

GCOE Special Lecture



Speakers: *Prof. Zhong Zhang*

**National Center for Nanoscience and Technology,
Beijing, China**

Title :

『Polymer Nanocomposites: from fundamental to application』

Date : Wednesday , November 16, 2011 16:00-17:00

**Place : Shinshu University, Lecture building , 3F
Room #32**

Abstract: Nanomaterials, including carbon nanotube, graphene and nanoparticle, perform outstanding mechanical and other physical properties in nanoscale. However, how to improve the performance of their macroscale counterparts which are constructed by these nanoscale building-blocks using current techniques is still a big challenge. To create hierarchically structured nanocomposites in which each sub-layer contributes a distinct function to yield a mechanically integrated macro-scale material is an important approach learnt from nature. Herein, we report some of our recent attempts on the production and investigation of hierarchically structured nanocomposites based on macroscale architectures of nano materials. It was found that the mechanical properties of such hierarchically structured nanocomposites can be manipulated where the nano-clusters and their surrounding polymer chains are interacted.

Biography: Zhong Zhang, Professor, Head of Division “Nanomanufacturing and Applications” at the National Center for Nanoscience and Technology, China. His major research interests are hierarchically structured multi-functional polymer nanocomposites, nanostructured surfaces and coatings, nanomanufacturing and applications. Dr. Zhang was a German Alexander von Humboldt Sofja Kovalevskaja Award winner between 2001 and 2005. He serves as editorial board members of 6 leading academic journals in the fields of composites, e.g. Composites Science and Technology, Composites Part A, Journal of Composite Materials, etc. He currently serves as the Vice President of the Chinese Society of Particology, and the Deputy Secretary General of the Chinese Society for Composite Materials.

He published more than 100 refereed papers in SCI journals, which have been cited for more than 800 times by others in the past five years. He published also a co-edited book (by Springer), 6 book chapters, 4 European patents, and 12 Chinese patents.

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