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PREFACE

The Ninth International Conference on Molten Slags, Fluxes and Salts (MOLTEN12) sponsored by the Chinese Society of Metals will be held from May 28 to 31, 2012 in Beijing, China. The preparation has come to the final stage. It is a satisfactory result coming from the contributions of the participants of the whole world as well as from the hard-working of our conference team after MOLTEN09.

The aim of this conference is to present scientific research achievements, bring together specialists, research scientists and industrial technologists to exchange their idea and successful experience, to provide a forum for discussing the possible future development in the molten salts and slags. In these aspects, we pay attention to both the traditional subjects like the previous molten conferences and the challenges encountered in present and future both in fundamental researches and industrial applications.

The response to this conference is overwhelming that is completely beyond our expectation. At present, the registered hotel rooms are already full; the organizer has to find more hotels. Over 150 papers are from foreign countries and we have to limit the number of papers from China. Since I attended the first conference of MOLTEN in Halifax, Canada 30 years ago, a big change has happened in the "MOLTEN" field: the body of knowledge is continuously growing up, the research issues have covered more and more contents. In this proceedings around two hundred papers are divided into the following five sections:

- [1] Molten slags
- [2] Molten salts and applications
- [3] Transport/interfacial phenomena and foaming
- [4] Industrial applications in extraction, smelting and refining
- [5] Recovery and utilization of slag, other wastes or byproducts of metallurgical Industry

The molten slags are the largest group in this proceedings covering the phase diagrams and equilibrium, the calculation of thermodynamic and physicochemical

properties as well as their modeling. Another feature apart from the previous conferences is the increasing of utilization of slag and other metallurgical wastes reflecting a special concern for the issues of environmental protection, resources and energy saving. Some review papers on the subject of fundamentals and applications of molten melts provided by the invited plenary lectures are collected in the first Chapter. Each of the following chapters starting with the invited keynotes papers as well as other papers have reported either the authors' fresh research or the outline of the recent development in a relevant topic. All abstracts of papers have been printed in the hard copy of proceedings and one can find their full manuscripts from the CD version attached.

It is expected that quite a number of papers presented in this conference will be transferred to five metallurgical journals for publication respectively according to the journal requirements. Hereby I would like to thank Professor R.G. Reddy, Professors Z. Zivkovic and D. Zivkovic, Dr. T. Adams and Professor H. Fukuyama for their kind efforts in compiling the conference papers to their journals. Since no copyright transfer is required in this conference, the authors can also submit their papers to any other journals as they like.

The preparation for this conference is well underway, at this moment, I would like to express:

- My thanks to all sponsors: CSM (Chinese Society of Metals), NSFC (National Science Foundation of China), USTB (University of Science and Technology Beijing), and SHU (Shanghai University) for their kind financial and/or technique supports.
- My special thanks to Academician Xu, Kuang-di, the former President of the Chinese Academy of Engineering and now the President of CSM, for his effort to promote this conference to be held in China
- I am also grateful to Professor Seetharaman, Seshadri and Professor Li, Wenchao for their years efforts from both international and national sides to make this meeting finally coming true in China.
- I also owe my gratitude to Professor Sánchez, Mario Chairman of the Eighth International Conference on Molten Slags, Fluxes and Salts, as well as our other Chile's friends for sharing their valuable experiences with us.

- I am particularly thankful to my colleagues, Professors Zhang Jiayun and Yan Baijun, for their great contributions in preparing this conference from organizing the international and national committees to reviewing each submitted manuscript. Besides, they have also dealt with all faced complicated problems including the personnel arrangement. It is hard to image that this conference can be underway without their devotion.
- Finally, my thanks also go to my students: Wang Lijun, Hou Xinmei, Yu Ziyou, Chen Zhiyuan, Zhang Guohua, Zhang Lu and Fan Jun for their generous contributions in preparing this conference.
- The scientists and researchers in the United States have expressed their willingness to organize the Tenth International Conference on Molten Slags, Fluxes and Salts. We sincerely hope that they will reach a great success.

Kuo-Chih Chou
Conference Chairman
Member of Chinese Academy of Sciences

May 10, 2012