

26th International Congress on Glass

Sunday, 3. July					
	TC Meeting Room 1 Salon 2, Rom	TC Meeting Room 2 Salon 3, Rom	TC Meeting Room 3 Salon 4, London	TC Meeting Room 4 Salon 5, London	TC Meeting Room 5 Salon 6, Oslo
12.00 - 14.00					
14.00 - 14.30			Break		
14.30 - 16.30	TC21	TC05	TC23	TC07	TC28 Glass Fibers
16.30 - 17.00			Break		
17.00 - 19.00	TC18	TC02	TC09	TC26	TC06

Monday, 4. July				
	Parallel- Session 1 Grand Ballroom, inkl. Galerie	1st Floor, Gallery & GB Foyer B	HVG MV Salon 4.5, London	DGG MV Salon 2.3, Rom
8.00 - 9.15			HVG Mitgliederversammlung	
9.15 - 10.30				DGG Mitgliederversammlung
10.30 - 11.00	Break		Break	
11.00 - 11.40	ICG Opening Ceremony & OTTO SCHOTT Research Award			
11.40 - 13.00				
13.00 - 14.00	Lunch Break			
14.00 - 16.00	Award Session			
16.00 - 16.30	Coffee Break			
16.30 - 18.00		Poster Session		
Rest				
19.00 -	Welcome Reception Sponsored by SORG			

Tuesday, 5 July

	SYMPOSIUM IV Sustainable Glass Production Symposium Chairs: Christian Roos, Erik Mujsenberg, Manoj Choudhary	SYMPOSIUM II Glass Physics, Properties and Characterisation Symposium Chairs: Dominique de Ligny, Madoka Ono, Liping Huang	SYMPOSIUM II Glass Physics, Properties and Characterisation Symposium Chairs: Dominique de Ligny, Madoka Ono, Liping Huang	SYMPOSIUM V Glass Forming, Post-Processing and Quality Control Symposium Chairs: Sindy Fuhrmann, Harald Zimmermann, Jochen Altkemper	SYMPOSIUM VII Emerging Glass Applications and Application-related Challenges Symposium Chairs: Aldo Boccacini, Akio Koike, Lothar Wondraczek	SYMPOSIUM I Chemistry and the Structure of Glasses Symposium Chairs: Delia Brauer, Daniel Neuville	SYMPOSIUM II Glass Physics, Properties and Characterisation Symposium Chairs: Dominique de Ligny, Madoka Ono, Liping Huang	SYMPOSIUM VII Emerging Glass Applications and Application-related Challenges Symposium Chairs: Aldo Boccacini, Akio Koike, Lothar Wondraczek	SYMPOSIUM III Recycling and Raw Materials Symposium Chairs: Jürgen Horbach, Srikanth Sastry
	Grand Ballroom, inkl. Galerie	Saal Berlin B (Bühne)	Saal Berlin C	Salon 7: Wien	Salon 4-5: London	Salon 2-3: Rom	Salon 12-15: Paris	Salon 16-17: Riga	Salon 1: Moskau
9.00 – 9.15	Conversion of Natural Gas to Hydrogen Combustion for Sustainable Glass Production <i>Jan Viduna</i>	Invited Speaker Surface-Initiated Microstructure Formation in Glass Ceramics <i>Stefan Reinsch</i>	Invited Speaker The Energy Landscape Governs Ductility in Glasses <i>Mathieu Bauchy</i>		Invited Speaker Overview of glasses versus glass-ceramics for nuclear wastes immobilization <i>John McCleay</i>	Invited Speaker Glass and melt structure studied by diffraction <i>Laurent Cormier</i>	Invited Speaker Recent advances in highly conductive Nasion glass-ceramics <i>Ana Candida M. Rodrigues</i>	Invited Speaker Tackling Global Challenges with Framework Materials and Hybrid Glasses <i>Alexander Knebel</i>	Invited Speaker Predicting Structure, Properties and Behaviour of Multicomponent Oxide Glasses through Molecular Dynamics Simulations. <i>Alfonso Pedone</i>
9.15 – 9.30	Decarbonizing process heat in the glass industry with hydrogen and hydrogen/natural gas blends <i>Jörg Leicher</i>	Heterogeneous crystal nucleation in the system lithium metasilicate – lithium disilicate <i>Raschid Al-Mukadam</i>	Competition of shear and brittle failure under micro-compression in silica <i>Gergely Molnar</i>		Invited Speaker Melting behaviour of simulated radioactive wastes as a function of iron-bearing raw materials redox <i>Paul Bingham</i>	A critical evaluation of barium silicate glass network polymerization <i>Benjamin Moulton</i>	Invited Speaker The emerging case for high performance non-crystalline electrolytes <i>Greg Palmer</i>	Direct forming of hollow microspheres from a borosilicate glass melt <i>Tobias Helling</i>	Accuracies of classical force fields for silicate glasses: A large-scale DFT study <i>Atsushi Tanaka</i>
9.30 – 9.45	Fining of Flint Glass under Hydrogen Oxygen Firing <i>Sebastian Krogel</i>	Accelerated crystal growth of a lithia aluminosilicate glass <i>Jessica Löschmann</i>	Experimental investigation of compressed silica glass micropillars using electron-beam irradiation <i>Guatavo Rosales-Sosa</i>	Invited Speaker End to end optimization of the container glass production process <i>Thomas Huhn</i>	Invited Speaker Understanding the effects of simulated radioactive wastes as a function of iron-bearing raw materials redox <i>Paul Bingham</i>	Clustering in Tb-doped borosilicate glasses – A combined TEM, fluorescence spectroscopy, and NMR study <i>Katrin Thieme</i>	Characterizing diffusion channels in glassy electrolytes using topological data analysis <i>Rasmus Christensen</i>	Dissolvable Copper Borate Glass for Wood Preservation <i>Courtney Calahoo</i>	Development of an empirical Force-field for lithium-borosilicate glasses <i>Shingo Urata</i>
9.45 – 10.00	FlammaTec CF Burner – From Natural Gas to Carbon Free Oxy-Fuel Technology <i>Andreas Birle</i>	Phase formation of silica-free glasses in the Na ₂ O-B ₂ O ₃ -TiO ₂ system and the production of glass ceramics <i>Elisa Brade</i>	Strength and microscale plasticity of silica glass assessed by spherical nanoindentation <i>René Limbach</i>	Advances in artificial intelligence based container glass quality inspection <i>Nikolas Estner</i>	Understanding the Effects of Various Cations and Anions on Sulfate Retention and Solubility Within Simulated Low Active Waste Glasses <i>Natalie Smith-Gray</i>	Effect of fictive temperature on surface structural chemistry of soda-lime-silica glass <i>Barasheek Roy</i>	Sprayable Glass Bubble insulation - The sustainable & energy efficient building insulation <i>Thorsten Gerdes</i>		The effect of the interatomic potential model on volumetric strain in hydrostatically compressed sodium silicate glasses <i>Leton Saha</i>
10.00 – 10.15	Glass Production Decarbonisation Utilising Hydrogen under Air- and Oxy-combustion conditions <i>Tilen Sever</i>	Effect of Li ₂ O on Melt Crystallization of Cupidine in CaO-SiO ₂ -CaF ₂ -Na ₂ O glasses <i>Jung-Wook Cho</i>	Indentation cracking in silicate glasses is directed by shear flow, not by densification <i>Elinette Barthel</i>	Indentation Crack Localisation and Classification in Vacuum Insulated Glazing by Explainable AI methods <i>Henrik Riedel</i>	The effect of synthesis route on the Na ₂ O-TiO ₂ -SiO ₂ glass system: a potential wasteform for 137Cs <i>Lucas-Jay Woodbridge</i>	Effect of the Na/Mg mixing on the structure and properties of aluminosilicates glasses and melts <i>Salomé Pannefieu</i>	Electrical Glass melting and boosting solutions of the future designed for efficiency and flexibility to reduce CO ₂ emissions and facilitate return on investment. <i>Mikael Le Guern</i>		Dissolution Processes of Calcium Aluminosilicate Glass from Simulation <i>Tiffany Walsh</i>
