

XXVII International 2025 Congress on Glass

Glass: A Smart and Indispensable Material for Sustainable Society

Organised by





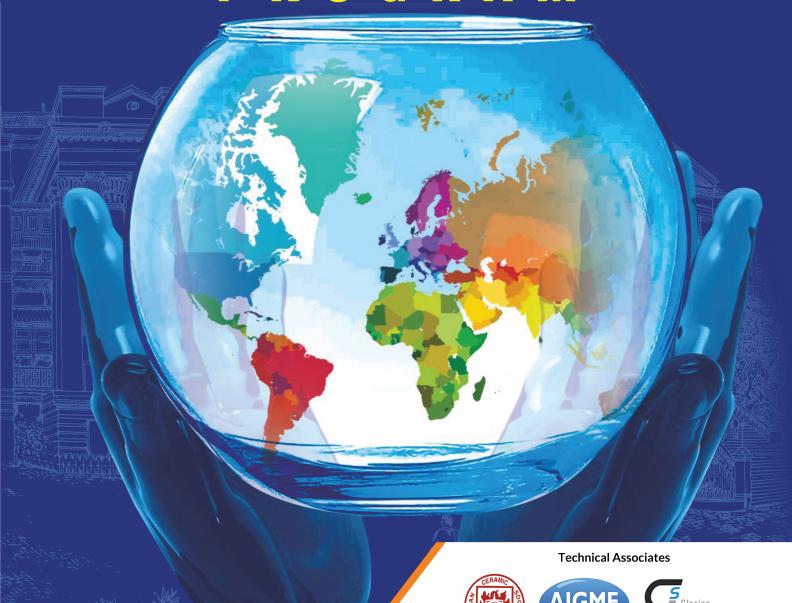
VENUE:

Biswa Bangla Convention Centre, Newtown, Kolkata, West Bengal, India January 20-24, 2025



Society of India

P R O G R A M



Pre-Conference Events January 19, 2025 (Sunday)

Venue: CSIR-Central Glass and Ceramic Research Institute, Kolkata

| Time (hr) | Event | Venue |
|---------------|--|------------------------------|
| 13:00 – 14:00 | Lunch (For Tutorial participants, CTC and TC Members) | K D Sharma Multipurpose Hall |
| 14:00 – 15:30 | Meet the Mentor (for Tutorial Participants) | A P C Roy Seminar Hall |
| 15:30 – 17:15 | Lab visit at CSIR-CGCRI (for Tutorial Participants) | |
| 14:00 – 18:00 | ICG's CTC and TC meetings | Committee Rooms* |

| *Room | allotments | will be do | ne as per t | he Technic | al Commit | tees requii | rements | |
|-------|------------|------------|-------------|------------|-----------|-------------|---------|--|
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XXVII ICG 2025

TECHNICAL PROGRAM

January 20- 24, 2025

Venue: Biswa Bangla Convention Centre, Kolkata

Day 1 : January 20, 2025 (Monday)

| TIME (hr) | EVENT |
|---------------|--|
| 8:00 | Registration 2 nd floor in front of entrance |
| TIME (hr) | EVENT |
| 9:00 - 11:10 | ICG Award Ceremony Main Auditorium (Hall 1) |
| 9:00 - 9:05 | Invocation |
| 9:05 - 9:15 | Welcome Address by Dr. Sitendu Mandal, Conference President, ICG 2025 and Chief |
| | Scientist, CSIR-CGCRI, Kolkata, India |
| 9:15 – 9:25 | Address by Prof. Hiroyuki Inoue President, International Commission on Glass and |
| | Professor, University of Tokyo, Tokyo, Japan |
| 9:25 – 9:32 | Address by Dr. K. Annapurna, Chair, Technical Programme, ICG 2025, Chief Scientist, |
| | CSIR-CGCRI, Kolkata, India |
| 9:32 – 9:39 | Address by Prof. Reinhart Conradt, Immediate Past President, International Commission |
| | on Glass and Uniglass AC GmbH, Aachen, Germany |
| 9:39 – 9:46 | Address by Prof. Arun Varshneya , President, Society of Glass Technology & President, |
| | M/s Saxon Glass Technologies, Alfred, USA |
| 9:46 – 9:53 | Address by Prof. Manoj Choudhary, Former President, ICG and Adjunct Professor, The |
| | Ohio State University, Columbus, USA |
| 9:53 – 10:00 | Address by Prof. Alicia Duran, Former President, ICG and Research Professor CSIC, |
| | Instituto de Cerámica y Vidrio, Madrid, Spain |
| 10:00 - 11:10 | ICG Awards 2025 presentation and Award Lectures: |
| | 10:00 – 10:20 ICG President's Award |
| | Awardees : Edgar Dutra Zanotto Kathleen Richardson |
| | Lili Hu |
| | Tsutomu Minami |
| | 10:20 – 10:25 ICG V. Gottardi Prize |
| | Awardee : Thomas Bennett |
| | 10:25 – 10:35 ICG W.E.S. Turner Award |
| | Awardee : Massimo Guglielmi |
| | Peggy Georges |
| | 10:35 – 10:40 Woldemar A. Weyl Award |
| | Awardee: Maxime Cavillon |
| | 10:40 – 11:10 Woldemar A. Weyl Award Lecture |
| | by : Maxime Cavillon |
| | Assistant Prof. Department of Chemistry, Université Paris-Saclay, |
| | France |
| | 3D Structuring of Oxide Glasses by Ultrashort Laser Pulses for High Temperature |
| | Environments |
| 11:10 – 11:20 | Inauguration of Poster Session and Exhibition by Prof. Hiroyuki Inoue, President, ICG |
| | |
| 11:20 - 11:50 | TEA/COFFEE BREAK |

| 11:50 – 12:00 | Reassembling in main Auditorium (Hall - 1) |
|---------------|---|
| 12:00 – 13:10 | Inauguration of ICG 2025 |
| 12:00 – 12:05 | Lighting of the Lamp |
| 12:05 – 12:15 | Welcome Address by Prof. Bikramjit Basu, Director, CSIR-CGCRI, Kolkata, India |
| 12:15 – 12:45 | Address by Chief Guest, Dr. Jitendra Singh, Honourable Minister of State for Science and |
| | Technology and Earth Sciences, Govt. of India and Vice President, CSIR, India |
| 12:45 – 12:50 | Release of Abstract Book |
| 12:50 – 13:00 | Felicitation of the Dignitaries on the Dais |
| 13:00 – 13:05 | Vote of Thanks by Dr. Atiar Rahaman Molla, Organizing Secretary, ICG 2025 and |
| | Sr. Principal Scientist, CSIR-CGCRI, Kolkata, India |
| 13:05 – 13:10 | National Anthem |
| 13:10 – 13:15 | Group Photo |
| 13:15-14:30 | Lunch Break |

HALL - 1: PLENARY SESSION - 1

| Time (hr) | Event | Speaker/Title of Talk |
|-------------|--------|---|
| 14:30-15:10 | PL – 1 | S Kumar Memorial Lecture Bikramjit Basu Director, CSIR- CGCRI |
| | | Emerging Innovation Ecosystem in Glass and Ceramics in India |

