IUPAC World Polymer Congress
Tentative Technical Program

****This is a tentative program and is subject to change. Please check back weekly****

T. E. Long and S. R. Turner, *Program Chairs*

MONDAY MORNING

Symposium: Commercial Frontiers (Torgersen 1050)

K. Haider, Z. Yang, *Organizers*

10:30 Shape memory biomaterials: Variation and study of topography, functionality and processing. D. Le, S. W. Brosnan, **V. S. Ashby**

11:10 Development of polysaccharide based tissue adhesives. **H. S. Lu**

11:50 Chitosan nanoscaffold-based bone glue in the form of injectable gel. **S. Chirachanchai**

Symposium: Complex Macromolecular Systems I (McBryde 113)

L. Leibler, T. Lodge, *Organizers*

10:30 Mechanochemical remodeling of synthetic polymers. **S. L. Craig**

11:00 Macroscopic self-assembly and self-healing through molecular recognition. **A. Harada**

11:30 PDMS-3F-4.5-PDMS: A novel, tough hybrid triblock elastomer. **K. J. Wynne**, S. Chakrabarty

11:50 Cross-linked semi-crystalline poly(epsilon-caprolactone) networks as shape-memory polymer systems. **J. Raquez**

Symposium: Energy, Optics, and Optoelectronics (Holden 114)

S. Cheng, *Organizer*
A. Jen, A. Holmes, Y. Furukawa, *Presiding*

10:30 Organic and polymeric semiconductors for light harvesting. M. Brown, **A. B. Holmes**, S. Ji, D. J. Jones, R. J. Kumar, T. Kwon, B. Purushothaman, H. Seyler, J. Subbiah, H. Weerasinghe, W. W. Wong, Z. Xiao, J. Yang

11:00 High efficient and thermally stable organic photovoltaics based on cross-linkable fullerene derivatives. **C. Hsu**

11:30 Porphyrin polymers for solar energy conversion. **M. G. Walter**, C. C. Wamser

11:50 11. Controlling blend film morphology by varying chemical structure of donor-acceptor alternative copolymers for photovoltaic applications. Y. Li, Y. Chen, **Y. Tu**, X. Zhu

Symposium: Macromolecules and Nanotechnology I (McBryde 126)

P. Hammond, *Organizer*

10:30 Positioning polymer ligand-coated nanoparticles in block copolymers. S. G. Jang, B. J. Kim, A. Kahn, M. D. Dimitriou, N. A. Lynd, G. H. Fredrickson, C. J. Hawker, **E. J. Kramer**

11:00 High-density array of one-dimensional nanostructures by using AAO templates with surface or interfacial modification. **J. Kim**, J. Byun

11:30 Plasmonic particles ordered in block copolymers. **C. Tallet**, J. Vieaud, O. Merchiers, P. Sivasankaran, F. Nallet, A. Aradian, V. Ponsinet

11:50 Synthesis of asymmetric conjugate polymer/metal hybrid nanoparticles. **J. He**, M. Teresa Perez, P. Zhang, Y. Liu, T. Babu, J. Gong, Z. Nie

Symposium: Macromolecules in Biotechnology and Medicine I (Torgersen 3100)

B. Ratner, *Organizer*

10:30 Sphere-templated scaffolds and engineered scaffold polymers to drive healing and regeneration. **B. D. Ratner**, L. R. Maddan, A. Galperin

11:00 Degradable polyurethanes fro maintaining form and wound healing nature in tissue regeneration. **J. Santerre**, S. Sharifpoor, J. E. McBane, J. W. Cheung, K. G. Battiston, R. S. Labow

11:30 Significance of soft and hard segments on shape memory properties of polyurethane films. **A. Sirkecioglu**, M. Bonfil, F. Guner

11:50 Surface reponse of mixed shell micelles for refolding of thermally denatured proteins. **L. Shi**

Symposium: Modern Methods of Characterization (McBryde 332)

Emerging Tools in Macromolecular Characterization

K. Beers, *Organizer*

10:30 Analysis of complex polymers by field flow fractionation coupled to MALLS. **H. Pasch**, A. Makan, W. van Aswegen, T. Otte

11:05 Exploiting theromophoresis for polymer analysis. **S. R. Williams**

11:40 Advanced liquid chromatographic techniques for separation and comprehensive molecular characterization of complex polymer systems. **D. Berek**

Symposium: Polymer Physics (Torgersen 1030)

D. Vlassopoulos, R. Colby*, Organizers*

10:30 Nucleation and flow-induced crystallization in polyolefins. **S. Milner**

11:00 Polymer crystallization: order in complex systems. **J. Sommer**, C. Luo

11:30 On the formation of helical homopolymer crystals. **D. A. Ivanov**, J. J. Hernandez, M. Rosenthal, Y. Odarchenko, M. Soccio, N. Lotti, A. Munari, D. V. Anokhin, M. Burghammer

11:50 Influence of temperature and molar mass on the spherulitic growth rate of poly(ε-caprolactone). **S. S. Sheth**, S. Sparks, H. Marand

Symposium: Macromolecules and Nanotechnology II (McBryde 129)

P. Hammond, *Organizer*

10:30 Design of polymers as therapeutic carriers. **J. M. Frechet**, P. Wich

11:00 Co-opting moore's law: The cost-effective design of vaccines and therapeutics. **J. M. DeSimone**

11:30 Synthesis and study of highly fluorescent PAMAM-based dendritic molecules for multidisciplinary applications. **A. M. El-Betany**, N. B. McKeown

11:50 Functional nanocontainers for self-healing applications. **J. Fickert**, K. Landfester, D. Crespy

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications I (McBryde 100)

B. Freeman, M. Silverstein, *Organizers*

10:30 Gas permeation in thin versus thick glassy polymer films. N. R. Horn, **D. R. Paul**

11:00 Dehydration of bioethanol by vapor-membrane permeation. Y. Huang, **R. W. Baker**

11:30 Thermally rearranged (TR) polymer membranes for high performance gas separation. **R. Guo**, J. E. McGrath, D. F. Sanders, Z. P. Smith, B. D. Freeman

11:50 Virtual screening of zeolitic imidazolate framework membranes. **A. W. Thornton**, D. Dubbeldam, M. S. Liu, B. P. Ladewig, A. J. Hill, M. R. Hill

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications II (Randolph 331)

B. Freeman, *Organizer*

10:30 Novel proton-conducting block copolymers containing imidazole functionalities for solar fuels applications. **Y. Schneider**, R. A. Segalman

11:00 Synthesis via ROMP of triazole bearing polycyclobutene diblock copolymers as water-free proton conducting membranes for PEM fuel cells. J. Wei, W. Trout, **S. Granados-Focil**

11:30 Synthesis of glycerol-based oligomers: a new opportunity for lithium batteries? P. Pham, V. Lapinte, **S. Monge**, Y. Raoul, J. Robin

11:50 Covalently incorporating a cationic charged layer into Nafion membrane by radiation-induced graft copolymerization. J. Ma, J. Yuan, S. Wang, C. Yu, J. Peng, **M. Zhai**

Symposium: Recent Developments in Synthesis I (Torgersen 2150)

A. Mueller, C. Hawker, *Organizers*

10:30 Controlled installation of single reactive groups along a polymer chain or at the chain ends. **P. Theato**

11:00 Utilizing efficient chemical reactions to prepare multifunctional polymers, artificial-oligonucleotide-based block copolymers, and reactive nanoporous membranes. **A. Khan**

11:30 Thiolactone chemistry: A powerful approach in the metal-free conjugation toolbox. **P. Espeel**, F. Goethals, M. M. Stamenovic, F. E. Du Prez

11:50 Polymer microspheres prepared by water-borne thiol-ene suspension photopolymerization. **O. Z. Durham,** S. Krishnan, D. A. Shipp

Symposium: Recent Developments in Synthesis II (Torgersen 1020)

A. Mueller, C. Hawker, *Organizers*

10:30 Heterocomplementary H-bonding raft agents: New tools for the preparation of tailor-made supramolecular block copolymers. S. Chen, A. Bertrand, N. Delbosc, M. Virolleaud, C. Ladavière, F. Lortie, **J. Bernard**

11:00 Creating new nanoparticles by combination of supramolecular chemistry, click chemistry and RAFT polymerization. **M. Stenzel**, F. Yhaya, R. Buch Møller, T. Terndrup Nielsen

11:30 Novel flower shaped BAB and CBABC tri- and penta-block Copolymers via solution ATRP. S. Kumar, **C. N. Murthy**

11:50 Synthesis of photoreversible polymer via solid state polymerization and depolymerization. **K. Saito**, P. Johnston, Y. Nishikami, D. Wheldale

12:10 Anionic synthesis of star-branched acrylic polymers by using divinyl monomers with equivalent and non-equivalent (meth)acrylate functions. **T. Kitayama**, A. Hashimoto, T. Kitaura

Symposium: Surfaces and Interfaces (Torgersen 1060)

T. Russell, *Organizer*

10:30 Orientation of block copolymer thin films on brushless substrates. **K. Char**

11:00 Creasing instability of soft polymer surfaces. **R. C. Hayward**

11:30 Multifunctional Brain-like Soft Materials by Biomimetic Wrinkle Processing. **H. Endo**, M. Tamura, T. Iijima, T. Kawai

11:50 A new view of wrinkling phenomena in ultrathin films. **N. Menon**

Symposium: Tri-National Award Session (Torgersen 1040)

W. Mormann, *Session Leader*

10:30 Welcome.

10:40 Controlled radical synthesis in supercritical carbon dioxide of new stimuli-responsive materials for biomedical applications. C. Magee, **F. Aldabbagh**, A. Earla, R. Braslau, M. Nash, C. Elvira

11:10 Encircle: Polymer encapsulation of anisotropic inorganic particles by RAFT-mediated emulsion polymerization. A. Cenacchi-Pereira, M. Lansalot, F. d'Agosto, T. de Camargo Chaparro, A. Martins dos Santos, A. Barros-Timmons, **E. Bourgeat-Lami**

11:40 Bio-inspired cationic polymerization of isopentenol and isoprene. S. Ouardad, S. V. Kostjuk, F. Ganachaud, J. E. Puskas, A. Deffieux, **F. Peruch**

MONDAY AFTERNOON

DSM Symposium (ICTAS 310)

1:45 Conjugated alternating copolymers via chain-growth catalyst transfer polycondensations. **C. Bielawski**

2:20 Responsive polymer-protein hybrid materials. **B. S. Sumerlin**, M. Li, H. Li, A. P. Bapat, H. S. Sun

2:55 Industrial relevance of controlled radical polymerization for waterborne coatings. **M. Schellekens**

3:30 Break.

3:45 Modular synthetic design for delivery nanosystems and tunable 3D polypeptide cell environments. **P. T. Hammond**

4:20 Organocatalytic polymerization of delta-decalactone. **M. A. Hillmyer**

4:55 Wrap Up.