10.15 – 10.30	Hydrogen Fired Oxyfuel Burners for Glass Melters <i>Martin Adendorff</i>	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10.30 – 11.00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
11.00 – 11.15	Hydrogen Combustion on a Float Glass Furnace <i>Andrew Keeley</i>	Effect of Li ₂ O addition on phase-separation and crystallization of BaO-SiO ₂ glasses <i>Takato Kajihara</i>	Invited Speaker Evaluation method of dynamic indentation behavior of glass based on electromagnetical induction phenomena <i>Satoshi Yoshida</i>	A new approach to glass contact interactions <i>Christian Roos</i>	Invited Speaker Glass Crystalline Materials as Advanced Nuclear Wasteforms for HLW Immobilisation <i>Michael Ojovan</i>	Elaboration, structure and mechanical properties of oxynitride glasses from the SiO ₂ -BaO-Al ₂ O ₃ -Si ₃ N ₄ chemical system <i>Alexis Duval</i>	Invited Speaker All-solid-state Na-ion Battery Fabricated with a Glass Ceramic <i>Kei Tsunoda</i>	Interfacial chemistry of sealing glasses <i>Sathy Narayanasamy</i>	Beyond the Average: Spatial and Temporal Fluctuations in Oxide Glasses <i>Kateřyn Křičner</i>
11.15 – 11.30	Extent of structural disorder in SrO-Ga ₂ O ₃ -2SiO ₂ glass and SrGa ₂ Si ₂ O ₈ in transparent ceramic from advanced solid-state NMR spectroscopy <i>Amandine Ridouard</i>	Structural studies on high zirconia-containing lithium silicate glass-ceramics <i>Bernhard R. Durschang</i>	Deformation and fracture behavior of curved glass fiber surfaces under sharp contact loading by wedge indentation <i>Roman Sajzew</i>	Glass Technology Process Designing: A Job for Scientists? <i>Harald Zimmermann</i>	Imaging Phase Separation and Crystallization in Glasses with X-ray Nano-Computed Tomography <i>John Bussey</i>	Glasses in blended cements – link between structural, thermodynamic and hydration properties <i>Alexandre Pisch</i>	Vitrification of maricite NaFePO ₄ by laser irradiation for all-solid-state battery <i>Masafumi Hiratsuka</i>	Liquid phase sintering of alkali zinc borate glass-bearing silver pastes for applications in photovoltaics and microelectronics <i>Lina Heuser</i>	A molecular dynamics simulations based study on the structure-property relationship of the phosphate glasses <i>Lu Deng</i>
11.30 – 11.45	Hydrogen combustion technologies for a smooth transition <i>Luc Jarry</i>	Crystal Structure Determination of a new LaPO ₄ phase in a multicomponent glass ceramic via 3D electron diffraction <i>Philipp Gollé-Leidreiter</i>	In-situ observation of median crack initiation under the sharp edge indentation and its compositional dependency <i>Shigeki Sawamura</i>	Process simulation for the glass industry – a worthy tool or wasted effort? <i>Lukas Spindler</i>	New glass system of SrO-ZrO ₂ -Al ₂ O ₃ -La ₂ O ₃ for immobilization of high-level nuclear wastes, LLFP and MA <i>Tetsuji Yano</i>	Incorporation of ZrO ₂ into glasses of the system (MgO)-Al ₂ O ₃ -SiO ₂ <i>Alessio Zandonà</i>	Structure and Performances of Boroluminosilicate Sealing Glasses for Solid Oxide Fuel Cells <i>Jiada Yan</i>	Structure and Performances of Boroluminosilicate Sealing Glasses for Solid Oxide Fuel Cells <i>Jiada Yan</i>	Composition (C) - Structure (S) - Property (P) Relationships and C-S-P Statistical Modelling of Oxide Glasses Properties <i>Hong Li, L. Zhang</i>
11.45 – 12.00	Technical aspects of combustion of natural gas – hydrogen blends <i>S. Gersen</i>	Revealing the crystallization process of oxyfluoride glasses using in situ HEXRD measurements <i>Kenji Shinozaki</i>	Lateral-pushing induced surface lift-up during nanoindentation of silicate glass <i>Linfeng Ding</i>	The Influence of Day-Night Variations on Mold Cooling of IS Machines <i>Andreas Hanninger</i>	Sodium iron phosphate glass ceramic materials with alumina and silica additions for immobilisation of spent fuel <i>Liam Harnett</i>	Structural Study on Sodium Aluminosilicate Glasses Depending on B ₂ O ₃ and P ₂ O ₅ Contents with Molecular Dynamics and NMR <i>Kyeong Dae Park</i>	Dielectric response of glass in the GHz-THz frequency region <i>Kazuki Kanehara</i>	High-Performance Porous Zeolite-Glassy Silica Membranes for Water Desalination <i>Xinxin Chen</i>	Effect of Iron Redox Ratio on the Structures of Boro-aluminosilicate Glasses <i>Jincheng Du</i>
12.00 – 12.15	The emission spectra of flames when mixing hydrogen to natural gas using oxy-fuel burners <i>Berhard Fleischmann</i>	Revealing the crystallization process of oxyfluoride glasses using in situ HEXRD measurements <i>Kenji Shinozaki</i>	Lateral-pushing induced surface lift-up during nanoindentation of silicate glass <i>Linfeng Ding</i>	Validation of a three-dimensional model to predict glass thickness distributions of non-axisymmetric perfume bottles. <i>Adria Biosca</i>	Nuclear glass/iron/claystone interactions: a study relying on multi-scale characterizations and geochemical modeling <i>Alexis Delanoe</i>	Pressure-induced densification of amorphous Li ₂ SiO ₃ <i>Emmanuelle de Clermont Gallerande</i>	Enhancing the Glass Anode Performances for Lithium-Ion Batteries by Humidity Treatment <i>Yanfei Zhang</i>	Glass-ceramics: a highly potential material for energy storage applications; a few case studies <i>Atiar-Rahman Molla</i>	A metadynamics investigation of nucleation mechanism of lithium disilicate <i>Federica Lodesani</i>
12.15 – 12.30	The influence of hydrogen combustion on the glass colour of industrial batches <i>Berhard Fleischmann</i>	Investigating the solidification paths of a molten Al ₂ O ₃ -ZrO ₂ -SiO ₂ mixture by in situ techniques. <i>Maureen Yembele</i>	Surface damage resistance of silicate glasses under sliding load: Effect of test environment and glass composition <i>Gohar Sani</i>			Redox of multivalent elements at high temperature in silicates melts <i>Adrien Donatini</i>			
12.30 – 14.00	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break
14.00 – 14.15	The potential to decarbonise the Glass Industry using Hydrogen and biofuel technologies <i>Robert Ireson</i>	Invited Speaker Densification process boosted by microwave irradiation in sinter-crystallization of diopside glass <i>Kenji Shinozaki</i>	Invited Speaker Correlating Structure with Mechanical Properties in Hybrid Glasses <i>Roy Shimen, Satoshi Yoshida</i>	Invited Speaker Glass in Electronic Applications - Outlook <i>Kenji Shinozaki</i>	Invited Speaker Glass in Electronic Applications - Outlook <i>Kenji Shinozaki</i>	Invited Speaker The effect of transition metals on the structure of aluminosilicate glasses and melts <i>Olivier Podda</i>	Invited Speaker Glass-water interfacial reaction mechanisms and dissolution behavior predictions from atomistic computer <i>Kenji Shinozaki</i>	Invited Speaker Engineered Semiconductor Quantum dot (Q-Dot) Structures in Silicate Glasses for Solar Energy Harvesting <i>Kenji Shinozaki</i>	Invited Speaker Low-energy excitations in structural glasses <i>Kenji Shinozaki</i>

