

Editorial preface

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7th International Conference on Materials for Advanced Technologies



Editorial Preface

This special volume of Procedia Engineering contains papers selected from those presented at the International Conference on Materials for Advanced Technologies (ICMAT2013), Symposium W - Advanced Structural and Functional Materials for Protection, held on 30th June – 5th July 2013 at the Singapore International Convention & Exhibition Centre, Singapore. A total of 120 papers were presented at the symposium, including 20 invited papers, 60 oral and 40 poster presentations.

Protection materials represent one of the most challenging materials to synthesize and process due to the extreme application requirements. The understanding of the various mechanisms & sciences behind materials' behavior will contribute invaluablely to the development of materials for protection applications. This symposium provided a platform for academics, scientists, technologists and industrial players to present innovations, exchange views, share results and discuss opinions and thoughts in the field of advanced structural and functional materials for protection. Specifically, the symposium focused on materials for protection of civilians and soldiers against collision of vehicles, blast, fragmentation, unconventional attack, and also multi-functional materials for enhancement of civilians and soldier performance in extreme conditions.

The areas covered at the symposium included novel synthesis, processing and applications of advanced materials, micro and nano-structures, design and fabrication of structural materials, self-healing materials, advanced ceramic materials, multi/hybrid layers, films/coatings for protection, thermoelectric materials and thermal protection, materials for radiation protection and extreme conditions, development of materials evaluation techniques, modeling and simulation, smart materials for structural and/or functional management, sensors and devices, failure analysis and characterization of materials, applications of protection materials – civilians, soldiers, aerospace, navy and heavy vehicles and sustainable protection materials.

The success of this truly international symposium has to be attributed to the efforts of the organizing committee. In particular, Professor Gan Chee Lip played an important role of coordinating the delegates, before and during the symposium as well as sponsoring the symposium dinner. We are grateful to our overseas co-chairs Professor T.Y. Tseng and Professor W.K.Chiu for kindly helping us in many ways both before and after the conference. We also want to thank all the invited speakers, oral and poster presenters, reviewers of manuscripts, participants of this symposium, Republic Polytechnic, TemasekLaboratories@NTU, Nanyang Technological University, A* Institute of High Performance Computing and Materials Research Society of Singapore for their valuable contributions. They have contributed to the success of this international symposium and the publication of this special volume of the proceedings. Once again, thank you all!

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