheology of mucins	BM-O15
5:45 PM	Abhilasha Batra	Decoding of temperature signals by the thermosensory neurons in <i>Caenorhabditis elegans</i>	BM-O14

POSTER PRESENTATION - 20-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Chaithanya KVS	Homeostasis in confined environments	BM - P1
2	Ashitha B A	Yeast Budding Dynamics in Complex 3D Environments	BM - P2
3	Sreepadmanabh M	Cellular growth and behavior in designer 3D culture media	BM - P3
4	Jorge R. Espinosa	Location and Concentration of Aromatic-Rich Segments Dictates the Percolating Inter-Molecular Network and Viscoelastic Properties of Ageing Condensates	BM - P4
5	Ashok Kumar Dasmahapatra	Disruption of Alzheimer's Amyloid- β Fibrils: Insight from all-atom Molecular Dynamics Simulation Study	BM - P5
6	Nandhu Krishna Babu	Role Of Tissue Mechanics In Wound Healing In An Epithelial Monolayer	BM - P6
7	Shreerang Pande	Topology-driven spatial organization of ring polymers under confinement	BM - P7
8	Garima Rani	Entropic insights on emerging traits from growing bacterial colonies	BM - P8
9	Bincy Lukose	Homo- versus Hetero-Oligomerization Drives the Thermo-Osmo Responsive Behavior of the Enterobacterial Sensory Protein H-NS	BM - P9

10	Sanchari Chakraborty	Understanding Phase Separation Characteristics of Non-Amyloid β -Component of α -Synuclein	BM - P11
11	Saloni Goyal	Conformation and Charge - Density Dependent Phase Separation and Ageing of an Intrinsically Disordered Protein	BM - P12
12	Anirban Paul	Molecular dynamics investigation of the dynamical response of the interfacial waters near DPPC bilayer to Hyaluronic acid	BM - P13
13	Sweta Pradhan	Protein Association Reaction Study on GB1 Protein Dimerization in a Crowded Environment	BM - P14
14	Sahithya Sridharan Iyer	Role of WASP in Arp2/3 complex activation	BM - P15
15	Anagha Manohar	pH mediated aggregation and fibrillization of amyloid beta(16-22)	BM - P17
16	Rajendra Rath	Association of Globular and Intrinsically Disordered Proteins in Particle Based Coarse-grained Models	BM - P18
17	Ashish Joshi	Single-droplet single-molecule FRET and vibrational Raman scattering reveal conformational heterogeneity and shapeshifting within liquid condensates	BM - P19
18	Lisha Arora	Complex coacervation of a prion-like protein and a J-domain protein into multiphasic condensates inhibits the amyloid formation	BM - P20
19	Deepshikha Ghosh	Investigating the Chaperone Mechanism of α -Crystallin in Preventing γ D-Crystallin Aggregation in Cataract Formation	BM - P21
20	Deepshikha Ghosh	Exploring the molecular aspects of α -crystallin's inhibitory role against γ D-crystallin aggregation	BM - P22
21	Anushka Biswas	Predictive Modeling of Biological Enzyme-Substrate Binding: Understanding Conformational Dynamics and External Influences	BM - P23

22	Ajoy Paul	Liquid-liquid phase separation of p53 and its paralogs p63 & p73 in the context of cancer progression.	BM - P25
23	Monika Choudhary	Multicomponent membranes with active recycling: compositional inhomogeneities and morphology	BM - P26
24	Anurag Singh	Amylin modulates the electrical properties of Amyloid- β during its fibril growth	BM - P27
25	Akshay Narayan Sarangi	Impedance spectroscopy revealed the surfactant-driven unfolding and refolding of a globular protein.	BM - P28
26	Harini SureshKumar	Signatures of glassy dynamics in liquid-ordered lipid membrane	BM - P30
27	Mahrukh A Mir	Smearing Technique For Liquid Viscosity Measurement	BM - P31
28	Uttam Kumar	Dynamics of Bacterial Biofilm Growth on Porous Surfaces: Insights from a Three-Phase Model	BM - P32
29	Shovon Swarnakar	Nanoscale Dynamic Interplay of SARS CoV Fusion Peptides and Lipids in Host Cell Entry	BM - P33
30	Nehal Mathur	Pulling Short DNA with Mismatch Base Pairs	BM - P34
31	Rupal Kaushik	Synthesis of highly biocompatible surface-modified MoS ₂ Nanoflowers: unraveling the detailed antibacterial mechanisms	BM - P35
32	Prabhash Kumar	Understanding the role of convective mixing on aerosols deposition in lung acini	BM - P36
33	Omkar S. Deshmukh	Understanding Mucin-Albumin assembly using microrheology	BM - P37
34	Sandeep Parma	PNIPAAm as A Thermosensitive Drug Delivery System for Targeted Cancer Treatment: A Molecular Dynamics Study	BM - P38
35	Bratin Kumar Das	Probing the formation of pre-fibrillar prion peptide oligomer with atomistic molecular dynamics simulation	BM - P39

36	Sesan Nayak	Super-hydrophobic surface assisted micro-droplet drying for aerosol evaporation analysis	BM - P40
37	Semanti Mukherjee	Role of Liquid-liquid Phase Separation in the Regulated Secretory Pathway	BM - P41
38	Sumangal Roychowdhury	Conformational fluctuation can modulate the phase separation of yeast prion protein	BM - P42
39	Tanmoy Pal	Phase Separation of Intrinsically Disordered Proteins in Analytical and Field Theoretic Models	BM - P44
40	Bhukya Vijay Mohan	Force measurements on cells and Near-field optical microscope platform	BM - P45
41	Puchalapalli Saveri	Rheological characterization of bacterial suspensions in plant mucilage	BM - P46
42	Debalina Datta	Phase separation of p53 and its functional implications	BM - P47
43	Anirban Paul	Molecular dynamics investigation of the dynamical response of the interfacial waters near DPPC bilayer to Hyaluronic acid	BM - P48
44	Moumita Sasmal	Biomimicking Of The Natural Mucilage By Pectin-based System	BM - P49
45	Shouvik Manna	Mechanism of nucleation and liquid-to-solid transition for α -synuclein liquid-liquid phase separation	BM - P50

COLLOIDS

ORAL PRESENTATION

COLLOIDS SESSION 1 - 18-12-2023

Time	Speaker	Title	Abstract ID
9:00 AM	Eric Grelet	Decorating Filamentous Viruses: Design & Self-Organization of Virus based Colloidal Molecules	CO-P45
9:30 AM	Sulalit Bandyopadhyay	Coating Hydrophilic and Hydrophobic Iron Oxide Nanoparticles with Polymers using Novel Flash Nanoprecipitation Techniques.	CO-02
10:00 AM	Manisha Jhahria	Activity induced non-monotonic aggregation in a mixture of chemically active and passive particles	CO-01
10:15 AM	Om Prakash Bamboriya	Critical cracking thickness of mixed particles suspension film	CO-P23
11:00 AM	Subramanyan Namboodiri Varanakkottu	Light-controlled patterning of metallic nanoparticles	CO-07
11:30 AM	Ashish Kumar Thokchom	Bioinspired structures via self-assembled of colloidal particles	CO-03
12:00 AM	Ashutosh Shukla	Opto-thermoelectric trapping of fluorescent nanodiamonds	CO-04
12:15 AM	Sonali Kawale	Slow dynamics of a soft glassy colloidal suspension in the presence of probe particles	CO-P38

