

# Joint Meeting of DGG / ČSS / SSS

92<sup>nd</sup> Annual Meeting of  
German Society of Glass Technology (DGG)

in conjunction with the

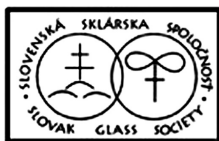
Annual Meetings of  
the Czech Glass Society (ČSS)  
and the Slovak Glass Society (SSS)

**Bayreuth, Germany**  
**28 – 30 May 2018**

## Programme



Czech Glass  
Society



Slovak Glass  
Society



German Society  
of Glass Technology

We thank our partners for their kind support:



**glasstec**

**INTERNATIONAL TRADE FAIR FOR GLASS  
PRODUCTION • PROCESSING • PRODUCTS**

**23-26 OCTOBER 2018  
DÜSSELDORF, GERMANY**



**HORN**  
**GLASS INDUSTRIES**

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## Conference Venue

ARVENA Kongress Hotel  
Eduard-Bayerlein-Straße 5a  
95445 Bayreuth (Germany)  
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F: +49 921 727-115  
info@arvenakongress.de  
www.arvena.de

## Preface

The 92<sup>nd</sup> Annual Meeting of the German Society of Glass Technology (DGG) is held in conjunction with the Annual Meetings of the Czech Society of Glass Technology (CSS) and the Slovak Society of Glass Technology (SSS). The joint conference takes place from 28<sup>th</sup> to 30<sup>th</sup> May, 2018 in the city of Bayreuth, Germany. 104 oral and poster contributions cover a wide scope of topics reaching from the fundamentals of the glassy state and amorphous materials to energy applications of glass topics related to health, medical, and biological applications as well as optical materials and devices, and finally to glass production technology.

The city of Bayreuth is a focus of culture. The annual Richard Wagner opera festivals enjoy highest reputation worldwide. The tradition started at the lifetime of the great composer already. The Margravia Opera House, still present today, turned out to offer far too little space for the large number of opera friends attracted. So, since 1873, the festival has been taking place in the then built Festival Theatre on the Green Hill. From July to August 2018, seven Wagner operas will be presented, with an expected number of 60,000 visitors.

But the city of Bayreuth has more to offer. Do not miss to visit the New Castle, the beautiful scenery of the Eremitage, or one of its 25 museums (among them, of course, the Richard Wagner Museum – Haus Wahnfried, the Franz Liszt Museum, or the Pre-historical Museum). Do not miss to enjoy the typical Franconian cuisine and to test the results of its beer brewery history.

The University of Bayreuth hosts a faculty of engineering comprising a department devoted to glass science and technology. It is led by Prof. Thorsten Gerdes, the local academic host of the conference. He and his staff will lend their support to the local organization of the event. His department is a vital part of a Bavarian glass network comprising the Fraunhofer Institute of Silicate Science, Würzburg, running one of its many spin-offs in Bayreuth, as well as the universities and universities of applied science in Erlangen, Nürnberg, Regensburg, Deggendorf, Coburg, Hof, the Glass School in Zwiesel, and the Center of Technology in Spiegelau. The so-called Glass Road extending throughout Bayreuth's Southern neighbor region of Oberpfalz hosts a large number of glass producers, glass workshops, and glass museums.

It may be less well known that the city of Bayreuth also hosts the German-Czech Society. It is an enjoyable coincidence that this conference held in conjunction with our neighbors from the Czech and Slovak Republics takes place just here. Glass science and technology has been a traditional focus in our neighbor countries, enjoying high recognition worldwide. So, we may look forward to a considerable reinforcement of the conference.

Finally, the organizers want to express sincere gratitude to the manifold contributors to this event, and to the numerous sponsors. Special thanks go to the symposia chairs who did their very best in composing and organizing the symposia programmes.

On behalf of Deutsche Glastechnische Gesellschaft (DGG)

Prof. Dr. Reinhard Conradt  
President

Dr. Ulrich Roger  
Managing Director

# Symposia Chairs of the Joint Meeting of DGG / ČSS / SSS:

## **Session S1: *Functional Glasses***

Dusan Galusek, Alexander Dubcek  
University of Trencin, SK

Peter Simurka, Slovak Glass Society,  
Lednické Rovne, SK

Lothar Wondraczek, Friedrich-Schiller-University,  
OSIM, Jena

## **Session S2: *Glasses in Healthcare***

Aldo R. Boccaccini, Friedrich-Alexander-University,  
Erlangen

Delia S. Brauer, Friedrich-Schiller-University,  
OSIM, Jena

## **Session S3: *Electrical Melting***

Jaroslav Klouzek, University of Chemistry and  
Technology, Prague, CZ

## **Session S4: *Hot Forming, Secondary Manufacturing, Quality Control***

Michael Kellner, Heye-International, Obernkirchen  
Gesine Bergmann, VDMA, Frankfurt

## **Session S5: *Energy, Environment and Glass Furnaces***

Bernhard Fleischmann, HVG, Offenbach  
Karlheinz Gitzhofer, HVG, Offenbach  
Christian Roos, RWTH-GHI, Aachen

## **Session S6: *Laser Application on Glass***

Jens Bliedtner, Ernst-Abbe-Hochschule, Jena  
Martin Kahle, ifw – Günter-Köhler-Institut für  
Fügetechnik und Werkstoffprüfung, Jena

## Guided Tours

Meeting point in front of the ARVENA Kongress Hotel

### Notice

- For all plant visits the number of participants is limited. This lists of the registered participants will be sent to the companies in advance of the meeting. Participants may be rejected on grounds of business competition.
- For all plant visits sturdy shoes and adequate clothes (no short trousers) are indispensable.

### Gruppe A **Horn Glass Industries AG, Plößberg** *[www.hornglas.de](http://www.hornglas.de)*

#### 12.30 Departure of the bus

Horn Glass Industries AG, a German specialist in the design and supply of complete glass melting technology is a solution partner for the worldwide glass industry. With its abroad subsidiary companies in Czech Republic, India, Malaysia and China, HORN matches the glass industry's requirement for local and fast activities.

With its more than 130 years of experience in glass melting, HORN has a wide range of experience in the design, manufacture and supply of different furnace types for production of lighting ware, tableware, containers, cast glass, float glass, solar glass and technical glassware.

The range of products and service not only includes utility equipment such as combustion systems, electric control equipment as well as modern process controlling with SCADA systems of the highest standard, to name but a few, but also the design engineering and site service.

Moreover, with its service people, HORN can cover the full requirements of the glass industry. A wide range of experts is available to install and commission all melting tanks worldwide. Service people can react quickly in order to provide assistance in case of any trouble during the glass production.

A reference of more than 20.000 tons of glass per day coming from furnaces build by HORN express

es the professional and reliable performance of the market leader in glass melting furnaces. Customers appreciate Horn Glass Industries AG because of the unique properties:

- Technology – and System – solution partner
- Flexibility and customer orientation
- High vertical integration of manufacturing

**Programme:**

- Welcome participants
- Guided plant tour (5 x 10 persons)
- Questions and discussion combined with snacks and beverages

Arrival at the ARVENA Kongress Hotel: 17:35

**Gruppe B Pilkington Deutschland AG, Weiherhammer**  
***www.pilkington.com***

**12.45** Departure of the bus

The NSG Group is one of the world's leading manufacturers of glass and glazing systems in three major business areas; Architectural, Automotive and Technical Glass.

Today, the Company has combined with manufacturing operations in 28 countries and sales in 110 countries, employing some 27,000 people worldwide.

The NSG Group operate in three main sectors. Architectural supplies glass for architectural and Solar Energy applications. Automotive serves the original equipment, aftermarket replacement and specialized transport glazing markets. Technical Glass products include very thin glass for displays, lenses and light guides for printers, and glass fiber, used in battery separators and engine timing belts.

We have major market shares in most building and automotive product markets of the world, with a broad geographic reach, enabling us to respond to customers whose Operations, particularly in the case of Automotive OE, are increasingly global.