V.1 Forming Operations and Quality Control for Bulk Containers and Specialty Glasses
Session Chairs: Michael Kellner, Dominik Orgel

VIL.3: Waste Vitrification
Session Chairs: Aldo Boccacini, Akio Koike, Lothar Wondraczek

I.1 Silicate Glasses and Melts
Session Chairs: Delia Brauer, Daniel Neuville

I.4 Electromagnetic Properties, Ionic and Electric Conduction Technique
Session Chairs: Toshihiro Yamada, Grahm Wilkinson

VII.2 Glasses in Energy and Environmental Technologies
Session Chairs: Aldo Boccacini, Akio Koike, Lothar Wondraczek

III.3 Composite Glasses, Statistical Mechanics and Model Systems
Session Chairs: Ebru Lener, John Russo, Alfonso Pedone

14.15 – 14.30	IV.2 Energy Efficiency Session Chairs: Hans van Limpt, Benji Meuldeman, Thorsten Gerdies	Invited Speaker Energy efficient glass melting: an apparent contradiction between practice and theory? A paper from Technical Committee 9 (TC9) of the ICG on energy efficiency Hans van Limpt	II.7 Crystallization and Glass Session Chairs: Ina Mitra, Mubira Paice	powders Cristina Leonelli	II.8 Strength, Fracture and Mechanics Session Chairs: René Limbach, Chiny Robinson	Morten M. Snesdskjaer	V.3 Mesosizing, Polishing, Cutting, Laser Processing Session Chairs: Geline Bruggmann, Jens Blüthner, Sharon Koppka	Raimund Förg	II.9 Glass Viscosity and Rheology Session Chairs: John McCloy, Jincheng Du	metts: 1 and 1e John McCloy	II.8 Glass Surfaces and Durability Session Chairs: Pappi Ghargh, Gofe Higgins, Joe Ryan	simulations Jincheng Du	II.9 Glass Viscosity and Rheology Session Chairs: John McCloy, Jincheng Du	for Boiling Water Heat Exchanger Animesh Jha	II.9 Glass Viscosity and Rheology Session Chairs: John McCloy, Jincheng Du	Edan Lerner	
14.30 – 14.45				3D printing of crystallizing bioactive glasses Carsten Blaeß		Study of the Indentation Deformation Mechanisms in Borosilicate Glasses KASIMUTHUMANIYAN S		Shear strength of laser bonded glass interfaces Jens Ulrich Thomas		Influences of Yellow Phase Formation on Japanese High Level Waste Vitrification Akira Sakai		Transition of Ni ²⁺ ion local environment in immiscible sodium borosilicate glass and melt observed by high temperature in-situ Ni K-edge XAFS spectroscopy Kana Tomita		Modelling Reactions of Water on Calcium Aluminosilicate Glass Surfaces Alastair Cormack		Vacuum Insulated Glazing – a slender yet highly energy efficient window unit Isabell Schulz	Modeling Relaxation and Crystallization of Glass Forming Systems: Toy Landscape Model Collin Wilkinson
14.45 – 15.00				Invited Speaker Silica glassceramics containing zinc oxides nanoparticles by sol-gel derived bottom-up approach Roberto Lorenzi		Effects on indentation mechanical properties by chemically strengthening of TiO ₂ and Al ₂ O ₃ doped soda lime silicate glasses Stefan Karlsson		Experimental results of comparing face and lateral grinding of fused silica and BK7 using metal and resin bonded tools in a single processing step Christian Schultze		Outline and results of basic research on vitrification technology for reducing the volume of radioactive waste Kohei Owaku		Structural control on crystallization of mold flux glasses in the system CaO-SiO ₂ -CaF ₂ -B ₂ O ₃ -Na ₂ O-Li ₂ O: A multinuclear NMR spectroscopic study Taemin Yeo		Tuned wettability of SiO ₂ sol-gel coatings for humid air and saturated vapor condensation Alessandro Martucci		Synthesis and thermal processing of N-doped, sol-gel-derived TiO ₂ thin films on glasses Paulina Levario	First-principles molecular dynamics modelling of La4Ti9O24 glass Hiroyuki Inoue
15.00 – 15.15				Invited Speaker Fundamental approach to a CO ₂ -free container glass production Christian Roos		Tunable expansion of spray-dried quartz and keatite sol-gel powders at cryogenic and high temperatures Gundula Hetsch		Elastic properties and Mn-ion clustering in heavily doped Manganese aluminosilicate glasses Byoungjin SO		Investigation of the influence of air humidity during the storage and polishing of optical glasses Michael Benisch		Alteration of glasses in storage condition Loryelle Sesegolo		Transient subsurface hardening of soda-lime-silica glass accompanied by surface network depolymerization caused by superheated steam Barsheek Roy		Preparation and sintering of Li-ion conductive Li Mx Tiy (PO ₄) ₃ (M = Al, La) glass ceramic as solid electrolyte for next generation batteries Dieter Gödek	How plastic flow affects the photoelastic response of silicate glasses Gustavo Rosales-Sosa
15.15 – 15.30				Invited Speaker Energy efficient melting of glass with Microwave Heating: A novel method to minimize volatilization loss during melting of glass Ashis Kumar Mandal		Functionalization of glass-ceramics by gas discharge treatments Jonas Hildebrand		On The Physical Properties of New Antimony Glass System Rochdi El Abdi		Rounded glass edges produced with an optical Airy beam D. Sohr, J. U. Thomas		Effects of complex irradiation scenarios on ISG nuclear glass long-term behavior Magaly Tribet ONLINE		Structure and chemical composition of amorphous SiO ₂ /Al ₂ O ₃ thin films for tunable physico-chemical properties of glass Nadia Pellerin		Flash sintering with concurrent crystallization of Si ₃ N ₄ in Li _{1-x} Al _x (PO ₃) ₂ glass-ceramics Joao Vitor Campos	The Origin of Deformation-Induced Topological Anisotropy in Silica Glass Erik Bitzek
15.30 – 16.00	Coffee Break		Coffee Break		Coffee Break		Coffee Break		Coffee Break		Coffee Break						
16.00 – 16.15	IV.2 Energy Efficiency Session Chairs: Hans van Limpt, Benji Meuldeman, Thorsten Gerdies	Preliminary test results from a new approach increasing the mechanical strength of glass Thomas Claude Sauer	Invited Speaker Glass-ceramics comprising solid solutions derived from high- and low-quartz structure Markus Rampf	Invited Speaker Simulation for dynamic fracture of tempered glass sheet Sayako Hirobe	Invited Speaker Advanced laser based glass structuring for microfluidic diagnostics and packaging solutions Felix Dreisow	Immobilization of 129I in nuclear waste glass matrices synthesized under high-pressure conditions: an experimental study Moritz, Y.	Influence of aluminum content on multicomponent diffusion in Na ₂ O-CaO-Al ₂ O ₃ -SiO ₂ melts Ekaterina Burov	Invited Speaker Predicting the Long-Term Durability of Glasses using Machine Learning Mathieu Bauchy	Up-Cycling of Pharmaceutical Glass into Highly Porous Photocatalytic Ceramic Membranes for Wastewater Treatment AKANSHA MEHTA								
16.15 – 16.30		Reducing fuel consumption and CO ₂ emissions for glass forehearth with Linde partial oxy-fuel technology Julien Pedel			High resolution UV laser marking of glass surfaces Jürgen Ihlemann	High-temperature crystallization and rheology of simulated nuclear glasses Justi, J.	Iron-containing sodium borosilicate glasses: phase separation, crystallization and properties Marina Konon	Studying the Scratch-induced Damage of Silica Glass by Molecular Dynamics Simulations Sourav Sahoo	Enhancing Scratch Resistance of Silica Glass via Self-generated Tribofilms from Graphene Oxide Aqueous Dispersions Sourav Sahoo								
16.30 – 16.45		Experimental facility to simulate melting in cold-top furnaces Oscar Verhejen	Glass-Ceramic enabling Novel Feedthroughs for High Temperature Applications Ina Mitra	Effective Mechanical Behaviour for Acoustic Attenuation in Glasses Anne Tanguy	Possibilities of glass tube processing using laser radiation Schmidt, T.	Water solution mechanism in calcium aluminosilicate glasses and melts: insights from in and ex situ Raman and ZFSI NMR spectroscopy Charles le Losq	Comparison of silica and sodium trisilicate glass surfaces created by molding and breaking: an MD simulation Jan Machžek	ICG Steering Committee Meeting									
16.45 – 17.00		Change of flame emissivity in a container glass furnace. CFD Model combined industrial trial Fatih Mehmet Güçlü	Glass-ceramics with extremely high Young's modulus values Alexandra Mitchell	Non-destructive testing of the glass strength in flat glass with indentation induced cracks by Nonlinear Acoustic Wave method Stefan Karlsson	Laser beam polishing (LBP) of inner contours in fused silica components Robin Hassel	A Feedback mechanism between crystals and bubbles in a RuO ₂ -bearing melt Luiz Pereira	Room-temperature bonding between freestanding ultra-thin silicate glass film and Ti substrate: compositional dependence of the bonding strength Tetsuo Kishi										
17.00 – 17.15		Batch and cullet preheating – Next steps and future challenges Andreas Ernich	Properties of thermally poled lithium aluminosilicate glasses and glass-ceramics Malte Sander	Vacuum crack growth in silicate glasses Tina Waurschik	Progress towards the development of advanced freeform glass optics Tayyab Suratwala	Freeform shaping of silicate glass substrates via a viscous deformation induced by a laser patterned, stressed film Jürgen Ihlemann	Microstructuring of photosensitive glass with plasma- and wet chemical etching methods Ulrike Brokmann										
17.15 – 17.30		Practical experience with the Sorg BATCH3 system for preheating glass melting batches Dirk Schnurpfel	Titanium and Zirconium Compositional Influences on Crystallization of Glass-Ceramics for Piezoelectric Applications David Dobesh	Invited Speaker Computer simulations and models of yielding and fatigue failure of amorphous solids under cyclic deformation Sikanth Sastry													
17.30 – 17.45		Evaluating the effects of crystallization advance on the electrical properties of Li _{1.5} Al _{0.5} Ge _{1.5} (PO ₃) ₃ and Li _{1.5} Si _{0.3} Al _{0.7} Ge _{1.5} (PO ₃) ₃ NASICON glass-ceramics Silvia Santagneli															
17.45 – 18.00		Nanocrystallization and formation of highly dispersed bismuth nanoparticles in iron bismuth silicate glass-ceramics Tsuoyoshi Honma		Analysis of damaged glass components to identify critical conditions in manufacture and use Martin Krappitz													