COLLOIDS SESSION 2 - 19-12-2023

9:00 AM	Rahul Mangal	Pe dependent pair interactions in self-propelled droplets	CO-05
9:30 AM	Prashant Kumar	Hybrid Metamaterials with Controllable Twist	CO-06
10:00 AM	Mamta Yadav	Effective one-component theory for colloidal suspensions	CO-P24
10:15 AM	Soumyajyoti Chatterjee	Particle-Stabilized Microcapsules via Ice Templating	
11:00 AM	H S S Ramakrishna Matte	Solution Processing of Low-dimensional Materials and Applications	CO-08
11:30 AM	Pramod P. Pillai	The Impact of Surface Ligands in Regulating Nanoparticle Chemistry	CO-P46
12:00 AM	Jyoti R. Seth	Engineering Polymers and Colloidal Particles to Control and Tailor Crystal Habit	CO-P47

POSTER PRESENTATION - 19-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Syamjith KS	Role of Softness on transition temperatures for PNIPAM Microgels	CO-P1
2	Aakriti Sharma	Bulk nanobubble generation by gas supersaturation method	CO-P4
3	Barros Indira	Electric Field Induced Self Assembly of Polystyrene Spheres	CO-P7
4	Sayanth RC	Field Induced Self Assembly of Anisotropic Particles	CO-P8

5	Hariharan Sekar	Development of Antibacterial Waterborne Polymeric Coatings using Iodine Complex	CO-P9
6	Goga Ram	Understanding the effect of Methyl group of molecules in polymer solutions	CO-P10
7	Noman Hanif Barbhuiya	Direction-dependent Dynamics of Colloidal Particle Pairs and the Stokes-Einstein Relation in Quasi-Two-Dimensional Fluids	CO-P12
8	Debasish Saha	Work distribution of a colloid in an elongational flow field and under Ornstein-Uhlenbeck noise	CO-P13
9	Rahul Chand	Optothermal Chiral Rotation in a Trap	CO-P19
10	Chaudhary Eksha Rani	Optical and Optothermal forces on Colloids in Evanescently generated Plasmofluidic Field	CO-P20
11	Lokesh Soni	Electrostatic self-assembly of GO-CNT nano-hybrid structures	CO-P21
12	Meenakshi	Long Range Electrostatic Screening in Zwitterionic Liquids	CO-P22
13	Aditi Dahake	Synthesis of monodispersed Polyethylene nanoparticles by microemulsion	CO-P25
14	Salini Kar	Monitoring the MOF synthesis and quality using sessile drop drying phenomena	CO-P26
15	Farida Batool	Phase Separation in Binary Strongly Coupled Plasma	CO-P27
16	Rajeev Reddy Sadu	Dynamics Of Particles In Line Plumes	CO-P29

17	Neethu Thomas	Tailoring the dimensions of silver nanowires (Ag NW) by modifying the polyol synthesis and the fabrication of Ag NW-based transparent conducting films	CO-P30
18	Santhra Krishnan P	All-natural Plant-derived Superhydrophobic Wax Coatings	CO-P33
19	Chetteente Meethal Ragisha	Plasmonically controlled patterning of metallic nanoparticles at liquid- liquid interface	CO-P34
20	Sanjib Majumder	Pattern formation in microgel laden sessile droplets: Effect of substrate temperature	CO-P35
21	Sk Jasim	Coffee stain morphologies obtained by drying suspension droplets of gold nanorods of different aspect ratios	CO-P36
22	Ejaz Ashraf	Non-linear fluctuating hydrodynamics of a colloid near a plane surface	CO-P37
23	Sankar Hariharan	Quantitative Characterization of Deposit Patterns Formed from Dried Dispersion Drops	CO-P39
24	Simmie Jaglan	Reversibly Aggregating Binary Colloidal System	CO-P40
25	Prathyusha S Nair	Enhancement in the transport properties of a tilted rough ratchet	CO-P42
26	Ramana Patibandla	Sphere motion in a viscous, stratified fluid	CO-P44
27	Santosh Vasant Daware	Synthesis and Characterization of 2D Colloidal Sheets	CO-P48

EARLY CAREER RESEARCHERS

ORAL PRESENTATION

EARLY CAREER RESEARCHERS - 19-12-2023

Time	Speaker	Title	Abstract ID
02:30 PM	Rishabh V More	Micromechanics of particulate soft matter: the governing role of interparticle interactions	EC-03
03:00 PM	Swati Mehta	Unveiling the Self-Pinning Driven Jamming Behavior of Colloids during Droplet Drying	EC-01
05:30 PM	Akhil Varma	Morphogenesis of active fluid surfaces: a mechano-chemical model	EC-04
06:00 PM	Shibananda Das	Sequence-specific folding of active macromolecules	EC-05
06:30 PM	Praneet Prakash	Spatio-temporal dynamics of nutrient exchanges	EC-06

POSTER PRESENTATION - 19-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Kandalam Ravitheja	Role of Contact Inhibition of Locomotion in collective behavior and de-mixing of cell types	EC - P1
2	Dipanjan Mandal	Nucleation in the presence of static/dynamic impurities with varying interaction strength in an Ising lattice-gas model of solute precipitation	EC - P2
3	Afroz Momin	A Computational Study on the Smooth-Wall, Radial Gravity Phenomenon in Granular Flow Through a Wedge-Shaped Hopper	EC - P3
4	Sunil Kumar	Effect of Coarse Particle Shape on Mixing and Segregation Dynamics: Insights from Experimental and Discrete Element Method Analyses	EC - P4

5	Pawan K Pandey	Drug Delivery from Ocular Implant: An In-silico Investigation	EC - P5
6	Divya Jayoti	Functionally graded shape reprogrammable liquid crystal elastomers films for artificial gripper applications	EC - P6

EMULSIONS AND FOAMS

ORAL PRESENTATION

EMULSIONS AND FOAMS - 18-12-2023

Time	Speaker	Title	Abstract ID
2:30 PM	Emmanouil Chatzigiannikis	The effect of interfacial stresses on film drainage	EF-O2
3:00 PM	John Crocker	TBD	EF-O3
3:30 PM	Soumodeep Biswas	Light-induced destabilization of oil-in-water emulsions using light-active Bolaform surfactants	EF-P7
4:30 PM	Venkateshwar Dugyala	Novel way to design Pickering emulsions with partial droplet coverage	EF-O1
5:00 PM	Chandra Shekhar	A simple pathway to fabricate water-in-water emulsion-filled gels	EF-O5
5:30 PM	Hemant Kumar	Controlled Phase Inversion of Pickering Emulsions via Particle Surface Engineering	EF-P6
5:45 PM	TBD		

POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Rahul Painuly	Drop Interfaces Interaction Under Application of Electric Field: Effects of Surfactants and Polymer	EF-P1
2	Madhavi Tiwari	Preparation of Pickering Double Emulsions by In-situ Particle Surface Modification	EF-P3
3	Senthan Pugalneelam Parameswaran	Evaporative Phase Separation in Polymer Micro-droplets with Confinement and Internal Flow	EF-P4
4	Guguloth Naresh	Numerical Simulations of Instability in Pickering Emulsions Caused by a Mutually Soluble Solute	EF-P5

5	Anjali Kumari	Breaking the Mold: A Novel Approach to Evolving Drop Breakup Functions and Rates Based on Multi-Physics Mechanisms in High Shear Mixers	EF-P8
6	Roopesh P	Oil in water Emulsion Stabilized by HEUR Polymers	EF-P9

FOOD SCIENCE

ORAL PRESENTATION

FOOD SCIENCE - 20-12-2023

Time	Speaker	Title	Abstract ID
8:30 AM	P. Prabhasankar	Application of Empirical and Fundamental Rheology to understand the wheat flour and non-wheat flour Dough properties and its relationship with end products	FS-01
9:00 AM	Trivikram Reddy	Food science – A soft matter perspective	FS-02
9:30 AM	Gurmeet Singh	Application of twin-screw extruder for protein texturization: Interplay of system & process parameters on product properties	FS-03
10:30 AM	Rekha S. Singhal	Emerging trends on formulations of bigels, their rheological characterization and correlation to food applications	FS-04
11:00 AM	KSMS Raghavarao	Recent Research Developments & Future directions in Food Processing	FS-05
11:30 AM	Chirasmita Panigrahi	Rheological study of cereal based fermented food suspensions	FS-06

POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Somnath Basak	Rheological characterization of composite hydrogels fabricated from pea protein and konjac glucomannan	FS-P1
2	M. Saravanan	A bottom-up understanding of the rheological and microstructural characteristics of edible oleogels	FS-P2

3	Sree Nivetha. B. B	Formation and characterization of polysaccharide-based oleogel derived from emulsion: A Rheological Investigation	FS-P3
4	Jayaraman K	Study on Evaporation of Liquid Sugarcane Juice Droplet for Granular Jagerry Production	FS-P4
5	Abdul Mateen	Unveiling Rheological Transformations in High Moisture Extrusion: Bridging Insights from Raw Material to Extruded Meat Analogues	FS-P5
6	Manoj Mathpati	Low Moisture Extrusion for Textured Vegetable Protein (TVP) Production from Soy and Pea Protein Isolates: System Response, Expansion Ratio and Rehydration Properties	FS-P6

GELS AND GLASSES

ORAL PRESENTATION

GELS AND GLASSES SESSION 1 - 18-12-2023

Time	Speaker	Title	Abstract ID
9:00 AM	Srikanth Sastry	Low temperature dynamics in a model glass former	GG - 07
9:30 AM	Murali Krishnan	Fatigue Damage of Bituminous Binders using Large Amplitude Oscillatory Shear	GG - 012
10:00 AM	Mounika Gosika	On the structure-viscoelasticity relationship of reversible polymer networks	GG - 08
11:00 AM	Smarajit Karmakar	Dramatic growth of Dynamic and Static correlations in Active Glass-forming Liquids as probed via rod-like probe particles	GG - 09
11:30 AM	Ankit Singh	Dynamics and structural ordering in binary colloidal-solvent mixtures of glass-formers	GG - 03
12:00 PM	Sayantan Majumdar	Inter-particle adhesion induced strong mechanical memory in a dense granular suspension	GG - 02

GELS AND GLASSES SESSION 2 - 19-12-2023

9:00 AM	Yogesh Joshi	A Curious Case of the Thixotropic Timescale	GG - 01
9:30 AM	Harish Srinivasan	Nature of universal subdiffusion crossover in molecular glass-formers	GG - 013
10:00 AM	Santosh Mogurampelly	Ion diffusion, ion-pair relaxations and viscosity of pectin-[BMIM][PF6] electrolytes	GG - 06
11:00 AM	Dimitris Vlassopoulos	Rheology modification with polymeric loops	GG - 014
11:30 AM	Bhaskar Sen Gupta	Dynamics of supercooled liquid in complex confined geometry	GG - 05

12:00 PM	Prachi Thareja	Applications of κ -carrageenan hydrogels strengthened by mixed salt for 3D printing and water remediation	GG - O11
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POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Saumya Suvarna	Transport properties of a fluid intercalating via Mie potential	GG - P1
2	Meenakshi L	Characteristics and correlations of nonaffine particle displacements in the plastic deformation of athermal amorphous materials	GG - P2
3	Hema Teherpuria	Effects of Salt Concentration on EC-LiTFSI Electrolytes	GG - P3
4	Sipra Mohapatra	Ion Transport Mechanisms in PEO-SN-LiTFSI Electrolytes	GG - P4
5	Hitesh Yadav	Molecular dynamics simulations of the effect of fluorinated ethylene carbonate on sodium ion battery electrolytes	GG - P5
6	Sruthi H	New Approach to Prepare FmKP based Supramolecular Organo-Gels	GG - P7

GRANULAR MATERIALS

ORAL PRESENTATION

GRANULAR MATERIALS SESSION 1 - 18-12-2023

Time	Speaker	Title	Abstract ID
2:30 PM	Shankar Ghosh	Self-organization of granular systems under chiral driving	GM - 08
3:00 PM	Tejas Murthy	Mechanical behaviour of cohesive frictional granular materials	GM - 06
3:30 PM	Alok Tiwari	Determination of rotational coefficient of restitution from DEM simulation of vibro-fluidized particles	GM - 04
3:45 PM	Manish Mandal	Novel energy dissipation mechanism in granular materials under high speed impact	GM - 05
4:30 PM	V Kumaran	Steady and oscillatory states in the granular flow through a vertical channel	GM - 01
5:00 PM	Anurag Tripathi	Role of elasticity and cohesion for accurate and efficient simulations of cohesive granular materials	GM - P17
5:30 PM	Sukhada Bhure	Spherical tracer induced clogging behavior of aspherical particles in a silo	GM - 02
5:45 PM	Sujith Reddy Jaggannagari	A numerical study for multi-layer powder spreading in metal additive manufacturing	GM - 03

POSTER PRESENTATION - 20-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Tarun De	Flow kinematics and stress comparison of resolved and multi-level coarse-grained DEM simulations	GM - P1
2	Vighnesh Prasad	Influence of rheology on the pipeline transportation of mineral slurries	GM - P2

