

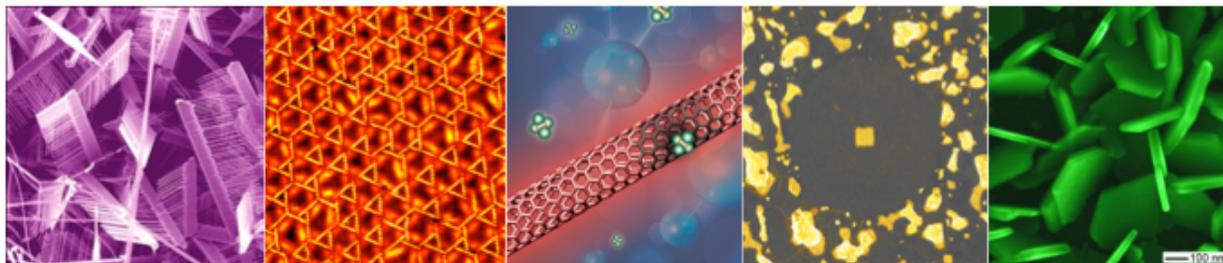
## Joint NSRC Workshop on Nanoparticle Science

November 5 -6, 2012

Argonne National Laboratory

Building 401, Rooms E1100 & E1200, LL Gallery

7:45-8:00am Registration		
<b>Monday, November 5, 2012</b>		
<b><u>Synthesis and Assembly</u> (Chairs: Gary Grest, Sandia and Xiao-Min Lin, Argonne)</b>		
Time	Speaker	Title
8:00-8:15am	Amanda Petford-Long	Welcome Remarks
8:15-8:45am	Chad A. Mirkin (Northwestern)	"Artificial Atoms" Formed from Nucleic Acid-Nanoparticle Conjugates
8:45-9:10am	Dale Huber (Sandia)	Size Control in the Synthesis of Magnetic Nanoparticles
9:10-9:35am	Yugang Sun (Argonne)	In situ Tetragonal Crystalline Symmetric in Colloidal Nanoparticles with fivefold Twinning
9:35-10:00am	Kunlun Hong (Oak Ridge)	Self-Assemblies of Optoelectronic Molecules by Tailored Synthesis
10:00-10:20am	Coffee Break	
10:20-10:45am	Elena Schvchenko (Argonne)	Nanoparticle Superlattices Assembly
10:45-11:10am	Oleg Gang (Brookhaven)	Nanoscale Self-Assembly Guided by DNA and Geometry: Structures, Transformations and Rationally Designed Materials
11:10-11:35pm	Jim DeYoreo (Berkeley)	Nanoparticle-Mediated Pathways of Assembly and Crystallization
11:35-12:00am	Raffaella Buonsanti (Berkeley)	Assembly of Colloidal Nanocrystals into Precisely Controlled 3D Mesoporous Architectures
12:00-1:30pm	Lunch	
<b><u>Theory and Modeling</u> (Chair: Mark Stevens, Sandia)</b>		
1:30-1:55pm	Gary Grest (Sandia)	Modeling of Nanoparticles in Solution and at Interfaces
1:55-2:20 pm	Amalie Frischknecht (Sandia)	Dispersion of Polymer-Grafted Gold Nanorods in a Homopolymer Matrix
2:20-2:45pm	Alexei Tkachenko (Brookhaven)	Programmable Self-Assembly of DNA-Nanoparticle Mesostructures
2:45-3:00pm	Coffee break	
3:00-3:30pm	Ken Schweizer (Illinois)	Bulk Polymer Nanocomposites
3:30-3:55pm	Steve Whitelam (Berkeley)	Self-assembly of molecular networks on surfaces
3:55- 4:20pm	Mina Yoon (Oak Ridge)	Theoretical Challenges in Modeling Nanoparticles using ab initio Density Functional Theory
4:30-6:00pm	Poster Session (coffee will be served)	
7:00pm	- Non-sponsored Dinner (Gordon Biersch Restaurant, 639 E. Boughton Road, Suite 100, Bolingbrook, IL 60440)	



## Joint NSRC Workshop on Nanoparticle Science

November 5 -6, 2012

Argonne National Laboratory

Building 401, Rooms E1100 & E1200, LL Gallery

<p style="text-align: center;"><b>Tuesday, November 6, 2012</b>  <b><i>Characterization and Properties in Nanoscale</i></b>  <b><i>(Chairs: David Geohegan-Oak Ridge and Jeff Urban-Berkeley)</i></b></p>		
Time	Speaker	Title
8:00-8:30am	Heinrich Jaeger (University of Chicago)	Nanoparticle Monolayers as Ultrathin Freestanding Membranes
8:30-8:55am	Xiao-Min Lin (Argonne)	Structural Complexity in Magnetic Nanoparticles
8:55-9:20am	Mircea Cotlet (Brookhaven)	Control of Charge Transfer in Semiconducting Quantum Dot-based Hybrids
9:20-9:45am	Matt Pelton (Argonne)	Ultrafast Processes in Semiconductor Nanocrystals Metal Nanoparticles and their Assemblies
9:45-10:10am	Iliia Ivanov (Oak Ridge)	Electro-optical Functionality of Conducting Polymer Nanoparticles Assemblies in Solution and Thin Films
10:10-10:30am	Coffee Break	
10:30-10:55am	Matt Sfeir (Brookhaven)	- Photophysics of Monodisperse Nanoclusters
10:55-11:20am	Zili Wu (Oak Ridge)	- Support Morphology Effect in Nanocatalysis: Vanadia Clusters Supported Ceria and Titania Nanoshapes
11:20-11:45am	James Werner (Los Alamos)	- Resolved Three-Dimensional Tracking of Single Nanoparticles: from Cellular Biophysics to Materials Characterization
11:45-12:10pm	Jihua Chen (Oak Ridge)	Nanoparticles in Hybrid Assemblies as Revealed by Low Dose Analytical TEM
12:10pm-1:15pm	Lunch	
<p style="text-align: center;"><b><i>Biofunctional Materials (Chair: Oleg Gang-Brookhaven)</i></b></p>		
1:15-1:45pm	Dan Luo (Cornell)	- Using DNA as Both a Polymer and a Ligand to Organize Nanoparticles
1:45-2:10pm	Jennifer S. Martinez (Los Alamos)	- Fluorescent Gold and Silver Nanoclusters
2:10-2:35pm	Tijana Rajh (Argonne)	- Biofunctionalized Nanoparticles
2:35-3:00pm	Ron Zuckermann (Berkeley)	- Protein Mimetic Materials as Nanoparticle Templates
3:00-3:25pm	Scott Retterer (Oak Ridge)	- Synthesis and Modification of Nanoparticles for Understanding Toxicity
3:25-4:00pm	Wrap up Discussions	