Symposium: Complex Macromolecular Systems I (McBryde 113)

L. Leibler, T. Lodge, *Organizers*

1:45 Covalent adaptable networks: The benefits and opportunities of reversible bonds in thermosets. E. F. Gillett, C. Fenoli, D. Leung, B. Adzima, C. J. Kloxin, **C. N. Bowman**

2:15 Anelastic shape memory in liquid crystalline elastomers. **A. C. Griffin**, W. Ren, P. J. McMullan

2:35 Exploiting noncovalent interactions for the design of stimuli-responsive polymers. **C. Weder**

3:05 Mechanoluminescence in polymers. Y. Chen, **R. Sijbesma**

3:35 Break.

3:50 Design of a thermo-reversible supramolecular polymer based on poly (ethylene-co-vinyl alcohol) and self-assembly of UPy groups. **A. Jangizehi**, S. Ghaffarian, E. kowsari

4:10 Supramolecular polymer assemblies from ionic building blocks: Tuning size, shape and functionality. **F. Gröhn**, J. Düring, S. Frühbeisser, I. Willerich

4:30 Reorganizable cross-linked polymers based on radically exchangeable dynamic covalent bonds. **H. Otsuka**, K. Imato, Y. Amamoto, J. Su, T. Ohishi, A. Takahara

5:00 New multi-stimuli responsive macromolecular assemblies. **P. Woisel**, L. Sambe, J. Lyskawa, D. Fournier, F. Stoffelbach, B. Charleux, G. Cooke

5:20 Silicone elastomers having silver nanoparticles as crosslinkers show self-healing at room temperature. R. Martin, A. Rekondo, G. Cabañero, H. J. Grande, **I. Odriozola**

5:40 Stimuli-responsive and self-healing polymers that change color. **M. W. Urban**

Symposium: Macromolecules and Nanotechnology I (McBryde 126)

P. Hammond, *Organizer*

1:45 Chiral transfer from molecule to phase in self-assembly of chiral block copolymers. **R. Ho**

2:15 Amphiphilic block copolymers: From bulk structures to aqueous solution assemblies. **R. Castillo**, E. Lejeune, C. Chassenieux, O. Colombani, V. Ponsinet

2:35 Efficient synthesis of janus-type gold nanoparticle hybrid amphiphilic triblock copolymers and their controlled self-assembly. J. Hu, T. Wu, G. Zhang, **S. Liu**

3:05 Synthesis and properties of anisotropic particles. **D. Crespy**, C. Herrmann, K. Friedemann, R. H. Staff, K. Landfester

3:35 Break.

3:50 Hierarchical self-assembly of π-conjugated oligomers and polymers in solid state. M. Goel, **M. Jayakannan**

4:10 In situ synthesis of stable and unique nanostructures from polyacetylene diblock copolymers easily produced by mild ring-opening metathesis polymerization. **K. Yoon**, T. Choi

4:30 Radical/Ionic domain formation in self-assembled block copolymer platform for morphology-driven modulation of charge transport. **T. Suga**, H. Nishide

5:00 Polymeric supra-amphiphiles for controlled self-assembly and disassembly. **P. Han**, S. Li, H. Xu, Z. Wang, X. Zhang

5:20 Selective-Assembly of Nanoparticles on Patterned Polymer Layers by UV Laser Ablation on Various Glass Surface Structures. **J. Lee**, C. Daengngam, E. See, Y. Xu, H. Robinson, J. R. Heflin

5:40 Microphase separation and crystallization of all-conjugated phenylene-thiophene diblock copolymers. X. Yu, **Y. Han**

Symposium: Macromolecules and Nanotechnology II (McBryde 129)

P. Hammond, *Organizer*

1:45 Supramolecular nanomedicines for targeted cancer therapy. **K. Kataoka**

2:15 Manipulating polymersomes: Control over shape and surface functionality. **S. A. Meeuwissen**, K. Kim, D. J. Pochan, J. C. van Hest

2:35 Self-assembled functional polymeric nanostructures for anticancer drug delivery. **Y. Yang**, C. Yang, A. Attia, J. Tan, S. Venkataraman, A. Lee, X. Ke, D. J. Coady, A. C. Engler, J. L. Hedrick

3:05 Development and applications of polymeric nanoparticles for theranostics. **I. Kwon**

3:35 Break.

3:50 Cylindrical micelles with a degradable core: understanding polylactides in self-assembly. **N. Petzetakis**, A. P. Dove, R. K. O'Reilly

4:10 Polymer nanocapsules with "invisible" walls: Synthesis and beyond. **S. A. Dergunov**, M. D. Kim, E. Pinkhassik

4:30 How do free cationic polymer chains promote gene transfection?. **C. WU**

5:00 Multifunctional fluorophore-labeled poly(organosiloxane) nanoparticles for biomedical applications. **O. Koshkina**, T. Lang, C. Bantz, J. Kasper, C. Kirkpatrick, D. Docter, R. Stauber, S. Hatami, U. Resch-Genger, M. Maskos

5:20 Preparation and characterization of clonazepam nanoparticles by water soluble polymer to cross the blood brain barrier. **A. Pandey**

5:40 Azlactone functionalization of magnetite nanoparticles using ATRP and their bioconjugation. Y. Prai-in, K. Tankanya, B. Rutnakornpituk, U. Wichai, V. Montembault, S. Pascual, L. Fontaine, **M. Rutnakornpituk**

Symposium: Macromolecules in Biotechnology and Medicine I (Torgersen 3100)

B. Ratner, *Organizer*

1:45 Novel approaches using different natural based polymeric scaffolds for moving forward on the engineering of human tissues. **R. L. Reis**

2:15 Fabrication of photo cross-linked, microstructured hydrogel systems as biocarrier for enzymes. **A. Richter**, M. Diener, J. Fingernagel, D. Appelhans, B. Voit

2:35 Microengineered hydrogels for stem cell bioengineering and tissue regeneration. **A. Khademhosseini**

3:05 Determining structure-function relationships in fibrous, elastic scaffolds to design mechanically appropriate tissue constructs. **W. R. Wagner**, Y. Hong, M. Sacks, A. D'Amore, N. J. Amoroso

3:35 Break.

3:50 Evaluation of PEG-based hydrogel scaffolds properties for tissue engineering applications. **Z. Abdul Hamid**, A. Blencowe, G. Qiao, G. Stevens

4:10 Rational design and synthesis of biodegradable polyesterurethanes for spinal-cord tissue repair. **F. Rasoul**, B. L. Dargaville, A. Yu, F. Filardo, A. S. Micallef, A. K. Whittaker, E. C. Tsai, M. S. O'Shea, F. Graichen

4:30 Magnetic block lonomer clusters (MBIClusters) with untrahigh transverse NMR relaxivities to enhance MRI contrast and sensitivity. **J. Riffle**

5:00 High aspect ratio supramolecular polymer assemblies with broad-spectrum targeted antimicrobial activity. **J. L. Hedrick**, K. Fukushima, Y. Yang, P. Korevaar, J. Tan, A. Nelson, D. Coady, A. Engler, E. W. Meijer

5:20 Ex vivo expansion of hematopoietic stem and progenitor cells cultured on biomaterials having nanosegments from umbilical cord blood. **A. Higuchi**

5:40 Engineering bioresorbable polymers into vascular scaffolds - an application in interventional cardiology. **M. Kossuth**, J. P. Oberhauser

<u>Symposium: Commercial Frontiers</u> (Torgersen 1050)

K. Haider, Z. Yang, *Organizers*

1:45 New polymers for ophthalmologic and cardiovascular applications: The transition from molecules to medicine. **B. D. Ratner**

2:25 From functional biodegradable polymers to advanced drug delivery systems. H. Sun, W. Chen, F. Meng, R. Cheng, C. Deng, **Z. Zhong**

3:05 Biocompatibility of microcapsules aimed at encapsulation of islets assessed by human whole blood assay. G. Kolláriková, A. Rokstad, P. Kasák, A. Ďuračková, D. Mocinecová, P. Sobolčiak, V. Semak, B. Steinkjer, T. Espevik, **I. Lacík**

3:30 Break.

3:45 Simultaneous functionalization and reduction of graphene oxide and its electrically conductive polymer nanocomposites. **Z. Yu**

4:25 Current efforts on simulating injection molding of long glass fiber composites. **K. J. Meyer**, J. T. Hofmann, D. G. Baird

4:50 Effect of glass fiber length on orientation distribution within injection molded composites. **J. T. Hofmann**, K. J. Meyer, D. G. Baird, A. R. Whittington

5:15 Carbon-based transparent electrodes: Advantages, bottlenecks and strategies. **I. Kolaric**

Symposium: Energy, Optics, and Optoelectronics (Holden 114)

S. Cheng, *Organizer*

1:45 New polymerization route to conjugated polymers: Regio- and stereoselective synthesis of poly(arylene chlorovinylene)s by decarbonylative polyaddition of aroyl chlorides and alkynes. C. Chan, J. Liu, J. Lam, **B. Tang**

2:15 Conjugated polymers with highly polar side chains for the interface engineering of high-performance optoelectronic devices. **F. Huang**, C. Duan, C. Zhong, X. Guan, K. Zhang, Y. Cao

2:35 Rational material design and interface engineering for high-performance and stable polymer solar cells. **A. K. Jen**

3:05 Photoinduced infrared absorption from regioregular poly(3-hexylthiophene)/PCBM blend films. **Y. Furukawa**, J. Eguchi, H. Yoshida, T. Sugiyama, H. Fujimura

3:35 Break.

3:50 Miscibility of fullerenes and conjugated polymers in organic photovoltaics as monitored by neutron reflectivity. **H. Chen**, J. Peet, J. Azoulay, G. Bazan, W. You, M. Dadmun

4:10 Rare solvent annealing effective benzo(1,2-b:4,5-b')dithiophene-based low band-gap polymer for bulk heterojunction organic photovoltaics. **H. Chen**, C. Chen, J. Wu

4:30 How to design low bandgap polymers for OPV solar cells. **L. Yu**

5:00 Biaxially extended quaterthiophene-vinylene conjugated polymer for high performance field effect transistors and photovoltaic cells. **C. Lu**, H. Wu, Y. Chiu, W. Lee, W. Chen

5:20 Donor/acceptor side chain containing (co)polymers. D. Gulfidan, E. Sefer, A. Oral, S. Koyuncu, **M. H. Acar**

5:40 High performance polymer solar cells with an inverted device structure and by novel materials. **X. Gong**

Symposium: Modern Methods of Characterization (McBryde 332)

Emerging Tools in Macromolecular Characterization

K. Beers, *Organizer*

1:45 Hplc analysis and large scale purification of peo-ppo-peo triblock copolymers. **C. Y. Ryu**, H. Park

2:10 Copolymer characterization by quadruple- and quintuple-detector SEC. **A. M. Striegel**, I. A. Haidar Ahmad, S. M. Rowland

2:45 Characterization of branched polymer. H. Lee, S. Ahn, **T. Chang**

3:10 SEC-DAD as useful method for characterization of conjugated polymers. **D. Bondarev**, O. Trhlíková, J. Vohlídal, J. Sedláček

3:35 Break.