3	Kiran Kumari	Assessment of Segregation for Non-spherical Cohesive Particles using DEM	GM - P3
4	Deepak Pawar	Granular Morphology Matters: Deformation Mechanics of Lithium-Based Pebbles under Triaxial Compression	GM - P4
5	Ravindra Ghodake	Flow behavior of lubricated granular media across various flow configurations	GM - P5
6	Md Shahid Ansari	Flow characterization of poly-dispersed granules under the influence of external mechanical vibration for additive manufacturing applications	GM - P6
7	Afroz Momin	A Computational Study on the Smooth-Wall, Radial Gravity Phenomenon in Granular Flow Through a Wedge-Shaped Hopper	GM - P7
8	Sri Mourya Melam	Two-phase approach for laminar shearing beds using kinetic theory of granular flows	GM - P8
9	Neiladri Sekhar Ray	Kinematics of Granular Surface Flow on a Heap	GM - P9
10	Sarwar Zaheer	Large Scale Industrial Hopper Flow Simulation using coarse-grained DEM	GM - P10
11	Soniya Kumawat	Theory for combined effect of size and density segregation of binary granular mixtures	GM - P11
12	Suchintika Chanda	Continuum modeling of granular flow evolution using OpenFOAM	GM - P12
13	Sourav Ganguli	Turbulence modification of particle-laden flow in horizontal rectangular duct	GM - P13
14	Alok Tiwari	DEM analysis of inelastic rough spherical particles in a vibro-fluidised	GM - P14
15	Mohd Ilyas Bhat	2D DEM study of force transmission during in-plane cutting of flexible granular chains	GM - P15
16	Sanyogita	Dynamics of sand pile	GM - P16

INDUSTRIAL APPLICATIONS

ORAL PRESENTATION

INDUSTRIAL APPLICATIONS - 20-12-2023

Time	Speaker	Title	Abstract ID
8:30 AM	Saswati Pujari	Impact of surfactant chain length and micellization on antimicrobial activity of soap	IA-01
9:00 AM	Kiran Iyer	Rapid Development of Nirmatrelvir Tablets using Digital Design and Predictive Science	IA-02
9:30 AM	Anwasha Mohanty	Experimental investigations to study the drug release from bilayer osmotic tablets	IA-03
9:45 AM	Ashok Yacham	Role of organic ligands on the gas adsorption and separation in Zeolitic Imidazolate Frameworks	IA-04
10:30 AM	Girish Rao	Shell Bitumen: Innovating from the Refinery to the Road	IA-05
11:00 AM	Dhiraj Kumar	Application of Analytical Solution of Free Radical Polymerization With AK Method For Semi-Batch Operations	IA-06
11:45 PM	Rakesh Gupta	Leveraging Bio Digital-Twins for Design and Testing of Formulations and Devices	IA-07

POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Priya Koundle	Effective degradation of dark green rit dye using ozone nanobubbles	IA-P1
2	Bhawana Singh	Predicting Drug Release in Bilayer Osmotic Tablets: Model Development and Experimental Validation	IA-P2
3	Anomitra Saha	Acoustophoresis assisted Fluid Jet Polishing	IA - P5
4	Binu Varghese	Nanobubble modulated Amino acid Adsorption at Graphene Surface	IA-P8

MULTIPHASE FLOWS

ORAL PRESENTATION

MULTIPHASE FLOWS - 20-12-2023

Time	Speaker	Title	Abstract ID
8:30 AM	S. Balachandar	Physics-Inspired Machine Learning for Multiphase Flow	MF-05
9:00 AM	Shauvik De	Complex flow behaviors of complex fluids in porous medium for applications in Energy industry	MF-06
9:30 AM	Venkat Gundabala	Microfluidics Route to Generation of Biomaterials	MF-03
10:30 AM	Ganesh Subramanian	An altered streamline topology allows deformed drops to transport mass faster than spherical ones	MF-01
11:00 AM	Dipankar Bandyopadhyay	Self-organized Microrheology of the Suspended Particles at the Mesoscale	MF-04
11:30 AM	Partha Sarathi Goswami	Dynamics of turbulence suspensions with inertial particles	MF-02

POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Pavan Kumar Singeetham	Inertio-elastic orientation dynamics of anisotropic particles in linear shearing flows	MF-P1
2	Sourabh Das	Deterministic lateral displacement for precise microfluidic droplet sorting	MF-P2
3	Abhiram Ramachandran	Droplet Impact on Drone Propellers	MF-P3
4	Krishnaveni Thota	Numerical analysis of the migration of a particle in a symmetric serpentine microchannel in inertial microfluidics	MF-P4

5	Shuvalaxmi Das	Effect of size-disparity on the structure and dynamics of a Lennard-Jones mixture with random interactions between the particles	MF-P5
6	Deekshith I. Poojary	Influence of synthetic inflow perturbations on the dispersion characteristics of particles over a normal flat plate	MF-P6
7	Saini Jatin Rao	Dispersion size measurement in multiphase systems using Depth from Defocus technique	MF-P7
8	Supriya Karmakar	Long- and short-time stability analyses of plane Poiseuille flow in an anisotropic porous channel	MF-P8
9	Anushka Herale	A minimal continuum model of clogging in spatio-temporally varying channels	MF-P9
10	Karthick Raj .S	Modeling droplet decisions in 1D microfluidic networks	MF-P10
11	R.Kumar	Elastohydrodynamics Of Faraday Instability	MF-P11
12	Lopamudra Palodhi	Thermodynamic Effects on Viscous Fingering	MF-P12
13	Harishankar Muppirala	Hydrodynamic stability of gravity waves on a free surface: Effect of curvature	MF-P13
14	A.Subramanian	Nonlinear evolution of a Dewetting bilayer thin film on a soft-gel layer	MF-P14
15	Daniya Davis	Phase separation of binary liquid confined inside uniform pore with wetting effect	MF-P15
16	Garima Singh	Film Dynamics Over a Topographical Surface Using Lattice Boltzmann Method	MF-P16
17	Anu V. S. Nath	Clustering and chaotic motion of inertial particles in an isolated vortex	MF-P17
18	Parameshwaran A	Effect of Vicsek like activity on the Vapour liquid phase separation inside cylindrical nanopore	MF-P18