In Germany around 1,500 employees work in the sector of architectural glass at four sites. Gelsenkirchen, Gladbeck, Weiherhammer and Schmelz.

The plant in Weiherhammer arose from the former DETAG (Deutsche Tafelglas AG), which goes back to 531 years of glass manufacturing in the area of Weiden. Merged with the DELOG (Deutschen Libbey Owens GmbH) to the Flachglas AG, later the Pilkington Deutschland AG (a member of the NSG Group).

Weiherhammer produces with two lines mainly for the architectural and automotive glass sector plus online coated products for thermal insulation, self-cleaning applications and special low-iron products for solar applications. 450 people are working there.

**Programme:**

- Welcome and company presentation
- Plant tour
- Questions and discussion

Arrival at the ARVENA Kongress Hotel: 17:45

**Gruppe C Nachtmann GmbH, Weiden**  
***www.nachtmann.com***

**12.45** Departure of the bus

Nachtmann is a fine crystal glassware manufacturer from Bavaria, with a heritage going back almost 200 years. The company combines their decades of expertise in traditional glassmaking with innovative production processes and modern machine manufacturing. Its products stand for “the best of Made in Germany”, and reflect the company’s commitment and devotion to fine quality and outstanding design. High quality goes beyond high fashion. Untroubled by time or passing trends, our intricate glassblowing, engraving and polishing techniques remain. We acknowledge, celebrate and gain inspiration from them.

Determined to discover the next generation of designers, we seek our fresh talent at world-class design colleges. So far, our search has taken us to New York, Stockholm, Tokyo, Prague and, closer to home, Stuttgart. This young designers

demonstrates our commitment to creativity. Slice, Petals, Quartz, Sculpture and Sphere show what can be achieved when cutting-edge ideas fuse with traditional craft skills. Crystal glass unfolds its true brilliance with a perfect cut that refracts and perfectly reflects the light. Produced in extremely clear, brilliant crystal glass, the plates, bowls, vases, votives, and glasses in the Nachtmann range bring affordable luxury to everyday life.

**Programme:**

- Welcome and short introduction
- Plant tours
- Questions and discussion

Arrival at the ARVENA Kongress Hotel: 17:15

**Gruppe D ISC/HTL – Fraunhofer-Zentrum für Hochtemperatur-Leichtbau, Bayreuth**  
***www.htl.fraunhofer.de***

**13.00** Departure of the bus

The Fraunhofer-Center for High Temperature Materials and Design HTL was founded in 2012 with the aim of pooling the ceramics research of the Fraunhofer-Institute for Silicate Research ISC. HTL employs about 100 staff members at its three locations Bayreuth, Würzburg and Münchberg. The main location is Bayreuth, where in 2015 the HTL moved into a specially constructed new building. HTL is certified according to ISO 9001: 2015. The central R & D topic of HTL is efficient thermal processes. HTL develops new high temperature materials and components, characterizes materials at high temperatures and optimizes heat treatment processes with regard to energy efficiency and product quality.

As customary at Fraunhofer, HTL carries out application-oriented R & D and offers its services for contract research. Main applications are energy, drive and heating technology. The material focus is on ceramics and fiber composites (CMC). With specially developed ThermoOptical measuring systems (TOM), industrial heat treatment processes can be simulated in a laboratory. HTL plays an internationally leading role in the field of high temperature measuring methods and CMC.

**NMB – Neue Materialien Bayreuth GmbH,  
Bayreuth**  
***www.nmbgmbh.de***

New Materials Bayreuth GmbH is a non-academic research company developing various novel materials for lightweight constructions, from plastics and fiber-reinforced composites to metals, including also the processing. We provide application-oriented solutions by optimizing available materials and production processes.

Our company also offers a broad spectrum of services for material analysis and component testing with state of the art processes and laboratory technologies.

In addition to R&D, in direct cooperation with industrial partners or within government-funded projects, we accept orders for prototypes and small series productions, as well as mould validations.

Our work with polymers focuses on bead foams, special injection moulding techniques (esp. foam injection moulding) and fibre-reinforced thermoplastics and high-performance composites. Furthermore, we concentrate on additive manufacturing based on polymers and metals.

The unique advantage of NMB lies in the highly modern industrial scale production machinery. They create the basis for our solutions, which are directly applicable to industry. If demanded, our investigations can cover the whole process line. In this matter, a close working relationship with our partners is very important to us.

Furthermore, we provide profit by synergy effects of an interdisciplinary exchange of knowledge between our materials science engineering experts from the fields of plastics and metals. Based on our close contact to departments at the University of Bayreuth engaged in materials-related research our partners can benefit from our vast experience in coordinating the university's competences in fundamental research and application development.

The results of this approach are ready-to-use and profitable solutions, due to the application-related research and development made by NMB.

**Programme:**

- Welcome and short presentation of both institutes
- Guided tour through the ISC/HTL and NMB

Arrival at the ARVENA Kongress Hotel: 16:45

18.30  
to  
21.30

**Poster-Show,  
Exhibition of Suppliers and  
Welcome Reception** (starting 19.30)

**ARVENA Kongress Hotel – Grosser Saal**

The three top posters of students or postgraduates will be awarded with 400, 300 and 200 EUR, respectively, during the banquet on Tuesday evening.

■ For the welcome reception a special booking is necessary for organizational reasons. ■

Important Note for your Calendar

The

**Joint Meeting of DGG – USTV**

including

**Annual Meeting of the  
German Society  
of Glass Technology (DGG)**

and the

**French Union for Science and  
Glass Technology (USTV)  
Annual Meeting**

takes place

**13 – 15 May 2019**

in **Nürnberg.**

18.00      **88. Ordentliche Mitgliederversammlung  
der Hüttentechnischen Vereinigung der  
Deutschen Glasindustrie (HVG) e.V.**

ARVENA Kongress Hotel, Raum K2+K3

- Hierzu ergehen besondere Einladungen -

8.15      **86. Ordentliche Mitgliederversammlung  
der Deutschen Glastechnischen  
Gesellschaft (DGG) e. V.**

ARVENA Kongress Hotel, Raum K2+K3

**Tagesordnung:**

1. Tätigkeitsbericht 2017\*)
2. Berichte über die Fachausschüsse der DGG\*)
3. Bericht über das DGG-Glasforum\*)
4. Genehmigung des Jahresabschlusses 2017  
und Entlastung
5. Bericht über die außerordentliche Mitglieder-  
versammlung vom 02.03.2018
6. Änderungsvorschläge zur DGG-Satzung
7. Vorstellung des ICG-Tagungskonzeptes für 2022
8. Personalien – Neubesetzung Geschäftsführung
9. Wahlen zum DGG-Vorstand und  
DGG-Vorstandsrat
10. Bekanntgabe von Veranstaltungen
11. Verschiedenes

\*) Diese Unterlagen sind im Heft 2 / 2018 des  
dgg journals zur Kenntnisnahme für alle  
DGG-Mitglieder veröffentlicht.

**10.30 Opening Ceremony****ARVENA Kongress Hotel, room K4-7****Opening Address**

Prof. Dr. Reinhard Conradt  
 President of the Deutsche Glastechnische  
 Gesellschaft e. V. (DGG)

Ing. Petr Beránek  
 Chairman of the Czech Glass Society (ČSS)

Dr. Peter Šimurka  
 Chairman of the Slovak Glass Society (SSS)

**Welcome Speech**

Thomas Ebersberger  
 Mayor of Bayreuth

**Obituary on Prof. Dr. Monika Willert-Porada**

Prof. Dr. Thorsten Gerdes  
 Universität Bayreuth, Lehrstuhl für  
 Werkstoffverarbeitung

**Obituary on Prof. Dr. Werner Vogel**

Prof. Dr. Christian Rüssel  
 Friedrich-Schiller-Universität Jena,  
 Otto-Schott-Institut für Materialforschung (OSIM)

**Keynote Lecture**

Prof. Dr. John M. Parker  
 Dept. of Engineering Materials  
 University of Sheffield, GB

**„Our friends – the enemy“**

This title was used for an early article written by W.E.S. Turner during WW1. It refers to his desire to work collaboratively on an international stage unfettered by the mores current to that time.

