

# PREFACE

Following the tradition of preceding MOLTEN conferences, the MOLTEN 2009 call for papers received a great response from the international academic and industrial communities. This proves that high temperature materials processing continues being fertile ground for scientific advances and for technology development and improvement.

In the MOLTEN 2009 proceedings, the reader will find submissions from authors from 32 different countries from nearly all continents. The 139 papers presented in have been grouped into the following sections:

- Slags (61)
- Other Melts and Liquids (6)
- Interfacial and Transport Phenomena (13)
- Industrial Processes (53)
- Molten Salts (6)

This is, obviously, not a strict classification.

The papers on slags account for about one third of the total. In this case, the editors thought that arranging these papers in subgroups, as shown in the proceedings table of contents, would facilitate the location of specific topics.

In an industrial perspective, most of the MOLTEN 2009 papers discuss either basic or technical aspects relating to the production of iron, steel or ferroalloys; a clear indication of the importance of these materials to sustain the accelerated economic development that countries in several regions of the world, in particular Asia, have been experiencing in recent years.

Modeling work in support of both fundamental research and technology development and improvement shows that researchers are using a two-pronged approach to the investigation of specific topics. This is a field of work that will probably further expand in the immediate future. The judicious use of mathematical modeling to study complex systems and to improve industrial processes, with continuous validation and revision of model predictions against actual physical data, is a most promising tool in high temperature work.

A concern for the environment and the need to achieve industrial sustainability is openly discussed in a few of the MOLTEN 2009

papers. In an attempt to highlight the importance of this matter, the organizers of MOLTEN 2009 selected two of these papers for plenary session presentations.

The editors are confident that the MOLTEN 2009 proceedings will prove a valuable addition to the bookshelves of academic and practicing high temperature researchers alike around the world.

**THE EDITORS**

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