Wednesday, 6. July

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Grand Ballroom, inkl. Galerie		Saal Berlin B (Bühne)		Saal Berlin C		Salon 7, Wien		Salon 4-5, London		Salon 2-3, Rom		Salon 12-15, Paris		Salon 16-17, Riga		Salon 1, Moskau	
9.00 – 9.15	A comprehensive study of the batch-to-melt conversion process of a high-boron aluminosilicate glass <i>Hong Li, M. Reben</i>	Invited Speaker The colorless and transparent zero thermal expansion glass ceramic "Cerapure" <i>Yuki Yokota</i>	Invited Speaker Elaboration and Research properties of glass matrix/glass particles composites <i>Tanguy Rouxel</i>	Invited Speaker Formation and mechanical properties of glass fibres <i>Yuanzheng Yue</i>	Invited Speaker Trends of Research and Development on LTCC Materials for Microwave Devices <i>Yasutaka Sugimoto</i>	Invited Speaker Impact of industrial treatments on glass alteration <i>Léa Brunswic</i>	Invited Speaker Using Neutron Diffraction to study the structure of Chalcogenides <i>Anita Zeidler</i>	Invited Speaker Strategies towards circular economy for glass materials and products <i>Edda Rädlein</i>	Invited Speaker Understanding glass science literature: An NLP based approach <i>N. M. Anoop Krishnan</i>								
9.15 – 9.30	Advanced Techniques & Modeling to Improve Process Efficiencies and Sustainability in Glass Fiber Manufacturing <i>Bruno Purnode</i>	Rare-earth doped transparent oxyfluoride glass-ceramics processed by spark plasma sintering <i>Maria de las Mercedes Sedano Rodriguez</i>	Mechanical Properties of Transparent Na2O-SiO2-P2O5 Glass-Ceramics <i>Qi Zhang</i>	Quantifying high temperature stability of stone wool fibres <i>Peter Grouleff Jensen</i>	Invited Speaker Development of Low Dielectric Tangent LTCC Materials Suitable for 5G Communication <i>Yoshio Iimayahara</i>	Invited Speaker Thin Film Glass Coating technology contributing to the search for extraterrestrial life. The realization of the coating plant for the segments of the primary mirror of the Extremely Large Telescope (ELT) in Chile. <i>Jeroen Schotsaert</i>	Very sharp diffraction peak in oxide glasses and liquids <i>Shinji Kohara</i>	Developing a more sustainable glass recycling system <i>Steve Whettingsteel</i>	Predicting Optical properties of Glasses as a function of testing parameters <i>MCHD ZAKI</i>								
9.30 – 9.45	Dynamics of bubble population undergoing mass transfer and coalescence in a glass forming liquid <i>Franck Pigeonneau</i>	Heat treatment enables Translucent Oxyluoride Glass Ceramics <i>Zhencai Li</i>	Toughness Enhancement of Glasses by Dispersion of Trace Amount of Ni Nanoparticles <i>Kenji Shinozaki</i>	Influence of production parameters on the excess enthalpy of glass mineral wool <i>Martin Maiwald</i>	Invited Speaker Preparation of sulfide-based solid electrolytes using solution process for all-solid-state battery <i>Kiyoharu TADANAGA</i>	Invited Speaker A brief review of a high current diffusive magnetron discharge (HCMD) approach for improved thin film deposition <i>Sener Oktik</i>	Structure of low-melting vanadate glass <i>Yohei Onodera</i>	From batch to melt: chemical energy demand and energy balance model <i>Corinne Claireaux</i>	Predicting Vickers Hardness of Glasses as a function of processing parameters <i>MCHD ZAKI</i>								
9.45 - 10.00	EUROX – Heated probes for extractive measurements <i>Christian Reichl</i>	Development of new transparent borotellurite glass-ceramics <i>Marine Cholin</i>	Damage resistant nano-glasses from consolidation of amorphous nanoparticles <i>Liping Huang</i>	Stone wool fibers behaviour in different synthetic lung fluids: influence of experimental conditions, fluid composition and binder presence <i>Denis Okhrimenko</i>	Invited Speaker Foaming in E-Glass: The effect of SO3 amount and different raw materials <i>Gülün Demirok</i>	Cleaning test setup and standard for ARC abrasion resistance assessment of solar glass coatings on original format panels <i>Charlotte Pfau</i>	Iron in minerals and glasses: what can we learn from optical and X-ray spectroscopies? <i>Gerald Lelong</i>	Industrially proven material and cullet solutions to reduce the overall carbon footprint of glass manufacturers <i>Hans van Limpt</i>	Building an integrated research system using Construct electronic lab notebooks (ELN) <i>Hiroyuki Hijiya</i>								
10.00 – 10.15	How Industry 4.0 can help to reduce carbon foot print <i>Erik Mujsenberg</i>	Mechano-luminescence from transition metal ions activated glass ceramics <i>Jiangkun Coa</i>	Fracture toughness and crack initiation probability of demixed sodium silicate glasses <i>Jan-Oliver Fritzsche</i>	Invited Speaker Understanding the behaviour of aluminium on the surface of calcium aluminosilicate glass during dissolution <i>Aleksej Popel</i>	Development of chalcogenide glass-ceramics for solid-state electrolytes in batteries <i>Jiajie Zhang</i>	Superhydrophobic functional Coatings with high Temperature Stability and UV protection <i>Anna Kathrin Schmidt-Verna</i>	Characterization of radioactive materials with x-rays at the MARS beamline <i>Myrtille O.J.Y. Hunault</i>	Invited Speaker Shark Solutions: Recycling of laminated glass <i>J. Holmegaard</i>	Predicting the Dynamics of Atoms in Glass-Forming Liquids by a Surrogate Machine Learned Simulator <i>Mathieu Bauchy</i>								
10.15 – 10.30	Infrared temperature measurement and automation in glass production processes <i>Daniel Wagner</i>	Crystallization and Glass-Ceramics Session Chairs: <i>Ira Mitra, Meeta Pascoal, Kenji Shinozaki</i>	Crystallization of Ce/Yag crystallites from an aluminosilicate glass <i>Andreas Herrmann</i>	Invited Speaker Glass strengthened by steam <i>Jingshi Wu</i>	High-modulus glasses and fibers drawn from them: thermal and mechanical properties <i>Muawia Dafr</i>	Structural transformation and Phase Change Properties of Se substituted GeTe <i>Roopal Shekawat</i>	Performance Optimization of VO2-based Thermochromic Films by Quenching Process <i>Senwei Wu</i>	Atomic structure and fragility of bulk metallic glasses/liquids studied by synchrotron-radiation X-ray diffraction, scanning tunneling microscopy and ab-initio molecular dynamics simulation <i>Dmitri Louzguine</i>	Realistic modeling of aluminosilicate-water interfaces by machine learning potentials with ab initio quality <i>Andreas Efebach</i>								
10.30 – 11.00	Coffee Break	III.9 Glasses under Extreme Conditions Session Chairs: <i>Dmitri Louzguine, Meeta Pascoal, Jigda Wu</i>	Chromium-doped alkali-alumina-borate glass-ceramics: synthesis, properties and applications <i>Anastasia Babkina</i>	Cold- and Hot-Densified Lead Metasilicate Glass: A Multiscale Vibrational Investigation <i>Rafaella Bartz Pena</i>	Non-Circular Cross-Section Glass Fibers for Improved Matrix Adhesion in Reinforcement Applications <i>Martin Groß</i>	Alternate routes to synthesize materials for energy applications <i>Anna Kathrin Schmidt-Verna</i>	Smart Glass in Architecture and the Automotive Sector through Functional Interlayer Films <i>U. Havelkamp</i>	Glass surface composition: a comparative approach by ToF-SIMS and XPS <i>Hervé Montigaud</i>	Anhydrous borate for energy and CO2 emission reduction <i>Allen Zheng</i>								
11.00 – 11.15	Mathematical modeling of batch melting process in cold-top electric furnace <i>Kenji Oda</i>	III.2 Strength, Fracture and Mechanical Properties Session Chairs: <i>Rolf Fehsch, Chofu Rourines, Itay Sakma, Satoshi Yoshida</i>	Persistent luminescence of Eu/Dy-doped Sr2MgSi207 glass-ceramics <i>Laura Fernandez</i>	Mechano-luminescence from transition metal ions activated glass ceramics <i>Aziliz Le Bescond de Coatpont</i>	Hydrolytically active glass fibers as reinforcing fibers for biodegradable fiber-reinforced plastic composites <i>Julia Eichhorn</i>	Two-dimensional Silica-Glass and its Real-Space Characterization at the Atomic Scale visualizing the Zachariasen Proposal from 1932 and beyond <i>Hans-Joachim Freund</i>	Invited Speaker Boson peak and terahertz absorption of sodium silicate glass <i>Tatsuya Mori</i>	Foaming of CRT waste glass in air atmosphere with the use of carbon black <i>Uroš Hribar</i>	A Machine Learning approach for large models simulation of 29Si NMR spectra in Mg-silicate glasses <i>Marco Bertani</i>								
11.15 – 11.30	Radiative Heat Transfer in Glass Furnace Foams <i>Manoj Choudhary</i>	III.5 Advanced Techniques for Glass Characterization Session Chairs: <i>Samuel Heffley, Anita Zeidler</i>	Mechano-luminescence from transition metal ions activated glass ceramics <i>Aziliz Le Bescond de Coatpont</i>	Subtraction method's potential to produce porous silicate-free glassceramics. <i>Sharon Koppka</i>	Super-flexible continuous glass nanofibers produced by a novel technique: Continuous Fiberizing by Laser melting and Supersonic dragging <i>Felix Quintero</i>	Applications of CARS (Coherent Anti-Stokes Raman Scattering) to the study of third-order optical nonlinearity: from metrology to nonlinear imaging <i>Jean René DUCLERE</i>	Deep learning modeling of the properties of aluminosilicate melts <i>Charles LE LOSQ</i>										
11.30 – 11.45	Specific Energy and CO2 Reduction Through Infrared Furnace Monitoring and Optimisation <i>P. Droegmoeller</i>	III.7 Machine Learning and Accelerated Glass Discovery Session Chairs: <i>Mathieu Bauchy, Anoop Krishnan</i>	Subtraction method's potential to produce porous silicate-free glassceramics. <i>Sharon Koppka</i>	Governing functionality of Na+ Ag+ ion-exchanged silicate glass: implication of small additives <i>Evgenii Sgibnev</i>	L120-GeO2-SiO2 glass: Formation, crystallization and high pressure effect <i>Gaële de Lima Hippler</i>												
11.45 – 12.00	The limits of pull rates of industrial glass furnaces <i>Reinhard Conradt</i>																
12.00 – 12.15	The use of sodium-chloride as a fining agent in all-electrical-melting <i>Weniamin Yusim</i>																
12.15 – 12.30	"Rigorous" a different approach of Model Predictive Control <i>Andries Habraken</i>																
12.30 – 13.00																	
13.00 – 17.00																	

