

Preface

2013 2nd International Conference on Nanotechnology Technology and Advanced Materials (ICNTAM 2013) will be held on August 4-5, 2013, Los Angeles, CA, USA. ICNTAM 2013 serves as good platforms for academics, researchers, and engineers to meet and exchange innovative ideas and information on all aspects of nanotechnology and material technologies.

Nanotechnology is the study of manipulating matter on an atomic and molecular scale. Nanotechnology entails the application of fields of science as diverse as surface science, organic chemistry, molecular biology, semiconductor physics, microfabrication, etc. There is much debate on the future implications of nanotechnology. Nanotechnology may be able to create many new materials and devices with a vast range of applications, such as in medicine, electronics, biomaterials and energy production. On the other hand, nanotechnology raises many of the same issues as any new technology, including concerns about the toxicity and environmental impact of nanomaterials, and their potential effects on global economics, as well as speculation about various doomsday scenarios. These concerns have led to a debate among advocacy groups and governments on whether special regulation of nanotechnology is warranted.

Materials science is an interdisciplinary field applying the properties of matter to various areas of science and engineering. This scientific field investigates the relationship between the structure of materials at atomic or molecular scales and their macroscopic properties. It incorporates elements of applied physics and chemistry. With significant media attention focused on nanoscience and nanotechnology in recent years, materials science has been propelled to the forefront at many universities. It is also an important part of forensic engineering and failure analysis. Materials science also deals with fundamental properties and characteristics of materials.

The selected, peer reviewed paper from ICNTAM 2013 focus on four topics: (1) Material Science and Engineering, (2) Nanotechnology Technology, (3) Manufacturing and Mechanical Engineering, and (4) Information Technologies and Computational Procedures in Engineering Researches and Design. We expect that the conference and its publications will be a trigger for further related research and technology improvements in this importance subject.

The Organizing Committee thanks the sponsors, government agencies and sponsors that contributed definitely to the conference success. We hope that ICNTAM 2013 will be successful and enjoyable to all participants. We look forward to seeing all of you next year at the ICNTAM.

Guohui Yang

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