19	Jagadeesh Korukonda	Enhancement of Chemical Reactions using Droplet-Based Microfluidics: A Study on Contact Modes and Reaction Kinetics	MF-P19
20	Shravya Gundavarapu	Evidence of an inertialess Kapitza instability due to viscosity stratification	MF-P20
21	Lokendra Mohan Sharma	Quantitative measurements of immiscible oil jet	MF-P21
22	Sajal Wankhede	Weakly nonlinear analysis of flow driven morphological instability in porous anodic oxides	MF-P22
23	Anurag Pant	Vorticity generation in miscible, volatile film spreading	MF-P23
24	Rajeev Reddy Sadu	Dynamics Of Particles In Line Plumes	MF-P24
25	Charul Gupta	Determining the flow fields near a moving contact line: comparison between experiments and theory	MF-P25
26	Shubham N. Lanjewar	Behavior of Confined Gas Bubble and Liquid Droplet in Liquid Co-Flow.	MF-P26
27	Vivek Karma	An Experimental Study of Streaming Patterns Around an Acoustically Oscillating Single Air Bubble in Water	MF-P27
28	Arunachalam S	Drop breakage using inserts in two-phase systems	MF-P28
29	V.S. Anvesh Sangadi	Lightning Stokes Solver for wedge flows: application to moving contact lines	MF-P29
30	Arasakumaran K	Modelling the simultaneous entrainment of two liquids with slip	MF-P30
31	Ghanashyam K. C	Development of an electrohydrodynamic solver for polymer electrospinning and analytic modelling of an electrified jet subjected to insoluble surfactants.	MF-P31
32	Tejasvi Hegde, Rishabh Sharma	Experimental evidence of a slip near a moving contact line	MF-P32
33	Himanshu Mishra	Orientation dynamics of a settling spheroid in a simple shear flow	MF-P33

34	Namratha Kulkarni	Theoretical modelling of dark fringe formation during colorimetric detection of Pb using NaRh assay	MF-P34
35	Navin Kumar Chandra	Bag breakup of a polymeric droplet in a continuous flow air stream	MF-P35
36	Azim Memon	Simulation of Fluid-Particle suspension using the Immersed Boundary Method	MF-P37
37	Vaibhav Raj Singh Parmar	Stiffness-induced clustering of amphiphilic particles at air-water interface during drying	MF-P38
38	Kunal Kailash Sharma	Investigation of spin number and its influence on the cut-size in a spiral air jet mill geometry.	MF-P39
39	Ainkara Karthiga R	Effect of non-spherical drag on particle dynamics in fluidized bed - A CFD approach	MF-P40
40	Pallavi Katre	Ring formation in the Newtonian rod-climbing effect	MF-P41
41	Syed Shuja Hasan Zaidi	Surface-directed Spinodal Decomposition on chemically patterned substrate	MF-P42
42	Pramodt Srinivasula	Unexpected differences in the electrohydrodynamic oscillations of charged and polarized anchored water droplets	MF-P43
43	Shambhu Anil	Modelling dynamics of an Ultrasound Contrast Agent near a deformable wall using Kelvin Impulse	MF-P44
44	Malyadeep Bhattacharya	Improved surface tension force scheme for two-phase flow in diffuse interface framework	MF-P45
45	Swarnaditya Hazra	Entrapment of air-borne particles by pulmonary mucus films	MF-P46
46	Amitesh Kumar Chaudhary	Extensional rheology of polymer solutions for spray application	MF-P47

POLYMER AND HYDROGELS

ORAL PRESENTATION

POLYMERS AND HYDROGELS SESSION 1 - 18-12-2023

Time	Speaker	Title	Abstract ID
2:30 PM	Bhanu Nandan	Self-Assembly in Block Copolymer/Nanoparticle Mixtures	PH-01
3:00 PM	Anindita Das	A Multifaceted Transesterification Route to Functional Polyesters	PH-02
3:30 PM	Parbati Biswas	Intrinsic Viscosity and Rheology of Ring Polymers	PH-03
4:30 PM	Swaminath Bharadwaj	Solvation Shell Thermodynamics of Extended Hydrophobic Solutes	PH-04
5:00 PM	Ashok Kumar Dasmahapatra	Development of Conducting Polymer Nanocomposites for Energy Harvesting Applications	PH-05
5:30 PM	Aritra Santra	Universality of dilute ring polymer solutions	PH-06

POLYMERS AND HYDROGELS SESSION 2 - 19-12-2023

Time	Speaker	Title	Abstract ID
2:30 PM	Christopher Durning	Morphological Control During Polymer Crystallization	PH-07
3:00 PM	Lenin S. Shagolsem	Collapse transition in a model heteropolymer: Effect of chain topology	PH-08
3:30 PM	Shivalika Sharma	Low pH self-organisation of similarly charged Polyethylenimine chains into light-responsive microstructures.	PH-P33
3:45 PM	Ashima Choudhury	Pattern formation in electro-responsive polymer ionic liquid blends	PH-P21
5:30 PM	Rajdip Bandyopadhyaya	Local Drug Delivery to Pancreatic Tumor by Film and Gel-based Polymeric Implants	PH-010

6:00 PM	Arindam Kundagram	Polymer complexation: Theory and application to the thermodynamics of complexation between highly charged disordered proteins	PH-011
6:30 PM	Somesh Kurahatti	Simulation of Polyelectrolyte hydrogel Network with various charge densities and network defects	PH-012

POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Banalata Kaibarta	Nanoclay based hierarchical mesoporous polyaniline/acetylene black nanocomposites for high energy density supercapacitors	PH-P1
2	Siddharth Saraswati	Structure-Property of Epoxy Blends in Electronic Packaging: Impact of Heating Rate	PH-P3
3	Prabeen Kumar Pattnayak	Diffusion of star polymers in dilute solutions: role of shape anisotropy	PH-P4
4	Devendra Kumar Verma	Phase separation kinetics of miktoarm star polymer in solvent: A DPD simulation study	PH-P5
5	Mounika Gosika	On the structure-viscoelasticity relationship of reversible polymer networks	PH-P8
6	Imran Hussain	Benzene tetracarboxylic acid doped polyaniline functionalized with graphene oxide: morphological and electrochemical characterization	PH-P9
7	Jagat Singh	Self-assembly of A2B Miktoarm Star Block Copolymer under Cylindrical and Spherical Confinements	PH-P12
8	Somtirtha Santra	Role of sequence on the phase behavior of thermoresponsive copolymers	PH-P13
9	Aathira Murali	Interaction of chitosan with water vapor: An experimental & simulation study.	PH-P14

10	Manish Dwivedi	Polymer translocation : Effects of confinement	PH-P15
11	Vishal Kumar	Combined Electromechanically Driven Pulsating Flow of Non-Linear Viscoelastic Fluids In Narrow Confinements	PH-P16
12	Viney Ghai	Role of Rheology on the Magnetic Field Orientation of Graphene Nanosheets in Polymers	PH-P17
13	Tushar Mahendrakar	Comparisons between Free Monomer Clusters and Polymer Globules by using Molecular Simulations	PH-P18
14	Sateesh Kumar Gupta	Influence of Ca ²⁺ Ions on Rheological and Dielectric Behavior of Sodium Carboxymethyl Cellulose (NaCMC) and Esterified Hydrogels	PH-P19
15	Shinjini Das	Salt-dependent swelling kinetics of polyelectrolyte gels	PH-P20
16	Ashima Choudhury	Pattern formation in electro-responsive polymer ionic liquid blends	PH-P21
17	Vrinda Garg	Dynamics of interior loop formation in polymer chains: effect of tail length and confinement	PH-P22
18	Sumitra Rudra	Thermal melting and force induced unzipping of DNA hairpin: Unfolding pathways and phase diagrams	PH-P23
19	Sayani Karmakar	Predicting Phase Behavior of Polymer-Nanorod Composites Via Coarse-Grained Molecular Dynamics Simulations	PH-P24
20	Swasthika Arunachalam	Investigation of cone shape parameters in polymer electrospinning via in situ visualization: towards precise control over fiber diameter	PH-P26
21	Anagha C R	Improving functional Properties of PNIPAM hydrogel using extracted seed mucilage of Salvia Hispanica	PH-P27