Pick up Lunchbox to Go

Excursions

Thursday, 7. July		SYMPOSIUM IV Sustainable Glass Production Symposium Chairs: Christian Roos, Erik Muijsenberg, Manoj Choudhary	SYMPOSIUM II Glass Physics, Properties and Characterisation Symposium Chairs: Dominique de Ligny, Madoka Ono, Liping Huang	SYMPOSIUM II Glass Physics, Properties and Characterisation Symposium Chairs: Dominique de Ligny, Madoka Ono, Liping Huang	SYMPOSIUM V Glass Forming, Post-Processing and Quality Control Symposium Chairs: Sindy Fuhrmann, Harald Zimmermann, Jochen Altkemper	SYMPOSIUM VII Emerging Glass Applications and Application-related Challenges Symposium Chairs: Aldo Boccaccini, Akio Koike, Lothar Wondraczek	SYMPOSIUM I Chemistry and the Structure of Glasses Symposium Chairs: Delia Brauer, Daniel Neuville	SYMPOSIUM II Glass Physics, Properties and Characterisation Symposium Chairs: Dominique de Ligny, Madoka Ono, Liping Huang	SYMPOSIUM VI Recycling and Raw Materials Symposium Chairs: Edda Rädlein, Enrico Bernardo, Dusan Galusek	SYMPOSIUM VII Emerging Glass Applications and Application-related Challenges Symposium Chairs: Aldo Boccaccini, Akio Koike, Lothar Wondraczek
		Grand Ballroom, inkl. Galerie	Saal Berlin B (Bühne)	Saal Berlin C	Salon 7: Wien	Salon 4-5: London	Salon 2-3: Rom	Salon 12-15: Paris	Salon 16-17: Riga	Salon 1: Moskau
9.00 – 9.15		Invited Speaker The Hybrid furnace – our contribution to sustainability, Part #1: The future of Low Carbon Glass container production <i>S. R. Kahl</i>	Invited Speaker From fundamentals to applications: Modelling of thermo-viscoelastic glass behaviour for the moulding of precision optics <i>T. Bergs</i>	Invited Speaker Femtosecond Laser Direct Writing: How to make nanogratings in oxide glass? <i>Matthieu Lancy</i>	Increase Energy Efficiency through Digitalization <i>Peter Holzmann</i>	Invited Speaker Fused Silica for Communication and Semiconductor Application <i>Jan Vydra</i>	Invited Speaker Chemical approach to the vitreous state <i>Natalia Vedshcheva</i>	Invited Speaker Advances in hydrolytic testing of glass containers and its relation to realistic storage conditions <i>Robert Schaut</i>	Invited Speaker Potentialities and limitations of alkali activation in the upcycling of discarded glasses: new opportunities from combination with natural waste <i>Enrico Bernardo</i>	Invited Speaker Future Opportunities for Bioactive Glasses in Healthcare <i>Steve Jung</i>
9.15 – 9.30					Standard machine interface for the flat glass industry (OPC/UA CS) <i>Klaus Mühlhans</i>					
9.30 – 9.45		Invited Speaker The Hybrid furnace - our contribution to sustainability, Part #2: The evolution of the Sorg CLEAN Melter <i>Dirk Schnurpfeil & Jose Torres</i>	Invited Speaker Density scaling and isochronal superposition in liquids – combining neutrons and dielectric spectroscopy <i>Kristine Niss</i>	Optical properties evolution in photo-thermo-refractive glass caused by laser irradiation and thermal treatment <i>Leonid Glebov</i>	Increase Energy Efficiency using New Production Control Systems <i>Sebastian Dick</i>	Influence of the Germanium/Gallium ratio over fiber drawing & direct laser writing capabilities in Mid-infrared germano-gallate of barium glasses <i>Théo Guéneau</i>	Boron incorporation and speciation in silicate glass alteration layers: Implications for nuclear waste immobilization <i>Scott Kroeker</i>	Structure and chemical durability of industrial glasses in acetic acid <i>Léa Brunswic</i>	Development of Foamed Glass with Improved Thermal Insulation Properties and Sustainability <i>Jakob König</i>	Influence of progressive additions of B2O3 into 4SS5 bioactive glass: properties and performance <i>Germán Rodríguez</i>
9.45 – 10.00				Dynamics of phase separation driven by femtosecond laser induced thermal and electronic plasma effects. <i>Bertrand Pourmellec</i>	Utilizing waste heat, improving climate balance, reducing cost: Waste heat recovery system <i>Dennis Schattauer</i>	Photoluminescence enhancement of divalent and trivalent Eu ions by energy transfer from CdS quantum dots in chloroborosilicate glass <i>Nilanjana Shasmal</i>	Influence of chloride addition on sodium borophosphate glasses <i>Pengzhu Zhang</i>	Is the poison in the container? <i>Mariona Tarragó</i>	Glass foams from barium crystal glass waste <i>Dusan Galusek</i>	Beyond in vitro testing of bone-like apatite formation: towards a new ISO standard <i>Dana Rohanova</i>
10.00 – 10.15		Understanding Electrochemical Defect Formation – characterization, simulation, lab experiments <i>Kim Oliver Hofmann</i>	Towards understanding relaxation phenomena in precision hot-forming of glass: Recent advances in modeling thermo-viscoelastic behaviors of glass under wide temperature range, material states, and load complexity <i>Anh Tuan Vu</i>	Optical and laser properties of fluorophosphate glasses with small additives of phosphates doped with neodymium <i>Sergei Ivanov</i>	Container Glass: Energy Consumption and saving opportunities? <i>Kai Bindewald</i>	Compositional optimization of Ge-Se-Te glass for use as molded lens <i>Yong Gyu Choi</i>	Polymorphism in lithium borates: how temperature and pressure impact the glassy structure? <i>Gerald Lelong</i>	Insights into subsurface bulge formation in weathered silicate glass <i>Edda Rädlein</i>	Mullite based geopolymer materials developed in a thin-film configuration suitable for the application in vertically mounted solar cells <i>Arijeta Bafti</i>	Compositional effects on the in vitro dissolution and properties of Na-Mg-Ca-Nb-Al-P-O glasses <i>Natalia Wójcik</i>