3:50 Determination of polymer structures, sequences, and architectures by mass and tandem mass spectrometry. **A. M. Yol**, J. E. Janoski, S. Wang, M. D. Foster, R. P. Quirk, C. Wesdemiotis, B. A. Laurent, S. M. Grayson

4:15 In situ NMR/ MRI studies of lithium ion batteries and supercapacitors. **N. M. Trease**, H. Chang, H. Wang, S. Chandrashekar, T. K. Köster, A. Jerschow, C. P. Grey

4:50 Transport and collective interactions from nanometer to micron scales in ionomers. **L. A. Madsen**, J. Hou, Z. Zhang, M. D. Lingwood

5:25 Supercooling effects on chain folding of semi-crystalline polymer by ^{13}C-^{13}C double quantum NMR and selective isotope labeling. **Y. Hong**, T. Miyoshi

5:50 Investigation into the properties of a bioactive polymer for renal failure diseases. **R. Elsiddig**, S. Hudson, E. Owens, H. Hughes, D. O'Grady, P. McLoughlin

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications I (McBryde 100)

B. Freeman, M. Silverstein, *Organizers*

1:45 Synthesis and gas transport properties of hydroxyl-functionalized polyimides with intrinsic microporosity. **I. Pinnau**

2:15 Study of gas permeability for thermally rearranged (TR) HAB-6FDA/silica nanocomposite polymeric membrane. **N. K. Acharya**, D. F. Sanders, Z. P. Smith, B. D. FREEMAN

2:35 Cross-linking of intrinsically microporous polymer membranes. **M. D. Guiver**, N. Du, N. Li, M. Dal-Cin, G. P. Robertson, L. Scoles

3:05 Crosslinked polymeric membranes for natural gas treating. **W. J. Koros**

3:35 Break.

3:50 Effect of residual solvent on the CO_2 separation properties of 6FDA-DAM membranes. D. Kahraman, C. Atalay-Oral, **S. Tantekin-Ersolmaz**

4:10 Polymer-clay nanobrick wall multilayer thin films for gas barrier and separation. **J. C. Grunlan**, M. Priolo

4:30 Tuning the microcavities in thermally rearranged polymer membranes for small gas molecules. **Y. Lee**, S. Han, S. Kim, A. Hill, A. Lozano, M. Calle

5:00 Investigating the sorption behaviour of post-modified PIM-1 polymers. **L. Maynard-Atem**, C. R. Mason, K. Herd, P. M. Budd

5:20 A scattering model for amorphous, intrinsically microporous polymers. **A. G. McDermott**, P. M. Budd, N. B. McKeown, C. M. Colina, J. Runt

5:40 Polymer membranes to mitigate CO_2 emissions from the power industry. **T. Merkel**, X. Wei, Z. He, H. Lin, M. Zhou, S. Thomas

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications II (Randolph 331)

B. Freeman, *Organizer*

1:45 Development of a nonlinear viscoelastic viscoplastic constitutive model for a PFCB/PVDF proton exchange membrane. **J. Wright**, M. Ellis, D. Dillard, S. Case, R. Moore, Y. Li, Y. Lai, C. Gittleman

2:15 Preparation and characterization of nafion/siloxane semi-interpenetrating polymer networks. **L. Perez**, B. Lopez, J. Lopez

2:35 Microfabrication of ion-conducting membrane-electrode assemblies by spray Layer-by-layer assembly. **N. R. Davis**, D. S. Liu, N. S. Lewis, P. T. Hammond

3:05 Solution and membrane morphology of ion-containing block copolymers. **M. L. Disabb-Miller**, M. A. Hickner

3:35 Break.

3:50 Block polyelectrolytes with pendent quaternary ammonium groups for anion exchange membranes. **H. Lee**, Y. Wu, K. Liu, C. Chao

4:10 Block copolymers with pendant ionic groups for anion exchange membranes. **L. Wang**, M. A. Hickner

4:30 Microwave assisted synthesis of triazole functionalized polyethylene imine as water-free proton conducting membranes for PEM fuel cells. **R. P. Doyle**, S. Granados-Focil

5:00 Polymer electrolytes of protic ionic liquids for non-humidiried intermediate temperature fuel cells. **M. Watanabe**

5:20 Controlled porosity in polyelectrolyte multilayers using electric fields. **N. S. Zacharia**, J. L. Lutkenhaus, J. Jeon, C. Cho

5:40 Water-polymer interactions in cation and anion conducting membranes. **M. Hickner**

Symposium: Polymer Physics (Torgersen 1030)

D. Vlassopoulos, R. Colby, *Organizers*

1:45 Formation mechanism of polymer spherulites. **A. Toda**

2:15 Thermodynamic studies related to crystallization analysis fractionation (CRYSTAF) or temperature rising elution fractionation (TREF). **M. Fischlschweiger**, S. Enders

2:35 Molecular aspects of flow-induced crystallization of polymers. **J. A. Kornfield**

3:05 Filled elastomer mechanics and polymer dynamics modification near surfaces. **F. Lequeux**

3:35 Break.

3:50 Controlling crystal orientation in isotactic PP. **G. Kumaraswamy**, K. Sreenivas, H. V. Pol

4:10 Kinetics of nucleation and crystallization in poly(ε-caprolactone) (PCL) and PCL-CNT nanocomposites. **E. Zhuravlev**, C. Schick

4:30 Thin Polymer Coatings with Functionality. **M. Stamm**

5:00 Nanofluid glasses and lambda transitions. **J. Texter**, K. Bian, D. Chojnowski, J. Byrom

5:20 Glass transition temperature reductions in thin polymer films: Understanding the mechanisms of how a free surface imparts enhanced mobility. **C. B. Roth**, J. E. Pye

5:40 Theory of aging, mechanical response and plastic flow in polymer glasses. **K. S. Schweizer**, K. Chen

Symposium: Recent Developments in Synthesis I (Torgersen 2150)

1:45 New synthetic methods for chain end functionalization in ROMP. **A. F. Kilbinger**

2:15 Synthesis of novel polymers containing adamantyl skeletons. **T. Ishizone**, S. Inomata

2:35 Design of sequence-controlled polymers: Where do we stand? Where do we go?. **J. Lutz**

3:05 Simply, yet powerful reactions for polymer crosslinking and functionalization. **J. M. Spruell**, C. J. Hawker

3:35 Break.

3:50 Copper-catalytic orthogonal 'click' reactions for functionalization of polymer bromide chain-end and construction of complex polymer architectures at 25 ^{o}C. **Z. Jia**, C. A. Bell, M. J. Monteiro

4:10 Novel polyimides from thiol-ene polymerizations. **K. A. Murphy**, A. Zebertavage, B. Kiliman, D. A. Shipp

4:30 Synthesis and Applications of DNA Block Copolymers. **A. Herrmann**

5:00 Synthesis of thermo-reversible crosslinked polymers using diels-alder reaction of furan-containing polyfurfuryl methacrylate. **D. Yamamoto**, T. E. Long

5:20 Cyclopentadiene-maleimide platform for reversible Diels-Alder polymerizations. **J. B. Stegall**, P. A. Deck

5:40 Novel approaches to orthogonally reactive polymeric materials. **A. Sanyal**

Symposium: Recent Developments in Synthesis II (Torgersen 1020)

1:45 Use of continuous flow microreactor technology for the synthesis of polymers using the RAFT process. **J. Chiefari**, C. Hornung, S. Saubern, K. von Kaenel, S. Kyi, X. Nguyen, A. Postma

2:15 Synthesis of reduction-responsive block copolymers by integrated RAFT and ATRP techniques in the presence of a novel double-head agent combining RAFT CTA and ATRP initiator with a disulfide linkage. **H. Wei**, J. G. Schellinger, D. S.H. Chu, J. Shi, S. H. Pun.

2:35 Advances in switchable RAFT - N-aryl-N-4-pyridinyl dithiocarbamates. **G. Moad**, D. J. Keddie, C. Guerrero-Sanchez, E. Rizzardo, S. H. Thang

3:05 Imidazol(in)ium hydrogen carbonates and imidazolium carboxylates as a genuine source of N-heterocyclic carbenes for various organocatalyzed (macro)molecular Syntheses. **D. Taton**, M. Fèvre, J. Pinaud, P. Coupillaud, J. Vignolle, Y. Gnanou

3:35 Break.

3:50 Tris(2,4,6-trimethoxyphenyl)phosphine (TTMPP) : Potent organocatalyst for group transfer polymerization of alkyl (meth)acrylates. **M. Fevre**, J. Vignolle, V. Heroguez, D. Taton

4:10 Controlled radical polymerization mediated by amine-bis(phenolate) iron(III) complexes. **M. P. Shaver**, L. E. Allan, J. P. MacDonald

4:30 Bis(acetylacetonato)cobalt(II) ($Co(acac)_2$), an efficient spin-trap that controls the growth of polymer chains. **C. Detrembleur**, M. Hurtgen, J. Liu, C. Jérôme, A. Debuigne

5:00 Living/Controlled radical copolymerization of hexafluoropropylene and butyl vinyl ether. P. Wang, L. Liu, J. Dai, **R. Bai**

5:20 Tailor-made functional polymers bearing pendant cycloalkenyl group via selective atom transfer redical polymerization (ATRP). **N. K. Singha**, P. Mandal

5:40 Nitroxide-mediated inverse suspension polymerizations of N-isopropylacrylamide in supercritical carbon dioxide. P. O'Connor, **F. Aldabbagh**

6:00 Preparation of optically active polymers using circularly polarized light. **T. Nakano**, Y. Wang, N. Xiao

Symposium: Surfaces and Interfaces (Torgersen 1060)

T. Russell, *Organizer*

1:45 Polymer surface instabilities: Fundamental physics to scalable engineering. **A. J. Crosby**

2:15 Design and fabrication of surface polyion complex gel. **H. Ajiro**, K. Takemura, M. Akashi

2:35 Chemotaxis of active, self-oscillating polymer gels in solution. P. Dayal, A. Bhattacharya, O. Kuksenok, **A. C. Balazs**

3:05 Instability of a thin film of polymer solution spin-coated on a wavy surface and its applications. **U. Jeong**, D. C. Hyun, J. Park

3:35 Break.

