Proceedings of the International Conference on Nanoscience and Nanotechnology

(Melbourne, 25–29 February 2008)

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PREFACE

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Guest Editors

Mike Ford
University of Technology, Sydney, Australia

Salvy Russo
Royal Melbourne Institute of Technology, Melbourne, Australia

Julian Gale
Curtin University of Technology, Perth, Australia

The International Conference on Nanoscience and Nanotechnology is held bi-annually in Australia, supported by the Australian Research Council and Australian Nanotechnology Network. The purpose of the conference is to provide a forum for discussion about all aspects of nanoscience and nanotechnology, to enable young Australian researchers a chance to meet and engage with leading global scientists in the field, and to set up the exchange mechanisms and collaborations that will enable the field to continue to develop and flourish.

The second conference in this series co-chaired by Professor Paul Mulvaney and Professor Abid Khan attracted over eight hundred participants from across academia, industry, government and schools, with 8 plenary talks, 32 invited talks and more than 420 oral and poster papers spread across 6 parallel symposia. These symposia presented the status of international research from nanoelectronics to nanobiotechnology, a stream dedicated to commercialization issues and showcasing Australian success stories, and a final symposium discussing regulatory, environmental and health issues, and the next stage of the nanotechnology roadmap.

The development of efficient algorithms and availability of computing power has seen calculation play a crucial role in the progress of nanoscience and nanotechnology, providing a window onto processes occurring at the molecular level that are not easily accessed by experiment alone. Consequently, a symposium was dedicated to nanocomputation, containing contributions ranging from first principles atomistic simulations of nanostructures to classical models of nanotube motion. The papers in this special issue are contributions to this symposium co-chaired by Salvy Russo, Julian Gale and Mike Ford.

