

The 181st MANA Special Seminar



Non-aqueous sol-gel routes to metal oxide nanostructures Chair: Dr. Enrico Traversa (MANA PI)

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Nonaqueous sol-gel routes are elegant approaches for the synthesis of nanomaterials. Indeed, high quality pure inorganic nanocrystals, ordered hybrid organic-inorganic materials or thin films by atomic layer deposition (ALD) can be obtained[1-4]. After introducing and discussing nonaqueous sol-gel routes to inorganic nanocrystals and ordered hybrid organic-inorganic materials synthesized in surfactant-free system, we will concentrate on the deposition of thin films by ALD. The similarities and differences of the chemical processes taking place in solution and in ALD will be discussed.

[1] N. Pinna, M. Niederberger, Metal Oxide Nanoparticles in Organic Solvents: Synthesis, Formation, Assembly and Application, Springer, 2009, ISBN: 978-1-84882-670-0 [2] N. Pinna, M. Niederberger, Angew. Chem. Intl. Ed. 2008, 47, 5292 [3] N. Pinna, J. Mater. Chem. 2007, 17, 2769 [4] G. Clavel, E. Rauwel, M.-G. Willinger, Nicola Pinna, J. Mater. Chem. 2009, 19, 454

Venue: Seminar Room #409-410, 4F, Collaborative Research Bldg.

Date: November 11th (Thu) Time: 15:30-16:15

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