**20.00 Banquet****bis ARVENA Kongress Hotel, Großer Saal****23.30**

During the banquet the three top posters will be awarded a prize each.

Performance of SILBAND from Košice, Slovakia  
 Enjoy the unique music – “tuned” Cymbal music of 21<sup>st</sup> century!

Multi-Genre Band playing on traditional acoustic instruments: Accordeon, Violin, Cymbal, Contrabass, Cajon, Fújara...  
[www.silband.sk](http://www.silband.sk)

For the banquet a special registration is necessary for organizational reasons.

## Time schedule of oral presentations (view)

### Monday, 28 May 2018

- **2. Zwischensymposium** **13.00 – 16.30**  
**K2+K3**  
Glas-Technologie-Allianz Oberfranken-Ostbayern  
(TAOO)

### Tuesday, 29 May 2018

- **Session S1.1** **13.30 – 18.10**  
**K2+K3**  
Functional Glasses
- **Session 2** **13.30 – 17.20**  
**K4+K5**  
Glasses in Healthcare
- **Session 4** **13.30 – 17.45**  
**K6+K7**  
Hot Forming, Secondary Manufacturing,  
Quality Control

### Wednesday, 30 May 2018

- **Session S1.2** **08.30 – 12.20**  
**K2+K3**  
Functional Glasses
- **Session S3** **08.30 – 12.20**  
**K4+K5**  
Electrical Melting
- **Session S5.1** **08.30 – 12.20**  
**K6+K7**  
Energy, Environment and Glass Furnaces
- **DGG Student Workshop** **08.30 – 12.20**  
**K1**  
Clear as Glass 2018
- **Session S6** **13.00 – 15.30**  
**K4+K5**  
Laser Application on Glass
- **Session S5.2** **13.00 – 15.55**  
**K6+K7**  
Energy, Environment and Glass Furnaces



## 2. Zwischensymposium Glas-Technologie-Allianz Oberfranken-Ostbayern

K2+K3

- 13.00 *Akkreditierung*
- 13.15 Prof. Dr.-Ing. Thorsten Gerdes, Universität Bayreuth  
**Begrüßung**
- 13.20 Benedikt Scharfe, TAZ Spiegelau, TH Deggendorf  
Dr. Andreas Rosin, Universität Bayreuth  
**Statusbericht zum 2. Projektjahr**
- 13.45 Dr. Andreas Rosin, Universität Bayreuth  
**Akkumulation von Schwermetallen im Kreislaufsystem Glas und Möglichkeiten zur Aufreinigung**
- 14.05 Dr. Kanat Kyrgyzbaev, Universität Bayreuth  
**Neue niedrigschmelzende Lotgläser für Vakuumverglasungen**
- 14.25 Liane Bingel, TAZ Spiegelau, TH Deggendorf  
**Glas als Verpackungsmaterial**
- 14.45 Dr. Rainer Völkl, Universität Bayreuth  
**Untersuchungen zum Kontakt von Platin und Basaltglas**
- 15.05 Kaffeepause
- 15.30 Dr. Friedrich Wolff, 3M Deutschland GmbH  
**Eigenschaften und Einsatz von Mikro-hohlglaskugeln – 3M™ Glass Bubbles**
- 15.50 Dr. Heiko Zettl, Vitrolan Textile Glass GmbH  
**Entwicklungstrends in der Herstellung und für den Einsatz von Glastextilien**
- 16.10 Thomas Schmidt, HEINZ-GLAS GmbH & Co. KGaA  
**Demand Side Management in der Glasindustrie**
- 16.30 Ende der Veranstaltung

## S1.1: Functional Glasses

**K2+K3**

Chairs: Prof. Dusan Galusek (Institute of Inorganic Chemistry, Slovak Academy of Science)  
Assoc. Prof. Peter Simurka (Slovak Glass Society)

- 13.30** Prof. Dusan Galusek<sup>1</sup>; PhD Anna Prnova<sup>1</sup>;  
PhD Jana Valuchova<sup>1</sup>; Assoc. Prof. Alfonz Plsko<sup>2</sup>;  
PhD Robert Klement<sup>2</sup>  
Institute of Inorganic Chemistry,  
Slovak Academy of Science  
**Crystallization Of Selected Binary Rare Earth  
Aluminate Glasses**
- 13.55** M.Sc. Rolf Samsinger; Dr. rer. nat. Meike Schneider;  
Dr. rer. nat. Andreas Roters; Dr.-Ing. Wolfgang  
Schmidbauer; Dr. rer. nat. Jörg Schuhmacher;  
Dr.-Ing. Ulrich Peuchert, Schott AG  
**Glass-ceramic electrolytes for solid state batteries**
- 14.20** M.Sc. Stefanie Hauber<sup>1</sup>; PhD Bernhard Durschang<sup>1</sup>;  
Dipl.-Ing. Elisabeth Reitz<sup>2</sup>  
Fraunhofer-Institut für Silicatforschung (ISC)  
**Bilayered glass-ceramics as sealants for SOFCs**
- 14.45** PhD Andreas Diegeler; Assoc. Prof. Martin Kilo  
Fraunhofer-Institut für Silicatforschung (ISC)  
**Thermo-optical determination of  
Glass Crystallization**
- 15.10** Coffee break
- 15.40** PhD Katarína Haladejová<sup>1</sup>; PhD Robert Klement<sup>1</sup>;  
PhD Anna Prnova<sup>2</sup>; PhD Jana Valuchova<sup>2</sup>;  
Prof. Dusan Galusek<sup>2</sup>  
Alexander Dubček University of Trenčín  
**The Photoluminescence Properties of Eu<sup>3+</sup>/Eu<sup>2+</sup>  
Doped Glass and Polycrystalline Phosphors in  
the System Y<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>**
- 16.05** Dr. Susanne Selle<sup>1</sup>; M.Sc. Laura Briese<sup>2</sup>;  
Prof. Joachim Deubener<sup>2</sup>  
Fraunhofer-Institut für Mikrostruktur von  
Werkstoffen und Systemen IMWS  
**Microstructure Analysis of Redox Potential  
induced Precipitation of Metallic Nano Particles in  
Silicate Glasses**
- 16.30** Dipl.-Phys. Klaus-Dieter Schicke, CODIXX AG  
**Modified optical properties at the intrinsic  
absorption threshold in silicate glass by  
Ag<sup>+</sup>-Na<sup>+</sup> ion exchange**

- 
- 16.55** M.Sc. Stephan A. H. Sander<sup>1</sup>; Prof. Dirk Enke<sup>2</sup>;  
Prof. Hans Roggendorf<sup>1</sup>  
Martin-Luther-Universität Halle-Wittenberg  
**Long term phase separation in  
sodium borosilicate glass**
- 17.20** M.Sc. Martin Brehl<sup>1</sup>; PhD Maria Rita Cicconi<sup>1</sup>;  
PhD Alexander Veber<sup>1</sup>; M.Sc. Ali Hajian<sup>2</sup>;  
Prof. Ulrich Schmid<sup>2</sup>; Prof. Dominique de Ligny<sup>1</sup>  
Friedrich-Alexander-University Erlangen-Nürnberg  
**Bariumborosilicate glasses: Investigation of  
their structure and thermal history with coupled  
Raman/Brillouin spectroscopy**
- 17.45** PhD Anuraag Gaddam<sup>1</sup>; PhD Hugo R. Fernandes;  
Prof. Lionel Montagne; Prof. José Maria F. Ferreira  
University of Aveiro  
**Structural relaxation of Qn units by statistics  
mechanical modelling**
- 18.10** End of the session

