

**Unified International Technical  
Conference on Refractories (UNITECR)  
18<sup>th</sup> Biennial Worldwide Congress on  
Refractories**

26<sup>th</sup> – 29<sup>th</sup> September 2023  
Germany | Frankfurt am Main | Kap Europa

Deutsche  
Feuerfest  
Industrie e.V.



**UNITECR 2023**



**CALL FOR  
PAPERS**



**THE CARBON  
CHALLENGE**

**| Steps and leaps to master the future**



### UNITECR 2023

26<sup>th</sup> – 29<sup>th</sup> September 2023  
Germany | Frankfurt am Main  
[unitecr2023.org](https://unitecr2023.org)

#### Host

Deutsche Feuerfest-Industrie e.V. (DFFI)  
*German Refractory Association*

#### Organizational Office

European Centre for Refractories gGmbH (ECREF)



## INVITATION



“The Carbon Challenge: Steps and leaps to master the future” is our motto for UNITECR in Frankfurt. The way to carbon neutrality for our high temperature industries will keep engineers busy for many years to come.

The transformation from carbon to green hydrogen-based steel making and the replacement of fossil fuels in high temperature processes will have an impact on the refractory materials. New technologies will require new lining concepts.

Also for existing technologies and processes, modified and new refractory lining concepts will contribute to energy saving and lower carbon emissions.

Modern tools such as big data analysis, machine learning, and the development of suitable models will help us to increase the speed of innovation in our industry.

Circular economy is another important aspect in order to preserve limited resources and reduce the ecological footprint in the refractory industry. Regional value chains with close cooperation between suppliers, users, and other involved stake holders are essential.

With Prof. Dr. Christos G. Aneziris as Vice President and Chairman of the Scientific Committee and myself as President we kindly ask you to help us make the UNITECR 2023 a success.

Even now we would like to thank the founding member German Refractory Association and its President Ulf Frohneberg for the invitation to Frankfurt, Germany.

Frankfurt am Main provides excellent travel connections and an international flair combined with attractive sightseeing and local specialities in atmospheric traditional quarters.

Please reserve the dates in your calendar and join us in Frankfurt for an interactive conference with fruitful discussions and good times with your fellow members from the refractory world.

**Dr. Andus Buhr**  
UNITECR 2023 President

**Please submit your abstract on latest scientific and technical developments addressing the challenges of the refractory world!**

# TECHNICAL PROGRAM

The technical program will inform you on the latest advances, applications and successes in refractories.

## TOPICS

### 1. Raw Materials

- Alumina materials
- Basic materials
- Other materials
- Secondary/recycled materials
- Binders

### 2. Advances in Monolithic Technology

- Monolithic refractories
- Installation techniques
- Drying and heating
- Testing of monolithic refractories

### 3. Refractories for Iron- and Steelmaking

- Ironmaking
- Primary metallurgy (BOF, EAF, IF)
- Secondary metallurgy (Ladle, Degasser, Ladle Furnace)
- Steel casting
- Secondary heat processing (Rolling mills, Thermal treatment)
- Foundries

### 4. Refractories for Non-Ferrous Metallurgy

### 5. Refractories for Non-Metal Industries

- Cement & Lime
- Glass
- Energy & Waste Incineration
- Chemical & Petrochemical

### 6. Modelling and Digitalization

- Modelling and Digitalization of refractories and their usage
- Application of models in industrial practice to develop refractory solutions
- Digitalization in industrial practice (digital exchange of data, Big Data, Machine Learning, Artificial Intelligence)
- Refractory engineering: Design, modelling and simulation of refractory materials

### 7. Education

### 8. Testing and Standardization

### 9. Basic Refractory Science and Technology Transfer

- Synthesis of materials
- Mechanisms of corrosion, erosion and clogging phenomena
- Interaction between H<sub>2</sub> and refractory materials
- Thermodynamic modelling
- Transfer from basic science to applications

# CALL FOR PAPERS

**DEADLINE**  
**30<sup>TH</sup> NOVEMBER**  
**2022**

The Scientific Committee is pleased to invite you to submit an abstract of a paper or a poster for consideration and inclusion in the program at [www.unitecr2023.org](http://www.unitecr2023.org). Please note abstracts must be submitted in English and electronically. You may also find detailed guidelines for abstract submission on the website.

Notifications of acceptance will be sent via e-mail in **February 2023**.

## MANUSCRIPTS

Once your abstract has been accepted, you will be asked to submit a paper (detailed manuscript) or a poster by 30<sup>th</sup> June 2023 at the latest.

Please note that the acceptance of your paper does not include your congress registration. At least one author is therefore kindly asked to register for the congress. It is indispensable and linked to the publication of the manuscript in the conference proceedings.

Proceedings will be available at the congress and also on the website.

## REGISTRATION

The registration will start in Autumn 2022. Don't miss any news or the start of registration and subscribe to our newsletter:

[www.unitecr2023.org/newsabo](http://www.unitecr2023.org/newsabo)

For further information please visit our website [www.unitecr2023.org](http://www.unitecr2023.org).



# UNITECR 2023

The German Refractory Association is pleased to host the 18<sup>th</sup> Unified International Technical Conference on Refractories (UNITECR).

## Host

**Deutsche Feuerfest-Industrie e.V. (DFFI)**

*German Refractory Association*

**Chairman:** Ulf Frohneberg

Höhr-Grenzhausen | Germany

## President of UNITECR 2023

Dr. Andus Buhr

Frankfurt | Germany

## Vice President of UNITECR 2023

Prof. Dr. Christos G. Aneziris

Freiberg | Germany

## Founding Members

- American Ceramic Society (ACerS)
- Association Latinoamericana de Fabricants de Refractories (ALAFAR)
- German Refractory Association (GRA)
- Technical Association of Refractories, Japan (TARJ)

## Principle Members

- The Chinese Ceramic Society (CCS)
- Indian Refractory Makers Association (IRMA)
- Fédération Européene des Fabricants de Réfractaires (PRE)

# GENERAL INFORMATION

## Host

Deutsche Feuerfest-Industrie e.V. (DFFI)

*German Refractory Association*

## Organizational Office

European Centre for Refractories gGmbH (ECREF)

Dr. Christian Dannert (Scientific Committee)

Thomas Kaczmarek (Secretary General)

📍 Rheinstrasse 58

56203 Höhr-Grenzhausen | Germany

☎ +49 2624 9433 125

✉ [office@unitecr2023.org](mailto:office@unitecr2023.org)

## Congress Venue

Kap Europa

📍 Osloer Str. 5

60327 Frankfurt am Main | Germany

## Our local organizer and support

**m:con**  
VISION INTO CONVENTIONS

m:con – mannheim:congress GmbH

📍 Rosengartenplatz 2

68161 Mannheim | Germany

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## Scientific Committee

Chairman: Prof. Dr. Christos G. Aneziris

## THE TOPICS (and experts)

1. Raw Materials

*Dr. Christoph Wöhrmeyer*

2. Advances in Monolithic Technology

*Prof. Dr. Olaf Krause*

3. Refractories for Iron- and Steelmaking

*Prof. Dr. Helge Jansen*

4. Refractories for Non-Ferrous Metallurgy

*Daniel Cölle*

5. Refractories for Non-Metal Industries

*Dr. Stefan Postrach*

6. Modelling and Digitalization

*Rinus Siebring*

7. Education

*Dr. Dietmar Gruber*

8. Testing and Standardization

*Dr. Christian Dannert*

9. Basic Refractory Science and Technology Transfer

*Prof. Dr. Dr. h.c. Peter Quirnbach*





## **UNITECR 2023**

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