

# Preface

2016 International Conference on Material Engineering and Smart Materials (ICMESM 2016) was held in Singapore during June 23-25, 2016. It is a conference dedicated to issues on all aspects of material engineering and smart materials, topics include shape memory alloys and polymers, electro and magnetorheological materials, piezoelectrics, ferroelectrics, multiferroics, piezomagnetism, energy storage materials, self-healing materials, etc.

The major goal and feature of the conference is to bring academic scientists, engineers, industry researchers together to exchange and share their experiences and research results, and discuss the practical challenges encountered and the solutions adopted. We hope you will have a delightful and rewarding experience, and use this occasion to meet old friends and make many new ones.

This volume consists of 17 selected papers which were presented orally at the conference or via poster sessions. They provide the recent knowledge and achievements in the field of material science and processing technologies. Each contributed paper was rigorously peer-reviewed by reviewers who were drawn from the organizing and advisory committee members and external reviewers. The proceedings are divided into 5 chapters based on the different topics of the papers, including alloy processing and preparation, thin film structure design and measurement, performance analysis of composites, materials science and processing technologies.

We hope your experience with ICMESM 2016 was a fruitful. With your support and participation, the conference will continue its success for a long time. And we would like to thank the organization staff, the members of the program committees and reviewers. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in the review process, and the authors for contributing their research results to the conference.

We look forward to seeing all of you next year at ICMESM.

ICMESM Organizing Committees  
July 25, 2016.

# **Committee**

## **Advisory Chair**

Prof. Ching Ping Wong, The Chinese University of Hong Kong

## **Conference General Co-Chair**

Prof. Hao Gong, National University of Singapore, Singapore

## **Program Committee Chair**

Prof. Michel Cotsaftis, LACSC/ECE, Paris, France

## **International Technical Committees**

Dr. Nongluck Houngkamhang, King Mongkut Institute of Technology Ladkrabang, Thailand

Dr. Sirasa Poomkeaw, National Metal and Materials Technology Center, Thailand

Dr. Sun Chengliang, Institute of Microelectronics, Agency for Science, Technology and Research (A\*STAR), Singapore

Prof. Chang Qing, Heilongjiang University, China

Dr. B. Karthikeyan, National Institute of Technology, India

Dr. Phongsak Phakamach, The Army Research and Development Office, Royal Thai Army, Ministry of Defence, Thailand

Prof. Ghim Wei Ho, National University of Singapore, Singapore

Dr. Ebrahim Abouzari-Lotf, Universiti Teknologi, Malaysia

Dr. Noor Shawal Nasri, Universiti Teknologi Malaysia, Malaysia

Dr. Dong-Joong Kang, Pusan National University, Korea