**S2: Glasses in Healthcare****K4+K5**

- Chairs: Prof. Aldo Roberto Boccaccini (University of Erlangen-Nuremberg)  
Prof. Delia S. Brauer (Friedrich-Schiller-Universität)
- 13.30** Prof. Enrica Verné; Prof. Francesco Baino; PhD Cristina Balagna; Dr.-Ing. Martina Cazzola; PhD Sara Ferraris; PhD Marta Miola; PhD Sergio Perero; Assoc. Prof. Silvia Spriano; Prof. Monica Ferraris  
Politecnico di Torino  
**Antibacterial glasses for prosthetic devices and healthcare-associated infections**
- 14.20** M.Sc. Marin Dean Bilandžić; Prof. Christian Roos  
RWTH Aachen University - Institut für Gesteins-  
hüttenkunde - Lehrstuhl für Werkstoff- und Prozess-  
technik - Glas und Verbundwerkstoffe  
**Treatment of a leucite toughened dental glass-  
ceramic by a CO<sub>2</sub> laser**
- 14.45** M.Sc. Nuttawan Sawangboon<sup>1</sup>; John Heier<sup>1</sup>;  
M.Sc. Dahiana Andrea Avila Salazar<sup>1</sup>; Prof. Doris  
Möncke<sup>2</sup>; Prof. Delia S. Brauer<sup>1</sup>, Otto Schott Institute  
of Materials Research (OSIM), FSU Jena  
**Structure and in vitro dissolution of ternary  
K<sub>2</sub>O-CaO-B<sub>2</sub>O<sub>3</sub> bioactive borate glasses**
- 15.10** Coffee break
- 15.40** M.Sc. Kai Zheng<sup>1</sup>; Assoc. Prof. Sonia Fiorilli<sup>2</sup>;  
Prof. Chiara Vitale-Brovarone<sup>2</sup>; Prof. Aldo Roberto  
Boccaccini<sup>3</sup>, University of Erlangen-Nuremberg  
**Strategy for synthesis of Cerium-containing  
mesoporous bioactive glass nanoparticles**
- 16.05** M.Sc. Dahiana Andrea Avila Salazar; PhD Peter  
Bellstedt; M.Sc. Atsuhiko Miura; Prof. Toshihiro Kasuga;  
Prof. Leena Hupa; Prof. Delia S. Brauer  
**Dynamic dissolution kinetics in phosphate glasses**
- 16.30** M.Sc. Agata Lapa<sup>1</sup>; PhD Mark Cresswell<sup>2</sup>; PhD Phil  
Jackson<sup>2</sup>; M.Sc. Francesca Elisa Ciraldo<sup>1</sup>; PhD Andrew  
Parsons<sup>3</sup>; Assoc. Prof. Ifty Ahmed<sup>3</sup>; Prof. Aldo Roberto  
Boccaccini<sup>4</sup>, University of Erlangen-Nuremberg  
**Phosphate-Based-Glasses and Phosphate Glass  
Fibres for Biomedical Applications**
- 16.55** PhD Dana Rohanová<sup>1</sup>; PhD Diana Horkavcová<sup>1</sup>;  
B.Eng. Johana Kulhánková<sup>1</sup>; Prof. Aldo Roberto  
Boccaccini<sup>2</sup>, University of Chemistry and Technology  
in Prague  
**A new formula of SBF solution to test bioactive  
materials**
- 17:20** End of the session

## S4: Hot Forming, Secondary Manufacturing, Quality Control K6+K7

- Chairs: Dr.-Ing. Michael Kellner (Heye International GmbH)  
Dipl.-Ing. Gesine Bergmann (VDMA)
- 13.30 Dr. Andreas Kasper  
Saint Gobain  
**Spontaneous breakage of toughened glass:  
On size distribution of NiS inclusions**
- 13.55 Dipl.-Ing. Bertrand Mercier  
ISRA SURFACE VISION GMBH  
**3D measurement requirements and benefits of  
the Stereo-Deflectometry technology**
- 14.20 PhD Leonard Alaribe<sup>1</sup>; Dipl.-Ing. Benedikt Scharfe<sup>1</sup>;  
Prof. Thorsten Gerdes<sup>2</sup>; Dr.-Ing. Andreas Rosin<sup>2</sup>;  
Dr. rer. nat. Stephan Tratzky<sup>3</sup>  
Technische Hochschule Deggendorf  
**Chemical strengthening of glass in  
microwave field**
- 14.45 Paul Schreuders  
XPAR Vision B.V.  
**Revolution in Vorformschmierung**
- 15.10 Coffee break
- 15.40 Daniel Wagner  
DIAS Infrared GmbH  
**Upcoming automation and applications for infra-  
red temperature measurement in glass production**
- 16.05 Leo Diehm  
Emhart Glass SA  
**Prerequisites for further Glass Container  
Process Control**
- 16.30 Dipl.-Phys. Axel Schroeter  
Heye International GmbH  
**Smart Container Glass Plant: Today and Tomorrow**
- 16.55 Paul Schreuders  
XPAR Vision B.V.  
**Container Glass Forming in 2020/2025**
- 17.20 PhD Vlastimil Hotar  
Technical University of Liberec  
**How Can 4<sup>th</sup> Industrial (R)Evolution Influence  
Glass Industry?**
- 17.45 End of the session

**S1.2: Functional Glasses****K2+K3**

Chairs: Assoc. Prof. Peter Simurka (Slovak Glass Society)  
Prof. Dusan Galusek (Institute of Inorganic Chemistry,  
Slovak Academy of Science)

- 08.30** Dipl.-Ing. Benedikt Scharfe<sup>1</sup>; M.Sc. Laura Schwinger<sup>2</sup>; Dipl.-Ing. Friedbert Scharfe<sup>3</sup>; Dr.-Ing. Friedrich Wolff<sup>4</sup>; Prof. Thorsten Gerdes<sup>2</sup>  
Technische Hochschule Deggendorf  
**Glass in multi-functional construction materials**
- 08.55** M.Sc. Felix Eiwien; Dr. rer. nat. Andreas Prange;  
Prof. Christian Roos, RWTH Aachen University -  
Institute of Mineral Engineering  
**Glass protection layer for concrete**
- 09.20** Jakub Struczynski; Jochen Schmidt; Prof. Dominique de Ligny; Dr.-Ing. Stefan Romeis; Prof. Wolfgang Peukert,  
Friedrich-Alexander-Universität Erlangen-Nürnberg  
**Mechanochemical densification of silica glasses in stirred media mills**
- 09.45** Prof. Miroslav Vlcek<sup>1</sup>; PhD Siegmund Schröter<sup>2</sup>;  
PhD Stanislav Slang<sup>1</sup>; PhD Karel Palka<sup>1</sup>,  
University of Pardubice  
**Chalcogenide Glasses - Materials with Unique Properties and Functionalities**
- 10.10** Coffee break
- 10.40** PhD Milan Parchovianský<sup>1</sup>; Dipl.-Ing. Ivana Petříková;  
PhD Gilvan Barroso; PhD Peter Švančárek;  
PhD Dagmar Galusková; PhD Günter Motz;  
Prof. Dusan Galusek  
Alexander Dubček University of Trenčín  
**Oxidation Behavior Of Stainless Steel And Polymer Derived Ceramic Coatings With Seal Glass And Passive Fillers**
- 11.05** Dr.-Ing. Kanat Kyrgyzbaev; Prof. Thorsten Gerdes  
University of Bayreuth  
**Sintering of low-Tg Bi<sub>2</sub>O<sub>3</sub>-based glass under hydrothermal conditions**
- 11.30** M.Sc. Ulrich Schadeck; Dr.-Ing. Kanat Kyrgyzbaev;  
Prof. Walter Krenkel; Prof. Thorsten Gerdes  
University of Bayreuth  
**Influence of sodium in glass separators on the performance of Li-ion batteries**
- 11.55** Peter Schöffel, Glashütte Lamberts Waldsassen GmbH  
**Numerous Use of Mouthblown UV-Filter-Glass**
- 12.20** End of the session