22	Shakshi Gupta	Novel Evaporation Kinetics of a Droplet Containing Polymer	PH-P28
23	Manoj Kumar Maurya	Tuning Thermal conductivity in bottlebrushes: A molecular dynamics simulation approach	PH-P29
24	Vivek Sharma	Polyethylene grafted sheet-like silsesquioxane nanocomposites with unprecedented adhesion to polar substrates	PH-P30
25	Krithika Bhaskaran	Rheological studies on seed mucilage layers	PH-P31
26	Projesh Kumar Roy	Soft and adhesive alginate hydrogel: Microstructure from MD simulations	PH-P32
27	Shivalika Sharma	Low pH self-organisation of similarly charged Polyethylenimine chains into light-responsive microstructures.	PH-P33
28	Amit Yadav	Spreading and Evaporation of a Polymeric Droplet Impacting on Nonporous Substrate	PH-P34
29	BALAAJI M	Particle image velocimetry as a tool to investigate lubricating effect of root mucilage	PH-P35
30	Sharanya Alluri	Predicting Mechanical Properties of Biodegradable Copolymers using Molecular Dynamics Simulations	PH-P36
31	Ravi Kumar Pujala	Novel composite hydrogels with enhanced thermal stability and injectability	PH-P37
32	Keerthi Radhakrishnan	Adsorption of pH responsive ampholytic ions into a weak PE brush: A simulation study	PH-P39
33	Vijith S	Effect of Degree of Confinement on Mechanical Properties of Polymers Through Free Volume.	PH-P40
34	Smruti Parimita	Solvent-assisted ink-based 3D printing of free-form structures via phase separation	PH-P41

RESPONSIVE SOFT MATTER

ORAL PRESENTATION

RESPONSIVE SOFT MATTER - 18-12-2023

Time	Speaker	Title	Abstract ID
9:00 AM	Pijush Ghosh	pH Responsive Actuators: Controlling Actuation Direction & Printing	RS-04
9:30 AM	Umadevi	Liquid crystal elastomer-based soft actuators	RS-01
10:00 AM	Himangsu Bhaumik	Material Training through Mechanical Regularization	RS-03
11:00 AM	Apala Majumdar	Tunable Textures in Cholesteric Liquid Crystal Shells for Sensing and Other Applications	RS-05
11:30 AM	Raj Kumar Roy	Understanding the role of polyproline's secondary structures in thermal phase transitions and bulk phase separations	RS-06
12:00 PM	Subrata Chattopadhyay	Reactive stimuli-responsive poly(aminoamide) microgels as a platform for diverse sensing applications	RS-02

POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Ashish Kumar Singh	A DPD study on the impact of external shear due to moving rigid walls, on the phase separation dynamics of polymer fluids	RS-P1
2	Kushal Bagchi	Preparing functional soft materials through the directed self-assembly of complex liquid crystals	RS-P2
3	Saikat Das	Topological defects and electrokinetics of emulsion droplets in nematic liquid crystals	RS-P3

4	Rahul Karmakar	Hot crystals of thermo-responsive particles with temperature dependent diameter in the presence of a temperature gradient	RS-P4
5	Kalyani Agarwal	Nucleation of Bulk Nanobubbles During Oscillating Pressure Field	RS-P5
6	Archana S	Transport of magnetodielectric particle in a nematic liquid crystal under transverse electromagnetic fields	RS-P6
7	Satyendra Rajput	Ethylene glycol energetically destabilizes aggregates of pseudoisocyanine dyestuffs at crowded concentrations	RS-P7
8	Vipin Kumar	Controlled actuation of gelatin based soft actuators in response to multiple vapor	RS-P10
9	Sarah Ahmad Siraj	Vapor-responsive tunable actuation of silk films: Effect of secondary structures	RS-P11
10	Abinash Barthakur		RS-P12
11	Rajesh Pavan Pothukuchi	Understanding The Role Of Shape-Dependent Anisotropy Of Electrostatically Driven Nanoparticle Self-Assembly	RS-P13
12	Akash Patil	Coupled Photo-Mechanics of Nematic Liquid Crystal Elastomers - An ABAQUS UEL Implementation	RS-P14
13	Prasoon Rani	Effect of Counterions on Polyelectrolytes: A Molecular Dynamics Simulation Study	RS-P15
14	Surbhi Khewle	Role of interfacial properties on the mechanical deformation in light-activated polymer blends	RS-P16
15	Neeraj C. S.	Multi-dye-based light/thermal responsive liquid crystal polymer films	RS-P17
16	Sanghamitra Debta	Numerical Investigation of Coupled Swelling-Deformation Behavior of Functionally Graded Hydrogel Thin Films	RS-P18

17	Sachin Singh Rajput	Computational validation of stimulus-responsive anisotropic PVDF film	RS-P19
18	P.S. Patwal	Buoyancy-driven microgel oscillator: Beating and Bouncing dynamics	RS-P20
19	Sayantana Chanda	Studying the effect on yielding behaviour of dense suspensions of thermo-responsive PNIPAM particles by tuning inter-particle interactions	RS-P21

RHEOLOGY AND CONSTITUTIVE MODELLING

ORAL PRESENTATION

RHEOLOGY AND CONSTITUTIVE MODELLING -20-12-2023

Time	Speaker	Title	Abstract ID
2:00 PM	Ravi Kumar Pujala	Novel composite hydrogels with enhanced thermal stability and injectibility	RC-01
2:30 PM	V. Shanker	Role of finite extensibility on the center-mode instability in viscoelastic channel flow	RC-02
3:00 PM	Naveena C S	The linear and nonlinear rheological characteristics of the biofilm formed by Mycobacterium Smegmatis	RC-03
3:15 PM	Puchalapalli Saveri	Tuning the non-linear rheological response of low molecular weight supramolecular gels	RC-04
4:00 PM	Luca Cipelletti	A unified state diagram for the yielding transition of soft colloids	RC-05
4:30 PM	Mahesh Ganesan	Fractional calculus derived empirical predictive relations for the linear viscoelasticity of semi-dilute polymer solutions	RC-06
5:00 PM	Balaji Iyer	Modeling Local and Collective Dynamics in Polymer Grafted Nanoparticle Systems	RC-07

