

# Preface

The international conference on advanced design and manufacturing engineering series provides a forum for accessing to the most up-to-date and authoritative knowledge from both industrial and academic worlds, sharing best practice in the field of advanced design and manufacturing engineering. The meeting will provide an opportunity to highlight recent developments and to identify emerging and future areas of growth in this exciting field. The first of this conference series (ADME 2011) was held in Guangzhou, China, in September 2011 with the participation of Scientists from the Asia-Pacific region, Europe and the United States. Following the success of the inaugural conference, the 2nd International Conference on Advanced Design and Manufacturing Engineering (ADME 2012) was taken place in Taiyuan, China, in August, 2012. This conference successfully brought together scientists and engineers from industry and academia and provided a forum for exchange of ideas, cooperation and future directions by means of keynote speeches, regular presentations and a round-table discussion.

All papers had undergone the careful peer-review by expert referees to the professional and scientific standards before it is selected for publications in those volumes. Studies presented in this book cover these topics: composites, micro/nano materials and equipments, metal alloy materials, steel, polymer materials, optical/electronic/magnetic materials, energy materials and new energy technology, environmental friendly materials and waste utilization, biomaterials and preparation technology, thin films, structure materials and earthquake resistant structures, functional materials, surface engineering/coatings, modeling, analysis and simulation, materials processing technology, laser processing technology, mechanical behavior & fracture, tooling testing and evaluation of materials, thermal engineering theory and applications, detection and control technology.

We believe that this conference provided a medium for scientists and experts in the field to effectively communicate and share ideas. We would like to express our sincere thanks to all participants for their contributions and stimulating discussions. We are also grateful to keynote speakers, referees, exhibitors, committee members and many others for their patience and efforts.

*The editors*

The 2nd International Conference on  
Advanced Design and Manufacturing Engineering  
(ADME 2012)

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**Co-organized by:**

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