Preface

The international conference on Advances and Trends in Engineering Materials and their Applications, ATEMA 2013, held during October 11 to 12 in Singapore, was aimed at providing a platform to meet frontier researchers, scientists, as well as students and share experiences and promoting the integration of these themes as a multidisciplinary in the field. ATEMA 2013 was hosted by Hong Kong Education Society and published by TTP.

ATEMA 2013 has the presence of authors from different countries in the areas of materials science, engineering materials, manufacturing process and so on. The authors had formal and informal exchange regarding the most recent problems in the field of matter in the conference.

ATEMA 2013 has received more than 200 papers from 14 countries and regions. About 30 PC members and 20 International reviewers worked hard in reviewing the submissions. Based on the review reports, about 75 papers were accepted to be presented in ATEMA 2013 by the chairs. According to the paper topics, the editor concluded 4 themes in the proceedings.

The first Chapter of the proceeding is Materials Science and Technology. A large number of authors deal with the problems about materials. For example, the paper "The effect of corrosive medium CaCl2 on the quality of shaped refractory materials" written by Marek Šolc and Štefan Markulik describes the quality refractory materials.

Chapter two is the analysis of Engineering Materials and Application. Many new materials are applied in Engineering in the recent years. Nayatat Tonmitr in his paper "Materials for Extension Low-income Housing: The Case of Bang Bua Community in Bangkok, Thailand" conclude the real situation as well as trends of the urban poor housing in the aspect of utilized materials in the context of Thailand.

The Chapter three deals with Manufacturing Technology and process. The topics, including Mechanical Dynamics and Its Applications, Mechanical Transmission Theory and Applications, Mechanical Reliability Theory and Engineering and so on, are discussed.

The last Chapter presents Related Topics. The paper "Utilization of tannery wastewaters sludge ash in waterproofing membrane: a technical and environmental feasibility study" aimed to investigate the effects and feasibility in the use of tannery sludge ash as a partial or total replacement of usual mineral filler such as in manufacture of waterproofing membranes.

The collection of papers shows the importance of new advanced observational capabilities both in space and on ground and the strength of the theoretical and empirical modeling at different scales to tackle the complex multi-scale problems of engineering materials .We express our thanks to all editors, reviewers as well as authors devoted themselves to facing all difficulties and working hard.

Finally, special thanks are due to the participants of our conference for their great support. I hope the proceedings will be helpful to all of you. Thanks.

Wei Deng and Jerry Tian

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