

Symposium 1

Title: **Advanced Nanostructured Materials: Smart Colloids and Nanoparticles. Responsive Surfaces and Thin Films**

Chair: S. Minko

Chair Assistant: Maxim Orlov

Location: 176 CAMP

Monday June 13, 2005

Presiding: M. M. Santore, M. Mueller, R. Varadaraj, G. Sukhorukov, A. Laschewsky, S. Sukhishvili

Paper	Time	Title and Authors
1-01	11:00 - 11:20 AM	Nanostructured Materials Based on Polyelectrolyte Complexes M.C. STUART
1-02	11:20 - 11:40 AM	Multifunctional and Responsive Behavior of ABC Terpolymers with Amphoteric Blocks C. TSITSILIANIS, I. Katsampas, Y. Roiter, S. Minko
1-03	11:40 - 12:00 AM	Design of Self Assembles Surfactant Nanostructured at Interfaces: Effects of Regio-isomeric and Sero-isomeric Chemical Structure Changes R. VARADARAJ
1-04	12:00 - 12:20 PM	Self-recognising Fluid Monolayers of DNA-based Surfactants: Properties and Applications V. PAUNOV, C. Xu, P. Taylor, P. D. I. Fletcher
1-05	1:30 - 1:50 PM	Triggered Morphological Transformations in Block Copolymer Aggregates in Solution S. Burke, A. Choucair, F. Liu, L. Luo, H. Shen, A.EISENBERG
1-06	1:50 - 2:10 PM	Synthesis and Self-organization of Multiple Stimuli Responsive Amphiphilic Polymers in Aqueous Media A. LASCHEWSKY, S. Garnier, M. Mertoglu, K. Skrabania, J. Storsberg
1-07	2:10 - 2:30 PM	Nanostructured Materials Formulation and Synthesis via Self-Assembly and Directed Assembly of Amphiphilic Block Copolymers

P. ALEXANDRIDIS

- 1-08 2:30 - 2:50 PM Ordering and Interactions in Electrorheological Fluids
J. PERSELLO, B. Cabane, G. Bossis, R. Schweins
- 1-09 3:20 - 3:40 PM Nanostructured, Smart Hydrogel Layers
D. KUCKLING, K. Kretschmer, C. Corten, P. Pareek
- 1-10 3:40 - 4:00 PM Nanofabrications via Block Copolymer Templates: From
Nanoparticles Arrays to Optical Waveguides
D.H. KIM, X. Li, K. Hang, A. Lau, T. P. Russell, J.K. Kim,
W. Knoll
- 1-11 4:00 - 4:20 PM Nanomolecular Valve Effect of Cu Complex Crystal in Gas
Adsorption
H. Noguchi, A. Kondo, H. Kajiro, Y. Hattori, H. KANO. K.
Kaneko
- 1-12 4:20 - 4:40 PM Microcalorimetry and Scattering in Binary and Ternary PNIPA
Systems near the Volume Phase Transition
K. LASZLO, K. Kosik, E. Wilk, E. Geissler
- 1-13 4:40 - 5:00 PM A Novel Method for Controlling the Size and Spatial Patterning
of Defect Domains in a Smectic a Liquid Crystal
S. SHOJAEIZADEH, S. L. Anna,
- 1-14 5:00 - 5:20 PM Pore Expansion in Fluorinated Surfactant Templated Porous
Silica Thin Films through Supercritical Carbon Dioxide
Processing
K. GHOSH, H.J. Lehmler, S. E. Rankin, B. Knutson

Tuesday June 14, 2005

Presiding: V. V. Tsukruk, D. Kuckling, S. Minko, M. M. Urban, W. Brittain, M. Stamm

- 1-15 10:30 - 10:50 AM Nanoprobng of Switchable Polymer Surfaces
V.V. TSUKRUK
- 1-16 10:50 - 11:10 AM Stimuli-Responsive Polymeric Films from Colloidal Disperitions
M.W. URBAN