HALL - 1 : STRATEGIC APPLICATIONS AND FUTURISTIC TECHNOLOGIES

| 15:10-15:22 | Industry Presentations | Gopal Ganatra, Executive Director, M/s Asahi India Glass |
|-------------|------------------------|---|
| 15:22-15:34 | | Sudhir Pillai, Managing Director, M/s Corning India |
| 15:34-15:46 | | Jimmy Tyagi, CEO, M/s Gold Plus Glass Industry Ltd., India |
| 15:46-15:58 | | Somya Vashishtha, National Sales Head (India)-Ceramics, M/s Hindalco Industries Ltd, India |
| 15:58-16:10 | | Sudipta Saha, President, Operations and Business Head, M/s Prism Johnson Ltd, India |
| 16:10-16:22 | National Lab | M. R. Ajith, Group Director, Advanced Materials Group, VSCC, ISRO, Trivandrum, India |
| 16:22-16:35 | TEA/COFFEE | |

PARALLEL TECHNICAL SESSIONS (JAN 20, 2025) (16:35 – 18:19)

HALL - 2 : TECHNICAL SESSION - 1 SYMPOSIUM - 2 : GLASSES FOR OPTICS AND PHOTONICS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|------------------|--|
| 16:35-17:05 | KT-S2-1 | Virginie Nazabal | Infrared luminescence of chalcogenide glasses doped with rare earth ions and their potential applications |
| 17:05-17:30 | IT-S2-1 | Animesh Jha | Pulsed laser-based deposition for adhesive bonding of micro-to-nanoscale glass, ceramic, and polymer composite for thin film devices |
| 17:30-17:55 | IT-S2-2 | M. Tomita | Glass technologies and products for future application in photonics area |
| 17:55-18:07 | CL-S2-1 | Nisha Deopa | Dysprosium ion concentration variations and their comprehensive influence on the physical structural and optical properties of multi component borate glasses for luminescence tailoring |
| 18:07-18:19 | CL-S2-2 | Roberto Lorenzi | Investigation of the role of defects in the scintillation mechanism of $\mathrm{Ga_2O_3}$ glass-ceramics |

HALL - 3: TECHNICAL SESSION - 2 SYMPOSIUM - 4: MODELLING AND DYNAMIC SIMULATION OF GLASS

| TIME | (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|---------|-------|-------------|-------------------|---|
| 16:35-1 | 7:05 | KT-S4-1 | Chandan Das Gupta | Living glass: activate matter at high densities |
| 17:05-1 | 17:30 | IT-S4-1 | Smarajit Karmakar | Annealing Amorphous Solids using Oscillatory Shear and Active Dopants and Memory Formation |
| 17:30-1 | 17:55 | IT-S4-2 | Shingo Urata | Role of hydrogen doping for compensating oxygen defect in nonstoichiometric amorphous In_2O_3 -x: modelling with machine learning potential |
| 17:55-1 | 18:07 | CL-S4-1 | Sunil Kumar | Sub-micrometer scale Molecular Dynamics Simulation of strain induced nucleation and crystal growth in a super cooled glassy phase of copper |
| 18:07-1 | 18:19 | CL-S4-2 | Indrajit Tah | Fragility in glassy liquids: A structural approach based on machine learning |
| | | | | |

HALL - 4 : TECHNICAL SESSION - 3 (JAN 20, 2025) SYMPOSIUM - 6 : GLASSES FOR ARCHITECTURAL, ENERGY AND ENVIRONMENT

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|------------------|---|
| 16:35-17:05 | KT-S6-1 | Steve Martin | Thin-film glassy solid electrolytes as a new functionality for glass enabling high energy density Li and Na all solid-state batteries |
| 17:05-17:30 | IT-S6-1 | Aswini Ghosh | Different facets of ion dynamics in ionic glass |
| 17:30-17:55 | IT-S6-2 | John McCloy | Incorporation and crystallization of anions in borosilicate glasses |
| 17:55-18:07 | CL-S6-1 | Purnananda Nandi | Post-irradiation examination of lead glasses for RSW application |
| 18:07-18:19 | CL-S6-2 | Geeta Sharma | Bi ₂ S ₃ Q-Dot silicate glass for thermal Energy Harvesting for ICT devices |
| | | | |

HALL - 5 : TECHNICAL SESSION - 4 SYMPOSIUM - 9 : GLASS AND GLASS - CERAMICS FOR EMERGING APPLICATIONS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|------------------|---|
| 16:35-17:05 | KT-S9-1 | Himanshu Jain | Lattice engineered crystal-in-glass architecture: A new kind of metamaterial for integrated optics |
| 17:05-17:30 | IT-S9-1 | Atul Khanna | Effects of melt history on the glass forming ability of heavy metal oxide tellurite and borate glass systems |
| 17:30-17:55 | IT-S9-2 | C. Venkateswaran | The transformative power of a magical material: Glass |
| 17:55-18:07 | CL-S9-1 | Prasenjit Barick | Lithium Aluminosilicate low-expansion glass-ceramic-Composition effect on salient properties, crystallization mechanism |
| 18:07-18:19 | CL-S9-2 | Chinmoy Das | Coordination network-based glasses: A new frontier of emerging materials |

HALL - 7: TECHNICAL SESSION - 5 SYMPOSIUM - 10: ADDITIVE MANUFACTURING AND NOVEL MANUFACTURING PROCESS OF GLASS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|--------------------|--|
| 16:35-17:05 | KT-S10-1 | Atsunobu Masuno | Functional Unconventional Oxide Glasses Prepared by a Levitation Technique |
| 17:05-17:30 | IT-S10-1 | Michel Fokine | 3D Printing Glass for Photonics and Life Science Applications |
| 17:30-17:55 | IT-S10-2 | Amit Bandyopadhyay | Bioglass reinforced Ti ₆ Al ₄ V for load-bearing implants |
| 17:55-18:07 | CL-S10-1 | Akansha Mehta | Developing sustainable approach of upcycling non-recyclable glass and bauxite residue waste into membranes by additive manufacturing for waste-water treatment |
| 18:07-18:19 | CL-S10-2 | Arish Dasan | Upcycling of Waste Glass through Digital Advancements and Advanced Manufacturing Practices for a Sustainable Future |

HALL - 6: TECHNICAL SESSION - 6

SYMPOSIUM - 3: SUSTAINABLE GLASS MANUFACTURING AND PROCESSING

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|-----------------|--|
| 16:35-17:05 | KT-S3-1 | T K Chakraborty | Evolution of Indian Glass Industries |
| 17:05-17:30 | IT-S3-1 | Sheetal Khanna | Sustainable practices to be adopted during the Glass Manufacturing process in the Factories |
| 17:30-17:55 | IT-S3-2 | Rob Ireson | Carbon Capture - An enabler for net-negative glass manufacturing? |
| 17:55-18:07 | CL-S3-1 | Canalp Kulahl | Numerical Modelling of Regenerators in Hybrid Glass Furnaces: Optimizing for Decarbonization |
| 18:07-18:19 | CL-S3-2 | Changlin Zheng | Circular Raw Materials for Glass Manufacturing |

19:30 - 22:30

Celebration of Women in Glass, Felicitation of Champions of ICG 2025 & Glass Industry followed by Banquet Dinner

Ganges Queen

PARALLEL EVENTS ON DAY 1

| Time (hr) | Event | Venue |
|---------------|---|---------------------|
| 14:30 – 18:00 | ICG Steering Committee Meeting | Glass Room, BBCC |
| On everyday | Meet the Mentors (for Young Researchers) | During Lunch Breaks |