3:50 Controlling the morphologies of block copolymer nanocomposites via thermally processable nanoparticles. **J. Bang**, M. Yoo, S. Kim, B. Kim

4:10 Directed rapid assembly of block copolymer films. **D. Ryu**, E. Kim, H. Ahn, S. Park, H. Lee

4:30 Mussel-inpired block copolymer lithography for low surface energy materials of teflon, graphene, and gold. **S. Kim**

5:00 Vertically oriented peo cylinder array with several hundreds think film in amphiphilic liquidcrystalline block copolymers. **T. Iyoda**

5:30 Spectral approach for non-linear theory of dip coating process. **O. B. Yusuf**, R. E. Khayat, A. N. Hrymak

5:50 Functional nanomaterials based on soft and hard nanoporous templates. **J. Kim**, S. Yang, G. Jeon

Tri-National Award Session (Torgersen 1040)

1:45 Glycosylated polypeptides and block copolypeptides from glycosylated α-amino acid N-carboxyanhydrides. **T. J. Deming**, J. R. Kramer

2:15 Simple, yet powerful reactions for polymer crosslinking and functionalization. **C. J. Hawker**, J. Spruell, E. Drockenmuller, A. Mueller

2:45 Toward new-generation selective ion membranes via supramolecular self-assembly. J. J. Hernandez, M. Rosenthal, Y. Odarchenko, **D. A. Ivanov**, H. Zhang, L. Li, X. Zhu, M. Möller, L. Madsen, M. Lingwood

3:15 Break.

3:30 Supramolecular complexes of amphiphilic wedge-shaped sulfonic acid molecules with polybases. **X. Zhu**, D. V. Anokhin, D. A. Ivanov, M. Möller

4:00 Understanding order and transport in supramolecular wedge-shaped amphiphiles. **L. A. Madsen**, M. D. Lingwood, B. E. Kidd, L. Li, H. Zhang, X. Zhu, M. Moller, J. J. Hernandez Rueda, D. A. Ivanov

4:30 Morphology control of olefin based homo and copolymers in catalytic gas-phase, slurry and emulsion polymerization. **M. Klapper**, K. Müllen, B. Voit, K. B. Wagener, S. A. Miller, H. O. Pastore, U. Schulze

MONDAY EVENING

Monday Poster Session (Squires Commonwealth Ballrooom)

7:40 - 9:40

"Filling the gap": A new family of bioplastics ranging from brittle to ductile by reactive blending of PLA with poly(w-hydroxyfatty acids). J. Cai, F. Liu, D. Zhang, B. Zhao, C. Su, C. Hong, **R. Gross**

Synthesis and characterization of polylactic acid. **Y. Du**, W. Meng, M. Liu, Y. Yan

Multichromophoric perylene bisimide dye with excellent photochemical and thermal properties. **A. O. Aleshinloye**, J. B. Bodapati, H. Icil

Linear low density polyethylene oxo-degradation: Mechanical and thermal properties. **A. J. Benitez**, J. J. Sánchez, M. Arnal, A. J. Müller, O. Rodriguez, G. Morales

Design and synthesis of functionalizable and backbone degradable polymers by ROMP. **J. M. Fishman**, L. L. Kiessling

Sample recovery in liquid chromatography of synthetic polymers under critical conditions of enthalpic interactions. A. Siskova, **D. Berek**

Yeast-derived poly(ω-hydroxyl tetradecanoic acid): Molecular weight effects on chain entanglement and bioplastics properties. **J. Cai**, F. Liu, C. Liu, W. Xie, R. Gross

Rubber elasticity of percolation networks. **K. Nishi**, M. Shibayama, T. Sakai

Liquid crystal thermosets: Precursors to ultra-high performance polymers. **L. Heist**, T. J. Dingemans, E. T. Samulski

Hybrid composite membranesof PVA for fuel cell applications. L. C. de Aguiar, F. R. Ramos Filho, **A. d. Gomes**

Mass spectrometry characterization on protein interactions with synthetic polymers. **X. Liu**, V. Scionti, C. Wesdemiotis

Dual responsive polymersomes: drug encapsulation by heating and acid-triggered release. Z. Qiao, X. Huang, **F. Du**, D. Liang, Z. Li

Degradation behavior of bisphenol a polycarbonate in long-term outdoor exposure in the western of China. **L. Jiang**, Y. Pan, S. Han, W. Gao, Y. Dan

Characterization of the effect of counterions on self-assembled metallo-triangles by TWIM-MS. **K. Guo**, A. Schultz, X. Li, P. Dugourd, C. Moorefield, G. Newkome, C. Wesdemiotis

Dithieno-diketopyrrolopyrrole π-conjugated polymers functionalized with electron deficient bithiazolyl and pyrazinyl moieties for organic field-effect transistors. **B. Fu**, E. Reichmanis

Analysis of guayule rubber using high resolution size exclusion chromatography. C. Chiang, **B. Barkakaty**, J. E. Puskas, W. Xie, K. Cornish

Synthesis of siloxane branched polyolefins for use as extruding aids via ADMET polymerization. **P. Atallah**, K. B. Wagener

Repeatability, reproducibility, and baseline stability of a dual-flow differential refractive index detector for calculation of molar mass averages in size exclusion chromatography. **A. K. Brewer**

Fabrication of 'theranostic' magnetite and antiretroviral nanoparticles. **S. Balasubramaniam**, S. Kayandan, T. Li, X. Liu, J. McMillan, T. Bronich, A. V. Kabanov, M. D. Boska, H. E. Gendelman, J. S. Riffle, R. M. Davis

Temperature and pH dependence of smart poly(NVCL-co-IA)-based microgels synthesized by surfactant-free precipitation polymerization. **P. F. de Oliveira**, T. M. da Silva, S. F. Medeiros, A. M. dos Santos

Synthesis and characterization of nano-hydroxyapatite/cellulose-graft-polyacrylamide biocomposite hydrogel as a drug carrier. S. S. Samandari, **M. Gazi**, F. C. Cebeci

Treatment of molybdenum-containing wastewater by Polyol Process. **T. Chiang**

Thermal and morphological analysis of copolyesters containing 2,2,4,4-Tetramethyl-1,3-cyclobutanediol. **N. Dixit**, M. Zhang, M. Zhang, T. E. Long, R. B. Moore

Water hyacinth pretreated with phosphoric acid for sugar production. **T. Chiang**

Synthesis of ammonium bisphosphonate monomers and polymers. **N. Hu**

Synergic effect in electrical conductivity using a combination of two fillers in PVDF hybrids composites. **A. B. da Silva**, J. B. Marini, G. A. Gelves, U. B. Sundararaj, R. B. Gregório Jr, R. E. Bretas

Effect of post-processing treatment on perfluorocyclobutane/polyvinylidene difluoride (PFCB/PVDF) blended fuel cell proton exchange membranes. **K. A. Finlay**, M. Zhang, M. Green, J. Hou, D. A. Dillard, R. B. Moore, S. C. Case, M. W. Ellis, T. E. Long, L. A. Madsen, Y. Li, T. J. Fuller, L. Zou, C. S. Gittleman, Y. Lai

Development of byssal protein based films as biomaterials. **F. Byette**, I. Marcotte, C. Pellerin

Layer-by-layer assembly of siRNA on nanoparticles for multidrug delivery in cancer treatment. **J. Z. Deng**, S. Morton, P. Hammond

Toward the synthesis of isobutylene-based dendrimers for targeted drug delivery. **M. Castano**, J. E. Puskas, M. L. Becker

Synthesis and characterization of phosphonic acid-functional poly(ethylene oxide)-polyoxazoline diblock copolymers. **A. Y. Chen**, O. Celebi, S. R. Barnes, S. J. Mecham, J. S. Riffle

Synthesis reaction of castor oil/polyethylene glycol-based polyurethanes and determination of their kinetic parameters by ftir. **E. B. Colak**, F. S. Guner

Diffusion and porosity studies of aerogel polymers. **L. M. Heist**, L. A. Madsen, D. A. Schiraldi

Controlled release of paclitaxel from in situ-forming PLGA gel. **M. S. Amini-Fazl**, H. Mobedi

Thermodynamic analysis of polycationic complexation with nucleic acids using isothermal titration calorimetry. **A. G. Hudson**, M. H. Allen, S. T. Hemp, T. E. Long, R. B. Moore

Novel fullerene acceptor for the application in polymer solar cells. **Y. He**, K. Hong, Y. Yang

Computational and experimental studies of crack propagation in a hydrogel strip. **B. Mukherjee**, O. Kaymakci, R. C. Batra, D. A. Dillard, R. B. Moore

Synthesis and hemolytic properties of narrowly dispersed cholestanol-PEGs. **L. Chen**, W. Becker, B. Kim, T. Parker, S. Karangelen, L. Clark, C. Yoon, A. Esker, J. Falkinham III, G. Richard

Impact of solvent annealing on P3HT/PCBM solar cells: Role of solubility and vapor pressure. **S. Hu**, H. Chen, M. Dadmun, B. Khomami

Utility of staudinger ligation and branched polymers for cellular encapsulation. **K. M. Gattas Asfura**, C. L. Stabler

Biomechanical testing of vaginal prolapse tissue for modeling towards corrective mesh design. **S. Aghyarian**, C. Manz, D. Ortega, B. Lund, P. Zimmern, H. Tibbals, R. Eberhart, W. E. Voit, D. W. Smith Jr.

Controlling surface ligand presentation of linear dendritic polymer micelles for enhanced cancer targeting. **D. Chang**, Z. Poon, P. T. Hammond

Cellulose nanocrystal reinforced polymeric bone scaffolds. **J. Hong**, M. Roman

Dye doped mesoporous polymers with high laser efficiency and radiation stability. **A. Gumerov**

Correlation between dielectric/electric properties and cross-linking/charge density distributions of PNIPAM microgels. **D. Zhu**, T. Ngai, J. Zhou, L. Wang, J. Shen

Experimental study of the suitability of polymeric coatings as a mitigation strategy for exposed surfaces under icing conditions. **E. Piles Moncholi**, D. W. Hammond

Phase behavior of hyperbranched polymers. **S. Enders**, P. Schrader, C. Browarzik, D. Browarzik, T. Zeiner

Highly resilient PEG-based hydrogels. **M. A. Lackey**, J. Cui, A. J. Crosby, G. N. Tew

Bending induced stress storage in ultrathin polystyrene films. **A. B. Croll**, B. J. Gurmessa

Click reaction kinetics of end-functional polymers in solution reacting to functional SAMs. **S. Zhang**, J. T. Koberstein

Decoupling of ionic transport from segmental relaxation in polymer electrolytes. Y. Wang, A. L. Agapov, **F. Fan**, K. Hong, X. Yu, J. Mays, A. P. Sokolov

Significance of segment concept in polymer physics. **Y. Xu**

Reactive compatibilization of HDPE/PP/PS ternary polymer blend: Rheology and morphology studies. **M. Partovi Meran**, M. Razavi Aghjeh, F. Abbasi, M. Mehrabi Mazidi

Reactivity of mixtures of epoxy monomers in photoinitiated cationic polymerization. **W. F. Schroeder**, S. V. Asmussen, G. F. Arenas, I. E. dell'Erba, C. I. Vallo

Design of high inorganic content organic inorganic hybrids based on a fluorinated polymer via combination of sol-get chemistry and reactive extrusion. **S. Seck**

