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# GLASS

A Smart and Indispensable Material  
for Sustainable Society



## XXVII International Congress on Glass

January 20 - 24, 2025  
at Kolkata, India

Organized by  
CSIR-Central Glass & Ceramic Research  
Institute (CSIR-CGCRI), Kolkata, India

3rd ICG Tutorial

Date : January 17 - 19, 2025  
Venue : CSIR-CGCRI, Kolkata

In association with





# ICG 2025

## XXVII International Congress on Glass

About  
Congress

GLASS  
Smart and  
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The 27<sup>th</sup> International Congress on Glass is very significant for India because it will be close to four decades in 2025 since the last ICG congress was held in India in the year 1986 which was inaugurated by the then Hon'ble President of India Shri Giani Zail Singh. Between these periods, Indian science and technology especially the Glass Industry have undergone a sea-change making a phenomenal impact on the Indian economy. Therefore, it is the right time for us to take a proactive role and initiative for hosting such a prestigious event. Incidentally, the year 2025 marks the 75<sup>th</sup> anniversary of the foundation of CSIR-Central Glass and Ceramic Research Institute, Kolkata (CSIR-CGCRI). Thus, it is apt and appropriate that CSIR-CGCRI hosts one of the grandest events in the field of Glass with the august presence of glass scientists, researchers, industry representatives and technologists from all over the world.

The theme of ICG 2025 Congress is "Glass: A Smart and Indispensable Material for Sustainable Society" and the focus of the ICG 2025 event is on emerging technologies which can catalyse transformations in the use of glass products in various fields. The Congress will include keynote address, several plenary talks, industry presentations and round table discussions devoted to the theme of the congress, focusing on the contribution of glass in creating a Green World. Further, a Tutorial Session is also planned as part of this 27<sup>th</sup> ICG meet, for the benefit of budding researchers working in the area of glass science & technologies, especially students. A mega exposition on glass and allied products with active participation of several reputed industry houses has been planned to promote the exchange of ideas between the experts in glass science and technology across the globe.

Participation of about 800 delegates from all over the world including more than 300 faculty members and leading industry executives from abroad is expected in this mega event of 27<sup>th</sup> ICG meet, to be held at Kolkata during January 20-24, 2025. Needless to mention that such a mega event cannot be organized without active participation, encouragement and generous support from all who are directly or indirectly related with this fascinating material GLASS. So, let us come together, join hands to see that this mission meets a grand success.

ICG glass congress is a triennial event organised at different parts of the globe under the aegis of the International Commission on Glass (ICG) for dissemination of knowledge and to promote research cooperation and partnership with the stake holders.





# International Commission on Glass



ICG, the International Commission on Glass is a non-profit international Society for the National Scientific and Technical Organizations comprising about 34 countries with particular interests in Glass Science and Technology aiming to promote and stimulate the understanding and cooperation. Since late 1980s, ICG Congresses have expanded significantly, where the knowledge and information on glass science and technology are being disseminated. The ICG meets at an interval of every three years to provide valuable opportunities to glass scientists and technologists and during the ICG meet, host country generally organizes an International conference on glass science and technology. Their special features of ICG meet includes Invited lectures, reviewing of major achievements not only in the traditional fields of glass science and technology, but also on new glass applications such as optics, photonics, electronics, nanotechnology, coating technology, biotechnology, and composites

The ICG achieves these objectives by performing laboratory round-robin experiments, comparative studies of planned projects by its Technical committees and organizing topical meetings along with publishing scientific and technical papers, reports, books by disseminating knowledge on glass in advanced educational courses and workshops. A further major role is to organize annual international meetings/conferences apart from organizing the International Congress on Glass triennially at different parts of the globe.

## CSIR-Central Glass and Ceramic Research Institute (CSIR-CGCRI)



CSIR-Central Glass and Ceramic Research Institute (CSIR-CGCRI) is one of the first four laboratories that was set up under CSIR. Though it started functioning in a limited way in 1944, the Institute was formally inaugurated on August 26, 1950. In order to serve the local industrial clusters, the Institute established two extension centres at Naroda (Gujarat, India) and Khurja (UP, India). Presently, CSIR-CGCRI has a large pool of highly experienced and dedicated scientists of about 100 working in various fields of glass and ceramics research who are assisted by about 150 technical staff and a few hundred-research students. CSIR-CGCRI came into limelight by developing the technology for production of optical glass with a view to making the country self-reliant and consequently established an optical glass pilot plant with an annual capacity of 10 tonnes in 1961 without any foreign collaboration. In the seventies, the Institute initiated the development of laser glass, infrared transmitting filters, and synthetic quartz single crystal. All these carry the testimony of CSIR-CGCRI to become the leader in glass and ceramic research in the country. In the eighties CSIR-CGCRI started work on a number of fields, some of which were even in their nascent stage in the international arena. Work in the field of optical fibre for telecommunications, sol-gel processing of glass and ceramic materials, production of glass fibre based composites and application of ceramic materials in electronics were initiated during this period. Over the years, Glass Division of CSIR-CGCRI has developed various glasses and glass-ceramics namely radio-photoluminescent (RPL) glass, filter glass, colored signal glass, lanthanum bearing optical glass, radiation shielding window (RSW) glass, glasses for nuclear waste immobilization, rare-earth doped luminescent glass, tellurite glass, transparent nano-crystalline and machinable glass-ceramics etc. for several niche applications. Currently, R & D activities have been diversified in the areas of chalcogenide glass, bioactive glass, oxyfluoride glass-ceramics, nonlinear optical glass-ceramics, etc. to fulfil countries requirements as well as for emerging applications. Similarly, Fiber Optics and Photonics Division has made immense contributions in the fields of fiber amplifiers, high power fiber lasers, photonic crystal fibers and fiber Bragg grating sensors for practical applications. The Congress is being planned in association with the major glass and ceramic societies in India such as Indian Ceramic Society, All India Glass Manufacturers Federation and Glazing Society of India.





