

# Preface

This volume contains the revised full papers selected from the sixth Cross-Strait Conference on Advanced Engineering Materials, held in Nanjing, China during November 8-11, 2011. The conference series have provided a platform for researchers, engineers, academicians as well as industrial professionals from the Chinese mainland and Taiwan to present their research results and development activities in the engineering materials field. The first conference started from Taipei during November 21-23, 2002. The second conference was held in Chongqing during August 19-22, 2004, and the third in Hsinchu Taiwan during November 15-22, 2007, the fourth in Nanning during September 4-8, 2008 and the fifth in Kaohsiung during November 19-20, 2010.

In the sixth conference, 7 plenary lectures were arranged including Amorphous metallic materials – from bulk metallic glasses to non-volatile nano-memory by Prof. T.S. Chin (Feng Chia University, Taichung), Research and applications of membrane materials by Prof. W.Q. Jin (Nanjing University of Technology, Nanjing), High temperature thermal barrier coatings and interface mechanics by Prof. H.J. Shi (Tsinghua University, Beijing), Quest for multi-functional hybrid coatings by Prof. J.-G. Duh (National Tsing-Hua University, Hsinchu), Fretting wear and fatigue by Prof. M.H. Zhu (Southwest Jiaotong University, Chengdu), Long-term electric conductivity of Co-doped  $\text{Bi}_2\text{O}_3$  solid electrolytes for SOFC by Prof. W.C. J. Wei (National Taiwan University, Taipei), and Preparation and applications of nanocrystalline/Amorphous RE-Mg-Ni alloys for hydrogen storage by Prof. Y.H. Zhang (Iron and Steel Research Institute, Beijing). The parallel sessions covered a broad range of topics on thin film and nano materials, composites, coatings, high temperature alloys, rare earth materials, energy materials, biological materials, materials strength, design and simulation, and materials processing. The conference was concluded by the closing plenary lecture on latest development of applied materials technology by Prof. S.T. Tu (East China University of Science and Technology).

The success of the conference owes greatly to the joint effort and close cooperation between colleagues from the cross-strait areas. We would like to express our sincere thanks to all authors for their papers and presentations in the conference. Thanks are due to all reviewers for their careful work to ensure the quality of the papers. We also would wish to show our sincere thanks to the sponsors, session organizers, session chairs, and attendees for their efforts and enthusiastic participation in this conference.

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