Polymer-nanocrystals hybrid solar cells. **H. Wei**, H. Zhang, H. Sun, B. Yang

Synthesis, characterization and pH-sensory applications of novel organometallic polymers based on fluorene-bridged bis-benzimidazolylidene. **C. Wu**, Y. Lee, Y. Chen

Synthesis and characterization of poly(triphenylamine)s with electron-withdrawing trifluoromethyl side groups. **T. Yoon**, G. Kim

Characterization of the chain-ends and branching structures in polyvinylidene fluoride with multidimensional NMR. **E. B. Twum**, C. Gao, X. Li, E. F. McCord, P. A. Fox, D. F. Lyons, P. L. Rinaldi

Multifunctional drug delivery carrier with glycyrrhetinic acid -mediated liver targeting and pH-sensitive properties. **Z. Yuan**, H. Guo, C. Zhang, W. Wang

Polyacrylamide hydrogels as current sources. **A. T. Uzumcu**, A. Gelir, Y. Yilmaz

Low density polyethylene co-polymerization model studies. **D. Thompson**, B. Inci, K. Wagener

Analysis of poly(lactic-co-glycolic acid) repeating sequence copolymers. **R. M. Weiss**, J. Li, H. H. Liu, H. J. Kim, B. Godugu, T. Y. Meyer

Sequence effects on the electronic and optical properties of conjugated oligomers? **S. zhang**, B. N. Norris, C. M. Campbell, J. T. Auletta, P. Calvo-Marzal, G. R. Hutchison, T. Y. Meyer

Thermomechanical and morphological properties of random copolymers containing phosphonium ionic liquids. **A. Schultz**, T. E. Long

Synthesis of amino and amidopullulan esters for drug delivery. **J. Pereira**, K. J. Edgar

Cooperative effect observed in separation of oligolysine in ion-pairing chromatography using heptafluorobutyric acid. **W. Xie**, X. Qin, I. Teraoka, R. A. Gross

Photopolymerised microcellular polyesters from high internal phase emulsions. **M. Sušec**, S. C. Ligon, R. Liska, P. Krajnc

Post-fabrication biofunctionalization of tissue engineering nanofiber constructs via strain-promoted cycloaddition. **J. Zheng**, K. Liu, D. H. Reneker, M. L. Becker

Investigation on short chain branches of HDPE: Integrated application of DSC and SSA. R. Li, **J. Yi**

Double “Click” reaction towards ligand decorated micelles : Synthetic and biophysical aspects. **M. A. Quadir**, X. Zhao, P. T. Hammond

Lignocellulose DMA in ionic liquids. **M. Tasooji**, C. Frazier

Synthesis of low band gap semiconducting polymer and nanostructures for organic electronic applications. **J. Zhou**, X. Liu, X. Gong, M. L. Becker

Polymer-aptamer conjugates for selective cytotoxicity. **M. D. Schulz**, S. Casiz, W. Tan, K. B. Wagener

Effect of peptide GYIGSRG modified alginate on angiogenesis in vitro and in vivo. **W. Wang**, L. Guo, Z. Yuan

Polymer solar cells with a low temperature-annealed sol-gel-derived MoO_x film as a hole extraction layer. **T. Yang**

Synthesis and application of photoluminescent graphene quantum dots. **S. Zhu**, J. Zhang, B. Yang

Synthesis and characterization of dye-labeled carboxylic acid coated silica nanoparticles for drug delivery applications. **L. Wang**, B. M. Cash, Y. Chen, A. W. Decho, B. C. Benicewicz

Determination of the interaction between glimepiride and hyperbranched polymers in solid dispersions. D. Pahovnik, S. Reven, J. Grdadolnik, **E. Žagar**

Large molecular weight carboxylate containing norbornene and norbornane polymers via ring-opening metathesis polymerization. **S. E. Stidham**, B. H. Weinberg, M. W. Grinstaff

Study on the structure and photo-catalytic activity of iolite supported polythiophene/titanium dioxide composite photo-catalyst synthesized by photo-initiated polymerization. **S. Xu**

Hyperbranched glycopolymers as chromatographic selectors for the separation of bioactive molecules. **S. Tripp**, N. Polikarpov, D. Appelhans, E. Bessonova, L. Kartsova, B. Voit

Separation of different nucleation sites in polymer-carbon nanotubes composites by means of fast scanning calorimetry. **E. Zhuravlev**, C. Schick

Mechanistic study of tunable 3D superhydrophobic electrospun meshes as drug delivery devices. **S. T. Yohe**, Y. L. Colson, M. W. Grinstaff

Photopolymerization and thermal degradation of UV-curable flame retardant resins studied by photo-DSC and DP-MS. **Q. Wang**, W. Shi

Viscoelastic properties of water suspensions of polymer nanofibers synthesized via RAFT-mediated emulsion polymerization. **W. Zhang**, B. Charleux, P. Cassagnau

Investigation of the mechanism of TBAF hydrolysis of cellulose esters. **X. Zheng**

Green polymer chemistry: Crotonation of poly(ethylene glycol)s using enzyme catalysis under solventless conditions. **K. Seo**, M. Castano, M. Casiano, C. Wesdemiotis, J. E. Puskas

Explorations of metal chelation, polyplex size and diffusion, and DNA binding in polymeric theranostics. **X. Wang**, S. S. Kelkar, T. M. Reineke, L. A. Madsen

Applying ethyl cellulose matrix for encapsulating the drug piroxicam. L. Delmônego, A. C. Rosa, V. Buzzi, **D. A. Silva**

Gene delivery via functionalized poly(ethylene imine)-DNA poly-plexes. **A. Srungavarapu**, R. P. Doyle, S. Granados-Focil

Polyaniline containing composites for antioxidant applications. A. V. Nand, S. Ray, J. Travas-Sejdic, P. A. Kilmartin, **J. Jin**

Vinyl-substituted poly(p-phenylene vinylenes) via the gilch route. **N. Vilbrandt**, M. Rehahn

Crystallization and stereocomplexation behavior of poly(d- and l-lactide)-b-poly(n,n-dimethylamino-2-ethyl methacrylate) block copolymers. **R. M. Michell**, A. J. Müller, M. Spasova, P. Dubois, S. Burattini, B. W. Greenland, I. W. Hamley, D. Hermida-Merino, N. Cheval, A. Fahmi

Electrochemical coupling layer by layer (ECC-LbL) assembly. **M. Li**, S. Ishihara, M. Liao, M. Akada, J. P. Hill, Y. Ma

In vitro degradation kinetics of polycaprolactone films with different pH mediums. **E. Özsağıroğlu**, B. İyisan, Y. Avcıbaşı Güvenilir

Room temperature ferromagnetism of DNA-transition metal complexes. **Y. Kwon**, C. Lee, D. Choi, E. Koh, J. Jin

AFM as powerful imaging tool for the characterization of polymer-supported TBD catalysts. **M. Santarelli**, A. Broggi, M. Bracciale, A. Marrocchi, L. Vaccaro, D. Lanari

Ultrasensitive solution-processed infrared polymer photodetectors with an inverted device structure. **X. Liu**, T. Yang, H. Wang, X. Gong

Interphase and reinforcement of poly(butylene succinate)/graphene oxide nanocomposites. **C. Wan**, B. Chen

Switchgrass rheology and renewable energy: Development of solvent submersion dynamic mechanical analysis. **G. Wan**, T. Frazier, B. Zhao, C. Frazier

Studying crystallization kinetics using solution crystallization analysis by laser light scattering (SCALLS). **D. D. Robertson**, A. J. van Reenen

Chitosan-Starch blends in drug delivery. M. V. Debandi, N. J. François, M. A. Melaj, M. E. Daraio, **V. Dehandi**

Elusion behavior of cationic polymers on size exclusion chromatography. **R. Okazaki**, N. Kagawa

Preparation of PEDOT:PSS/graphene by in-situ polymerization and its applications as counter electrodes for dye sensitized solar cells. **S. Wang**, L. Wan, B. Dong, L. Zhao, Z. Xu, H. Lu, Q. Hu, X. Zhang, J. Ren

Polymer mediated therapies for targeting pediatric osteosarcoma. **S. Popwell**, K. B. Wagener, C. Batich, W. Bolch, R. Milner, J. Lagmay, R. Zlotecki

Synthesis of bimodal brushes on nanoparticles for designed interfaces. **T. Neely**, A. Rungta, B. Natarajan, D. Dukes, L. Schadler, B. Benicewicz

Diblock-copolymer-stabilized bulk heterojuction solar cells. **X. Li**, G. Liu, J. Gao

Novel polydithieno[3,2-b: 2,3-d]pyrroles for energy storage applications. **J. F. Mike**, J. L. Lutkenhaus

Nanofiber-coated carbon black composites of polyisobutyene-based thermoplastic elastomers for biomedical applications. **M. T. Luebbers**, A. Alvarez Albarran, J. E. Puskas

Physical aging of glassy polymer films affected by different stresses during vitrification. **C. B. Roth**, L. A. Gray, S. W. Yoon

Investigating the use of tapered bondline double cantilever beam (DCB) specimens to study the effect of bondline thickness on fracture of toughned epoxy adhesive bonds. **S. R. Ranade**, D. Dillard

Interrogating torsional interactions within thiophene-based conjugated copolymers using non-planar aromatics. **B. C. Streifel**, P. A. Peart, J. D. Tovar

Hybrid materials of ZrO_2-modified silicon rubbers with high transparency and refractive index. **I. Lei**, W. Chiu, D. Lai

The study of PS-b-PEO block copolymers by inerfaced separation mass spectrometry methods. **C. Shi**, C. Wesdemiotis

Ion mobility: An enabling technology for polymer characterization. **M. O'Leary**, E. Riches, K. Craven

Alternative sample introduction for mass spectrometry analysis of polymer samples using atmospheric solids analysis probe (ASAP). **M. O'Leary**, B. Cabovska, K. Craven

Influence of alkyl substituents on the rheological and thermal properties of phosphonium-PAA based supramolecular polymer networks. **X. Lin**, M. W. Grinstaff

Synthesis of chemically modified alginate derivatives. **S. N. Pawar**, K. J. Edgar

Selective deposition of conducting polymers on modified polypeptide scaffolds to form flexible, biocompatible electrodes and actuators. **A. R. Murphy**, I. Romero

Poly(ethylene oxide)-b-poly(L-glutamic acid) Ionic-nonionic block copolymers and their magnetic complexes. **J. Liang**, S. Balasubramaniam, Y. Lin, R. M. Davis, J. S. Riffle

Ionically conductive behavior and morphology of polyimide-based membranes for lithium secondary batteries. M. H. Ugur, **R. D. Toker**, N. Kayaman Apohan, A. Gungor

Synthetic mimics of antimicrobial peptides with high selectivity prepared via aqueous RAFT polymerization. **L. C. Paslay**, B. A. Abel, C. L. McCormick, S. E. Morgan