**S3: Electrical Melting****K4+K5**

- Chair: Jaroslav Klouzek (University of Chemistry and Technology in Prague)
- 08.30 PhD Josef Smrček, Electroheat s.v.p.d. Praha  
**Possibilities and limitations of all-electric melting of glass. Can we melt 10 t/m<sup>2</sup>/day?**
- 08.55 Erik Muijsenberg, GLASS SERVICE, a.s.  
**Past, present and future of Full Electric or Hybrid Melting**
- 09.20 Dipl.-Ing. Bernhard Fleischmann Hüttentechnische Vereinigung der Deutschen Glasindustrie e.V.  
**Flexible use of electric power when melting container glass – First results within the scope of the Kopernikus SynErgie project of the Federal Ministry of Education and Research (support code: 03SFK3M0)**
- 09.45 Prof. Thorsten Gerdes<sup>1</sup>; Alfred Krischke<sup>2</sup>; Dipl.-Ing. Benedikt Scharfe<sup>3</sup>; Dipl.-Ing. Achim Schmidt-Rodenkirchen<sup>4</sup>; Dipl.-Ing. Dominik Helling<sup>1</sup>; Prof. Walter Krenkel<sup>1</sup>, Universität Bayreuth  
**DisConMelter: New melting technology for fluctuating power supply**
- 10.10 Coffee break
- 10.40 Karl-Heinz Hartmann, Schneider Electric Systems Germany GmbH >Eurotherm<  
**Electrical Heating-Boosting**
- 11.05 Lucie Cermakova<sup>1</sup>; Frantisek Novotny<sup>2</sup>  
Crystal Bohemia a.s.  
**Electrochemical protection of Mo electrodes for melting**
- 11.30 Marcela Jebava<sup>1</sup>; Lubomir Nemeč<sup>1</sup>; Jiri Brada<sup>2</sup>  
Laboratory of Inorganic Materials, joint workplace of the University of Chemistry and Technology Prague and the Institute of Rock Structure and Mechanics of the ASCR  
**Energy distribution and controlled glass melt flow in melting space**
- 11.55 M.Sc. Alex Thierry Kouasseu Ngantcha<sup>1</sup>; Dr. rer. nat. Frank-Thomas Lentés<sup>2</sup>; Dr. rer. nat. Thomas Pfeiffer<sup>2</sup>; Prof. Christian Roos<sup>1</sup>, RWTH Aachen University - Institute of Mineral Engineering  
**Melting and Characterization of Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> and Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> model glasses in continuous processes**
- 12.20 End of the session

## S5.1: Energy, Environment and Glass Furnaces

**K6+K7**

Chairs: Dr. Matthias Lindig (Nikolaus Sorg GmbH & Co. KG)  
Dipl.-Ing. Karlheinz Gitzhofer (Hüttentechnische  
Vereinigung der Deutschen Glasindustrie e.V.)

08.30 Erhard Niessner, Lumasense Technologies GmbH  
**“FurnaceSpection” Thermal Imaging camera with  
special filters for glass melting furnaces**

08.55 Dr.-Ing. Peter Drögmöller, AMETEK Land  
**Infrared Temperature Measurement in the Glass  
Melt Tank**

09.20 Dipl.-Ing. Mahdie Moaveni, Simullex GmbH  
**How batch preheating system can affect the  
glass current flow in the melting furnaces**

09.45 Dr.-Ing. Rainer Mieth; Dipl.-Ing. Matthias Görisch,  
Linde AG  
**State of the art heat transfer and low emissions in  
oxyfuel combustion –COROX® FlatFlame**

10.10 Coffee break

10.40 Frank Probst, Nikolaus Sorg GmbH & Co. KG  
**SORG 340S+ forehearths. Improvements and  
Operational Data.**

11.05 Jan Viduna; Mark D’Agostini  
**Foam and NOx Reduction Through Advanced  
Combustion in Oxy-Fuel Glass Melting Furnaces**

11.30 Dipl.-Ing. Bernhard Fleischmann  
Hüttentechnische Vereinigung der Deutschen Glas-  
industrie e.V.  
**New approach to characterize the energy  
demand for glass production**

11.55 Dipl.-Ing. Rainer Gorris  
EUROX Sauerstoff Mess-Systeme GmbH  
**New Methodes of Atmosphere Characterisation**

12.20 End of the session



## S6: Laser Application on Glass K4+K5

- Chairs: Prof. Jens Bliedtner (Ernst-Abbe-Hochschule Jena)  
Dr. Martin Kahle (Günter-Köhler-Institut für Fügetechnik u. Werkstoffprüfung GmbH (ifw))
- 13.00** Dr. Jens Ulrich Thomas<sup>1</sup>; Dr. rer. nat. Frank-Thomas Lentens<sup>1</sup>; Patricia Karlowski<sup>1</sup>; M.Sc. Jonas Schatz<sup>1</sup>; Klaus Bergner<sup>2</sup>; PhD Alexander Veber<sup>3</sup>; Prof. Stefan Nolte<sup>2</sup>; Prof. Dominique de Ligny<sup>3</sup>  
Schott AG  
**Impact of ultrashort pulse induced shockwaves in glass and glass ceramics**
- 13.25** René Liebers, 3D-Micromac  
**Innovative laser processing technologies and system solutions for glass**
- 14.50** Dr. Martin Kahle  
Günter-Köhler-Institut für Fügetechnik u. Werkstoffprüfung GmbH (ifw)  
**boraident, Laser marking**
- 14.15** Dipl.-Ing. (FH) Thomas Schmidt; M.Sc. Daniel Eilenberger; Dr. Martin Kahle  
Günter-Köhler-Institut für Fügetechnik u. Werkstoffprüfung GmbH (ifw)  
**Cold glass processing with CO<sub>2</sub>-laser**
- 14.40** Anne-Marie Schwager<sup>1</sup>; Dr.-Ing. Jan Dellith<sup>2</sup>; Prof. Jens Bliedtner<sup>1</sup>; Armin Bruder<sup>1</sup>; Dr.-Ing. Kay Schuster<sup>2</sup>  
Ernst-Abbe-Hochschule Jena  
**Selective Laser-Sintering of Glass: Development of Suitable Glass Powder and Production of Three-Dimensional Silica Mouldings**
- 15.05** Leonhard Pohl<sup>1</sup>; Dr.-Ing. Philipp von Witzendorff<sup>2</sup>  
Laser Zentrum Hannover e.V.  
**3D-printing of glass: Laser based additive manufacturing of fused silica**
- 15.30** End of the session

## S5.2: Energy, Environment and Glass Furnaces

**K6+K7**

Chair: Prof. Christian Roos (RWTH Aachen University - Institute of Mineral Engineering)

- 13.00** Erik Muijsenberg  
GLASS SERVICE, a.s.  
**Industry 4.0, what does it mean for Glass Production**
- 13.25** Dominic Stürmer; Dr.-Ing. Hayo Müller-Simon  
HVG e.V.  
**Measures to prevent the accumulation of critical contaminants in the glass production due to recycling**
- 13.50** Dr.-Ing. Michel Gaubil<sup>1</sup>; Dipl.-Ing. Cyril Linnot<sup>2</sup>  
Saint Gobain CREE  
**Refractory Repair Solution for industrial glass furnace**
- 14.15** Joaquín de Diego Rincón<sup>1</sup>; Marco van Valburg; Frank Schuurmans; Elmer Sperry; Dr.-Ing. Stefan Laux; Robert Bell; Arthur Francis; Hisashi Kobayashi  
PRAXAIR EUROHOLDING S.L.  
**Operation of OPTIMELT™ Heat Recovery on a Tableware Glass Furnace at Libbey Leerdam**
- 14.40** Dipl.-Ing. Rainer Gorris  
EUROX Sauerstoff Mess-Systeme GmbH  
**Automatic Atmosphere Control Of Gas/Air Premixes For Feeder And Forehearth Burners**
- 15.05** PhD Hans Strauven  
GLAPOR WERK Mitterteich  
**The Environmental Product Declaration of cellular glass between polymer and fiber based thermal insulations and other applications.**
- 15.30** Oscar Verheijen<sup>1</sup>, Luuk Thielen<sup>1</sup>, Stef Lessmann<sup>1</sup>, Andries Habraken<sup>1</sup>, Stefan Postrach<sup>2</sup>, Elias Carrillo<sup>2</sup>, Rongxing Bei<sup>2</sup>  
<sup>1</sup>CelSian Glass & Solar B.V., Eindhoven, The Netherlands  
<sup>2</sup>RHI Magnesita, Germany  
**Improvement of Glass Furnace Regenerators**
- 15.55** End of the session

