Preface

**Lorenz Ratke · M. Chakraborty · B. S. Murty ·
Animesh Mandal**

Published online: 19 October 2012
© Indian Institute of Metals 2012

The current issue of Transaction of The Indian Institute of Metals contains some of the papers presented at the Fifth International Conference on Solidification Science and Processing (ICSSP5), organized by School of Minerals, Metallurgical and Materials Engineering & School of Mechanical Sciences, IIT Bhubaneswar during November 19–22, 2012. The last four conferences in this series have been organized in Bangalore (2001, 2004), Jaipur (2006) and Chennai (2009). As it has been the trend in this series of conferences that all the oral presentations are invited talks and contributed presentations are posters.

The ICSSP5 conference has scheduled 65 oral presentations and 60 poster presentations. A total of 56 manuscripts, among the papers presented at this conference, have been accepted after they are peer-reviewed by a distinguished international board of reviewers for publication in this issue. Since 2009, the Transactions of Indian Institute of Metals is being supported by Springer and is made available on-line internationally from its website. We hope that this change will also bring a wider readership to the ICSSP5 proceedings.

The papers presented in the conferences of this series reflect on the contemporary research trends in the field of

solidification science and technology. ICSSP5 covered topics such as fundamentals of solidification, microstructural evolution and modification during solidification, computational modeling, phase-field simulation, in situ observations during solidification, Al alloys, Mg alloys, metal matrix composites, metal foams, bulk metallic glasses, nanocrystals, high entropy alloys, rapid solidification and semi solid processing.

The conference brings together active researchers from various countries and different areas of solidification and we hope it will forge new collaborations and relations. We are grateful to all the members of the International Organizing Committee for their help in identifying and inviting distinguished speakers from different parts of the world.

We are confident that articles in this issue will be a valuable reference for researchers in the industry and academic alike for a comprehensive and an updated view of the field of solidification science and processing.

We express our sincere gratitude to all the authors, reviewers, editorial staff of the Trans. IIM and Springer for their immense support in making this special issue possible within the a short period of five months for distribution during the conference.

L. Ratke
DLR, Bonn, Germany

M. Chakraborty · A. Mandal
IIT, Bhubaneswar, India

B. S. Murty (✉)
IIT, Madras, India
e-mail: murty@iitm.ac.in