Preparation and characterization of novel triphenylamine perfluorocyclobutane (PFCB) polymer. **J. Wu**, D. W. Smith

Engineering modular protein scaffolds for high-sensitivity and specificity biosensing of small molecules. **A. Y. Mercedes-Camacho**, T. Grove

Monitoring structural development in organic photovoltaic active layers during spin-coating. **C. S. Lee**, W. Yin, M. D. Dadmun

Contrast variation in small-angle x-ray scattering as a means to isolate and characterize morphological features spanning common length scales in semicrystalline ionomers. **M. Zhang**, J. Park, R. B. Moore

Novel method for immobilisation of invertase within macroporous polyacrylamide cryogel. **Z. M. Sahin**, Z. Olcer, M. Ozmen, A. Tanriseven, F. Yilmaz

Studies on development and dissolution rate of efavirenz using solid dispersions technique. **A. Gorajana**, C. Jo Ni, S. Garg, K. Dua

Dissolution enhancement of cefuroxime axetil by solid dispersion technique. **A. Gorajana**, L. Mun Yew, S. Garg, K. Dua

Dynamic mechanical properties of styrene ionomers containing sodium salts of aromatic dicarboxylic acids. **K. Ko**, H. Park, J. Kim, Y. Kim

Disassembly and reassembly behaviors of ferritin and apoferritin in Solution: A solution x-ray scattering study. **H. Kim**

Roles of aromatic sodium dicarboxylate additives in methyl methacrylate ionomers. **K. Ko**, H. Park, J. Kim, Y. Kim

Generation of giant unilamellar vesicles via electro-formation method. **A. Kubilis**, A. M. Eissa, N. R. Cameron

Protease catalyzed oligomerization of l-lysine derivatives in aqueous solution. X. Qin, W. Xie, Q. Su, W. Du, **R. A. Gross**

Amine functional monodisperse microbeads via precipitation polymerization of N-vinyl formamide: Immobilized laccase for benzidine based dyes degradation. **B. Karagoz**, G. Bayramoglu, B. Altintas, N. Bicak, M. Arica

Novel lanthanide containing polymers for monitoring of polyplex dissociation in vitro. **S. S. Kelkar**, G. Grandinetti, T. M. Reineke

Synthesis of carboxyl-containing cellulose alkanoates for controlled oral drug delivery. **H. Liu**, B. P. Cherniawski, N. Kar, K. J. Edgar

Biocompatible temperature-sensitive dendrimers encapsulating gold nanoparticles for photothermal therapy. **X. Li**, K. Takeda, E. Yuba, A. Harada, K. Kono

Preparation of magnetic poly(N-vinylcaprolactam-co-acrylic acid)-based hybrid nanoparticles by nanoprecipitation. B. R. Lara, **S. d. Medeiros**, A. Elaissari, A. M. Santos

Nano-structuring polymers with cyclodextrins. **A. Gurarslan**, A. S. Joijode, A. E. Tonelli

In vitro controlled release of Ketoprofen from poly(N-vinylcaprolactam-co-acrylic acid) microparticles prepared by spray-drying technique. **S. d. Medeiros**, M. I. Ré, A. M. Santos

Carboxylate selective lanthanide. **D. Song**, K. D. Shimizu

Photoswitchable polymer nanoparticles for two-photon excitation fluorescent bioimaging. **M. Zhu**, G. Zhang, C. Li, W. Gong, M. P. Aldred

3D topological control of stem cell differentiation. **P. Viswanathan**, S. Chirasatitsin, A. J. Engler, G. Battaglia

Hydrogel/Hydroxyapatite Composites with High Mechanical Strength: Aiming to Bone Tissue Engineering Scaffold. Z. Li, **Y. Su**, H. Wang, C. He, D. Wang

Enzymatic degradable nitric oxide releasing polysaccharides. **V. B. Damodaran**, L. W. Place, M. J. Kipper, M. M. Reynolds

Biomimetic hydrogels based on radiation crosslinked collagen for wound healing. **L. Xu**, X. Zhang, X. Huang, X. Chen

Intracellular delivery of bioactive molecules via ROMP-polymers. **O. Tezgel**, G. N. Tew

Photopolymerizable siloxane as PCR compatible and patternable material. **A. Vitale**, R. Bongiovanni, M. Quaglio, S. Turri

Shape persistent polymersomes with tunable membrane permeability as smart carrier for targeting drug delivery. **M. A. Yassin**, D. Appelhans, B. Voit

Effect of polymeric nanoparticles from aqueous paints in a WWT biological process. A. Nobre, A. Barreiros, **S. Piçarra**

Neuron-targeted, brush-like polycationic copolymers with efficient gene delivery properties. **H. Wei,** J. G. Schellinger, S. H. Pun.

Aza-Michael reaction for polymer crosslinking: Structural prerequisites and gel properties. **A. Southan**, C. Schuh, G. Tovar

Chitosan-cellulose nanocrystal polyelectrolyte-macroion complex: In vitro drug release properties. **H. Wang**, M. Roman

Polystyrene-Polyurethane scaffolds as force measurement probes for single cells. **K. Sheets**, J. Wang, A. Nain

Developing microencapsulated probiotics for oral delivery. M. T. Cook, G. Tzortzis, D. Charalampopoulos, **V. Khutoryanskiy**

One-step fabrication of radiopaque alginate microspheres for endovascular embolization via microfluidics. **Q. Wang**, A. Shen, Y. Yang

Liquid chromatography under limiting conditions of desorption. Separation of blends containing low-solubility polymers and biodegradable polymers. A. Siskova, E. Macova, **D. Berek**

Capturing nanoscale dimensionality in network gels by microemulsion polymerization. K. Page, D. England, **J. Texter**

TUESDAY MORNING

Symposium: Advances in Interdisciplinary Interactions (Torgersen 1040)

10:30 Phosphorus polyesters as effective flame retardants in polybutylene terephthalate. **D. Pospiech**, O. Fischer, A. Korwitz, L. Häußler, S. Starke, Y. Bykov, M. Döring, S. Brehme, B. Schartel, T. Köppl, V. Altstädt

10:50 Development of oral tablets with pharmacologically active fenugreek mucilage as excipient. **S. Bahadur**, A. Roy, R. Chanda, S. Saha, A. Choudhury, S. Das

11:10 Polymer nanocomposites for additive manufacturing. **O. S. Ivanova**, A. Elliott, T. A. Campbell, C. B. Williams

11:30 Novel chemistry for hydrogels: The impact on Mechanical Properties. **G. Tew**

11:50 International collaboration seed funding: Outcomes of the ACS global research experiences, exchanges, and training program (GREET). **S. R. Meyers**, B. D. Miller

12:00 Precision synthesis of fluorine-containing vinyl ether polymers and study of their surface properties. **T. Irita**, T. Nagai, Y. Tanaka, K. Adachi, S. Kanaoka, A. Aoshima

Symposium: Commercial Frontiers

Biobased Polymers and Entrepreneurship (Torgersen 1050)

K. Haider, Organizer

10:30 413. Polylactide triblock copolymers as pressure sensitive adhesives and thermoplastic elastomers. **M. A. Hillmyer**

11:05 414. Production and applications of microbial polyhydroxyalkanoates (PHA). **G. Chen**

11:40 415. The Development of Poly(lactic acid) Green Plastic and Its Application. **X. Chen**

Symposium: Complex Macromolecular Systems I (McBryde 113)

L. Leibler, T. Lodge, *Organizers*

10:30 Structurally dynamic polymers as a route to stimuli-responsive films. **S. J. Rowan**

11:00 Supramolecular transient networks in water: from hydrogels to biomedical applications. **P. Y. Dankers**

11:30 Siloxane macromolecular networks capable of trapping organic fluids into solid gels. **J. G. Matisons**, N. Markovic

11:50 Self-healing hydrogels via hydrophobic associations. **D. Ceylan Tuncaboylu**, A. Argun, M. Sahin, W. Oppermann, O. Okay

Symposium: Energy, Optics, and Optoelectronics (ICTAS 310)

S. Cheng, Organizer
B. Yang, E. Reichmanis, L. Yu, Y. Li, *Presiding*

10:30 Bio-organic semiconductor devices based on DNA, indigo and derivatives. **N. Sariciftci**

11:00 Two-dimension-conjugated polymers with conjugated side chain for high efficiency polymer solar cells. **Y. Li**

11:30 Lithium ion conducting thiol-ene based networks. **C. N. Walker**, C. Versek, M. Tuominen, G. N. Tew

11:50 Gel process: Fabrication of proton excahnge membrane from polybenzimidazole. A. Sannigrahi, S. Ghosh, **T. Jana**

Symposium: Macromolecules and Nanotechnology I (McBryde 126)

P. Hammond, *Organizer*

10:30 Hydrogen-bonded assemblies of poly(vinyl alcohol) and poly(acrylic acid): Opportunities for biofunctional thin films and anti-frost coatings. **M. F. Rubner**

11:00 Layer-by-layer assemblies of polymers or proteins through weak interactions. **M. Akashi**

11:30 Glass transitions of layer-by-layer assemblies determined using temperature-controlled quartz crystal microbalance with dissipation. A. Vidyasagar, **J. Lutkenhaus**

11:50 Catching the end-groups: Covalent layer-by-layer assembly of ultrathin coatings of homobifunctional PDMS. **R. Gill**, S. S. Qureshi, G. DECHER, M. Mazhar, O. Felix

Symposium: Macromolecules and Nanotechnology II (McBryde 129)

P. Hammond, *Organizer*

10:30 Biocompatible smectic polymer nanoparticles with various morphologies. L. Jia, M. Liu, D. Lévy, A. Cao, V. Barbier, **M. LI**

10:50 Polyaniline nanofiber based biocompatible antioxidants and free radical sensors. **A. Kumar**, S. Banerjee

11:10 Targeted, polymer-based nanoparticles for delivery of small hydrophobic drug: Camptothecin. **H. Han**, M. E. Davis

11:30 Practical tactic for improving water solubility of hydrophobic small molecules: With an emphasis toward high sensitivity x-ray contrast media (XRCM). **G. Sun**, K. Seetho, J. Ma, K. L. Wooley

11:50 Particle size modulation of chitosan nanoparticles loaded with zinc ions. Y. Monsalve, L. Sierra, M. Mesa, **B. López**

Symposium: Macromolecules in Biotechnology and Medicine I (Torgersen 3100)

B. Ratner, *Organizer*

10:30 Self-assembling bioactive nanopartiles based on amphiphilic copolymer systems: Application in polymer therapeutics. **J. SAN ROMAN**

11:00 Synthesis and application of multifunctional, peptide-based copolymers for drug delivery to the brain. D. S. Chu, J. G. Schellinger, J. Shi, H. Wei, M. J. Bocek, D. L. Sellers, D. O. Maris, R. N. Johnson, A. J. Convertine, P. S. Stayton, R. C. Rostomily, P. J. Horner, **S. H. Pun**