DAY 2: JANUARY 21, 2025 (TUESDAY)

HALL - 7: PLENARY SESSION - 2

| Time (hr) | Event | Speaker/Title of Talk |
|-------------|-------|---|
| 09:30-10:10 | PL-2 | B L Kheruka Memorial Lecture Arun K. Varshneya President, Society of Glass Technology & President, M/s Saxon Glass Technologies, Alfred, USA Stronger Glass Products: Expanded Horizons |
| 10:10-10:50 | PL-3 | K D Sharma Memorial Lecture Pradeep Kumar Kheruka CMD, M/s Borosil Renewables Limited, Mumbai, India Journey of Glass Manufacturing in India |
| 10:50-11:05 | | TEA/COFFEE |

PARALLEL TECHNICAL SESSIONS (JAN 21, 2025) (11:05 – 13:15) - (14.15-15.40)

HALL - 2 : TECHNICAL SESSION - 7 SYMPOSIUM-2: GLASSES FOR OPTICS AND PHOTONICS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|-----------------------|---|
| 11:05-11:35 | KT-S2-2 | Heike Ebbendorf | Tellurite glasses: unique material for up conversion fluorescence and plasmonic based applications |
| 11:35-12:00 | IT-S2-3 | Saurabh Kapoor | Impact of varying strain rate during proof stress on the mechanical reliability of optical fiber |
| 12:00-12:25 | IT-S2-4 | Seongwoo Yoo | Refractive index profiling of a Tm-doped fibre for ultrafast laser applications in anomalous dispersion region |
| 12:25-12:50 | IT-S2-5 | Gopi Sharma | Linear and Nonlinear Absorption in Different Glass Formers for Photonic Applications |
| 12:50-13:15 | IT-S2-6 | Ivan Kasik | Nanoparticle doping – a method of fabrication of highly efficient rare-earth-doped silica fibres for fibre lasers |
| 13:15-14:15 | | LUNCH BREAK | |
| 14:15-14:40 | IT-S2-7 | Anirban Dhar | Advancing Specialty Optical Fiber Performance through strategic Design and Composition Engineering |
| 14:40-14:52 | CL-S2-3 | Nagaraju J | Structural, optical and conducting properties of aluminium borate glasses doped scandium ions |
| 14:52-15:04 | CL-S2-4 | Saswata Chakraborty | MIR emission and visible up conversion from Yb-Er co-doped thermally stable low germanium barium-zinc-calcium-aluminate glasses |
| 15:04-15:16 | CL-S2-5 | Manoj Singh Shekhawat | Study of lanthanide organic frameworks based on polycarboxylate ligands |
| 15:16-15:28 | CL-S2-6 | Michal Kamrãidek | Dual-wavelength fiber lasers based on structured-core active fibres |
| 15:28-15:40 | CL-S2-7 | Prerna Vashistha | Enhanced red emission in Eu ³⁺ doped alkali fluoride borate glasses: white LED applications |

HALL - 3: TECHNICAL SESSION - 8 SYMPOSIUM - 12: RECYCLING OF GLASS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|--------------------------|--|
| 11.05-11.35 | KT-S12-1 | Patrick Potzinger | Latest in Cullet Beneficiation |
| 11:35-12:00 | IT-S12-1 | Purvish Shah | |
| 12.00-12.25 | IT-S12-2 | Karthik Morar | Glass Sand Briquetting – Recovery of unwanted Glass Fines |
| 12:25-12:50 | IT-S12-3 | Amit Mahajan | Enhancing Circular Economy Through Glass Cullet Recycling |
| 12:50-13:15 | IT-S12-4 | Ashutosh Joshi | Glass recycling |
| 13:15-14:15 | LUNCH BREAK | | |
| 14:15-14:40 | IT-S12-5 | Ashis Kumar Mandal | Waste Utilisation in Glass and Recycling of Glass Waste in Preparation of Light Weight Porous Glass Foam |
| 14:40-14:52 | CL-S12-1 | Dave Fordham | Glass Futures: A Research and Collaboration Platform to increase recycling rates within the glass sector |
| 14:52-15:04 | CL-S12-2 | Himanshu Sekhar Maharana | Process for recycling of end-of-life solar cover glass |
| 15:04-15:16 | CL-S12-3 | Md. Saif Hossain | Applying the Concept of Glass Ceramics on Waste Admixtures to recover Critical Elements |
| 15:16-15:28 | CL-S12-4 | Stephan Sander | Towards a circular economy: The potential |
| 15:28-15:40 | CL-S12-5 | Sumanta Mukhopadhyay | Refractory Solutions for the Glass Industry |

HALL - 4 : TECHNICAL SESSION - 9 (JAN 21, 2025) SYMPOSIUM - 6 : GLASSES FOR ARCHITECTURAL, ENERGY AND ENVIRONMENT

| TIME | (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|--------|-------|-------------|-------------------------|--|
| 11:05- | 11:35 | KT-S6-2 | Michel J Ojovan | Vitreous materials for nuclear waste immobilisation |
| 11:35- | 12:00 | IT-S6-3 | Suneel Gattu | ZnO-based SiO ₂ -B ₂ O ₃ -Na ₂ O Glass for Vitrification of Lanthanide and Actinide Rich High-level Liquid Waste (HLW) |
| 12:00- | 12:25 | IT-S6-4 | Ashutosh Goel | Structural design of borosilicate-based nuclear waste glasses |
| 12:25- | 12:50 | IT-S6-5 | Ana C. M. Rodrigues | Electrode Capacitance Measurements to Unveil the Effective Charge Carrier Concentration in Lithium Disilicate |
| 12:50- | 13:15 | IT-S6-6 | Sophie Schuller | Fundamental Research to Advanced Simulation: Enhancing French Nuclear Waste Vitrification |
| 13:15- | 14:15 | | LUNCH BREAK | |
| 14:15- | 14:40 | IT-S6-7 | Avlokita Agrawal | Glass for Sustainability- Material Vs Design |
| 14:40- | 14:52 | CL-S6-3 | Patrick Stargardt | Determination of very low gas permeability of glasses for potential high-pressure hydrogen storage applications |
| 14:52- | 15:04 | CL-S6-4 | Selvakumar Jayaprakasam | Separation of Lanthanides (Ln, Ce, and Nd) from radioactive liquid waste and immobilization in borosilicate (SiO ₂ -B ₂ O ₃ -Na ₂ O-TiO ₂ -Fe ₂ O ₃) glass |
| 15:04- | 15:16 | CL-S6-5 | Takashi Kato | Glass briquet feeding for vitrification of HLW from MOX spent fuels; in-situ observation using X-ray imaging |
| 15:16- | 15:28 | CL-S6-6 | Bartlomiej Gawel | High purity quartz for PV glass crucibles with superior mechanical properties |
| 15:28- | 15:40 | CL-S6-7 | Cloé Laurin | Redox behaviour of ruthenium in borosilicate glass melts for nuclear waste vitrification |

