



NIST Combinatorial Methods Center

NCMC-6: Advanced Materials Forum **November 8th & 9th, 2004 ♦ Bldg. 101 / Lecture Room B**

Monday, November 8th, 2004 - Morning

- 8:15 am Registration
Continental Breakfast
- 8:45 am Welcome and Introduction
Michael Fasolka, Co-Director, NIST Combinatorial Methods Center

NCMC Update Symposium

- 9:00 am *Introduction and NCMC Services*
Michael Fasolka, Co-Director, NIST Combinatorial Methods Center
- 9:10 am *Discrete Combinatorial Measurements of Polymer Blend Phase Behavior*
Joao Cabral, MSEL NIST
- 9:40 am *Microfluidic Platform for the Generation of Polymer Colloids*
Zuzanna Cygan, MSEL NIST
- 10:10 am *Refreshment Break*
- 10:30 am High-throughput Microfluidic Instrument for Interfacial Tension
Steven Hudson, MSEL NIST
- 11:00 am *Surface Chemistry Gradients Prepared using Surface Initiated Polymerization*
Chang Xu, MSEL NIST
- 11:30 am High-Throughput Modulus and Adhesion Measurements
Christopher Stafford, MSEL NIST
- 12:00 pm *Lunch* (NIST cafeteria, Bldg. 101)



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Monday, November 8th, 2004 – Afternoon

Biomaterials Symposium

1:00 pm Keynote Address:
Prof. Joachim Kohn, Rutgers University
Integration of Combinatorial Synthesis, Rapid Screening, and Computational Modeling in Biomaterials Development

NIST Presentations: Polymers Division, Biomaterials and Characterization Groups

2:00 pm *Investigation of Cell-Substrate Interactions via Bio-active Surfaces*
Matthew Becker, MSEL NIST

2:20 pm *Gradient Techniques for Biomaterials*
Carl Simon, MSEL NIST

2:40 pm *Refreshment Break*

3:00 pm *Novel, In Vitro Optical Imaging*
Jeannie Stephens/Joy Dunkers, MSEL NIST

3:20 pm *Biofactor Screening In Vitro Using 3D Engineered Tissues and Mechanoactive Bioreactors*
Juan Taboas, MSEL NIST, NIH

3:40 pm *Break*

NCMC Focus Projects

4:00 pm *Introduction* – Michael Fasolka
Focus Project Proposals (12 minutes each)
HT Sample Preparation for SPM and Surface Analysis (Fasolka)
Combinatorial Maldi-Mass Spectrometry (M. Byrd)
HT Light Scattering for Colloids and Emulsions (A. Norman)
Microfluidics for Monodisperse Particle Synthesis (K. Beers)
Gradient Approaches to Processing Aids, Melt/Wall Interactions and Flow Instabilities (K. Migler)

5:15 pm *Adjourn*

6:00 pm *Dinner. RSVP Required*
Buca Di Beppo, 122 Kentlands Boulevard, Gaithersburg MD 20878
301.947.7346
See your handouts for directions from NIST.



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Tuesday, November 9th, 2004 – Morning

8:30 am Reconvene
Continental Breakfast

Polymer and Organic Electronic Materials Symposium

9:00 am Keynote Address:
Prof. Ghassan Jabbour, Arizona State University
Combinatorial Methods for Organic Electronic Materials and Devices

NIST Capabilities Presentations: Polymers Division, Electronic Materials Group

10:00 am *Organic Electronics: A New NIST Program*
Wen-Li Wu, MSEL NIST

10:25 am *Refreshment Break*

10:45 am *Moisture Transport Measurements: OLED Displays and Advanced Photoresists*
Bryan Vogt, MSEL NIST

11:10 am *Critical Dimension (CD) SAXS measurements of nanoscale patterns*
Ronald Jones, MSEL NIST

11:35 am *Nanoimprint Lithography: A New NIST Program*
Christopher Soles, MSEL NIST

12:00 pm *Lunch (NIST cafeteria, Bldg. 101)*

Discussion Session

1:00 pm *Introduction*
Michael Fasolka, Co-Director, NIST Combinatorial Methods Center

1:10 pm *Discussion*
Panel of Selected Speakers & NIST Staff, Fasolka Moderates
Goal: Assess member interests and needs in topics presented

NCMC Tours, Demonstrations and Tutorials

2:15 pm *Convene in NCMC Labs – Building 224, Rm. B204*
See Lab Tours Handout for Schedule

3:30 pm *Adjourn – See you at NCMC-7!*