## Poster-Show

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The posters will be on display during the entire conference. Authors will be available at their posters at the following dates:

- **Monday, 28 May 2018, starting 18.30 to 21.00**  
during special poster show and reception

- **Tuesday and Wednesday, 29-30 May 2018,**  
during coffee breaks of the sessions

1. M.Sc. Philippe Kiefer<sup>1</sup>; M.Sc. Robert Balzer<sup>2</sup>; M.Sc. Tina Waurischk<sup>3</sup>; Dr.-Ing. Stefan Reinsch<sup>3</sup>; Dr. Ralf Müller<sup>3</sup>; Prof. Harald Behrens<sup>2</sup>; Prof. Joachim Deubener<sup>1</sup>  
Clausthal University of Technology  
**Subcritical crack growth in water bearing soda-lime silicate glasses**
2. Barbora Holubova<sup>1</sup>; Dr.-Ing. Gundula Hensch<sup>2</sup>; Maria Kavanova<sup>1</sup>; Aleš Helebrant<sup>1</sup>  
University of Chemistry and Technology in Prague  
**Spectroscopic and Thermoanalytic Study on the Formation of Thin Organosilane Coatings on Glass**
3. Prof. Petr Mosner; Dipl.-Ing. Oksana Kupetska; Prof. Ladislav Koudelka  
University of Pardubice  
**Sodium phosphate glasses containing TeO<sub>2</sub>**
4. M.Sc. Thorben Welter<sup>1</sup>; Prof. Joachim Deubener<sup>2</sup>; Dr. Ulrich Marzok<sup>3</sup>; Dr.-Ing. Stefan Reinsch<sup>3</sup>; Dr. Ralf Müller<sup>3</sup>  
Technische Universität Clausthal  
**Silicate glass structures with low hydrogen permeability**
5. M.Sc. Oliver Beier<sup>1</sup>; Jakub Kelar<sup>2</sup>; PhD Dušan Kováčik<sup>3</sup>; Slavomír Sihelník<sup>2</sup>; Jost Wittwer<sup>4</sup>; PhD Andreas Pfuch<sup>1</sup>; PhD Bernd Grünler<sup>1</sup>; Prof. Mirko Černák<sup>2</sup>  
Innovent e.V. Technology Development Jena  
**Glass cleaning and activation by new areal atmospheric pressure plasmas - a treatment procedure for functional sheet glasses**
6. M.Sc. Laura Briese<sup>1</sup>; Dr. Susanne Selle<sup>2</sup>; Prof. Joachim Deubener<sup>3</sup>  
Institute for Non-Metallic Materials, Clausthal University of Technology  
**Synthesis of nickel and cobalt metal nanoparticles in silicate glasses via redox-reaction**

7. M.Sc. Daniel Hart; Dr.-Ing. Hansjörg Bornhöft;  
Natalja Pronina; Prof. Joachim Deubener  
Institute for Non-Metallic Materials, Clausthal  
University of Technology  
**Cooling rate determination of a granulated blast  
furnace slag**
8. B.Eng. Inga Katharina Götz; Dr.-Ing. Gundula Helsch;  
Prof. Joachim Deubener  
Technische Universität Clausthal  
**Effect of Y, Al and Er doping on the crystal  
structure of sol-gel derived hafnia thin films**
9. Zhuorui Lu<sup>1</sup>; PhD Maria Rita Cicconi<sup>2</sup>; M.Sc.  
Sebastian Bruns<sup>3</sup>; Prof. Karsten Durst<sup>3</sup>; Prof. Leo van  
Wüllen<sup>4</sup>; Prof. Delia S. Brauer<sup>5</sup>; Prof. Dominique de  
Ligny<sup>2</sup>  
Friedrich-Alexander-University Erlangen-Nürnberg  
**Influence of redox on glass mechanical proper-  
ties: a V case study**
10. M.Sc. Raschid Al-Mukadam; Prof. Joachim Deubener  
Institute of Non-Metallic Materials, Clausthal University  
of Technology, Germany  
**Nucleation kinetics of lithium disilicate glasses  
received by cooling with different rates**
11. Adrian Kirzdörfer; M.Sc. Christopher Tielemann;  
Dr.-Ing. Stefan Reinsch; Dr. Ralf Müller  
Federal Institute of Materials Research and Testing  
(BAM)  
**First hints on reorientation of surface crystals**
12. M.Sc. Tina Waurischk<sup>1</sup>; M.Sc. Robert Balzer<sup>2</sup>;  
M.Sc. Philippe Kiefer<sup>3</sup>; Dr.-Ing. Stefan Reinsch<sup>1</sup>;  
Dr. Ralf Müller<sup>1</sup>; Prof. Harald Behrens<sup>2</sup>; Prof. Joachim  
Deubener<sup>3</sup>  
Federal Institute of Materials Research and  
Testing (BAM)  
**Sub-critical crack growth in sodium silicate glass**
13. Yizhe Yang<sup>1</sup>; PhD Maria Rita Cicconi<sup>1</sup>;  
PhD Alexander Veber<sup>1</sup>; Prof. Ronan Lebullenger<sup>2</sup>;  
Prof. Jean Rocherullé<sup>2</sup>; Prof. Dominique de Ligny<sup>1</sup>  
Friedrich-Alexander-University Erlangen-Nürnberg  
**Synthesis and characterization of Eu phosphate  
glass-ceramics**
14. Dipl.-Ing. Katharina Lohr; Prof. Bernhard Weller  
Technische Universität Dresden  
**Residual stress distribution in tempered glass  
with reground edges**

15. M.Sc. Philippe Kiefer<sup>1</sup>; Prof. Joachim Deubener<sup>1</sup>;  
M.Sc. Tina Waurischk<sup>2</sup>; Dr. Ralf Müller<sup>2</sup>;  
Dr.-Ing. Stefan Reinsch<sup>2</sup>; M.Sc. Robert Balzer<sup>3</sup>;  
Prof. Harald Behrens<sup>3</sup>  
Clausthal University of Technology  
**Statistical analysis of Vickers induced subcritical crack growth in soda-lime silicate glasses**
16. M.Sc. Liane Bingel<sup>1</sup>; PhD Günther Ruhl<sup>1</sup>;  
Prof. Raimund Förg<sup>1</sup>; Dr.-Ing. Daniel Leykam<sup>2</sup>  
THD - Technische Hochschule Deggendorf  
**Metal doped glasses as food packaging material**
17. Dipl.-Ing. Ivana Petříková<sup>1</sup>; PhD Milan Parchovianský;  
PhD Gilvan Barroso; PhD Peter Švančárek;  
PhD Dagmar Galusková; PhD Günter Motz;  
Prof. Dusan Galusek  
Alexander Dubček University of Trenčín  
**Preparation and Characterization of Precursor Derived Ceramic Coatings with Glass Filler Particles on Steel Substrate**
18. M.Sc. Petr Chrast  
Centre for Functional and Surface Functionalized Glass - FunGlass  
**Corrosion behavior and in-vitro bioactivity of ceramic and glass microspheres prepared by flame synthesis**
19. M.Sc. Alessio Zandona<sup>1</sup>; PhD Bernd Rüdinger<sup>2</sup>;  
PhD Oliver Hochrein<sup>2</sup>; Prof. Joachim Deubener<sup>1</sup>  
TU Clausthal  
**Influence of increasing TiO<sub>2</sub> doping on the crystallization sequence in cordierite glass-ceramics**
20. M.Sc. Kristýna Rysová<sup>1</sup>; Assoc. Prof. Martin Míka<sup>1</sup>;  
PhD František Lahodný<sup>1</sup>; PhD Petra Kšírová<sup>2</sup>; Richard Bures<sup>1</sup>  
University of Chemistry and Technology in Prague  
**New Electro-Optic Glasses Containing Metal Nanoparticles for Light Modulators**
21. Markus Seibt<sup>1</sup>; Tobias Uesbeck<sup>1</sup>; Prof. Karsten Durst<sup>2</sup>; Prof. Doris Möncke<sup>3</sup>; Prof. Dominique de Ligny<sup>1</sup>  
**Investigation of strength structure relationship in the glass system M<sub>2</sub>O-SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub> by Raman spectroscopy.**
22. M.Sc. Simon Rudolph  
Georg-August-Universität Göttingen  
**Determination of extinction coefficients of coloring oxides and sulfidic complexes in soda-lime-glass**

