

## 2<sup>nd</sup> Annual Notre Dame Soft Polymer Materials Symposium

Thursday, October 22, 2015 • Jordan Hall of Science

Technical sessions: 8:40am – 12:30pm

Lunch: 12:30 – 1:30pm

Poster session: 1:45 – 3:45pm

### Agenda

8:00am	Check-in and light refreshments (3 <sup>rd</sup> floor Jordan Hall)	
	<b>Session 1: Polymer soft materials (8:40 – 10:40am • 322 Jordan Hall)</b>	
	<i>Presenter</i>	<i>Title of talk</i>
8:40am	Prof. Haifeng Gao Chemistry & Biochemistry	One-pot synthesis of highly branched polymers with well-defined nanostructures
9:00am	Prof. Hsueh-Chia Chang Chemical & Biomolecular Engineering	Electrospray synthesis of nanofibers and nanoparticles
9:20am	Prof. Jonathan Whitmer Chemical & Biomolecular Engineering	Soft materials design through free energy mapping
9:40am	Prof. Ruilan Guo Chemical & Biomolecular Engineering	Towards rational design of membrane materials for gas separations
10:00am	Prof. William Phillip Chemical & Biomolecular Engineering	High throughput fabrication of membranes with nanoscale chemical features
10:20am	Prof. Tengfei Luo Aerospace & Mechanical Engineering	Thermal transport across solid-polymer interfaces
10:40am	Break	
	<b>Session 2: Bio-nanotechnology (10:50am – 12:30pm • 322 Jordan Hall)</b>	
	<i>Presenter</i>	<i>Title of talk</i>
10:50am	Mr. Ray Boucher Dow AgroScience	Delivering convenience in a complex world: The challenge and opportunity for novel formulations in pesticide delivery
11:10am	Prof. Scott Howard Electrical Engineering	Molecular imaging of the tissue micro-environment by multiphoton microscopy
11:30am	Dr. Prakash D. Nallathamby Aerospace & Mechanical Engineering	Targeted nanoparticles for cancer detection and therapeutics
11:50am	Dr. Doug Rice Chemistry & Biochemistry	Current state of image guided surgery
12:10pm	Prof. W. Matthew Leevy Biological Sciences	Innovation at the interface of 3D printing and biomedical imaging
	<b>Lunch (12:30 – 1:30pm • Jordan Galleria)</b>	
	<b>Graduate Student and Postdoc Poster Session (1:45 – 3:45pm • Jordan Hall Galleria)</b>	
	<i>See attached roster.</i>	
	<b>Science Forum for local high school &amp; college students (4:00 – 6:00pm • 322 Jordan Hall)</b>	

10.19.15

## Posters

1	<u>Shuangjiang Luo</u> , Ruilan Guo “Iptycene-based polyimides with controlled molecular cavity architecture for membrane gas separation”
2	<u>Peng Gao</u> , Aaron Hunter, William Phillip “Template synthesis of nanomaterials by ink-jet printing”
3	<u>Siyi Qu</u> , William Phillip “Chemically-tailored fabrication of mixed mosaic membrane with printer”
4	<u>Feng Gao</u> , William Phillip “Inkjet printing of layer-by-layer assembled charge mosaic membranes”
5	<u>Yizhou Zhang</u> , William Phillip “Composite self-assembled block polymer hollow fiber nanofiltration membranes”
6	<u>Xiaosong Cao</u> , Yi Shi, Xiaofeng Wang, Robert Graff, Haifeng Gao “One-pot synthesis of hyperbranched polymers with over a million molecular weight and low polydispersity”
8	<u>Yi Shi</u> , Robert W. Graff, Xiaosong Cao, Xiaofeng Wang, Haifeng Gao “Chain-growth click polymerization of AB <sub>2</sub> monomers for the formation of hyperbranched polymers with low polydispersities in a one-pot process”
9	<u>Xiaofeng Wang</u> , Robert Graff, Yi Shi, and Haifeng Gao “One-pot synthesis of hyperstar polymers via sequential ATRP of inimers and functional monomers in aqueous dispersed media ”
10	Robert Graff, Xiaofeng Wang, Yi Shi, Haichao Lu, and Haifeng Gao “Regulating the synthesis of nanostructured polymers by atom transfer radical polymerization in microemulsion”
11	<u>Tao Jiang</u> , Teng Zhang, Ashley Gans, Xueqiang Zhang, Chen Qu, Fangyuan Sun, Sylwia Ptasinska, Tengfei Luo “Hydrogen-bond enhanced thermal transport across hard-soft materials”
12	<u>Teng Zhang</u> , Tao Jiang, Ashley Gans, Xueqiang Zhang, Chen Qu, Fangyuan Sun, Sylwia Ptasinska “Non-aqueous hydrogen bonds enable ultra-efficient thermal transport ”
13	<u>Jennifer Wiegand</u> , Ruilan Guo “Physical aging study on triptycene-based polyimides for gas separation membranes”
14	<u>Joseph Aboki</u> , Ruilan Guo “Triptycene-based sulfonated poly(arylene ether sulfone) multiblock copolymers for proton exchange membranes”
15	<u>Jacob L. Weidman</u> , Ryan A. Mulvenna, Yizhou Zhang, Bryan W. Boudouris, William A. Phillip “pH-dependent hysteretic pore size of nanoporous block polymer membranes lined by polyacrylic acid brushes”
16	<u>Gregory Kline</u> , Ruilan Guo, Jennifer Wiegand “Studies on crosslinking heterogeneity in CO <sub>2</sub> -selective separation membranes”
17	<u>Ashish Kushwaha</u> , Ruilan Guo “Organo-soluble polybenzoxazoles (PBOs) for high performance gas separation membranes: a novel synthesis route and transport properties”
18	<u>Felicia Roland</u> , Samit Guha, Bradley Smith “Dye-doped nanoparticles for tumor imaging and photothermal therapy”
19	<u>Mark J. Summe</u> , Sahadevan Rajesh, William A. Phillip “pH-induced hysteric swelling of charge mosaic membranes prepared using layer-by-layer assembly”
20	<u>Steven Marczak</u> , Satyajyoti Senapati, Zdenek Slouka, Hsueh-Chia Chang “Nanoparticle separations by hybrid gel-membrane electrophoresis for MiRNA profiling”
21	<u>Ben Sikora</u> , Jon Whitmer “Exploration of the coil-globule transition in weak polyelectrolytes”