10.15 – 10.30		Gold Ruby Glass Free of Hazardous Heavy Metals <i>Georg Partzsch</i>	Single parameter aging in molecular glasses <i>Tina Heckscher</i>	Thermal stability of femtosecond laser induced nanogratings in silicate glasses for photonic applications <i>Maxime Cavillon</i>	Optimization – a major key to save energy! <i>Klaus Mühlhans</i>	Direct ultrafast laser writing and characterization of photo-induced structures in gallo-germanate glasses <i>Rayan Zaiter</i>	Initial stages of glass corrosion inspected by SEM, EDX and TOF-SIMS <i>Ondrej Gedeon</i>	Titanium in ground-granulated blast-furnace slag like calcium-magnesium-aluminosilicate glasses: Its role in the glass network, dissolution at alkaline pH and surface layer formation <i>Simon Blotzwegel</i>	Influence of reaction products on the dissolution of bioactive glass particles <i>Minna Siekkinen</i>	
10.30 – 11.00		Coffee Break								
11.00 – 11.15		Invited Speaker Practical example of CO2 reduction in container glass production in Germany <i>Paul Kupfer</i>	Invited Speaker A tetrad effect in the glass transition of sodium lanthanide silicate glasses. <i>Donald Dingwell</i>	Optical Properties of Bismuth-based Lead-free Radiation Shielding Glass by incorporating Cesium Oxide for protection against High Energy Radiation <i>SITENDU MANDAL</i>	Holistically optimized toughening <i>Heinrich Ostendarp</i>	Patterning of the Surface Electrical Potential on Chalco-genic Glasses by a Thermo-electrical Imprinting Process <i>Lara Karam</i>	Invited Speaker Recent atomistic simulations and modelling of phosphate glasses <i>Gavin Mountjoy</i>	Invited Speaker Study of a chemical treatment based on zinc salts for ancient glass objects sensitive to atmospheric degradation in museums. <i>Fanny Alloteau</i>	Rejuvenation of granulated blast furnace slag (GBS) by high-energy mechanical milling <i>Daniel Hart</i>	Invited Speaker Dissolution Behavior of Na-Ca-Borophosphate Bioactive Glasses <i>Richard Brow</i>
11.15 – 11.30				Optical Properties of Bismuth-based Lead-free Radiation Shielding Glass by incorporating Cesium Oxide for protection against High Energy Radiation <i>SITENDU MANDAL</i>	Precision laser cutting of glass for industrial applications - Elimination of water, slurry, time, energy, with higher utilization of glass material <i>Benjamin Foig</i>	Development of Er³⁺-doped low-phonon glasses and glass-ceramics for MIR applications <i>Amaud Lemiere</i>	Direct simulation of the dissolution of sodium phosphate glass using reactive molecular dynamics <i>Zohreh Fallah</i>	Multi-scale investigation of the degradation of alkali silicate glasses by unsaturated humidity <i>Odile Majérou</i>	Advanced Break Temperature Determination of Slags <i>Christopher Giehl</i>	
11.30 – 11.45		Closed CO2 cycle in the container glass production <i>Ferdinand Drinert, F. Moser</i>	Extended relaxation below Tg characterized by calorimetry and spectroscopy in Ge-Se glasses <i>Pierre Lucas</i>	Re-Investigating Phase Separation in Industrial Glasses And Their Associated Optical Properties <i>Kevin Przepiora</i>	HEGLA new generation PVB separation <i>Peter Böhrner</i>	Development of new glass-based composites with persistent luminescence <i>Laeticia Petit</i>	Direct simulation of the dissolution of sodium phosphate glass using reactive molecular dynamics <i>Zohreh Fallah</i>	Corrosion of archaeological glass and modelling of this process <i>Karolina Pánová</i>	Copper Slag Valorization into Glass Fibers <i>Stephan A. H. Sander</i>	Novel borosilicate bioactive glass material for bone implants <i>Agata Szczodra</i>
11.45 – 12.00		Glass industry in transition – Sustainability targets and their influence on emission control <i>Marcel Zillgitt</i>	Structural relaxation dynamics of a silicate glass via changes in three properties <i>Ricardo Lancelotti</i>	X-ray Absorption Near-edge Structure of Ag Cations in Phosphate Glasses <i>Hirokazu Masai</i>	Glass in active facades <i>Jochen Weick</i>	Gadolinium-doped borosilicate glass for neutron guides <i>Bogdan Alexandru Sava</i>	Invited Speaker Short and medium range order in Li-Ca	Corrosion of archaeological glass and modelling of this process <i>Karolina Pánová</i>	Mine Remediation Waste into Glasses: Chemical Stability and Dissolution Behaviour <i>Saif Hossain</i>	Borosilicate-based bioactive glass scaffolds for bone regeneration <i>Marcela Arango-Ospina</i>
	IV.3 Emissions and Environmental Issues Chair: Svenja Thiele, Manoj Choudhary, Jeroen Kloucek			V.5 Software, Technology and New Business Models for a Climate-neutral Glass Manufacturing and Processing Industry Session Chair: Grotte, Bygmann			I.2 Phosphate, Borate and other Oxide Glasses Session Chairs: Delia Brauer, Daniel Neuville		VI.2 Geopolymers, Slags and Alternative Glass Products Session Chairs: Edda Rädlein, Enrico Bernardo, Dusan Galusek	VI.I Glass Chemistry and Durability Session Chairs: PSDI, Stegeman, Galle, Higgins, Joe Ryan
										VI.II Glasses in Healthcare Session Chairs: Aldo Boccaccini, Akio Koike, Lothar Wondraczek