11:30 (Oligo)mannose functionalized hydroxyethyl starch nanocapsules: En route to drug delivery systems with targeting properties. **H. Freichels**, K. Landfester, A. Musyanovych

11:50 Platinum(IV) prodrugs for controlled release formulations. **P. Chhetri**, B. A. Howell

Symposium: Macromolecules in Biotechnology and Medicine II (Holden 114)

10:30 Soft matter and mechanobiology in biomedicine: From treatment of brain tumors to matrix-based programming. **D. E. Discher**

11:00 Elastin-like recombinamer-based systems for biomedical and biotecnological uses. **J. Rodríguez-Cabello**

11:30 Synthesis of magnetic glycoparticles and their bioconjugation with lectins. G. Marcelo, M. Álvarez-Paino, A. Muñoz-Bonilla, J. Rodríguez-Hernández, **M. Fernández-García**

11:50 pH-Responsive and biodegradable polymeric nanoparticles with potential application as tumour-specific drug delivery containers. **F. C. Giacomelli**, C. Giacomelli, V. Schmidt, E. Jäger, A. Jäger, K. Ulbrich, P. Stepánek

Symposium: Modern Methods of Characterization (McBryde 332)

Complex Fluids, Rheology and Thermal Analysis

K. Beers, *Organizer*

10:30 Mesoscopic heterogeneity in supramolecular systems. A. Shundo, **K. Tanaka**

11:05 Self-crowding and reversible assembly of native proteins into nanoclusters for subcutaneous injection. **T. M. Truskett**

11:40 443. Characterisation of complex systems using combined rheological and optical structure analysis methods. **P. Kamerkar**, P. Heyer, J. Läuger

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications I (McBryde 100)

B. Freeman, *Organizer*

10:30 Solubility calculation of gases and liquids in glassy polymeric membranes: An overview. **G. C. Sarti**, M. De Angelis

11:00 Gas barrier properties of graphene/polymer nanocomposite membranes. **H. Park**, H. Yoon, H. Shin, B. Yoo

11:30 Temperature dependent transport properties of polycarbonate/silica nanocomposite membrane. **N. K. Acharya**, D. F. Sanders, Z. P. Smith, B. D. FREEMAN

11:50 Carbon nanotubes: Fast gas transport channels in nanocomposite membranes. **A. K. Surapathi**, E. Marand

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications II (Randolph 331)

B. Freeman, *Organizer*

10:30 Membrane research for water treatment facing the age of global mega-competition & collaboration. **M. Kurihara**

11:00 Self-assembled block copolymer membranes with high water flux and selectivity. **K. Peinemann**

11:30 Hydrophilic nano-channel formation via direct fluorination of disulfonated poly(arylene) copolymers in the solid state. **C. Lee**, K. Lee, O. Lane, J. E. McGrath, M. Zhang, R. B. Moore, M. D. Lingwood, L. A. Madsen, S. Wi, S. Lee, Y. Lee

11:50 Tailoring the pore size and surface properties of nanoporous membranes with click chemistry. **J. Meng**

Symposium: Polymer Physics (Torgersen 1030)

D. Vlassopoulos, R. Colby, *Organizers*

10:30 Gelation of DNA by topoisomerase II and its targeting anti-cancer drugs. **J. R. van der Maarel**, Y. Kim, B. Kundukad, A. Allahverdi, L. Nordenskiold, P. S. Doyle

11:00 Re-examination of dynamics of polyeletrolytes in salt-free dilute solutions by designing and using a novel neutral-charged-neutral reversible polymer. **C. WU**

11:30 Polyelectrolyte-surfactant complex organogelators. **K. A. Cavicchi**, Y. Liu, G. Guzman, A. Lloyd

11:50 Monte Carlo simulation to investigate the cascade transition of a permuted polyelectrolyte chain. **S. Uyaver**

Symposium: Recent Developments in Synthesis I (Torgersen 2150)

A. Mueller, C. Hawker, *Organizers*

10:30 New synthetic strategies towards responsive nanocapsules and nanocarriers. **B. Voit**

11:00 Synthesis and self-assembly of functional degradable polymers. **A. P. Dove**

11:30 Block copolymers of polylactide and condensation polyesters. **Z. J. Florjanczyk**, A. Jóźwiak, A. Kundys, A. Plichta, M. Debowski

11:50 Ring opening polymerization of □-caprolactone by a novel enzymatic catalyst porcine liver esterase. **E. Özsağıroğlu**, E. Bilgiç, H. Vural, B. İyisan, Y. Avcıbaşı Güvenilir

Symposium: Recent Developments in Synthesis II (Torgersen 1020)

C. Hawker, *Organizer*

10:30 Exploring polymerization in confined environment: New methods to control polymer structure. **H. Gao**

11:00 Redox-active cobaltocenium-containing polymers by controlled polymerization. **C. Tang**, L. Ren, C. G. Hardy, J. Zhang, J. Hayat

11:30 Synthesis of high molar mass complex branched and star-branched poly(n-butyl acrylate) by combination of nitroxide-mediated polymerization and single electron transfer-living radical polymerization. **M. SAVE**, L. Billon, C. Derail

11:50 Rate coefficients for atom-transfer radical polymerization (ATRP) up to high pressure. **H. Schroeder**, J. Morick, M. Buback, K. Matyjaszewski

Symposium: Surfaces and Interfaces (Torgersen 1060)

T. Russell, *Organizer*

10:30 Thin film organic photovoltaics deposited from solution: Probing the mechanisms of morphology development. **E. J. Kramer**

11:00 Active layers morphologies for OPV devices through self-assembly. **D. Venkataraman**

11:30 Understanding disorder quantitatively and its effects on the electronic properties of organic semiconductors. **A. Salleo**, J. Rivnay, R. Noriega, M. F. Toney

TUESDAY AFTERNOON

Symposium: Complex Macromolecular Systems I (McBryde 113)

L. Leibler, T. Lodge, *Organizers*

1:45 Electroplastic elastomer hydrogels. **T. Y. Meyer**, P. Calvo-Marzal, M. P. Delaney, J. T. Auletta, T. Pan, N. M. Perri, L. M. Weiland, D. H. Waldeck, W. W. Clark

2:15 New functionalizd polymers and cyclodextrins. **H. Ritter**

2:35 Water-based noncovalent polymers: Robustness, adaptivity, and function. **B. Rybtchinski**

3:05 Macrogel induced by microgel: Bridging and depletion mechanisms. C. Zhao, **G. Yuan**, C. Han

3:35 Break.

3:50 Biohybrid glycopolymers mimic the gelation behavior of Alginate. A. Ghadban, M. Rinaudo, A. Heyraud, **L. Albertin**

4:10 Supramolecular polymer conjugation in water through host-guest complexations with Cucurbit[8]uril (CB[8]). **F. Biedermann**, O. A. Scherman

4:30 Interfacial modification in self-assembled block copolymers. W. Kuan, R. Roy, **T. Epps, III**

5:00 Thermodynamically controllable transition from 3D to 2D self–assembly of a hydrogelator induced by the phase behaviors of triblock copolymers. **Y. Yang**, L. Jin, H. Wang

5:20 Amphipilic linear and star-like block copolymers. Thermoresponsive properties vs. chemical and topological structure. **H. Tenhu**, A. Alhoranta, J. Niskanen

5:40 Tension management in branched macromolecules. **S. S. Sheiko**, N. V. Lebedeva, Y. Li, S. Paniukov, E. B. Zhulina, M. Rubinstein, A. Nese, K. Matyjaszewski

Symposium: Macromolecules and Nanotechnology I (McBryde 126)

P. Hammond, *Organizer*

1:45 Layered, light-responsive polymer nanocomposites. Z. Zhu, **S. A. Sukhishvili**

2:15 Vascularized 3D-tissue models constructed by polymeric nanofilm coating on cell surfaces. **M. Matsusaki**, A. Nishiguchi, M. Akashi

2:35 Polyelectrolyte multilayer films as platforms for stretched-induced reactive release. C. Vogt, J. Barthès, D. Mertz, J. Voegel, P. Schaaf, **P. Lavalle**

3:05 Thermoelectric polymer nanocomposites. G. Moriarty, **J. C. Grunlan**

3:35 Break.

3:50 Development of novel itelative methodology for precise synthesis of 5-arm ABCDE asymmetric star-branched poly(alkyl methacrylate)s. **R. Goseki**, Y. Ozama, E. Akemine, A. Hirao

4:10 Supramolecular polymerization driven by host-enhanced noncovalent interactions. **Y. Liu**, Y. Yu, K. Liu, Z. Wang, X. Zhang

4:30 Photonic crystal sensing materials designed from polymeric nanoparticles and hydrogels. D. Arunbabu, **T. Jana**

5:00 Synthesis of polystyrene nanocomposites using PS-b-PVTES copolymers as precursors. **J. F. Lopez**, L. D. Perez, B. L. Lopez

5:20 Stimuli-responsive cellulose nanocrystals and nanocomposites. **A. E. Way**, L. Hsu, K. Shanmuganathan, C. Weder, S. J. Rowan

5:40 Self-assembly of inorganic nanoparticle vesicles and tubules driven by tethered linear block copolymers. J. He, Y. Liu, T. Babu, Z. Wei, **Z. Nie**

Symposium: Macromolecules and Nanotechnology II (McBryde 129)

P. Hammond, *Organizer*

1:45 High temperature mechanically adaptive polymer nanocomposites. **R. Vaia**, H. Koerner, M. Smith, A. Sellinger, D. Wang, L. Tan

2:15 Nanoporous carbon fibers from natural cellulosic precursors. **D. Berek**

2:35 Dispersion and selection of single-walled carbon nanotubes with polymers for printed electronics. **M. B. Chan-Park**

3:05 Mainchain-type organoboron polymers: Synthesis and photoluminescence properties. **Y. Chujo**

3:35 Break.

3:50 Complexes of single-walled carbon nanotubes with conjugated polymers for sensory applications. **A. Adronov**, P. Imin, X. Pang

4:10 Polylefins as matrix for graphene nanocomposites. **G. B. Galland**, D. S. Azambuja, N. R. Basso, T. Maraschin, R. Quijada, F. C. Fim, M. A. Milani

4:30 Carbon nanotubes decorated with silver nanoparticles for highly conductive composites: Epoxy-based pastes, metallic inks and stretchable conductive films. **S. Baik**

5:00 Effect of carbon nanotubes on the rheology and electrical resistivity of polymer blends. **A. Ophir**, L. Zonder, S. Kenig, S. McCarthy

5:20 High-performance polyetherimides with 0-D, 1-D and 2-D carbon nano reinforcements. M. Hegde, **T. J. Dingemans**, Y. Si, E. T. Samulski

5:40 Patterning graphene using block copolymers. **P. Gopalan**, M. Kim, S. Nathaniel, M. Arnold

Symposium: Macromolecules in Biotechnology and Medicine I (Torgersen 3100)

B. Ratner, *Organizer*

1:45 Engineering a polymeric device for the treatment of abdominal aortic aneurysms. **D. Cohn**, R. Abbas, R. Malal, A. Bloom

2:15 Thermally stable and mechanically robust polycarbonates that undergo controlled and complete backbone photodegradation. S. Sun, E. Chamsaz, **A. Joy**

2:35 Material considerations for annulus fibrosus and nucleus pulposus composite structures. **S. Deb**, E. Kemal

3:05 Polymeric drug-loaded devices for the prevention of lung tumor recurrence: From hydrophobic films to superhydrophobic meshes. **M. Grinstaff**

3:35 Break.

