THE CZECH CERAMIC SOCIETY
Novotného lávka 5, 116 68, Prague 1, Czech Republic
sis@csvts.cz, www.silikaty.cz

The Czech Ceramic Society invites you to participate in

REFRA PRAGUE 2024

The conference will deal with the following topics:

- **Key raw materials:** mining, use in ceramics, additives, recycling, strategic deposits
- **Energy aspects of high-temperature processing of products:** energy efficiency, environmental aspects, green processing, circular economy
- **Refractory and thermal insulating materials processing – additive manufacturing – machine learning:** metallurgy, glass production, chemical technology, building materials production, waste treatment, biomass applications
- **Corrosion of refractory materials:** influence of technology, fuels, aggressive environments
- **Structure of refractory materials and modification possibilities:** nanomaterial application, refractories for future challenges, simulation techniques
- **New qualities and grades of refractory materials:** innovative trends and challenging quests for properties, zero-carbon grades

KEYNOTE SPEAKERS

- **Pavol Šajgalík** (President of Slovak Academy of Sciences, ECerS)
- **Christos G. Aneziris** (TU Bergakademie Freiberg, President of DKG)
- **Christoph Wöhrmeyer** (Imerys)
- **Tomáš Strouhal** (RHI Magnesita Czech Republic)
- **Lucie Keršnerová** (RHI Magnesita Czech Republic)

On-line registration form, abstract template, full text template, conference fees and further information are available at the website of the Czech Ceramic Society (http://silikaty.cz/www-30). In case of questions reach out to the secretariat of the society through e-mail (lauermannovaannamarie@gmail.com) or phone (+420 732930931).

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PROGRAMME:

The official language of the conference is English.

May 22

12^{00}-13^{00} **Registration (Novotného lávka 200/5, Prague - conference room 213)**

Section 1

13^{00}-13^{15} **M. Přibyl (The Czech Ceramic Society)** Words of welcome

13^{15}-13^{45} **C. G. Aneziris (TU Bergakademie Freiberg, DKG)** Refractories, Composites and Recyclates: Approaches for Sustainability and Strategic Sovereignty

13^{45}-14^{15} **P. Šajgalík (Slovak Academy of Sciences)** Silicon Carbide Ceramics for Ultra-high Temperature Applications

14^{15}-14^{35} **Coffee Break**

Section 2

14^{35}-14^{55} **A. Lauermannová (University of Chemistry and Technology Prague)** Utilization of MgO-C Refractory Recyclate in New Generation of Composites

14^{55}-15^{15} **H. Ovčačíková (VSB – Technical University of Ostrava)** Properties of 3D Printed Ceramics

15^{15}-15^{45} **H. Peng (Elkem Silicon Materials)** Reducing Brucite Formation and Cracking in Magnesia Castables: The Impact of Microsilica and Drying Agent

15^{45}-16^{05} **Coffee break**

Section 3

16^{05}-16^{25} **P. Gehre (TU Bergakademie Freiberg)** Refractory Recycling: A Contribution For Raw Materials, Energy And Climate Efficiency In High-Temperature Processes (GRK 2802)

16^{25}-16^{45} **D. Veres (TU Bergakademie Freiberg)** Influence of the Ca-content of MgO based resin free tundish working linings on the population of non-metallic inclusions in a steel melt

16^{45}-17^{05} **F. Kerber (TU Bergakademie Freiberg)** Shaped Insulating Refractories Based on Rice Husk Ashes Functionalized with a Flame-Sprayed Alumina Coating for Steel Ingot Casting

19^{00}-22^{00} **Get Together (Novotného lávka 200/5, Prague – "Klub Techniků")**

May 23

Section 4

9^{30}-9^{50} **P. Mazurkiewicz (Vulcor Insulation)** Technical aspects for durable Fiber Modules linings

9^{50}-10^{20} **C. Wöhrmeyer (Imerys S.A.)** Data-Based Carbon Footprint and Roadmap Towards Net Zero of Imerys Specialty Minerals for Refractories

10^{20}-10^{40} **J. Sedláček (LANIK)** Coating of the Ceramic Cores

10^{40}-11^{00} **Coffee break**

Section 5

11^{00}-11^{20} **M. Henek (Průmyslová keramika)** Slurry Infiltrated Fiber Castable