Time	Session	Topic	Speaker	Topic	Speaker	Topic	Speaker	Topic	Speaker	Topic	Speaker	Topic	Speaker
12.00 – 12.15	Session 0	Emission measurements in Germany – current challenges for glass manufacturers and measuring institutes <i>Henrik Gustmann</i>	II.6 Glass Transition and Relaxation Session Chairs: <i>Ulrich Kucheringham, Masahito Shiba</i>	X-ray beam as a source and probe of defects enucleation <i>Erica Alfaneli</i>	In 1.1 Optical Properties Session Chairs: <i>Laurent Calvez, Rita Dobson, Katherine Richardson</i>	Relaxation of spectral absorption of soda-lime silicate glass and its influence on deformation rate at gravity bending <i>Oleg Prokhorenko</i>	Benefits of Optical Distortion Measurement – How Moiré Technology drives the Efficiency of Glass Production Chains <i>Gesine Bergmann</i>	Reforming Ge-Ga-Se glass via incorporation of Te for use as IR imaging lenses <i>H. Kim</i>	phosphate glasses <i>José F. Schneider</i>	The Role of Magnesium in Aqueous Basaltic Glass Dissolution <i>James Mansfield</i>	A new bioactive glass with low tendency to crystallize and high biological responsiveness <i>Devis Bellucci</i>		
12.15 – 12.30		Revision of the emission factors for air pollutants in the glass manufacturing sectors <i>Karlheinz Gitzhofer</i>		Understanding of the structural origin of volume relaxation in soda-lime silicate glass below the glass transition temperature by microsecond timescale molecular dynamics simulations <i>Masahito Shimizu</i>		Formation of a shell layer on CdSe quantum dots inside glasses using the laser irradiation <i>Jong Heo</i>		Compositional effect of Eu ²⁺ -doped nepheline in oxyfluoride glass ceramics with LaF ₃ on a UV-LED color conversion property <i>Hansol Lee</i>		The effect of mixed transition metal oxides on the polaronic conductivity in vanadium phosphate glasses <i>Marta Razum</i>		A Laboratory Study of Basaltic Glass Alteration Layer Thicknesses <i>Russell J. Hand</i>	Bioresorbable Mg/Sr phosphate scaffold as potential bone graft <i>Sonye Ghanaivati</i>
12.30 – 14.00	Lunch Break												
14.00 – 14.15	Session 1	Invited Speaker Containing glass furnace emission: focus on NOx and CO2 <i>Ernesto Cattaneo</i>	II.6 Glass Transition and Relaxation Session Chairs: <i>Ulrich Kucheringham, Masahito Shiba</i>	Invited Speaker Topology and rigidity of glasses with increasing complexity from molecular simulations <i>Mathieu Micoulaut</i>	In 1.1 Optical Properties Session Chairs: <i>Laurent Calvez, Rita Dobson, Katherine Richardson</i>	Formation of a shell layer on CdSe quantum dots inside glasses using the laser irradiation <i>Jong Heo</i>	Invited Speaker The Glassomer Technology – a nanocomposite approach to high-resolution glass structuring <i>Bastian Rapp</i>	Invited Speaker Recent Developments of Multicomponent Photonic Glass and Fibers <i>Shifeng Zhou</i>	Transport properties of potassium cations in Nb2O5-P2O5-based glasses <i>Luka Pavic</i>	First stage of the atmospheric alteration as a function of the alkali/alkaline-earth ratio in soda lime silicate glass <i>Amandine Serve</i>	Invited Speaker Thermal Conductivity of Amorphous Nanomaterials by Approach-to-Equilibrium Molecular Dynamics implemented in the framework of First Principles Molecular Dynamics <i>Evelyne Martin</i>	Bioactive glasses: surface modifications and their effects over protein adsorption <i>Virginia Alessandra Gobbo</i>	
14.15 – 14.30													Auxiliary Injection of Low-Carbon fuels for Glass Furnace NOx Reduction <i>Daniel Backhouse</i>
14.30 – 14.45	Session 2	Effect of feed composition on the production of off-gases during vitrification of simulated low-activity nuclear waste <i>Richard Pokorny</i>	II.6 Glass Transition and Relaxation Session Chairs: <i>Ulrich Kucheringham, Masahito Shiba</i>	On structural differences between glasses and melts <i>Michael Ojovan</i>	In 1.1 Optical Properties Session Chairs: <i>Laurent Calvez, Rita Dobson, Katherine Richardson</i>	Scintillators and persistent luminescent glass ceramic composites based on lanthanide emissions in gallium phosphate and tungsten-phosphate glasses <i>Andrea de Camargo</i>	Fused glass deposition modelling: Quality of joining area <i>Phillip Amir Chahdeh</i>	Plasmonic photocatalysis using sodium-titanium phosphate glasses containing Ag NP for organic dyes degradation <i>Danilo Manzani</i>	Properties and structure study of CaO-Ga2O3 glasses <i>Chen Tian</i>	Degradation Studies of Isostructural Float Glass Surfaces <i>Vipin Mishra</i>	Thermal conductivity of solder glass and glass matrix composites <i>Annika Blum</i>	Does cleanability lead to hygienic ceramic tiles? Investigation of the correlation between the cleanability of ceramic glasses and their antibacterial activity <i>Erka Iveth Cedillo-González</i>	
14.45 – 15.00													Reducing NOx with CO laser measurement <i>Sjerd Stelwagen</i>
15.00 – 15.15	Session 3	Catalytic Candle Filters for flue gas treatment of glass furnaces- Experience of past installations and new developments <i>Matthias Hagen</i>	II.6 Glass Transition and Relaxation Session Chairs: <i>Ulrich Kucheringham, Masahito Shiba</i>	Phase separation in oxide glasses: application to optical fibers core <i>Thibaut Robine</i>	In 1.1 Optical Properties Session Chairs: <i>Laurent Calvez, Rita Dobson, Katherine Richardson</i>	Influence of the concentration of yttrium ions on the optical properties of fluorozirconate glasses with a low phosphate content <i>Elena Kolobkova</i>	Selective Laser Melting of soda-lime glass: Influence of laser parameters on glass printed parts quality <i>Camille Giral</i>	High temperature extrusion of glass billets for optical fibre preform fabrication <i>Heike Eberndorf-Heidepriem</i>	The glass transition and the non-Arrhenian viscosity of carbonate melts. <i>Kai-Uwe Hess</i>	Research to determination of Fe ²⁺ /Fe ³⁺ in Sn ²⁺ containing glass by solvent extraction <i>Naoki Kanno</i>	Amorphous Carbon/GeTe like Superlattices: a Simplified Atomistic Study <i>Paul Desmarchelier</i>	Hot-working and sintering properties of SS3P4 powder <i>Adrian Stiller</i>	
15.15 – 15.30													Crystalization in fluoride phosphate optical glasses <i>Tihitnav Degu</i>
15.30 – 16.00	Coffee Break												
16.00 – 16.15	Session 4	Invited Speaker Glass Transition and Relaxation: Some General Thermodynamic Considerations, Consequences, and Unexpected Developments <i>Jim Schmelzer</i>	II.6 Glass Transition and Relaxation Session Chairs: <i>Ulrich Kucheringham, Masahito Shiba</i>	Linear and nonlinear optical properties in glasses managed at the micrometer scale by an imprinting thermo-electrical process <i>Marc Dussauze</i>	In 1.1 Optical Properties Session Chairs: <i>Laurent Calvez, Rita Dobson, Katherine Richardson</i>	Silicone-aided Advanced Additive Manufacturing of Bioglass and Bioglass-ceramic Scaffolds <i>Enrico Bernardo</i>	Elaboration and loss optimization of niobium rich borophosphate optical glass fibers <i>Georges EL DIB</i>	Progress in Metal-Organic Framework (Hybrid) Glasses <i>Thomas Bennett</i>	Invited Speaker Sound damping and structural relaxation of vitreous silica <i>Giacomo Baldi</i>				
16.15 – 16.30										CO2 laser-based powder reactive sintering towards bioactive glasses <i>Louis Chaigneau</i>	TeO2-ZnO-La2O3 glass purification, tellurite optical fibers for multimodal imagery and new multimaterials waveguides <i>Marianne Evrard</i>	Structure and dynamics of glass forming Metal Organic Frameworks: NMR study of Zeolitic Imidazolate Framework ZIF-62 <i>Ilean Cornu</i>	Acoustic attenuation and dispersion in the vicinity of the boson peak <i>Marie Foret</i>
16.30 – 16.45	Session 5	Identification of structural rearrangements during the vitrification of melts <i>Michael Ojovan</i>	II.6 Glass Transition and Relaxation Session Chairs: <i>Ulrich Kucheringham, Masahito Shiba</i>	3D-printing of chalcogenide glasses an original way for fabricating mid-infrared optical components <i>Johann Troles</i>	In 1.1 Optical Properties Session Chairs: <i>Laurent Calvez, Rita Dobson, Katherine Richardson</i>	Effect of acid leaching on the viscous sintering of glass powder compacts <i>Roger Gomes Fernandes</i>	Chalcogenide fiber supercontinuum generation covering the full molecular fingerprint region from 1,7 to 18 µm <i>Frédéric SMEKTALA</i>	Structure and dynamics of glass forming Metal Organic Frameworks: NMR study of Zeolitic Imidazolate Framework ZIF-62 <i>Ilean Cornu</i>	Acoustic attenuation and dispersion in the vicinity of the boson peak <i>Marie Foret</i>				
16.45 – 17.00										Ionic Exchange in Chalcohalide Glasses : A Way to Obtain IR GIN Lenses <i>Claire Fournentin</i>	Microstructure investigation of glass sintered compacts by 3D imaging <i>Roger Gomes Fernandes</i>	Chalcogenide step-index fibers for mid-IR supercontinuum generation and application of supercontinuum absorption spectroscopy. <i>Rémi Bizot</i>	Ionic liquid facilitated melting of the metal-organic framework ZIF-8 <i>Vahid Nozari</i>
17.00 – 17.15	Session 6	Prep Dinner Banquet	II.6 Glass Transition and Relaxation Session Chairs: <i>Ulrich Kucheringham, Masahito Shiba</i>	2D Raman mapping as a tool to correlate local structure and efficiency of optical poing in multimode fibers <i>MAGGY COLAS</i>	In 1.1 Optical Properties Session Chairs: <i>Laurent Calvez, Rita Dobson, Katherine Richardson</i>	Mullite glass-ceramic composites produced via co-sintering of aluminosilicate glass and kaolinite <i>Guilherme Macedo</i>	Influence of Cation Exchange on the Thermal Amorphization Kinetics of Zeolite X <i>Ayda Nemat Vesali Azar</i>	Hybrid Polyethylene Glycol/Sodium Metaphosphate Composites Prepared via Coacervation <i>Bruno Poletto Rodrigues</i>	Configuration entropy for glass structure and sample size effect in metallic glass deformation <i>Yannick Champion</i>				
17.15 – 17.30										High refractive index IR lenses based on chalcogenide glasses molded by Spark Plasma Sintering <i>Laurent Calvez</i>			