23. M.Sc. Nuttawan Sawangboon; John Heier;  
Prof. Delia S. Brauer  
Otto Schott Institute of Materials Research (OSIM),  
FSU Jena  
**Dissolution of borate bioglasses**
24. Katharina Schuhloden<sup>1</sup>; Prof. Leena Hupa<sup>2</sup>;  
Prof. Aldo Roberto Boccaccini<sup>1</sup>  
University of Erlangen-Nuremberg  
**Dissolution behavior of borate bioactive glasses  
and the influence of ion doping with Zinc and  
Copper in different solutions**
25. Gloria Kirste<sup>1</sup>; PhD Altair Contreras Jaimes<sup>2</sup>; Assoc.  
Prof. Jonathan Massera<sup>3</sup>; Prof. Delia S. Brauer<sup>2</sup>  
Friedrich-Schiller-Univ. Jena, Otto-Schott-Institut für  
Materialforschung (OSIM)  
**Influence of crystallization on the degradation  
and apatite formation of fluoride-containing phos-  
phosilicate glasses.**
26. M.Sc. Carsten Blaeß<sup>1</sup>; Dr. Ralf Müller<sup>1</sup>;  
Prof. Delia S. Brauer<sup>2</sup>  
Bundesanstalt für Materialforschung und -prüfung  
(BAM)  
**Sintering ability of fluoride-containing bioactive  
glass powders**
27. PhD Richard Pokorný<sup>1</sup>; Jaroslav Klouzek<sup>1</sup>; Miroslava  
Hujova<sup>1</sup>; Seungmin Lee<sup>2</sup>; Michael Schweiger<sup>2</sup>;  
Pavel Hрма  
University of Chemistry and Technology in Prague  
**Analysis of foam layer during waste vitrification  
in an electric melter**
28. Karolína Pánová<sup>1</sup>; PhD Dana Rohanová<sup>1</sup>;  
PhD Dagmar Galusková<sup>2</sup>; Petr Bezdička<sup>3</sup>  
University of Chemistry and Technology in Prague  
**Melting Process of Model Historical Glasses**
29. B.Eng. Oliver Jüngling; Sebastian Henkel; Prof. Jens  
Bliedtner  
Ernst-Abbe-Hochschule Jena  
**Examination of subsurface damages on silica  
glass by use of ultrasonic assisted grinding**
30. Lukas Tianis; Michael Seiler; Prof. Jens Bliedtner  
Ernst-Abbe-Hochschule Jena  
**A new approach of measuring sub-surface damage**
31. Assoc. Prof. Peter Simurka<sup>1</sup>; Dr.-Ing. Veronika  
Vargová<sup>2</sup>; Assoc. Prof. Peter Vrabel<sup>2</sup>  
Slovak Glass Society  
**Weathering of tableware glasses exposed to the  
atmosphere in a storehouse**

32. B.Eng. Weniamin Yusim<sup>1</sup>; B.Eng. Fabio Schraml<sup>1</sup>; Prof. Armin Lenhart<sup>1</sup>; Henning Katte<sup>2</sup>  
TH Nürnberg  
**Calculation of the chemical heat demand of glass melts embedded in a commercially available software solution**
33. Armin Bruder<sup>1</sup>; Anne-Marie Schwager<sup>1</sup>; Dr.-Ing. Kerstin Götze<sup>1</sup>; Prof. Jens Bliedtner<sup>1</sup>; Dr.-Ing. Roland Reetz<sup>2</sup>, Ernst-Abbe-Hochschule Jena  
**Development of a 3D-Printer for HT-SLS of Fused Silica Powder**
34. Dr.-Ing. Anne Giese<sup>1</sup>; Dr.-Ing. Jörg Leicher<sup>1</sup>; Prof. Klaus Görner<sup>1</sup>; Dr.-Ing. Tim Nowakowski; Dipl.-Ing. Bernhard Fleischmann; Dipl.-Math. Nils-Holger Löber  
Gas- und Wärme-Institut Essen e.V.  
**Gas Quality vs. Glass Quality? Results of the German Research Project "GasQualitaetGlas"**
35. M.Sc. Michael Bergler<sup>1</sup>; Kristian Cvecek<sup>1</sup>; PhD Christian Patzig<sup>2</sup>; Prof. Thomas Höche<sup>2</sup>; Michael Schmidt<sup>1</sup>; Prof. Dominique de Ligny<sup>1</sup>  
Friedrich-Alexander-University Erlangen-Nürnberg  
**Investigation of picosecond laser structured objects inscribed in silicate glasses**
36. Ferdinand Werr<sup>1</sup>; PhD Alexander Veber<sup>1</sup>; Dr. rer. nat. Dirk Werner<sup>2</sup>; Dipl.-Ing. Joachim Ebmeier<sup>2</sup>; Dipl.-Ing. (FH) Ludger Müllers<sup>3</sup>; Dipl.-Phys. Urs Eppelt<sup>3</sup>; Prof. Dominique de Ligny<sup>1</sup>  
Friedrich-Alexander-University Erlangen-Nürnberg  
**Investigation on Ultra-Short-Pulse filamentation in silicate glass and change of material properties around the modified area**
37. Dipl.-Ing. Ondrej Matusek; PhD Vlastimil Hotar  
Technical University of Liberec  
**Bort automatic detection possibilities**
38. Patricia Lasch; Anne-Marie Schwager; Prof. Jens Bliedtner; Dr.-Ing. Anett Rechtenbach; Thomas Schulz, Ernst-Abbe-Hochschule Jena  
**Particle Characterization of Silica Glass Powder**
39. Alexandra Dreher; Dr. Andrea Barz  
Ernst-Abbe-Hochschule Jena  
**Laser-based Procedure for Forming of Alumosilicate Flat Glass**

# Exhibition of suppliers at Joint Meeting of DGG / ČSS / SSS

28 – 30 May 2018 in Bayreuth

**ARVENA Kongress Hotel, Großer Saal**

The following companies will be represented:

- AMETEK LAND, Land Instruments Int. Limited, Dronfield, S18 1DJ (UK)  
[www.landinst.com](http://www.landinst.com)
- DIAS Infrared GmbH, 01189 Dresden  
[www.dias-infrared.de.de](http://www.dias-infrared.de.de)
- Linde AG, Linde Gases Division, 82049 Pullach  
[www.linde-gas.de](http://www.linde-gas.de)
- Luft- und Thermotechnik Bayreuth GmbH, 95497 Goldkronach  
[www.ltb.de](http://www.ltb.de)
- LumaSense Technologies GmbH, 60326 Frankfurt/M.  
[www.lumasenseinc.com](http://www.lumasenseinc.com)
- Nikolaus Sorg GmbH & Co. KG, 97816 Lohr am Main  
[www.sorg.de](http://www.sorg.de)

(Stand: 31.03.2018)



# General Information

## Registration of participants

For participation in the Joint Meeting of DGG, ČSS and SSS please register online **at <https://dgg.converia.de/?sub=37>**.