HALL - 5 : TECHNICAL SESSION - 10 (JAN 21, 2025) SYMPOSIUM - 9 : GLASS AND GLASS-CERAMICS FOR EMERGING APPLICATIONS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|-----------------------|---|
| 11:05-11:35 | KT-S9-2 | Timothy M. Gross | Glass-Ceramics research at Corning: Past, Present, and Future |
| 11:35-12:00 | IT-S9-3 | Ramesh K | Amorphous to crystalline transition accompanied by metal-insulator in As substituted Ge-Sb-Te glasses |
| 12:00-12:25 | IT-S9-4 | Erico Maeda | Influence of atomic structure on surface crystallization in glass |
| 12:25-12:50 | IT-S9-5 | Shibayan Roy | Micro-texture development in machinable mica-based glass-ceramics |
| 12:50-13:15 | IT-S9-6 | Akash Bhatnagar | Functional glass ceramics: Fundamentals to applications |
| 13:15-14:15 | | LUNCH BREAK | |
| 14:15-14:40 | IT-S9-7 | Shiv Prakash Singh | Preparation and Properties of Nanostructured Glass |
| 14:40-14:52 | CL-S9-3 | Devarajulu Gelija | Pr ₂ O ₃ and Pr ₂ O ₃ /Yb ₂ O ₃ doped CsPbBr ₃ perovskite nanocrystals embedded borosilicate glass for photonic applications |
| 14:52-15:04 | CL-S9-4 | Anirban Chakrabarti | SiO ₂ -Na ₂ O-K ₂ O-Nb ₂ O ₅ glasses: Investigation of crystallization kinetics, conductivity and dielectric properties |
| 15:04-15:16 | CL-S9-5 | Maria Clara Gonçalves | Self-supported flexible glasses with magnetic properties: room temperature synthesis |
| 15:16-15:28 | CL-S9-6 | Ariharan S | Novel zinc-borosilicate glass for low-temperature co-fired ceramics (LTCC) based electronic substrates |

HALL - 7: TECHNICAL SESSION - 11 SYMPOSIUM - 5: GLASS SURFACE SCIENCE AND COATING

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|------------------|---|
| 11:05-11:35 | KT-S5-1 | Satoshi Yoshida | Indentation-induced cracks on pristine and fractured surfaces of silica glass |
| 11:35-12:00 | IT-S5-1 | R. Subhasri | Sol-Gel Derived Nanocomposite Coatings on Glass for Diverse Applications |
| 12:00-12:25 | IT-S5-2 | Karthik Kumar | Glass Coatings – Bridging Functionality and Sustainability Across Industries |
| 12:25-12:50 | IT-S5-3 | Seong H. Kim | Invisible defects in glass surface and their impacts on durability |
| 13:15-14:15 | | LUNCH BREAK | |
| 14:15-14:40 | IT-S5-4 | Nagendra Kumar | Architectural glass through advanced coating technologies towards sustainable green energy solutions |
| 14:40-14:52 | CL-S5-1 | Ondrej Gedeon | Surface and subsurface of barium glass de-alkalised by water leaching and by electron irradiation |
| 14:52-15:04 | CL-S5-2 | Sourav Sahoo | Two-Dimensional Coatings for Superior Damage-Resistant Glasses |
| 15:04-15:16 | CL-S5-3 | Srikrishna Manna | Room temperature curable Inorganic-Organic hybrid nanocomposite coatings embedded in-situ generated stable Ag NPs: Properties evaluation and applications |

HALL - 6 : TECHNICAL SESSION - 12 SYMPOSIUM - 7 : GLASSES FOR HEALTHCARE

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|---------------|-------------|------------------------------|---|
| 11:05-11:35 | KT-S7-1 | Parag Bhargava | Processing and microstructure evolution in leucite/fluorapatite glass ceramics |
| 11:35-12:00 | IT-S7-1 | Santanu Dhara | Customized Dental Prosthetics by Ceramic Dough Shaping – Improved Strength and Aging Resistance |
| 12:00-12:25 | IT-S7-2 | G. Rajkumar | Synthetic Bone of The Future: Fluorophosphate glass-based bone graft |
| 12:25-12:50 | IT-S7-3 | Sudipta Chakraborty | Intrinsically 90Y-Radiolabeled Yttria Alumino Silicate Glass Microspheres for Treatment of Unresectable Liver Cancer |
| 12:50-13:15 | IT-S7-4 | Senthil Murugan Ganapathy | Biomedical Spectroscopy: Novel Platform and New Prospects |
| 13:15 - 14:15 | | LUNCH BREAK | |
| 14.15-14.40 | IT-S7-5 | S. Balakumar | Prioritizing and formulating phase-dependent nano-bioactive glasses for rapid hemostasis and tissue regeneration: From material development to clinical products |
| 14:40-14:52 | CL-S7-1 | Janhnavi Bhagavath | Snail shell (CaO) doped Potassium Titanium Phosphate Bioactive Glasses for Biomedical Applications |
| 14.52-15.04 | CL-S7-2 | Orhan Sisman | In vitro photodynamic therapy using dye loaded mesoporous bioactive glass nanoparticles |
| 15.04-15.16 | CL-S7-3 | Ashokraja Chandrasekar | Eco-Friendly Flash PEO Coatings for Improving the Biocompatibility and Biodegradation of AZ31B Magnesium Alloys |
| 15.16-15.28 | CL-S7-4 | Selvarajan N S | Vital Vitrum tegere augmenting patient- specific implants by osseoglassification |
| 15.28-15.40 | CL-S7-5 | S K Hasanur Rahaman | Bioactive Glass (BAG) and Bismuth Ferrite (BF) based Smart Biocomposites with In Situ Electrical Stimulation for Promotion of Early-Stage Osteogenesis |
| 15:40 - 15:55 | | TEA/COFFEE | |

| Time (hr) | Event | Speaker/1 | Fitle of Talk |
|-------------|-------|---|-----------------|
| 15:55-16:35 | PL-4 | Kalyan Kumar Phani Memorial Lecture Suman Kumar Bal Chief Sales & Marketing Officer, Specialty Alumina, Hindalco, Mumbai, India Alumina in Advanced Glass Applications: A Techno-Commercial Prospective | |
| 16:35-18:30 | | Poster Session | Exhibition Hall |
| 18:30-22:30 | | Cultural Programme followed by Conference Dinner | Exhibition Hall |

PARALLEL EVENTS ON DAY - 2: JANUARY 21, 2025

| Time (hr) | Event | Venue |
|--------------|--------------------------------------|------------------|
| 8:30 - 13:30 | AMCC meeting/Glass for Women meeting | Glass Room, BBCC |
| 14:30-18:30 | Council Meeting | Glass Room, BBCC |

DAY 3: JANUARY 22, 2025 (WEDNESDAY)

HALL - 7: PLENARY SESSION - 4

| Time (hr) | Event | Speaker/Title of Talk |
|---------------|------------------|--|
| 9:30-10:10 | PL-5 | C K Somany Memorial Lecture Manoj Kumar Choudhary President, MKC Innovations, LLC. and Adjunct Professor, The Ohio State University, Columbus, USA Pathways and Challenges to Decarbonizing Industrial Glass Melting |
| 10:10-10:50 | PL-6 | 3 rd N L Varshneya Memorial Lecture on Sustainability in Glass Stuart Hakes Chief Executive, F.I.C. (UK) Limited, Long Rock Industrial Estate, Penzance, UK Electric Forehearths for Energy Reduction and Decarbonisation |
| 10:50 - 11:05 | TEA/COFFEE BREAK | |

PARALLEL TECHNICAL SESSIONS (JAN 2 (11:05 – 13:10)

(JAN 22, 2025)