17.30 – 17.45

17.45 – 18.00

Rest

19.00 -

Invited Speaker
Local chemical interactions in MOF glasses
Courtney Calahoo

Novel approach for the estimation of the density of glass melts
Christoph Groß

Dinner Banquet at Grand Ballroom

Poster Awards
Stevanto/ DGG

Friday, 8. July

	<p>SYMPOSIUM IV Sustainable Glass Production Symposium Chairs: Christian Roos, Erik Mujsenberg, Manoj Choudhary</p> <p>Saal Berlin B (Bühne)</p>	<p>SYMPOSIUM IV Sustainable Glass Production Symposium Chairs: Christian Roos, Erik Mujsenberg, Manoj Choudhary</p> <p>Saal Berlin C</p>	<p>SYMPOSIUM V Glass Forming, Post-Processing and Quality Control Symposium Chairs: Sindy Fuhrmann, Harald Zimmermann, Jochen Alkemper</p> <p>Salon 7: Wien</p>	<p>SYMPOSIUM VII Emerging Glass Applications and Application-related Challenges Symposium Chairs: Aldo Boccazzini, Akio Koike, Lothar Wondraczek</p> <p>Salon 4-5: London</p>	<p>SYMPOSIUM II Glass Physics, Properties and Characterisation Symposium Chairs: Dominique de Ligny, Madoka Ono, Liping Huang</p> <p>Salon 2-3: Rom</p>	<p>SYMPOSIUM II Glass Physics, Properties and Characterisation Symposium Chairs: Dominique de Ligny, Madoka Ono, Liping Huang</p> <p>Salon 12-15: Paris</p>	<p>SYMPOSIUM VII Culture, Heritage and Education Chair: Verena Wasmuth</p> <p>Salon 16-17: Riga</p>	<p>SYMPOSIUM III Computational Glass Science Symposium Chairs: Jürgen Horbach, Srikanth Sastry</p> <p>Salon 1: Moskau</p>
9.00 – 9.15	Microstructural and compositional changes of AZS refractories during use <i>Christian Thieme</i>	Chances and limitations of full electric melting furnaces - Concepts for the further development of Sorg's VSM6 <i>Dirk Schnurpfeil</i>	Invited Speaker Network topological approach to glass product strengthening: Lessons learned and yet to be learned <i>Arun Varshneya</i>	Invited Speaker Side emitting fibers: Targeted light scattering on laser-induced microstructures in optical fibers <i>Aaron Reupert</i>	Invited Speaker Decoding the Origin of the High-Temperature Thermal Expansion of Glasses <i>Mathieu Bauchy</i>	Cerium speciation in cerium phosphate glasses <i>Yang Xia</i>	Oxydo-reduction of copper in ancient roman mosaic tesserae from the Roman villa of Noheda <i>Cecile Noirot</i>	Invited Speaker The emerging case for non-crystalline electrolytes <i>Greg Palmer</i>
9.15 – 9.30	How high electrical boosting will affect glass furnace refractory material, a comprehensive study supported by numerical simulation model <i>S. Schaller</i>	ALL-ELECTRIC-FOREHEARTH DESIGN with ZERO EMISSIONS, FOR FASTER RESPONSE TIME and FINALLY SAVING ENERGY and COSTs <i>Christoph Jatzwauk</i>	Invited Speaker Thermal strengthening revisited: Strengthened low expansion glasses by liquid metal immersion. <i>Roman Sajzew</i>	Multimaterial Fibers with embedded electrodes for fiber-tip arc spectroscopy <i>Clément STRUTYNSKI</i>	Viscosity-temperature dependence of silicate glasses by high rate calorimetry <i>Raschid Al-Mukadam</i>	Optical detection of Glass-properties as a function of temperature in-situ using the versatile Thermo-Optical Measuring technique TOM <i>A. Diegeler</i>	Characterization of the core-formed Phoenician glass beads found at the Philippines <i>Pisutti Dararutana</i>	Combining Statistical Mechanics and Machine Learning to Predict Short-Range Glass Structure <i>Morten M. Smedskjær</i>
9.30 – 9.45	Thermochemical assessment of crown corrosion at high boosting levels <i>Reinhard Conradt</i>	Floot glass melting with electrical power replacing combustion: A challenge with solutions <i>Wolf Kuhn</i>	Invited Speaker Stress and Kinetic Interrelationships in Chemically Strengthened Glass by Ion Exchange <i>Guglielmo Macrelli</i>	Magneto-optic nanofibers for fast infrared modulators <i>Martin Mika</i>	Pressure-induced densification of vitreous silica: insight from elastic properties <i>Coralie Weigel</i>	Dilatometric characterization of the glass structure relaxation <i>Cheng Jiang</i>	Technological aspects of yellow glazed tiles of Kievan Rus' <i>Vladimir Aseev</i>	Gaussian regression process for predicting the electrical conductivity of complex ionic glasses <i>Yuanqing Lu</i>
9.45 – 10.00	Refractories for a De-Carbonised World - Refractories for the changing conditions in Hydrogen and Hybrid Melters <i>Trevor Wilson</i>	Furnace design concepts for increasing electric contribution in glass melting <i>Max Kallert</i>	Improvement of Mechanical Properties of Soda-Lime Glass by Ion Exchange Method <i>Simay Yanik</i>	Development of glass optical fibers 1978-2021 providing us the digitalized communication world <i>Tarja Voloninen</i>	Production of high density vitreous systems using high pressure <i>Silvio Buchner</i>	Real time FT-IR observation of materials during their cooling from molten state <i>Ilea Maria Ermini</i>	Roman Cage Glasses – some engineer's questionmarks <i>Matthias Lindig</i>	Glass Screening for the systematic development of new glasses <i>Martin Kilo</i>
10.00 – 10.15	Refractory challenges arising from decarbonization activities in the glass industry <i>Stefan Postrach</i>	Simulation of batch motion and melting in industrial furnaces <i>Miroslav Trochta</i>	Invited Speaker Using Glass in Load Carrying Structural Elements. <i>Jens Henrik Nielsen</i>	Development of glass optical fibers 1978-2021 providing us the digitalized communication world <i>Tarja Voloninen</i>	Viscoelastic and viscoplastic simple models to describe hydrostatic pressure cycles in vitreous silica <i>Benoit Rufflé</i>	Visco-elasticity and glass transition determined with high-temperature oscillatory rheometry <i>Christopher Gieh</i>	Experimental Archaeology: Glass furnaces and production of ancient glass forms <i>Bettina Birkenhagen</i>	
10.15 – 10.30	Forced glassy phase exudation due to diffusion of volatile phosphate binders <i>Roland Heidrich</i>	The role of mathematical modelling in glass melting furnace engineering <i>Jose Torres</i>	Invited Speaker Chemical strengthening of glass: room for profitable material and process advancement? <i>Vincenzo M. Sglavo</i>	Tunable Rayleigh Scattering Enhanced Nanoparticle-doped Optical Fibers for Distributed Sensing <i>Victor Fuentes de la Llave</i>	In-Situ Visualization of Dynamic Stress Distributions in Soda-Lime Glass during Drop Impact Test <i>Mikio Nagano</i>	Chemical toughening of thin glasses for cover applications <i>Thomas Pfeiffer</i>	The coloring and altering role of iron and manganese in historical stained-glass windows <i>Camille Müller</i>	
10.30 – 11.00	Coffee Break	Coffee Break						
11.00 – 11.15	Furnace maintenance - a contribution to longer furnace lifetime and lower overall carbon footprint <i>Dirk Schnurpfeil</i>	CFD simulation based bubbling model <i>Václav Heidler</i>		Yttrium nanoparticles silica fiber doped with rare-earth for laser cooling <i>Thomas Meyneng</i>	Multi-Scale Study of Fracture properties in Phase Separated SiO2-B2O3-Na2O Glasses <i>Cindy Rountree</i>		A tale of colors: from stained glass to silicate melt <i>Theo Caroff</i>	
11.15 – 11.30					Reducing & managing laser damage on glass optics in the National Ignition Facility <i>Tayyab Suratwala</i>		Myrtille Hunault: The stained glass windows of the Sainte-Chapelle in Paris <i>Myrtille Hunault</i>	
11.30 – 11.45					Disordering of Metal-Organic Framework Crystals and Glasses upon Irradiation <i>Tao Du</i>		Non-destructive analyses of VOC-induced corrosion of historical glass objects in museum environment <i>Deepshikha Sharma</i>	
11.45 – 12.00							Historic glass and metals: Curious corrosion compounds caused by contact <i>Gerhard Eggert</i>	

IV.5 Refractory Materials
Session Chairs: Michel Gaubile, Steffen Postfach

IV.6 Furnace Design
Session Chairs: Erik Mujsenberg, Luis Blomnek, Christoph Jatzwauk

V.4 Strengthening Technologies
Session Chairs: Thorsten Gerdes, Jens Schneider

VII.6 Phoenician Glasses and Optical Fibers
Session Chairs: Aldo Boccazzini, Akio Koike, Lothar Wondraczek

II.9 Glass under Extreme Conditions
Session Chairs: Oneng Gelfond, Morten Smedskjær, Jigahi Wu

II.5 Advanced Techniques for Glass Characterization
Session Chairs: Bernard Hehlen, Anita Zedler

Symposium VIII

III.2 Machine Learning and Accelerated Glass Discovery
Session Chairs: Mathieu Bauchy, Anoop Krishan

<p>12.00 – 12.15</p> <p>12.15 – 12.30</p> <p>12.30 – 12.45</p>	<p>Lunch Break</p> <p>Lunch Break</p>	<p>Toughening of lithium borosilicate glass using ion-exchange processes <i>Ali Tallmian</i></p> <p>Salt-coatings for chemical strengthening of soda lime container glass <i>Anne Schmidt</i></p> <p>Regeneration of Used Salt Bath for Chemical Hardening of Glass <i>Thomas Voland</i></p>	<p>Will & Rhema Packaged Seasbon Chair, Aldo Boccasini, Aljo Yot</p>	<p>Invited Speaker Future Trends on the Demands for Parenteral Packaging made of Glass <i>Volker Rupertus</i></p> <p>Chemical Durability of Glass in the Presence of Strong Chelators <i>L. Gonzalez</i></p>	<p>Potassium-silicate glass foil irradiated with electrons – asymmetry in migration and space distribution <i>Ondrej Gedeon</i></p> <p>Thermal relaxation of densified electron irradiated silica phases <i>Mahinour Mobasher</i></p>	<p>GRAPE WASHERS AND CELERY STANDS – forgotten prestigious glass objects <i>Maria Richter, Paul Richter</i></p> <p>Multiplicity of glass: Finnish glass making skills as industrial heritage <i>Hannu Rastas</i></p> <p>Connecting with Berlin: glass as a medium to build community <i>Nadania Idriss</i></p>
<p>14.00 - 16.00</p>	<p>Closing Ceremony at Saal Berlin B</p>					