



## ***A Special Section on Magnetism Nanoscale (IUMRS-ICA2010)***

Nanomagnetism is at the forefront of nanoscience and nanotechnology, while magnetic nanomaterials are among the most promising nanomaterials for data storage, spintronics and biomedical applications. Magnetic nanoparticles are widely used for labeling and manipulating biomolecules, targeting drugs and genes, magnetic resonance imaging, as well as hyperthermia treatment. Magnetic thin films are often used in the development of nanosensors and nanosystems. Due to the great market potential of magnetic nanomaterials, many universities, research institutions, commercial companies and government organizations have spent a great deal of resources in the research of magnetic nanomaterials for spintronics, storage, biomedical applications and amazing progress has been made in this field.

The 11th IUMRS-ICA2010 conference organized by C-MRS was held in Qingdao city, China from 25th to 28th September 2010. The event was timely and impressive not only due to the rapid development of science and technology in China and Asian areas but also due to the emerging cultural and economic transformation. We organized Session Q: Magnetic Materials at Nano-scale. This session aims to present a comprehensive progress of this subject. Over 100 attendees are not only from Singapore,

Hong Kong, Taiwan and China mainland, but also UK, Ireland, United States and Germany. They presented the synthesis techniques, the physical and chemical properties, and the working principles for diverse applications of various types of magnetic nanomaterials. Some participants submitted their results for publication in *Journal of Nanoscience and Nanotechnology*, which forms a special section here.

In preparing the session, we would like to acknowledge the contributions made by the volunteers and colleagues.

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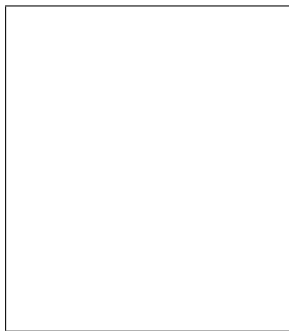
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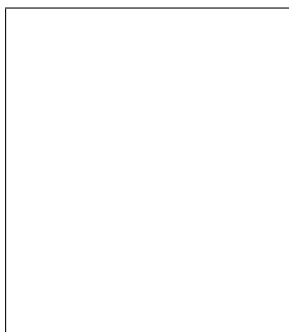


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**A SPECIAL SECTION**



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