HALL - 2: TECHNICAL SESSION - 13

SYMPOSIUM - 8: GLASSES FOR TRANSPORT AND PACKAGING

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|---------------------|--|
| 11.05-11.30 | IT-S8-1 | Ajay Joshi | Quality Assurance in Forehearth Colored Glass Bottles: Challenges & Innovations |
| 11.30-11.55 | IT-S8-2 | Ajit Kumar | Glass for Pharmaceutical Packaging |
| 11.55-12.20 | IT-S8-3 | Shravantika Lakshmi | Glasses for Transport and packaging |
| 12.20-12.45 | IT-S8-4 | Rahul Nikanj | New Trends in Automotive Glazing |
| 12.45-13.10 | IT-S8-5 | | |

HALL - 3: TECHNICAL SESSION - 14

SYMPOSIUM - 1: GLASS SCIENCE: PHYSICS AND CHEMISTRY

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|---------------------|--|
| 11:05-11:35 | KT-S1-1 | Doris Möncke | Revisiting preferential bonding in borosilicate glasses and the Dell-Bray-Yun model |
| 11:35-12:00 | IT-S1-1 | Nadege Ollier | Densification of silica glass and the metamict-like phase |
| 12:00-12:25 | IT-S1-2 | Laurent Cormier | Cuprite crystallization in glasses: redox changes and the impact of copper and lead in reducing atmospheres |
| 12.25-12.37 | CL-S1-1 | Yoshinari Kato | Structural aspects of ambient-temperature densification of highly crack-resistant borosilicate and aluminoborosilicate glasses: Two case studies examined by solid-state NMR |
| 12.37-12.49 | CL-S1-2 | Sathya Narayanasamy | Characterization of the glass alteration layers to study the evolution of its morphology and transport properties and generate predictive models |
| 12.49-13.01 | CL-S1-3 | Mikio Nagano | In-Situ Observation of Dynamic Deformation and Cracking in Glass Subjected to High-Speed Impact of a Blunt Indenter |
| 13.01-13.13 | CL-S1-4 | Anupama Yadav | Structural, physical and optical property evolution in $(Ge_{33}As_{12}Se_{55})_{1-x}Ag_x$ chalcogenide glass system with Ag addition |

SYMPOSIUM - 3: SUSTAINABLE GLASS MANUFACTURING AND PROCESSING

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|--------------------|--|
| 11:05-11:35 | KT-S3-2 | Reinhard Conradt | One and multicomponent crystalline states-relation to iso-chemical liquid to glasses |
| 11:35-12:00 | IT-S3-3 | Erik Muijsenberg | Industry 4.0+: Enhancing production efficiency with Al and MPC, reducing carbon footprint, and asset monitoring |
| 12:00-12:25 | IT-S3-4 | C V Raju | Sustainability in Glass Manufacturing - The Seven Point Focus |
| 12:25-12:50 | IT-S3-5 | Ulrich Imhof | Innovative / alternative furnace heating concept by using CO ₂ -free fuel (H ₂) |
| 12.50.13.02 | CL-S3-3 | Somsubhra Sensarma | Application of high temperature refractories in glass tank furnace |
| 13.02-13.14 | CL-S3-4 | Michel Gaubil | Glass Furnace corrosion monitoring supported by numerical simulation: A key solution to follow soldier block corrosion |

HALL - 5: TECHNICAL SESSION - 16

SYMPOSIUM - 10: ADDITIVE MANUFACTURING AND NOVEL MANUFACTURING PROCESS OF GLASS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|-----------------|--|
| 11:05-11:35 | KT-S10-2 | Susmita Bose | 3D-Printed Bioglass-Calcium Phosphate Scaffolds for bone tissue engineering and drug delivery |
| 11:35-12:00 | IT-S10-3 | Hiiroyuki Inoue | Container less process for the preparation of novel glasses and their structures and properties |
| 12:00-12:25 | IT-S10-4 | Kohei Yoshimoto | Optical properties and local structures of La ₂ O ₃ -TiO ₂ -based multicomponent glasses prepared by aerodynamic levitation technique |
| 12:25-12:50 | IT-S10-5 | Ravi Shankar | Additive manufacturing and novel manufacturing processes of Glass |
| 12.50.13.02 | CL-S10-3 | Gesine Bergmann | Securing interoperability in flat glass processing |
| 13.02-13.14 | CL-S10-4 | Gabriel Tayama | Optimization of nanocomposite-based resins for glass 3D printing applied to hybrid manufacturing of optical components |

HALL - 7 : TECHNICAL SESSION - 17 (JAN 22, 2025) SYMPOSIUM - 11 : ARCHAEOMETRY OF GLASS AND GLASS EDUCATION

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|--------------------|--|
| 11:05-11:35 | KT-S11-1 | Albert Thomas | Sustainability and Glass related curriculum in the Engineering Education- An Indian perspective. |
| 11:35-12:00 | IT-S11-1 | Alok Kumar Kanungo | Indian Drawn Glass Beads in Maritime World: A Case Study of Vadnagar Glass |
| 12:00-12:25 | IT-S11-2 | Shailesh Ranjan | Preserving the Heritage of Glass: Integrating Archaeometry with Current Education for Future Innovations |
| 12:25-12:50 | IT-S11-3 | Mathieu Hubert | Education and outreach activities at Corning and beyond |
| 12:50-13:15 | IT-S11-4 | Mohit Garg | National Standardization in the Field of Glass & Glassware: India's Perspective |

HALL - 6: TECHNICAL SESSION - 18 SYMPOSIUM - 2: GLASSES FOR OPTICS AND PHOTONICS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|-----------------------|--|
| 11:05-11:35 | KT-S2-3 | John M Parker | Electronic energy levels in silicate glasses: the nature of bonding |
| 11:35-12:00 | IT-S2-8 | Jayanta Sahu | Recent progress in Bi- and Er-doped silica optical fibers and amplifiers |
| 12:00-12:25 | IT-S2-9 | B Eraiah | Novel photoactive rare earth/ transition metal oxide doped glasses |
| 12:25-12:50 | IT-S2-10 | V V Ravi Kanth Kumar | White Light and Supercontinuum generation in glasses |
| 12:50-13:15 | IT-S2-11 | Andrea Camargo Simone | Structure And Photo physics of Rare Earth Ion Doped Gallium Phosphofluoride Glasses Containing Silver Nanostructures: Effects of Heat Treatment and Femtosecond Direct Laser Writing |
| 13.15-14.15 | | LUNCH BREAK | |

13.15-14.15

LUNCH BREAK

14:15 (onward)

CITY TOUR (On Payment basis)

DAY 4: JANUARY 23, 2025 (THURSDAY)

HALL-7: PLENARY SESSION - 5

| Time | Event | Speaker/Title of Talk |
|---------------|-------|--|
| 09:30-10:10 | PL-7 | Prasenjit Saha Memorial Lecture Alicia Duran Research Professor CSIC, Instituto de Cerámica y Vidrio, Madrid, Spain Glass, The Hidden Gem of Sustainability |
| 10:10-10:50 | PL-8 | Prabhu Nath Memorial Lecture Rajesh Ganapathy Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India Unveiling the 'hidden' structural order in dense liquids and glasses |
| 10:50 - 11:05 | | TEA/COFFEE |

PARALLEL TECHNICAL SESSIONS (JAN 23, 2025) (11:05 - 13:15) - (14.15 - 15.28)