POSTER PRESENTATION - 19-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Shivi Garg	Single contaminated droplet microextraction in a yield-stress fluid	RC - P1
2	Anaswara Das K	Non-equilibrium dielectric relaxation of a nematic liquid crystal	RC - P2
3	Sachin M B Gautham	Non-Linear Rheology of Polymer Grafted Nanoparticle Solutions	RC - P3
4	Anant Chauhan	Effect of geometric disorder on chaotic viscoelastic porous media flows	RC - P4
5	Surya Phani Tej Pulakhandam	Purely Elastic Center mode Instability in Dean Flow	RC - P5
6	Shailendra Kumar Yadav	Elastic center-mode instability in viscoelastic plane Couette-Poiseuille flow	RC - P9
7	Vivek Kumar	Rheological Behavior of Colloidal Silica Gel	RC - P14
8	Naved Khan	Fractional calculus derived empirical predictive relations for the linear viscoelasticity of semi-dilute polymer solutions	RC - P15
9	Naveen Kumar Agrawal	Novel Periodic Shear Protocols: Understanding Rheology and RIT	RC - P16
10	Abhishek Ghadai	Flow around a local probe driven in wormlike micelles: origin of flow instabilities	RC - P17
11	Gunjan Sharma	Unveiling the enhanced magnetorheo-transport dynamics in magnetic ionic liquid	RC - P18

12	Raviteja Miriyala	First normal stress differences in TEVP fluids	RC - P19
13	Faraz A. Burni	An organogel programmed to spontaneously degrade: How a breakthrough in rheology can enhance oil production	RC - P20
14	Ishu Chaudhary	Insights on Slip-layer Dynamics Using Electrorheology	RC - P21
15	Saurabh Maurya	Numerical simulations for electro-osmotic flow of PTT fluids in diverging microchannel	RC - P22
16	Sankata Tiwari	Rheological behaviour of Aqueous alumina suspension for Direct Ink writing process	RC - P23
17	Isha Misra	Dynamics of spherical particles in the presence of shear and oscillating magnetic field	RC - P24
18	Anupama Gannavarapu	Effects of local incompressibility on the rheology of composite biopolymer networks	RC - P26
19	Shrajesh Patel	Physical Aging Behavior of Aqueous Solution of Pluronic F127	RC-P27
20	Catherine Sanchana	Use of multi-wave rheological technique to characterise bitumen at low	RC-P28
21	Greena Maria Sunny	Influence of Frequency and Temperature on Warping Stress in Bituminous Mixture	RC-P29
22	Thirumalaven katesh Medem	Apparent viscosity and shear rate dependency characterization of reclaimed asphalt pavement (RAP) binders	RC-P30
23	Atanu Behera	Investigation of the Various Relaxation Modes for a Class of Bituminous Mixtures	RC-31

24	L. Abinaya	On the Arrhenius response of aged bituminous binders	RC-32
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SURFACTANTS AND MEMBRANES

ORAL PRESENTATION

SURFACTANT AND MEMBRANES - 20-12-2023

Time	Speaker	Title	Abstract ID
2:00 PM	Srinivasa Raghavan	Extending self-assembly beyond water: Wormlike micelles and vesicles in polar solvents at sub-zero temperatures	SM- 06
2:30 PM	Samapika Sahu	Unveiling Guest Molecule induced Alterations in model membranes	SM - 01
3:00 PM	Hirak Chakraborty	Protein machines and lipid assemblies: interdependence in membrane fusion	SM - 04
4:00 PM	Sajal Kumar Ghosh	Assembling of DNA macromolecules at air-water interface	SM -02
4:30 PM	Durba Sengupta	Interactions of cellular metabolites with membranes	SM-05
5:00 PM	Jyoti Gupta	Unraveling Interactions between Ionic Liquid and DPPC Membrane	SM-P16

POSTER PRESENTATION - 19-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Ajit Seth	Self-assembly of graphene-based nano-materials in and around a lipid film	SM-P1
2	Devansh Kaushik	Modified structure and physical properties of a model lipid membrane caused by an Antidepressant Drug	SM-P3
3	Prashanta Swain	Computational Microscopy of Cyclodextrins - Membrane Interactions	SM-P4
4	Prateek Chowdhury	Influence of SAM Growth on Wetting: Insights from Mass-Transfer Models	SM-P5
5	Renu Saini	Aggregation of chlorophylls on plant thylakoid membranes using coarse-grained simulations	SM-P6

6	Nalinikanta Behera	Electroporated-deformation of vesicles under ms-pulsed electric field	SM-P7
7	Sivadas P	Probing mechanism of membrane activity for small molecule based sequence defined oligomers	SM-P8
8	Vidhya Vijayakumar	Techniques for Low temperature Demulsification of Pickering Emulsion	SM-P9
9	Nithya M	Nisin-lipid bilayer interactions: A study on the kinetics of pore formation in vesicle membrane	SM-P10
10	Kailash Veerappan Uma Kumar	Spreading and Imbibition of Structured fluids on Porous Substrates	SM-P11
11	Rupesh Kumar1	Electrodeformation and dye leakage study of Giant Unilamellar vesicles (GUVs) under DC and AC electric field Pulses	SM-P14
12	D.Mahesh	Structure and Dynamics of Polymer Tethered Nanocomposites in Bulk and Interfaces	SM-P15
13	Md Rashid Ali Faridil	Understanding electrostimulation of neurons without electroporation	SM-P17
14	Manaswini Gowtham V	Interactions between similarly charged surfactants & nanoparticles – effect of size and geometry	SM-P18
15	Chetan TBV	Effect of Dissolved Polymer and Surfactant on the Evaporation of a Liquid Bridge	SM-P19

SUSTAINABILITY

ORAL PRESENTATION

Sustainability - 20-12-2023

Time	Speaker	Title	Abstract ID
2:00 PM	Janani Sampath	Gas transport through amorphous polymer membranes from all-atom molecular dynamics simulations	SU-01
2:30 PM	Thi Vo	Leveraging Stimuli-Responsive and Reconfigurable Block Polymers for Sustainable Materials Design	SU-02
3:00 PM	Santosh Kumar	Flexible Thermoelectric Films Produced via Printing for Energy Harvesting Applications	SU-03
3:15 PM	Sreejith Chakrapani	Production Of Polystyrene Microparticles Using Glass Modular Microfluidic Device (MMFD)	SU-04
4:00 PM	Sanat Kumar	Nanoplastic Formation Mechanisms	SU-05
4:30 PM	Tarak Patra	Modeling Compatibilization of Mixed Plastic Wastes	SU-06
5:00 PM	Guruswamy Kumaraswamy	Unprecedented adhesion of polyethylene-grafted sheetlike silsesquioxanes	SU-07