1-17	11:10 - 11:30 AM	Stimuli-Responsive Layer-by-Layer Polymeric Films and Capsules S. SUKHISHVILI
1-18	11:30 - 11:50 AM	Patterning of Polymeric and Biomolecular Nanostructures: Approaches and Challenges S. ZAUSCHER,
1-19	11:50 - 12:10 AM	Nanoscale Functionalization and Site-Specific Assemble of Colloids by Particle Lithography C. E. SNYDER, A. M. Yake, J. D. Feick, D. Velegol
1-20	12:10 - 12:30 PM	Xerogel from Silica and Naphthanediiimide, an Efficient Photoredox Agent N.D.S. Mohallem, M. J. POLITI, M.A. Rodrigues
1-21	1:30 - 1:50 PM	Synthesis and Rearrangement of Block Copolymer Brushes W. J. BRITAIN
1-22	1:50 - 2:10 PM	Ultrahydrophobic Surfaces through Surface-attached Ultrathin Polymer Films J.S.D. J. Samuel, I.J. Park, J. RÜHE
1-23	2:10 - 2:30 PM	Binary Polymer Brushes: Structured Surface with Reversibly Tunable Wetting Properties M. MUELLER
1-24	2:30 - 2:50 PM	Mixed Polyelectrolyte Brushes: Adaptive and Responsive Polymer Surfaces M. STAMM, N. Houbenov, D. Usov, S. Minko,
1-25	3:20 - 3:40 PM	Nanoprobng of Switchable Polymer Surfaces V. V. TSUKRUK
1-26	3:40 - 4:00 PM	Synthesis of Segregated Binary Polymer Brushes I. LUZINOV, Y. Liu, V. Klep
1-27	4:00 - 4:20 PM	Synthesis of Mixed Homopolymer Brushes on Silica Nanoparticles by Living Radical Polymerization Techniques D. Li, X. Sheng, B. ZHAO

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| 1-28 | 4:20 - 4:40 PM | Novel Smart Core-Shell Microgels: Synthesis and Characterization
M. F. Leung, J. Zhu, F. W. Harris, P. LI |
| 1-29 | 4:40 - 5:00 PM | Collapse of Polyelectrolyte Brushes Driven by Ion Pairing Interactions
O. AZZARONI, S. Moya, A. A. Brown, T. Farhan, W. T.S. Huck |
| 1-30 | 5:00 - 5:20 PM | Thermally Responsive Polymer Brushes with High Protein-Binding Affinity
A. Kusumo, L. Bombalski, Q. Lin, K. Matyjaszewski, T. Kowalewski, J. W. Schneider, R. D. TILTON |
| 1-31 | 5:20 - 5:40 PM | Strong Polyelectrolyte Brush at the Air/Water Interface
P. KAEWSAIHA, K. Matsumoto, H. Matsuoka |

Wednesday June 15, 2005

Presiding: U. Wiesner, I. Luzinov, M. Cohen Stuart, C. Tsitsilianis

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| 1-32 | 10:00 - 10:20 AM | Stimuli-Responsive Polymer Based Composite Microcapsules
C. Déjugnat, T. Mauser, D. Haloan, K. Köhler, D.G. Shchuckin, A. Skirtach, G. B. SUKHORUKOV |
| 1-33 | 10:20 - 10:40 AM | Connecting the Wetting and Rheological Behaviors of PDMS-Grafted Nanospheres in PDMS Melts
D. GREEN, J. Mewis |
| 1-34 | 10:40 - 11:00 AM | Counterion Condensation and Complex Formation on Polyelectrolytes
U. SCHELER, |
| 1-35 | 11:00 - 11:20 AM | Polymer-Capped Monodisperse Magnetic Nanoparticles
M. LATTUADA, T.A. Hatton |

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| 1-36 | 11:20 - 11:40 AM | Improving Fuel Cell Performance by Controlling Polymer Membrane Architecture; Nanoparticles for Enhanced Proton Conduction
T. B. J. BLIJDENSTEIN, N. J. Wagner |
| 1-37 | 11:40 - 12:00 AM | Vapor Sensors Based on Gold Nanoparticle Interlinked with p-Oligophenyldithiols
Y. JOSEPH, B. Guse, A. Yasuda, T. Vossmeier |
| 1-38 | 12:00 - 12:20 | Magnetic-field-guided Growth of Ferromagnetic Core-Shell Nanomaterials
L. Zhao, K. Sukhija, N. Heinig, X. Zhou, T. LEUNG |
| 1-39 | 1:30 - 1:50 PM | Advanced Nanostructured Materials from Block Copolymer-Nanoparticle Assemblies
U. WIESNER |
| 1-40 | 1:50 - 2:10 PM | Electric Field Directed Assembly of Colloidal Particles into Nanostructured Thin Films and Composites
J-C. Lin, D. Liu, M.Z. YATES |
| 1-41 | 2:10 - 2:30 PM | Inversion of Emulsions Stabilised by Ionisable Nanoparticles
B.P. BINKS, J. A. Rodrigues |
| 1-42 | 2:30 - 2:50 PM | A New AC Electrokinetic Technique for Collection and Manipulation of Particles on Patterned Electrodes
K. H. BHATT, O.D. Velev, |
| 1-43 | 2:50 - 3:10 PM | Temperature-Induced Phase Inversion of Emulsions Stabilized by Latex Particles Alone
B.P. Binks, R. MURAKAMI, S.P. Armes, S. Fujii |
| 1-44 | 3:10 - 3:30 PM | The Synthesis of FePt Nanoparticles by Two-Liquid Mixing Method
T. IWAKI, K. Yuasa, K. Okuyama |