HALL - 2: TECHNICAL SESSION - 19

SYMPOSISA - 2: GLASSES FOR OPTICS AND PHOTONICS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|------------------------|--|
| 11:05-11:35 | KT-S2-4 | Somnath Bandyopadhyay | Transforming Glass into Waveguides for Fiber-Based Devices in modern Laser and Sensor Applications |
| 11:35-12:00 | IT-S2-12 | A. S. Rao | Advances in rare earth doped glasses: Unlocking multifunctional applications across technology frontiers |
| 12:00-12:25 | IT-S2-13 | R Thiruneelakkandan | Investigation of Flaws in glass beam expander by Mach-Zehnder interferometer |
| 12:25-12:50 | IT-S2-14 | Nilanjana Shasmal | Effects of direct femtosecond laser writing on chloroborosilicate glasses doped with Eu ³⁺ /Eu ²⁺ and CdS quantum dots |
| 12:50-13:15 | CL-S2-8 | Pritha Patra | Fabrication of Te-nanoparticle embedded tellurite glass for optical limiting application |
| 12:50-13:15 | CL-S2-9 | Devaraja C | Structural, physical, optical properties of alkali zinc tellurium borate glasses doped with cerium oxide |
| 13:15-14:15 | | LUNCH BREAK | |
| 14:15-14:40 | CL-S2-10 | Sudipta Ghosh | Enhanced erbium doping in mesoporous silica glass for advanced photonic applications |
| 14:15-14:40 | CL-S2-11 | Sarathkumar Loganathan | Ultrafast laser direct inscription of the photonic waveguide in Er-doped tellurite glass ceramics |
| 14:39-14:51 | CL-S2-12 | Sachin Kumar | Innovative fibre laser threshold magnetometry: Fabrication and characterization of ytterbium and diamond-doped tellurite fibre |
| 15:03-15:15 | CL-S2-13 | Sourabh Wajhal | Understanding the local structure and network connectivity of rare earth doped tellurite glasses through neutron diffraction |
| 15:16-15:28 | CL-S2-14 | Akila Prabhudessai | Glass formation, thermal stability, and optical properties of Se/Te rich Ge-Se-Te glasses |

HALL - 3 : TECHNICAL SESSION - 20 SYMPOSIUM - 1 : GLASS SCIENCE: PHYSICS AND CHEMISTRY

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-----------------------------------|--------------------|---------------------------------|---|
| 11:05-11:35 | IT-S1-3 | Daniel R. Neuville | Unravelling the role of cation mixing in glass and melt properties |
| 11:35-12:00 | IT-S1-4 | Margit Fabian | Structure and durability studies of a glass network loaded with mixture of lanthanides/uranium |
| 12:00-12:25 | IT-S1-5 | Luiz Pereira | Rheology of complex silicates: physics vs. chemistry |
| 12:25-12:37 | CL-S1-5 | José Schneider | Solid-State Vitrification of Li and Al phosphates through mechanical milling |
| 12:37-12:49 | CL-S1-6 | Biplab Das | An effective utilization of copper redox states in alkali zinc borate glasses for structural probing and enhancing luminescence activity |
| 12:49-13:01 | CL-S1-7 | Tatsuya Mori | Coherent potential approximation analysis based on heterogeneous elasticity theory for boson peak spectra of various glasses |
| 13:01-13:13 | CL-S1-8 | Anuraag Gaddam | Structural investigation sodium alumino-phospho-silicate glasses by advanced NMR, neutron scattering and molecular simulations |
| | | | |
| 13:15-14:15 | | LUNCH BREAK | |
| 13:15-14:15 14:15-14:40 | IT-S1-6 | T. G. Ajith Kumar | Insights into chemical durability, and structure of ZnO incorporated sodium borosilicate glasses from Solid-State NMR |
| | IT-S1-6 CL-S1-9 | | incorporated sodium borosilicate glasses from |
| 14:15-14:40 | | T. G. Ajith Kumar | incorporated sodium borosilicate glasses from Solid-State NMR Synthesis and structure analysis of B-O-N glass with |
| 14:15-14:40 14:40-14:52 | CL-S1-9 | T. G. Ajith Kumar Yining Cui | incorporated sodium borosilicate glasses from Solid-State NMR Synthesis and structure analysis of B-O-N glass with high nitrogen content Study of short-range structural ordering in nano-structured ceramics and Amorphous materials from laboratory based atomic pair distribution function (LAPDF) in a conventional X-ray |

HALL - 4: TECHNICAL SESSION - 21

(JAN 23, 2025)

SYMPOSIUM-6: GLASSES FOR ARCHITECTURAL, ENERGY AND ENVIRONMENT

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|--|--|
| 11:05-11:35 | KT-S6-3 | Sitendu Mandal | A Journey towards Technology Development of Specialty Glasses for Radiation Shielding Windows and Nuclear Waste Immobilization at CSIR-CGCRI |
| 11:35-12:00 | IT-S6-8 | Bharat Kale | Quantum dots (Q-Dots)-glass for photonics and energy |
| 12:00-12:25 | IT-S6-9 | Valeri V Poluektov (Vladislav Petrov) | Environmental safety of ancient 140 Ma radioactive volcanic glasses |
| 12:25-12:50 | IT-S6-10 | Gohul Deepak | Selection of Glass for Safe and Sustainable Architecture |
| 12:50-13:15 | IT-S6-11 | Andrea Pilla | The Minimal Wall: Enhancing Composite Behaviour of Structural Sealant Glazed Facades for Material Optimization |
| 13:15-14:15 | | LUNCH BREAK | |
| 14:15-14:40 | IT-S6-12 | D Banerjee | Radiation stability studies on sodium borosilicate glasses |
| 14:40-14:52 | CL-S6-8 | Tetsuji Yano | Combinatorial approach on the development of borosilicate glass matrices for HLW encapsulation from MOX spent fuels |
| 14:52-15:04 | CL-S6-9 | Sandeep Kaur | Environment friendly cover glasses for solar panels |
| 15:04-15:16 | CL-S6-10 | Kalyan Roy | Alteration of iodine bearing glass matrix in vapor and aqueous phases: experimental and geochemical modelling on evaluation of chemical durability |
| 15:16-15:28 | CL-S6-11 | Alexis Delanoë | Oxide glasses materials: potential candidates as positive electrodes active materials for Li-ion and Na-ion batteries |

HALL - 5 : TECHNICAL SESSION - 22 (A) (JAN 23, 2025) SYMPOSIUM - 3 : SUSTAINABLE GLASS MANUFACTURING AND PROCESSING

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|--------------------------|--|
| 11:05-11:30 | IT-S3-6 | Vasco Sousa | Solutions for sustainable glass manufacturing |
| 11.30-11.42 | CL-S3-5 | Terutaka Maehara | Properties of glass melted under high water vapor atmosphere |
| 11.42-11.54 | CL-S3-6 | Jaroslav Klouzek | Refractory Corrosion During Industrial and Waste Glass Melting: The Impact of Temperature and Melt Flow Velocity |
| 11.54-12.06 | CL-S3-7 | Miroslav Polak | Mathematical modelling as a "must" in sustainable glass production |
| 12.06-12.18 | CL-S3-8 | Daniel Backhouse | Glass Futures: A Research and Collaboration Platform for Glass Industry Decarbonisation |
| 12.18-12.30 | CL-S3-09 | Dominik Orzol | The Testing of New Container Glass Compositions in a Real World Environment |
| 12.30-12.42 | CL-S3-10 | Krishna Surendra Muvvala | Advanced Refractory Solutions for low CO ₂ emission glass melting process. |
| 12.42-12.54 | CL-S3-11 | Luc Jarry | Oxy-combustion: Heat recovery, Hydrogen and Carbon capture, the last developments for decarbonizing of hard-to-abate industries. |
| 13:15-14:15 | | LUNCH BREAK | |

