

Preface

Sustainable development is perhaps the most critical issue to be addressed in the 21st century. As many of the approaches to address these challenges are revolving around “materials technology” the theme selected of the third International Conference of Advanced Materials and Nanotechnology (ICAMN III) was “**Next Generation of Sustainable Materials**”. The challenges of sustainable development will require materials engineers and scientists to think beyond the current definition of what constitutes the “best” material for a given application. It requires one to think of how the innovation of materials (via research on certain materials for example) can contribute to the known key thematic areas of sustainability: energy, population, food and water, materials resources and health.

This conference aimed to address on the vital role of materials in sustainable development. Progress of materials science (especially in nanotechnology) to the realisation of sustainable development was explored. Although the main focused may be materials innovation oriented, it is also important to realise that innovation is only part of the solution, considerations of other materials-related issues such as limited resources, green processing technique, toxicity of materials, effect of materials to the environment, recycling and life cycles are necessary and ought to be addressed as well. To cover all of these aspects was impossible given the time limitation of this event, but we organised 6 symposia in ICAMN III which cover the most important topics; *Green and Sustainable Materials, Nanomaterials, Structural Materials, Electrochemical & Materials For Alternative Energy Production, Polymeric Materials and Composites, Biomaterials/Medical and Pharmaceutical Materials & Technology*, which have been translated into the 6 chapters of this proceeding.

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