# Committee

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# Call for Abstracts

Researchers are requested to submit an abstract for Oral / Poster presentations in the field of glass, glass-ceramics. Abstracts (within 300 words) shall be submitted online at [www.icg2025.co.in](http://www.icg2025.co.in) on or before 31st July 2024. The acceptance of the abstracts for presentation will be communicated to the corresponding author by 31st August 2024. For details of Registration, submission of abstract, other information about the ICG 2025 conference and the participation in ICG 2025 Tutorial, please visit [www.icg2025.co.in](http://www.icg2025.co.in). Abstracts are expected from the researchers under the following topics, as detailed below under the Thematic Areas of ICG 2025.

## Symphosia of the ICG 2025

With the theme of "Glass: A Smart and Indispensable Material for Sustainable Society", this 27th ICG congress has been planned to cover the following areas through its various technical sessions:

- **S-1: Glass Science: Physics and Chemistry**

This thematic area of Glass Science includes the topics such as Glass Structures, Structure & Vibrations, Crystallization, Durability & Analysis and Thermal Properties of Glasses, etc.

- **S-2: Glasses for Optics and Photonics**

This includes the topics such as Optical Properties, glasses for Optoelectronics, glass based Optical Fibres, Rare-earth doped glasses, Optical Glass, Glass based Integrated Optics and Glass Sensors, etc.

- **S-3: Sustainable Glass Manufacturing and Processing**

This thematic area covers the topics such as life Glass fibres for reinforcement and insulation, Materials for Furnaces, Gases in Glass, Glass Melting, Modelling of glass melting, 3D Printing of Glass and Rapid Prototyping, Glass Furnace Operation and Design, Alternate glass processing techniques, etc.

- **S-4: Modelling and dynamic Simulation of Glass**

This thematic area of Modelling and simulation of Glass includes the topics, such modelling and atomistic level simulation, molecular dynamic simulation etc.

- **S-5: Glass Surface Science and Coating**

This thematic area of Glass surface and coatings includes the topics such as Surface Properties of glasses, Coatings on Glass, Architectural glass, Sol Gel Glasses and Glass-Organic Adhesion, etc.

- **S-6: Glasses for Energy, Environment**

This thematic area of Glasses for energy, environment & health-care includes the topics such as Bioactive glasses, Waste Vitrification / Nuclear Waste Immobilization, Pharma Packaging of glasses, Energy Efficiency of glass, Glasses for H<sub>2</sub> Storage, Environment friendly glass, Glass Recycling and Sustainability, Radiation Shielding Glass, etc.

- **S-7: Health Care**

This thematic area of Glasses for health-care includes topics such as Bioactive glasses, biocompatible glasses and composites for soft tissue engineering, bone grafts, bio-implants etc.

- **S-8: Glasses for Transport and packaging**

This thematic area of Glasses for transport and packaging includes topics such as Glasses for Pharma Packaging, packaging for food and beverages, and glasses for automobiles and locomotives, glass fiber composites for energy efficient transportation, laminated glasses, glass and glass ceramics for bullet resistance etc

- **S-9: Glass and Glass-ceramics for Emerging Applications**

This thematic area of includes the topics such as Nonconventional Oxide glasses, Hybrid Glasses, Metal-organic Framework Glasses, Mechanical & Nano-mechanical Properties of glasses, Nanostructures, Quantum Dots and Nano crystals in Glass, Ion conducting Glass, High strength glass, Ultra-thin / Flexible Glass, Multi-functional Glass & Glass ceramics, etc.

- **S-10: Additive manufacturing and novel manufacturing processes of Glass**

This thematic area includes topics such as novel, advanced and energy efficient preparation and fabrication techniques of glasses and glass-ceramics. New techniques, advanced alternate glass manufacturing techniques, 3D printing and laser processing including femtosecond (fs) laser processing, levitation, etc.