The registration is to do by **4 May 2018** at the latest.

The registration will serve for the compilation of the list of participants.

## Registration fees

Registration card (**early bird registration by 16 April 2018!**)

	by 16.4.18	from 17.4.18
Member of DGG, ČSS and SSS	€ 530	€ 580
Non-member	€ 695	€ 765
Student (oral presentation or poster)	€ 80	€ 95
Student	€ 115	€ 130
Retiree	€ 350	€ 385
Accompanying person (members of family)	€ 195	€ 210
Guided tours	€ 29	€ 29
Reception		free of charge
Banquet		free of charge

Participation in any meeting event is **not possible without registration card**.

Turnover tax: the fees for the registration cards are not liable to turnover tax according to § 4, 22 UStG.

Payment should be made directly after receipt of invoice **free of bank commission in Euro** to DGG account at: Postbank Frankfurt/M., **IBAN DE05 5001 0060 0055 6066 02, BIC PBNKDEFF**. **Please include invoice number and participant's name on all money transfers.**

**MASTER Card, VISA or American Express** is accepted for payment with credit card. Participants from abroad may pay their fees also in cash at the Conference office.

**Please consider: we prefer money transfer over credit card payment.**

## **Cancellation**

Cancellations have to be notified in **writing** to DGG office or at [dgg@hvg-dgg.de](mailto:dgg@hvg-dgg.de).

We kindly ask your understanding that in the event of a cancellation of registration after 14 May 2018, 30 % of the respective invoice amount will be charged.

## **Exhibition of Suppliers**

Within the framework of the Meeting suppliers will have the opportunity to display their products and services to the meeting participants. For further information on the exhibition terms, please contact:

Anzeigenverwaltung und Firmenausstellungen der DGG  
Ms Carmen Morbitzer  
Siemensstraße 45  
63071 Offenbach  
P: +49 170 2967458; F: +49 69 975861-99  
[morbitzer@hvg-dgg.de](mailto:morbitzer@hvg-dgg.de)

## **Conference language**

The conference language is English.

## **Conference venue**

ARVENA Kongress Hotel  
Eduard-Bayerlein-Straße 5a  
95445 Bayreuth (Germany)  
P: +49 921 727-0  
F: +49 921 727-115  
[info@arvenakongress.de](mailto:info@arvenakongress.de)  
[www.arvena.de](http://www.arvena.de)

## Hotel accommodation

A block booking has been made for conference participants at the ARVENA Kongress Hotel. Special rates per night are (incl. breakfast, bathroom/WC):

single room € 83,-

double room € 113,-

For room reservations at the ARVENA Kongress Hotel (before 13 April 2018 at the latest) please use the online reservation system:

[https://qres.qr-hotels.com/be/rez.aspx?Hotel=70472&Chain=19763&template=QR1&shell=RBE\\_ARHDE&locale=de-DE&group=0DGG](https://qres.qr-hotels.com/be/rez.aspx?Hotel=70472&Chain=19763&template=QR1&shell=RBE_ARHDE&locale=de-DE&group=0DGG) (German) or

[https://qres.qr-hotels.com/be/rez.aspx?Hotel=70472&Chain=19763&template=QR1&shell=RBE\\_ARHDE&locale=en-US&group=0DGG](https://qres.qr-hotels.com/be/rez.aspx?Hotel=70472&Chain=19763&template=QR1&shell=RBE_ARHDE&locale=en-US&group=0DGG) (English).

Please note: **Changes or cancellations of the rooms booked with the link are possible ONLY using the same link.**

The room reservations at other hotels will be handled by the Bayreuth Marketing & Tourismus GmbH. For bookings please use only the reservation form you will find at <https://dgg.converia.de/?sub=37>. Reservations **before April 2018** at the latest.

Inquiries are to be sent to:

Tourist Information Bayreuth  
Opernstr. 22  
95444 Bayreuth  
T: +49 921 885-88; F: +49 921 885-755  
[info@bayreuth-tourismus.de](mailto:info@bayreuth-tourismus.de)  
[www.bayreuth-tourismus.de](http://www.bayreuth-tourismus.de)

## **Conference office**

The conference office is located in the Foyer of the ARVENA Kongress Hotel.

Opening hours are:

Monday,	28 May 2018	11.00 to 19.00
Tuesday,	29 May 2018	8.00 to 18.00
Wednesday,	30 May 2018	8.00 to 13.30

Conference Office phone: +49 921 727-134

## **Cell phones**

We kindly ask you to switch off your cell phones in the session rooms.

## **Wireless LAN**

During the whole conference the participants have free WLAN access.

## **Lunch break**

At lunch hour on Tuesday and Wednesday a light meal will be provided at the Foyer (the meal is included in the meeting fees).

## **Car Parking**

There is a little space for parking in front of the Hotel (30 places) and in the underground garage (120 places, subject to charge) of the ARVENA Kongress Hotel.

## **Conference documents**

Conference documents will not be sent out; the abstracts of the lectures and posters and the list of participants will be published on the conference website.

## **Conference gift**

The participants are requested to collect it at the Conference office.

## **Leisure**

Please look at <https://www.bayreuth.de/english/welcome/>.

Bayreuth, the largest city in Upper Franconia, is world famous due to the annual Bayreuth Festival staging operas by Richard Wagner. Originally grown as a Margravia Residence, today it is a modern Economic, Congress and University City on its way to becoming a regional High-Tech Centre. Bayreuth's places of interest, its Museums and the diversity of cultural opportunities offer exciting days throughout the year.

# Journey to Bayreuth

## By car

A9 from south, exit "Bayreuth SÜD":  
follow signposts "Hotels Innenstadt", later  
"ARVENA KONGRESSHOTEL".

A9 from north, exit "Bayreuth NORD":  
Follow road B2 (2 km).

A70 from west, exit "Bayreuth/Neudrosselfeld":  
Follow road B85 (15 km).

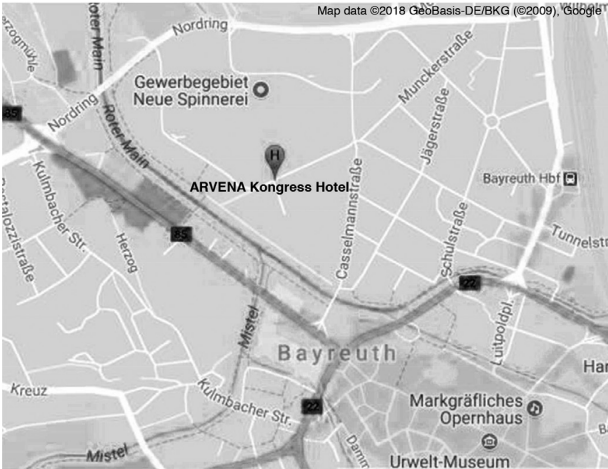
## By train

From main station by taxi 5 min or on foot 15 to 20 min (800 m).

## By plane

Nürnberg Airport (70 km):  
Underground U2 to Nürnberg Central Station,  
by train to Bayreuth.

# Journey to Bayreuth



Deutsche Glastechnische Gesellschaft e.V.

Siemensstraße 45  
63071 Offenbach (Germany)

Tel.: +49 69 975861-0

Fax: +49 69 975861-99

E-Mail: [dgg@hvg-dgg.de](mailto:dgg@hvg-dgg.de)

[www.hvg-dgg.de](http://www.hvg-dgg.de)

Conference Website: <https://dgg.converia.de/?sub=37>

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Technische Gesamtherstellung:  
Druck- und Verlagshaus Zarbock GmbH & Co. KG  
Sontraer Straße 8, 60386 Frankfurt am Main  
[www.zarbock.de](http://www.zarbock.de)

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