

ICG Spring School 2026 - April 19-24 2025 (Lloret del Mar, Spain)

Glass for a sustainable future: How can glass scientists help meet the challenge

Organizing committee : S. Schuller, T. Charpentier, F. Méar, M. Lancry, L. Cormier, D. de Ligny, N. Créon, A. Goel, R. Pokorny, J. McCloy, A.C. Martins Rodrigues, Y. Yue, J. Du, D. Neuville

TC 03, 05, 07, 18, 23, 27, 28

Monday - April 20 AM

The challenges of decarbonizing the glass industry

08:00	Registration	Organizing committee	
09:00	Introduction	Organizing committee	
09:10	The challenges of decarbonizing the glass industry	Erik Muijsenberg, Glass Service (Czechia) and ICG Vice President	Regulation point of view
09:50	Decarbonation of industrial Glass melting	Manoj Kumar Choudhary, THE OHIO STATE UNIVERSITY, Columbus, OH (US)	Industrial point of view
10:30	Coffee break		
11:00	Schotts perspectives on sustainability in the speciality glass industry	Michael Hahn, Schott (Germany)	Industrial point of view
11:40	The challenges of decarbonizing	Vasco Sousa, PICVISA (Spain)	Industrial point of view
12:20	Glass for a sustainable future: new cullet sources	Anette Zimmermann, Verallia (Germany)	Industrial point of view
13:00	Lunch		

Monday - April 20 PM

Basic science on glass fabrication

14:00	Basic data on glass: link between structure and properties	Daniel Neuville, IPGP (France)	Academic point of view
14:40	On the Ionic Conductivity of Glass Forming Oxide Melts: A Review of the Major Trends of Compositional and Temperature Dependence	Steve W. Martin, Iowa State University (US)	Academic point of view
15:20	Glass and glass-ceramic : formulation	John Mc Cloy, Pullman University (US)	Academic point of view
16:00	Glass synthesis: Focus on oxyde glass	Sophie Papin, Saint Gobain (France)	Academic point of view
16:40	Coffee break		
17:20	Experimental and Mathematical Analysis of Primary Foaming during Glass Melting - Towards Improved CFD Models	Richard Pokorny UCT Prague, Faculty of Chemical Technology (Czech Republic)	Academic point of view
18:00	Some challenges and opportunities in glass fiber science and technology	Yuanzheng Yue - Aalborg University (Denmark)	Academic point of view

18:40 Teasing poster students

20:30	Dinner		
-------	---------------	--	--

Tuesday - April 21 AM

Simulation approches and machine learning

08:30	Perspectives on molecular dynamic for glass melt properties	Thibault Charpentier, CEA Saclay (France)	Academic point of view
09:10	Machine learning and statistical approaches for accelerated glass development	N M Anoop Krishnan, Indian Institute of Technology Delhi (India)	Academic point of view

Glass melt properties issues

09:50	Redox Issues and relation with color	Daniel Neuville, IPGP & Laurent Cormier - Sorbonne University (France)	Academic point of view
10h30	Redox control for industrial-scale vitrification of nuclear waste	Annabelle Laplace, CEA/ISEC (France)	Industrial point of view
11:10	Coffee break		
11:30	Think tank: Glass reuse	Dominique de Ligny, Ana C. Martins Rodrigues, Yuanzheng Yue and Phd students	
12h10	Think tank: Secondary materials and new glass compositions	Daniel Neuville, Sophie Schuller, Ashutosh Goel, John Mc Cloy and Phd students	
13:00	Lunch		

Tuesday - April 21 PM

The challenges of decarbonizing the glass industry

14:00	Last update of AGC toolkit towards decarbonization, from processes to products	Francois Boland, AGC (Belgium)	Industrial point of view
14:40	Let's build a future where glass fiber is not just durable — but circular	Anne Berthereau, Owens Corning (France)	Industrial point of view

Current and future industrial glass furnace technologies

15:20	Digital Twin of Glass Melting Furnaces: Architecture and Use Cases	Gökçe Yüce, Sicecam (Turkey)	Industrial point of view
16:00	Electric furnace technology and control by IA	Katelyn Kirchner, CelSian (Nederland)	Academic point of view
16:40	Energy efficiency increase through hybridation of a tank producing green glass for glass-ceramic	Emmanuel Lecomte - Euroreka (France)	Industrial point of view
17:20	Coffee break		
17:50	Fundamentals of Electric Glass Melting	Manoj Kumar Choudhary, Ohio State University, Columbus, OH (US)	Academic point of view
18:20	NextGen hybrid furnace - Operational experience	Joris Goossens, Ardagh (Germany)	Industrial point of view

19:00 - 21:00 Poster session #1 and aperitif

21:00	Dinner		
-------	---------------	--	--

Wednesday - April 22 AM

Current and future industrial glass furnace technologies

08:30	Sustainable glass-melting concepts - How to deal with physical limits?	Christian Roos, Aachen University, Institut of Mineral Engineering (Germany)	Academic point of view
09:10	Bridging Today and Tomorrow: Industrial Furnace Design in Transition	Malte Sander, Glass Service (Germany)	Industrial point of view

Current and future nuclear glass furnace technologies

09:50	LFCM Melter Design and Testing for HLLW Vitrification in Japan	Hajime Koikegami, IHI Corporation (Japan)	Industrial point of view
10:30	Coffee break		
11:00	Geomelt and in situ vitrification technology - Feedback experience	Cyrille Veronneau, VEOLIA (France)	Industrial point of view
11:40	Cold crucible technology - Feedback experience	Emilien Sauvage, CEA/ISEC (France)	Academic point of view
12:20	Think tank: Sustainable glass furnace	Richard Pokorny, Manoj Choudary and Phd Students	
13:00	Lunch and free afternoon		
20:00	Dinner		

Thursday - April 23 AM

Eco-responsible glass production

08:30	Reuse and recycling of glass mosaics in the medieval world	Nadine Schibille, Université Orléans (France)	Academic point of view
09:10	Life cycle assessment: the case of cullet use and secondary raw materials	Antonella Sola, University of Modena (Italy)	Academic point of view
09:50	Energy savings associated with the use of cullet	Katelyn Kirchner, CelSian (NederLand)	Academic point of view
10:30	Coffee break		
11:00	Used of Secondary raw material : how to formulate new composition of glass	Daniel Neuville, Laurent Cormier, Nadine Schibille (France)	Academic point of view
11:40	Investigation of melting and fining /foaming behaviors in E-Glass batches with alternative raw materials	Gulin Demirok, Sicecam (Turkey)	Industrial point of view
12:20	Think tank: Machine learning for glass design	Thibault Charpentier Anoop Krishnam and Phd Students	
13:00	Lunch		

Thursday - April 23 PM

Challenges for high-performance glasses

14:00	Chemo-structural drivers controlling molybdenum solubility in aluminoborosilicate glasses	Ashutosh Goel, Rutgers University (US)	Academic point of view
14:40	Challenge for lighter glass - Glass strengthening methods	Dominique de Ligny, FAU university (Germany)	Academic point of view
15:20	Challenge of the Self-healing high-temperature functional glass for hydrogen fuel cell	Francois Méar, Lille University (France)	Academic point of view
16:00	Coffee break		
16:00	16:00 - 18:00 - Poster session #2		
20:00	Poster price		
20:30	Dinner		