

## Report

### Ordered and Non-Ordered Superstructures of Nanosized Objects: Preparation, Properties, Applications, and Modeling International Workshop — 09 - 13 July 2012

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The onsno12 workshop brought together about 100 leading scientists, postdoctoral researchers, and students from Europe, US, Canada, India, China, Australia and other countries working in the field of nanoscale assemblies, colloidal nanoparticles and metallic nanostructures, and their optical and physical properties. In the very productive scientific environment of the MIPPKS young researchers and established senior scientists enjoyed exciting discussions and productive exchange of ideas. All five days of the workshop have been very productive and the participants could listen to lectures given by highly recognized speakers from the various fields including synthesis and fabrication of colloidal nanocrystals, physical chemistry, optical spectroscopy, and theoretical and solid-state physics.

The central themes of the Workshop were the physical and chemical properties of nanoscale assemblies. This is nowadays an extremely “hot” field of research, due to both new fundamental physics and applications. The specific topics covered by the workshop included methods of fabrication of ordered and non-ordered assemblies of nanocrystals and quantum dots; new and optical, transport, and thermal phenomena of assembled nanocrystals, potential and current applications including solar cells, sensors, and thermoelectric devices. The topics of the talks at the Workshop also included fundamental physical aspects of the optical generation of excitons and multi-excitons in colloidal quantum dots and the problems of band-transport in nanocrystal solids.

During the Workshop, young scientists were presenting their results in short talks and posters. For some of the young participants, this was the first chance to meet with many well-established scientists from the field. In this way, the Workshop promoted and motivated young active scientists.

The Workshop was open to the public and, therefore, nonregistered visitors from several German institutions (local and other cities) used the opportunity to attend the lectures and to get involved in the scientific atmosphere during the workshop, and also to listen to the open-access Colloquium talk on the topic of the Workshop.

Going back to their home institutions, all of us brought home new ideas, excitement to advance our research further, and knowledge about the cutting-edge developments in the field of

nanoscale assemblies and related physical phenomena and applications. The workshop has received many good responses from the participants.

Using this opportunity, we would like to thank the local organizers, Claudia Pönisch and Dr. Sergei Flach, for their excellent and thoughtful organisation and support which was crucial for the success of the workshop.