



## The Unified International Technical Conference on Refractories (UNITECR)

March 15–18, 2022  
Chicago, Illinois

### INTRODUCTION

The importance of refractory materials to the world has always been prevalent as they support the production of materials and the processes that sustain our way of life. These materials may be called upon to act as insulation and/or containment as they form vessel linings in high-temperature and corrosive environments and thus must possess properties suitable for exposure to extreme environments. Indeed, it would be difficult to identify an industrial process that does not use refractory materials in one aspect or another. These materials must not only be capable of performing these tasks at elevated temperatures, but may also be called upon to bear mechanical loads and transfer heat. As such, refractories are a vital class of materials for the sustaining of the world industrial economy related to the manufacturing of the products that we rely on in our modern world.

As stated in its mission statement, The 17<sup>th</sup> Unified International Technical Conference on Refractories (UNITECR 2022) was organized to contribute to the progress and exchange of industrial knowledge and technologies concerning refractories with participation from refractory organizations from around the world collaborating in this biennial conference.

The theme of this year's conference is "Refractories as a Global Industry". Undoubtedly, the events of the past couple years have shown how connected our world and our industry is globally. It is with high hopes as I write this that we will all be able to meet together in Chicago and not only exchange technical ideas and progress, but also renew the many friendships and relationships within our community that have been put on hold the past couple years.

This year's conference, like those of the past, aims to address many of the aspects prevalent in refractory technology today and to bring together industrial and academic interests related to refractory production, testing, characterization, application, and education. These themes are covered in the symposia of the conference, covering a wide array of topics branching across many areas of interest with this volume containing the papers presented during this event.

Finally, I would like to thank the US and international advisory committees and the technical program committee without whose efforts the 17<sup>th</sup> UNITECR and this proceedings volume would not have been possible. The individuals from these groups were instrumental in the organizing and recruiting of papers for the various symposia and in the technical editing of the papers found in these proceedings.

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