HALL - 7 : TECHNICAL SESSION - 23 (JAN 23, 2025) SYMPOSIUM - 4 : MODELLING AND MOLECULAR DYNAMIC SIULATION OF GLASSES

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|--------------------|---|
| 11:05-11:35 | KT-S4-2 | Alastair N.Cormack | On the environment of Mg cations in some magnesium aluminosilicate glasses from Molecular Dynamics Simulations |
| 11:35-12:00 | IT-S4-3 | Malte Sander | The past, the present and the future of industrial furnace design |
| 12:00-12:25 | IT-S4-4 | Martin Kilo | Glass Digital – A joint project to digitalise glass development |
| 12:25-12:50 | IT-S4-5 | Jincheng Du | Insights on phase evolution and ion transport mechanisms in glass-ceramic solid state electrolytes from atomistic simulations |
| 12:50-13:15 | IT-S4-6 | SK Musharaf Ali | Structure-property correlation of multi-component glass through Atomistic Simulations |
| 13:15-14:15 | | LUNCH BREAK | |
| 14:15-14:40 | IT-S4-7 | Ralf Mueller | Glass Digital: Data driven workflow for accelerated glass development |
| 14:40-14:52 | CL-S4-3 | Srutisangeeta Jena | Developing $\text{Fe}_4(\text{P}_2\text{O}_7)_3$ glasses using machine learning based ab-initio molecular dynamics |
| 14:52-15:04 | CL-S4-4 | Kausik Hira | GloGMaT: Global glass material database from tables using distant supervision and graph attention networks |
| 15:04-15:16 | CL-S4-5 | Cillian Cockrell | Crossover in local dynamics underlying the glass transition |
| 15:16-15:28 | CL-S4-6 | Sumit Tiwari | Origin of the glass corrosion residual rate: Monte Carlo, Molecular Dynamics and Experiments |

HALL - 6 : TECHNICAL SESSION - 24 (A) SYMPOSIUM - 7 : GLASSES FOR HEALTH CARE

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|---------------|---------------------------------------|---------------------|--|
| 11:05-11:35 | KT-S7-2 | Leena Hupa | Understanding the dissolution behaviour of bioactive glasses |
| 11:35-12:00 | IT-S7-6 | Nilay J. Lakhkar | From Biomaterials Scientist to Biomaterials Entrepreneur: Perspectives from our Journey |
| 12:00-12:25 | IT-S7-7 | Jui Chakraborty | Bioactive glass in healthcare:Hope or Hype |
| 12:25-12:37 | CL-S7-6 | Anustup Chakraborty | Borosilicate bioactive glass coating for Ti-6Al-4V based orthopaedic implants: From compositional design to applied coating |
| 12:37-12:49 | CL-S7-7 | Rupam Saha | Incorporation of Bi ³⁺ as a network modifier into silicate based bioactive glass via sol-gel method for enhanced radiopacity-A potential application in image guided orthopaedic surgerie |
| 13.15 - 14.15 | · · · · · · · · · · · · · · · · · · · | LUNCH BREAK | |

HALL - 5 : TECHNICAL SESSION - 22 (B) SYMPOSIUM - 9 : THEME: GLASS AND GLASS-CERAMICS FOR EMERGING APPLICATIONS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|--------------------|--|
| 14:15-14:40 | IT-S9-8 | Xiang Hua Zhang | Functionalization of chalcogenide glasses by controlled crystallization |
| 14:40-14:52 | CL-S9-7 | Subrata Panda | Ceramic particulate reinforced glass/glass-ceramic composites for structural applications |
| 14:52-15:04 | CL-S9-8 | Raktima Chatterjee | Dy³+ doped nanocrystalline BaAl ₂ Si ₂ O ₈ glass-ceramic phosphor: A potential material for W-LEDs |
| 15:04-15:16 | CL-S9-9 | Pratyasha Rudra | Exploring low ppm chemiresistive NO2 sensing property of H-glass embedded with stable gold Nano-Islands at room temperature and below |
| 15:16-15:28 | CL-S9-10 | Hongyi Deng | Exploring the dielectric properties, glass ability and ferroelectric phases in the BaO-Bi ₂ O ₃ -TiO ₂ -B ₂ O ₃ -Al ₂ O ₃ system to develop glass-ceramics for energy storage and conversion applications |

HALL - 6 : TECHNICAL SESSION - 24 (B) (JAN 23, 2025) SYMPOSIUM - 11 : ARCHEOMETRY OF GLASS AND GLASS EDUCATION

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|-------------------------------|---|
| 14:15-14:40 | IT-S11-5 | Annika Blake Risng-Howland | An Overview of Glass Cultural Heritage Conservation and Conservation Science: Historic and Modern Methods |
| 14:40-14:52 | CL-S11-1 | Natali Risteska | Study on the Elemental Compositions of Blue and Red Ancient Glass Beads from Central Thailand |
| 14:52-15:04 | CL-S11-2 | Martin Kilo | Preservation of Ancient Glass and Enamels using Glass Ormocers |
| 15:04-15:16 | CL-S11-3 | Nadege Ollier | Sorting the colourless Roman glass by using photoluminescence |

15:30-15:45

TEA/COFFEE

HALL - 7: PLENARY SESSION - 6

| Time (hr) | Event | Speaker/Title of Talk |
|--------------|-------|---|
| 15:45-16:25 | PL9 | R Subramanian Memorial Lecture Steve Whettingsteel CEO, Krysteline Technologies Ltd, Southampton, UK The Decarbonisation Pathway for Used Glass |
| 16:25-17:05 | PL10 | Srikumar Banerjee Memorial Lecture Edgar Dutra Zanotto Professor, Federal University of São Carlos, São Carlos, Brazil Cracking Crystal Nucleation in SCLs and Glasses during the Pandemic |
| 17:05 -18:30 | | Meet the Mentors HALL 2 - 6 (for Young Researchers) |

DAY 5 : JANUARY 24, 2025 (FRIDAY)

HALL - 7: PLENARY SESSION - 7

| Time (hr) | Event | Speaker/Title of Talk |
|-------------|------------|--|
| 9:30-10:10 | PL11 | Amalendu Paul Memorial Lecture |
| | | Srikanth Sastry |
| | | Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, |
| | | Bangalore, India |
| | | Fatigue Failure in Cyclically Sheared Glasses |
| 10:10-11:10 | | Rapid Fire presentation |
| | | (selected best posters) |
| 11:10-11:25 | TEA/COFFEE | |

PARALLEL TECHNICAL SESSIONS

(11:25 - 13:28)

