

76. BHT - FREIBERGER UNIVERSITÄTSFORUM 2025 - KOLLOQUIUM
NEW TECHNOLOGIES FOR SUSTAINABLE AND HIGH-QUALITY GLASS PRODUCTION

Date:
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Conference language:
English

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Conference location:
ZeHS
Winklerstraße 5, EG 133
09500 Freiberg

Leading:
Jun.-Prof. Sindy Fuhrmann
Prof. Andreas Richter

Thursday, 5. June 2025

08:30 – 08:50	ARRIVAL
08:50 – 09:00	Welcome Jun.-Prof. Sindy Fuhrmann and Prof. Andreas Richter, TU Bergakademie Freiberg, Germany
09:00 – 09:30	Hydrogen in the Firing of Glass Melting Furnaces – Operating Conditions and Effects on the System Dr. S. Eckart, TU Bergakademie Freiberg, Germany
09:30 – 10:00	NN L. Wondraczek, Friedrich-Schiller-Universität Jena, Germany
10:00 – 10:30	COFFEE BREAK
10:30 – 11:00	Scientific Machine Learning Across Scales for Glass and Glass Structures M. Kraus, TU Darmstadt, Germany
11:00 – 11:30	Towards a Bayesian Neural Network Approach for Predicting Silicate Melt Viscosity and Estimating Uncertainty Dr. K. Itano, Akita University, Japan
11:30 – 13:00	LUNCH BREAK OPTIONAL 12:00: Tour ZeHS & Institute of Glass Science and Technology
13:00 – 13:30	Low-temperature Synthesis of Layered Transition Metal Oxides for Improving Materials Performance Prof. K. Saito, Akita University, Japan
13:30 – 13:45	Hydrogen Influence on the Structure of Green Container Glass. Y. Yuan, Young reasercher for QualiGlas, TU Bergakademie Freiberg, Germany
13:45 – 14:00	Detailed Modeling of Hydrogen and Natural Gas Oxy-Fuel Combustion for Glass Furnaces L. Etzold, Young reasercher for QualiGlas, TU Bergakademie Freiberg, Germany
14:00 – 14:15	Strategies for Modeling Turbulent Hydrogen Flames in Future Glass Furnaces G. Gonzalez, Young reasercher for QualiGlas, TU Bergakademie Freiberg, Germany
14:15 – 15:00	COFFEE BREAK & POSTER SESSION

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15:00 – 15:15	Innovative Glass Melting Using All-Electric and Microwave Heating R. Schaarschmidt, Young reasercher for QualiGlas, TU Bergakademie Freiberg, Germany
15:15 – 15:30	High-resolved CFD-Modeling of a Microwave Plasma Torch – a Numerical and Experimental Investigation. S. Rodmacher, Young reasercher for QualiGlas, TU Bergakademie Freiberg, Germany
15:30 – 15:45	Plasma Flame Generation Using Conditional Generative Adversarial Network (GAN) : A Generative AI Approach F. H. Maleki, Young reasercher for QualiGlas, TU Bergakademie Freiberg, Germany
15:45 – 16:00	Closing discussion