The present proceedings of the 7th International Conference on Processing and Manufacturing of Advanced Materials – THERMEC’2011 which was held during August 1-5, 2011 in Quebec City, Canada, under the co-sponsorship of The Minerals, Metals & Materials Society (TMS), USA. The Conference was also under the international auspices of professional organizations from Japan, Korea, France, Italy, The Netherlands, PR China, India, and Canada. The Conference was intended to bring together the researchers and engineers/technologists working in different aspects of processing, fabrication, structure/property evaluation and applications of both ferrous and non ferrous materials including biomaterials, and smart/intelligent materials. In addition to the contributed papers, the conference committee included in the final program the invited presentations by active researchers from various countries in several topic areas covered at THERMEC’2011.

Internationally known experts from several countries were invited to deliver Plenary/Keynote lectures at THERMEC’2011. Much of the credit of the success of the conference was due to topic coordinators who have devoted their time, expertise and experience in promoting and in general co-ordination of the activities for the organization and operation of the Conference. The coordinators of various session topics have devoted a considerable time and energy in soliciting papers from relevant researchers for presentation at the Conference. The Chairpersons of the different session played important role in conducting the proceedings of the session in a timely and efficient manner and the Committee expresses sincere appreciation for their involvement. The reviewers of the manuscripts, those who by tradition would remain anonymous, have been very helpful in efficiently reviewing the manuscripts, providing valuable comments well within the time allotted to them. The Editors express their sincere and grateful thanks to all reviewers.

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S. Takai, E.Poliak, A.J. DeArdo, A. Howe, K. Tsuzaki,
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Thermomechanical Processing: Steels
(John Jonas Honorary Symposium)
P.D.Hodgson , S.Yue, M.Militzer

New Methods in Steel Design
W. Bleck, D. Raabe, J. M. Rodriguez- Ibabe

Superalloys/ High & Super High Temp.
C. Sommitsch, T. Matsuo, A. Wasatowska-Sarnek
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Advanced Materials in Biomedical
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Degradable Metals for Biomedical
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Dynamic Behaviour of Materials
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Intermetallics
Y.W. Kim, H. Inui, R. Yang, M. Oehring

Friction Stir Processing/Welding
M. Mahoney, P. Prangnell, R.S. Mishra, Yutaka S. Sato

Metallic Glasses/ Bulk Metallic Amorphous
Hidemi Kato, E. Napolitano, Jun Shen, Do Hyang Kim
Materials

Nanostructured Materials
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Severe Plastic Deformation
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Smart/Intelligent Materials
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Thin Films
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Multiscale Modeling of Complex Materials
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Texture
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