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# The 101<sup>st</sup> iCeMS SEMINAR

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**Tue 21 Feb 2012**  
**15:00-16:00**

## **Next Generation of Magnetic Nanoparticles for Biomedical Applications**

Lecturer: **Assoc. Prof. Nguyen T. K. Thanh**  
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Venue: 2nd floor Seminar Room (#A207)  
iCeMS Complex 1, Kyoto University

Magnetic nanoparticles have many potential clinical applications, however, the currently available MNPs namely iron oxide are sub-optimal in terms of their physical and biochemical properties. They have lower saturation magnetisation and often are not well biofunctionalised for specific biological target. In this presentation, novel class of MNPs with different size, shape (cube, octopods, rods, multipods, star), chemical composition (e.g., metallic Co, alloy FePt, trimetallic FePtPd, etc..), coating and surface chemistry have been fabricated using wet chemical methods. Multifunctional/hybrid MNPs with noble metal Au and semiconductor quantum dots CdSe were also synthesised. Magnetic nanoparticles could be used to track neural stem cells after a transplant in order to monitor how the cells heal spinal injuries.

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**Hosted by:** iCeMS (Institute for Integrated Cell-Material Sciences), Kyoto University  
**Co-hosted by:** Center for Frontier Medicine, Global COE Program, Kyoto University