HALL - 2 : TECHNICAL SESSION - 25

SYMPOSIUM - 2: GLASSES FOR OPTICS AND PHOTONICS

| TIME (hr | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-----------|-------------|----------------------|--|
| 11:25-11 | 50 IT-S2-15 | Kaushik Biswas | Specialty Glasses for a Self-Reliant India: From Lab-Scale to Pilot Plant |
| 11:50-12: | 15 IT-S2-16 | Subrata Das | Crystal-engineered garnet phosphor in glass composite for blue light-converted high-power white LEDs |
| 12:15-12: | 27 CL-S2-15 | Naveenkumar Kurapati | Transition metal oxides doped lead silicate glasses for photonic applications |
| 12:27-12: | 39 CL-S2-16 | Ahmet Caner Kayaalp | Optimization of Er³+/Yb³+ co-doped phosphate -based laser glasses for enhanced laser performance |
| 12:39-12: | 51 CL-S2-17 | Pawel Socha | ZBLAN optical fiber preforms development with the extrusion method |
| 12:51-13: | O3 CL-S2-18 | Jagannath G | Gold and silver nanoparticles containing glasses: An efficient glass based SERS substrate |
| 13:03-13: | 15 CL-S2-19 | John M. Bussey | Soft X-ray absorption spectroscopy to explore fluorine in glass: A ZBLAN case study |

| (JAN 24. 2025) |
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|----------------|

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|---------------------|--|
| 11.25-11.55 | KT-S1-2 | K. Muraleedharan | Role of Modeling and Simulation in Manufacturing of Specialty Optical Glass |
| 11.55-12.20 | IT-S1-7 | Michael J Ojovan | Three crossover temperatures related to structural changes in glass forming systems |
| 12.20-12.32 | CL-S1-13 | Yoshitaka Saijo | Sulphur valence depth profile on the surface of float glass using EPMA with a step-wise etching technique |
| 12.32-12.44 | CL-S1-14 | Nadezhda Shchedrina | Exploring densification mechanisms of silica glass in femtosecond laser modifications using Nano-FTIR |
| 12.44-12.56 | CL-S1-15 | Daniela Schwarz | From liquid to solid: Applying high-temperature oscillatory rheometry and DMA for the advanced characterization of glass |
| 12.56-13.08 | CL-S1-16 | Debdutta Lahiri | Comprehensive Characterization of the structure of Zr-based glasses |

HALL - 4 : TECHNICAL SESSION - 27 SYMPOSIUM - 9 : GLASS AND GLASS - CERAMICS FOR EMERGING APPLICATIONS

| TIME (h) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|---------------------|--|
| 11:25-11:50 | IT-S9-9 | Suresh Sripada | Cutting –Edge Research on nanocrystallization in tellurite-based Glass – Glass-ceramic materials for Current & Future applications |
| 11:50-12:15 | IT-S9-10 | Atiar Rahman Molla | Ultra-Strong Transparent Glass-Ceramics: Revolutionizing Next-Generation Armor and Display Applications |
| 12:15-12:27 | CL-S9-11 | Ates Gosterislioglu | Composition design for high-strength thin glasses in float furnaces |
| 12:27-12:39 | CL-S9-12 | S K Mishra | Structural properties of LiNbO ₃ -TeO ₂ glasses: Total Neutron Diffraction and Reverse Monte Carlo |
| 12:39-12:51 | CL-S9-13 | Kazuki Mitsui | Iron-containing oxide glasses with n-type conductivity |
| 12:51-13:03 | CL-S9-14 | Caterina Sgarlata | Vanado-tellurite glass-ceramics containing copper oxide: effect of chemical composition on microstructural-electrical properties |
| 13:03-13:15 | CL-S9-15 | John Kaman | Local dielectric behaviour of Sb ₂ S ₃ 'Rotating Lattice Single Crystal' embedded in glass |
| 13.15-13.27 | CL-S9-16 | Md Amir | Beyond Glass: The revolutionary potential of transparent glass- ceramics |

HALL - 5 : TECHNICAL SESSION - 28 (JAN 24, 2025) SYMPOSIUM - 4 : MODELLING AND DYNAMIC SIMULATION OF GLASS

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|----------------------------|--|
| 11:25-11:50 | IT-S4-8 | N M Anoop Krishnan | High throughput information extraction from literature for glass research |
| 11:50-12:15 | IT-S4-9 | Sarika Maitra Bhattacharya | Exploring the structural contribution to dynamics in supercooled liquids |
| 12:15-12:27 | CL-S4-7 | Rajsekhar Das | Soft pinning: Experimental validation of static correlations in supercooled molecular glass-forming liquids |
| 12:27-12:39 | CL-S4-8 | Lucas Ueberricke | Thermodynamic property prediction of multicomponent oxide glasses and glass-ceramics using the CALPHAD approach |
| 12:39-12:51 | CL-S4-9 | Sushanta Kumar Mohapatra | Structural elucidation of zinc silico calcium aluminate glasses for Mid Infrared photonic applications: Experimental and MD simulation study |
| 12:51-13:03 | CL-S4-10 | Kumaresan Thangaraj | Influence of transport processes on chemical vapor deposition (CVD) online coating quality |
| 13:03-13:15 | CL-S4-11 | Katelyn Kirchner | From theory to practice: Selecting the ideal modelling technique to optimize glass quality |
| 13:15-13:27 | CL-S4-12 | Roni Chatterjee | Role of fragility of glass-formers on the yielding transition under oscillatory shear |

HALL - 7 : TECHNICAL SESSION - 29 SYMPOSIUM - 6 : GLASSES FOR ARCHITECTURAL, ENERGY AND ENVIRONMENT

| TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|-------------|-------------|-----------------------|---|
| 11:25-11:50 | IT-S6-13 | Maulik Patel | Glass in nuclear extremes or effect of lithium concentration on network connectivity and radiation effects of nuclear waste glasses |
| 11:50-12:15 | i IT-S6-14 | Allu A. Reddy | Glass Supported Metal Nano Particles for Solar-Driven H ₂ Evolution |
| 12:15-12:40 | IT-S6-15 | Srinivasa Rao Atchuta | Importance of Coatings on Solar glass for Photovoltaic Application |
| 12:40-13:05 | 5 IT-S6-16 | A Tarafder | Thermally cyclable glass and glass-ceramic sealant: An Indigenous solution of sealing issues in Solid Oxide Fuel Cell (SOFC) |
| 13:05-13:17 | CL-S6-12 | Biswanath Sen | Solar glass composition for enhanced durability and mechanical strength- low brittleness and high crack initiation load |
| | | | |

HALL - 6: TECHNICAL SESSION - 30

(JAN 24, 2025)

SYMPOSIUM - 5: GLASS SURFACE SCIENCE AND COATING

| | TIME (hr) | ABSTRACT ID | SPEAKER | ABSTRACT TITLE |
|---|-------------|-------------|-----------------------|--|
| | 11:25-11:50 | IT-S5-5 | Chandrachur Mukherjee | Development of specialized optical coatings at RRCAT, Indore |
| 1 | 11:50-12:15 | IT-S5-6 | Sunirmal Jana | Surface patterning of sol-gel thin films for advancing properties toward potential applications |
| • | 12:15-12:27 | CL-S5-4 | Narendra Chundi | Development of neutral colour anti-reflective coatings on solar glass and to evaluate its application for photovoltaic modules |
| - | 12:27-12:39 | CL-S5-5 | Tomomi Sekine | Sodium migration from flat glass substrates to thin films |
| | | | | |

13:35 - 14:35

LUNCH

14:35 - 15:30

VALEDICTORY SESSION

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