POSTER PRESENTATION - 18-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Javed Akhtar	Modeling Catalytic Degradation Mechanism of Polymers Using Density Functional Theory	SU-P1
2	Ganesh Kumar Rajahmundry	Predicting Percolation Phase Behaviour of Polymer Electrolytes using Coarse-Grained Molecular Simulation	SU-P3
3	Somas Singh Urikhinbam	Conductivity of a Size Polydispersed Ionic Liquid: A Molecular Dynamics Simulation Study	SU - P4
4	Mantosh Kumar Yadav	Development of Polymer/Composite based Growing Chamber with Controlled Temperature for Soil-less Agritech	SU-P5

TABLE TALKS

TABLE TALK SESSION 1 (19-12-2023)

Time	Speaker	Title	Abstract ID
2.30 PM - 3.30 PM	Mithun Radhakrishna	Investigating the Chaperone Mechanism of α -Crystallin in Preventing γ D-Crystallin Aggregation in Cataract Formation	T1-01
	Satyavrata Samavedi	Designing functional electrospun matrices: from polymer physics to biomedical applications	T1-02
	Athi Naganathan	Proteins, Strings, and Mechanisms	T1-03
	Hamsa Priya	Tracing Solvent Hydrogen Bond Network Reveals Surprising Facts	T1-04
	Sharad Gupta	Homocitrulline-containing peptide amphiphiles: Amyloids or Coacervates?	T1-05

TABLE TALK SESSION 2 (19-12-2023)

Time	Speaker	Title	Abstract ID
2.30 PM - 3.30 PM	Ronald Benjamin	Efficiency of an Active Brownian particle in a ratchet potential	T2-01
	Alan R Jacob	Towards developing sustainable fat substitutes	T2-02
	Parag Ravindran	A discussion on a few models for Thixotropic fluids	T2-03
	Bidisha Sinha	Regulation and role of plasma membrane mechanics in adherent cells	T2-04

	Indranil Saha	The FENE-mode model to accurately predict temporal variations of configuration and stress of polymer chains in solutions	T2-05
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TABLE TALK SESSION 3 (19-12-2023)

Time	Speaker	Title	Abstract ID
5.30 PM - 7.00 PM	Swapna Singha Rabha	Multiphase Flow and Flow in Porous Media for Energy Applications	T3-01
	Harish Dixit	Moving Contact Lines: singularity, flow fields, and new insights from experiments	T3-02
	Anki Reddy Katha	Insights into water-salt dynamics in polyamide and graphene oxide-based membranes and protein-surface interactions via computational approaches	T3-03
	Kiran Raj	Soft matter biomicrofluidics – from mimicking blood flows to cancer drug screening	T3-04
	Gaurav Tomar	Numerical Modeling of Capsules in Microchannel Flows	T3-05
	Himanshu Goyal	Modeling multiphase reactors for clean energy	T3-06

TABLE TALK SESSION 4 (19-12-2023)

Time	Speaker	Title	Abstract ID
	Nirmalya Bachhar	Understanding the effect of Methyl group of molecules in polymer solutions	T4-01

5.30 PM - 7.00 PM	Sivasurender Chandran	Pattern Formation in thin films of evaporating polymeric solutions – an interplay between evaporation and spreading rate	T4-02
	Susy Varughese	-	-
	Deepak Arora	Polymers for Advanced and Sustainable Manufacturing	T3-04
	Omkar Deshmukh	Understanding Mucin-Albumin assembly using microrheology	T3-05
	Kamendra Sharma	Ultra-sensitive protein detection at the aqueous-liquid droplet interface using microfluidic engineering and accoustic patterning	T3-06

THIN FILMS & POLYMER MEMBRANES

ORAL PRESENTATION

THIN FILMS AND POLYMER MEMBRANES - 19-12-2023

Time	Speaker	Title	Abstract ID
9:00 AM	Jaydeep Basu	Enhanced efficiency of water desalination in nanostructured thin-film membranes with polymer grafted nanoparticles	TP-04
9:30 AM	Deepak Kumar	Peeling a thin sheet from a liquid surface	TP - 06
10:00 AM	Simone Napolitano	Equilibration pathways beyond density fluctuations: the Slow Arrhenius Process	TP - 05
11:00 AM	Marcus Mueller	Fabrication of block co-polymer membranes: what can be learned from the coarse grain models?	TP - 01
11:30 AM	Ateeque Malani	Structure of adsorbed water present on thin film mica membranes: effect of exposed ions	TP - P18
12:00 PM	Satish Sukumaran	Using swelling of polymer thin films to investigate the tightly bound layer at a polymer/substrate interface	TP - 03

POSTER PRESENTATION - 19-12-2023

Sl. No	Speaker	Title	Abstract ID
1	Jyothi Priya Sarkar	Role of nanoparticle architecture and polymer-nanoparticle interface in unconventional flow of polystyrene thin films	TP - P1
2	Bharti	Rayleigh-Plateau Instability of a Viscoelastic Layer Coated on a Rigid Cylindrical Fiber	TP - P2
3	Patel YogeshKumar DalpatBhai	Effects of monomer sequence on the gas sorption and diffusion in a copolymer membrane	TP - P3

4	Yogitha Maithani	LIG coated Flexible and Reusable Textile based Dry Electrodes for Biopotential Sensing	TP - P4
5	Mahrukh Arif Mir	Smearing Technique For Liquid Viscosity Measurement	TP - P5
6	Pankaj Mahawar	Viscoelastic Bursting of Spin Coated Polymer Surfaces	TP - P6
7	Moirangthem Prem Meitei	Charged diblock copolymer melts under shear: A molecular dynamics simulation study	TP - P7
8	Shreyanil Bhuyan	Linear stability analysis of a thin film of polar polymer solutions	TP - P8
9	Ashish Biswas	Entropic and Enthalpic effect on interfacial jamming in polymer blend nanocomposite BIJELS	TP - P9
10	Ramya Durga Manga	Numerical study of instability ferrofluid thin film using hybrid lattice Boltzmann method	TP - P10
11	Sonam Zangpho Bhutia	Investigation of Bound Layers in Thin Films of Hydrophilic Polymers and Their Nanocomposites	TP - P11
12	Ratnadeep Samanta	Banana leaf inspired anisotropic slippery surfaces	TP - P12
13	Sudeshna Dhar	Effect of Plasticizer on Dewetting and Crazing Dynamics of Poly(p-tertbutylstyrene) Thin Films	TP - P13
14	Harshit Yadav	Structure and water transport through block copolymers with a sulfonated hydrophilic block	TP - P14
15	Igin Benny Ignatius	The effect of parametric forcing on the supercritical Marangoni instability	TP - P16
16	Chiranjith Majhi	Effects of externally deposited nanoscale heterogeneities in thin polymer films on their interfacial behaviors	TP - P17
17	Shreyank Goel	A reduced-order model for surfactant-laden electrified sessile droplets	