- **S-11: Archeometry of Glass & Glass Education**

This thematic area of Archeometry of Glass & glass Education includes topics such as Ancient glasses, their preservation, making techniques/technologies, colorants used, their origin, and relating scientific characteristics to their social value. This also takes account of archaeological case studies based on locations and different periods and glass art. structural glass Glass Education covers the activities of education and training within the glass community. Education or training kits on glass for the students etc.

- **S-12: Recycling of Glass**

This thematic area of Recycling of Glass includes topics such as recovery and recycling of waste glasses from electronic waste, end-of-life PV modules, architectural glasses, bottles and others. Impact of glass recycling on raw materials, energy and overall on environment. Effect on circular economy and zero carbon footprint.



# About the 3rd ICG-CGCRI Tutorial

The International Commission on Glass (ICG) and CSIR-Central Glass & Ceramic Research Institute (CSIR-CGCRI), Kolkata, India is jointly organizing the 3rd ICG-CGCRI Tutorial 2025 during January 17 – 19, 2025 which precedes the prestigious XXVII International Congress on Glass (ICG 2025). The first ever ICG-CGCRI Tutorial that was organized by CSIR-CGCRI, Kolkata in 2017 had generated an overwhelming response and motivated ICG to grant permission to CSIR-CGCRI to conduct such tutorials once in every four years.

This 3rd Tutorial is aimed to cover a wide spectrum of topics from fundamental to applied glass science and basic technology to industrial glass melting technologies including latest advanced glass and glass ceramics characterization techniques by globally well renowned lecturers in glass and glass ceramics. This tutorial is designed to benefit the budding glass researches, Technologists, Industry glass personnels and students across the globe.



Registration Fees*:		Early Bird Registration (Before 15th October 2024)		Regular Regulation (after 16th October 2024 onwards)	
		ICG 2025 Only	Tutorial + ICG 2025 Combined	ICG 2025 Only	Tutorial + ICG 2025 Combined
<b>A) for Foreign Participants</b>					
Scientists, Faculties and Academicians from R&D Institutes, Colleges & Universities, etc.	With banquet	USD 875	USD 975	USD 975	USD 1075
	Without banquet	USD 800	USD 900	USD 900	USD 1000
Research Scholars & Students	With banquet	USD 475	USD 625	USD 625	USD 725
	Without banquet	USD 400	USD 550	USD 550	USD 650
Invited Speakers	With banquet	USD 475	USD 575	USD 575	USD 575
	Without banquet	USD 400	USD 500	USD 500	USD 500
Delegates from Industries	With banquet	USD 925	USD 1025	USD 1025	USD 1125
	Without banquet	USD 850	USD 950	USD 950	USD 1050
Accompanying persons	With banquet	USD 475	USD 575	USD 575	USD 675
	Without banquet	USD 400	USD 500	USD 525	USD 600
<b>B) for Indian Participants</b>					
Scientists, Faculties and Academicians from R&D Institutes, Colleges & Universities, etc.	With banquet	INR 20,000	INR 23,000	INR 23,000	INR 26,000
	Without banquet	INR 17,000	INR 20,000	INR 20,000	INR 23,000
Research Scholars & Students	With banquet	INR 12,000	INR 14,000	INR 14,000	INR 16,000
	Without banquet	INR 10,000	INR 12,000	INR 12,000	INR 14,000
Invited Speakers	With banquet	INR 12,000	INR 14,000	INR 14,000	INR 16,000
	Without banquet	INR 10,000	INR 12,000	INR 12,000	INR 14,000
Delegates from Industries	With banquet	INR 22,000	INR 25,000	INR 25,000	INR 28,000
	Without banquet	INR 19,000	INR 22,000	INR 22,000	INR 25,000
Accompanying persons	With banquet	INR 12,000	INR 14,000	INR 14,000	INR 16,000
	Without banquet	INR 10,000	INR 12,000	INR 12,000	INR 14,000

\*Registration fee includes Lunch for all days, Welcome dinner, Tea & Coffee



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Conference Diner	INR 900,000 / USD 12,000	Display of Standee, two Banners in ICG2025 Venue, Two Banner in the Conference dining Area, One Stall of size 2mx1m for display/exhibition of products, display of company logo in electronic display, One full-page advertisement (inside page) in ICG2025 Abstract book, Free Registration of Five-delegates
Conference Lunch (per lunch per day)	INR 800,000 / USD 10,700	Display of Standee, One Banner in ICG2025 Venue, One Banner in the Conference Lunch Area, display of company logo in electronic display, One full-page advertisement (inside page) in ICG2025 Abstract book, Free Registration of five-delegates
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Exhibition Stalls	Rs. 200,000/- USD 2,700	Exhibition stall of size 2mx1m will be provided for display of products/ exhibits. One half-page advertisement (inside page) in ICG2025 Abstract book, Free Registration of one-delegate
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Inside (Half-Page)	INR 35,000 / USD 500	A half-page (color) advertisement in ICG2025 Abstract book (inside page)



# Conference Venue **BISWA BANGLA CONVENTION CENTRE**

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