11^{20}-11^{40} **P. Břicháček (Průmyslová keramika)** From Design to Commissioning – The Lower Part Lining of Alu Furnaces Made of Large-scale Prefabs

11^{40}-12^{00} **S. Kordová (Academy of Arts, Architecture and Design in Prague)** Organic Admixtures in 3D Printed Fired Ceramics and their Effect on the Porosity and Permeability of the Material Applied for Interior Elements that Increase Air Humidity

12^{30}-13^{30} **Lunch (Novotného lávka 200/5, Prague – "Klub Techniků")**

Section 6

14^{00}-14^{20} **I. Priesol (IPC Refractories)** Investigation of the Influence of Selected Additives on Non-Wetting Effect and Corrosion of Cementless High-Alumina Refractory Castable with Sol-gel Bond for Use in the Production of Primary and Secondary Aluminum

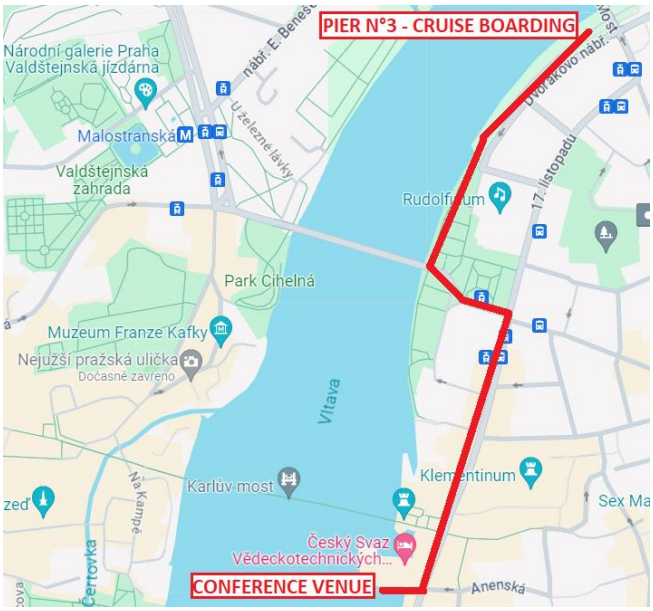
14^{20}-14^{40} **W. Odreitz (REF Minerals GmbH)** Ahead of Time: Providing a Full Cycle of Material Recycling from Demolition to Circular Products

14^{40}-15^{10} **L. Keršnerová (RHI Magnesita Czech Republic)** Utilization of Sol-gel Technology in Refractory Castables Manufacturing

15^{10}-15^{40} **T. Strouhal (RHI Magnesita Czech Republic)** Use of Recycled Raw materials for the Production of Refractories

17^{30}-18^{00} **Cruise – boarding (https://maps.app.goo.gl/RpEVigEasrXNJaeJ9)**

18^{00}-21^{00} **Cruise**



May 24

Section 7

9^{30}-9^{50} **O. Lapenko (IPC Refractories)** Research of the Sintering Process of no Cement Refractory Concretes with Dead Burned Magnesia Filler

9^{50}-10^{10} **P. Šimonová (University of Chemistry and Technology Prague)** Modelling and Measurement of Elastic Properties and Thermal Conductivity of Porous High-Alumina Refractories

10^{10}-10^{30} **L. Kotrbová (University of Chemistry and Technology Prague)** Measurement and Modelling of Elastic Properties and Thermal Conductivity of Silica Refractories

10^{30}-10^{45} **M. Přibyl (The Czech Ceramic Society)**

POSTERS:

J. Diviš (VSB – Technical University of Ostrava) Calibration and application of DEM modelling in the development of 3D printing processes for silicate materials

J. Jeřábek (VSB – Technical University of Ostrava) Statistical Analysis of Selected Mixtures of Alkali-activated Materials Exposed to Thermal Stress

D. Madej (AGH University of Krakow, Górbet Refractories) The role of additives in developing an efficient high performance castables resistant to explosive spalling under high temperatures

M. Velička (VSB – Technical University of Ostrava) Rapid determination of the thermal conductivity coefficient of insulating materials

ACCOMMODATION:

The participants secure their accommodation by themselves. Due to date collision with the IIHF World Championship in Prague, it is advised to do so **as soon as possible**.

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SPONSORS

Dr. Michal Přibyl
The Czech Ceramic Society President