3:50 Controlled release of therapeutics and cells from a hydrogel depot using light. **A. M. Kasko**, D. R. Griffin, J. L. Schlosser

4:10 Multifunctional polymers with structurally diverse thiol substituents for biomedical applications. **V. B. Damodaran**, K. A. Wold, M. M. Reynolds

4:30 Natural polymers for the enhancement of the functional properties of calcium phosphate bone cements. **M. Ginebra**, R. A. Perez

5:00 Phosphonium-containing polyelectrolytes for nonviral gene delivery. **S. T. Hemp**, M. H. Allen, A. E. Smith, J. M. Bryson, M. D. Green, T. E. Long

5:20 Modeling protein adsorption on polyurethane films : A Brownian dynamics study. **S. S. Hilkat**, O. Kurkcuoglu, F. Güner

5:40 Polymers used in implantable biomedical devices. **S. Lyu**

Symposium: Macromolecules in Biotechnology and Medicine II (Holden 114)

B. Ratner, *Organizer*

1:45 Micropatterned polymer surfaces obtained by breath figures formation and phase separation. **C. Migliaresi**, E. Carletti, D. Maniglio, A. Ruffo

2:15 Poly(ether ester amide)s: Truly degradable analogs of poly(ester amides). A. V. Kurdyumov, D. D. DuMez, **N. A. Lockwood**

2:35 Natural-derived polymer in medicine: Silk fibroin as a model. **A. Motta**, C. Migliaresi

3:05 Hollow polymer nanopodss: From synthesis to application. **K. Zhang**, J. I. Cutler, D. Zheng, L. Hao

3:35 Break.

3:50 Synthesis and study of highly fluorescent PAMAM-based dendritic molecules for multidisciplinary applications. **A. M. El-Betany**, N. B. McKeown

4:10 New water-soluble biocide nanocomposites. **M. N. Gorbunova**, L. G. Chekanova

4:30 Development of a series of ω-hydroxyl fatty acid based polymers: biotransformation, polymerization and characterization. F. Liu, J. Cai, W. Xie, **R. A. Gross**

5:00 HA-SbQ cross-linked micelles as a carrier for paclitaxel. **X. Liu**, Y. Tao

5:20 Degradable microcellular polymers by thiol-ene and chain polymerisation. R. Liska, **P. Krajnc**

5:40 Peptides as building blocks for functional biomaterials. **M. L. Becker**

Symposium: Modern Methods of Characterization (McBryde 332)

Complex Fluids, Rheology and Thermal Analysis

K. Beers, *Organizer*

1:45 Real-time characterization of polymer film degradation with quartz crystal microbalance with dissipation monitoring. M. Dixon, **M. C. Ferrarelli**, M. Gormally, M. Johal

2:10 Enhanced deposition via new particle development and characterization. **P. T. Spicer**, M. Caggioni, J. Lenis, A. Bayles, E. Furst

2:45 Thin film calorimetry as a powerfull tool for polymer characterisation. **E. Zhuravlev**, H. Huth, C. Schick

3:10 Zeta potential in solid surface analysis. **V. Radhakrishnan**, G. Langenbucher

3:35 Break.

3:50 Novel dynamic mechanical analysis and implications for numerical simulation. **A. Arzoumanidis**

4:15 Oscillatory shear rheology reveals concurrent softening and stiffening of a polymeric physical gel. **R. H. Ewoldt**, N. Bharadwaj

4:50 Resistive pulse analysis of microgel passage through nanopores. **G. R. Hendrickson**, D. A. Holden, H. S. White, A. Lyon

5:15 Resolving the decomposition profiles of polycarbodiimides. **B. L. Batchelor**, J. D. DeSousa, B. M. Novak, D. W. Smith, Jr

Symposium: Surfaces and Interfaces (Torgersen 1060)

T. Russell, *Organizer*

1:45 Functionalized nanoparticles in solution-based assembly of hybrid photovoltaic materials. **T. Emrick**, R. Hayward, E. Pentzer, F. Bokel

2:15 Conjugated dynamers: Conjugated materials capable of component exchange in thin films resulting in opto-electronic property tailoring. S. Skene, T. Skalski, L. Sicard, **W. G. Skene**

2:35 Comparison of polymer-fullerene heterojunction morphology to bimolecular recombination kinetics. **D. M. DeLongchamp**, D. B. Rodovsky, J. Peet, A. A. Herzing, R. J. Kline, T. M. Clarke, L. J. Richter, A. J. Mozer, G. Dennler

3:05 Role of additives in the morphology of organic photovoltaics (OPV). **M. F. Toney**

3:35 Break.

3:50 Temperature and/or pH responsive hierarchically self-organized bioinspired films. **P. Escalé**, L. Rubatat, F. Du Prez, M. Save, L. Billon

4:10 Chitin ultrathin films for biosensors. C. Wang, J. D. Kittle, C. Qian, Y. Zhang, M. Zhang, M. Roman, J. R. Morris, R. B. Moore, **A. R. Esker**

4:30 Toward dually responsive polyelectrolyte brushes. **Y. Lu**, S. Sukhishvili

4:50 Peering into the interfaces of nanoscale polymer films. **T. Koga**, N. Jiang, P. Gin, M. K. Endoh, S. Narayanan, L. Lurio, S. K. Sinha

5:10 Modifying polybutadiene surface properties with additives made by living anionic polymerisation. **S. M. Kimani**

5:30 Physical-chemical and tribological aspects of the adsorption of conditioning polymers on surfaces. **G. S. LUENGO**, C. Cazeneuve, N. Baghdadli, C. Drummond, R. G. Rubio

5:50 Optical and viscoelastic properties of thin film Nafion®. **S. Petrina**, J. Torrey, L. Greenlee, N. Podraza, M. A. Hickner

Symposium: Commercial Frontiers (Torgersen 1050)

Biobased Polymers and Entrepreneurship

K. Haider, *Organizer*

1:45 Naturally-derived crosslinked polyelectrolytes for superabsorbents. **C. M. Leibig**, M. Rodwogin, F. Stollmaier, B. Mullen, D. J. Yontz

2:20 Metabolic engineering to increase production of malonyl-CoA derived products. **M. D. Lynch**

2:55 Dream production - from basics to materials. **C. Guertler**, A. Wolf, W. Leitner, T. E. Mueller

3:30 Break.

3:45 Benzoxazine modified triglyceride oil as a coating material. C. Yildirim, **A. T. Erciyes**, Y. Yagci

4:05 Isosorbide as a renewable biosource for phosphorous based flame retardants. **Y. G. Daniel**, B. A. Howell

4:25 Non-phthalate plasticizers from a renewable biosource. **W. Sun**, B. A. Howell

4:45 Polymer-bound antioxidants via ADMET-polymerization of functionalized, renewable monomers. **S. Beer**, I. P. Teasdale, O. Brueggemann

5:05 542. Functionalization of chitosan to serve as a biobased flame retardant. **M. R. Alomari**, B. A. Howell, A. Dumitrascu, R. S. Operman

Symposium: Energy, Optics, and Optoelectronics (ICTAS 310)

S. Cheng, *Organizer*

1:45 Towards enhanced macroscale mobility in polymeric semiconductors: Control of structure, process, property relationships. **E. Reichmanis**, A. Aiyar, B. Fu, M. S. Park, J. O. Park, M. Srinivasarao, K. Nayani

2:15 Applications of functional materials containing conjugated azomethine linkages. D. Navarathne, C. Mallet, S. Barik, A. Bolduc, **W. G. Skene**

2:35 Responsive polymer hybrid materials based on micro- and nano-ordered structures. Y. Li, Z. Wang, J. Zhang, **B. Yang**

3:05 High Efficiency polymer solar cells based on planar narrow band gap conjugated polymers. **Z. Bo**

3:35 Break.

3:50 Interrelation of processing, microstructure, optoelectronic properties and Device Performance of Polymer Semiconductors. **N. Stingelin**

4:10 Monodisperse elastomer particles with anisotropic optical properties. **V. Gortz**, K. L. Holdsworth

4:30 Anthraquinone imide based stimulus responsive materials: From NIR electrochromism to piezochromism. F. Chen, J. Zhang, **X. Wan**

5:00 Design of molecular donors for organic photovoltaic devices. **P. Blanchard**

5:20 Phosphonated graft copolymers for potential fuel cell applications. **S. Hvilsted**, I. Dimitrov, K. Jankova, S. Takamuku, P. Jannasch

5:40 Water plasticized melt spinning of polyacrylonitrile fibers as carbon fiber precursors. **J. Huang**, D. G. Baird

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications I (McBryde 100)

B. Freeman, *Organizer*

1:45 Polymer membrane-based advanced air conditioning (AC) system. **E. J. Amis**, Z. J. Dardas, S. J. Kandil, R. J. Ranjan, K. J. Smith, T. J. Wagner

2:15 Integrated approach to materials development for carbon capture. **H. B. Nulwala**, F. Yan, R. L. Thompson, K. A. Damodaran, B. Adzima, B. W. Kail, K. Matyjaszewski, B. Smit, D. R. Luebke

2:35 High temperature polymer membranes for fuel cells and sustainable energy devices. **B. C. Benicewicz**

3:05 Disulfonated poly(arylene ether) copolymers as proton exchange membranes for H2/air and DMFC fuel cells. **J. E. McGrath**

3:35 Break.

3:50 Changing anion-exchange membrane properties by varying the cationic bound groups. **G. SUDRE**, S. INCEOGLU, N. P. BALSARA

4:10 Synthesis of ion conducting diblock copolymers via ATRP and click chemistry. **X. Chen**, D. Luong, S. Granados-Focil

4:30 Solid state electrolytes for improved stability of electrochemical devices. **M. Forsyth**, P. Howlett, D. R. MacFarlane, A. Noor, J. Pringle

5:00 Advanced ion selective hybrid membranes for proton exchange membrane fuel cell. **N. K. Dutta**, N. Roy Choudhury, S. Holdcroft

5:20 Developing ionomers with controlled morphologies for anion exchange membranes. S. C. Price, A. C. Jackson, K. K. Stokes, **F. L. Beyer**, Y. Ye, Y. A. Elabd

5:40 Influences of confinement on the behavior of membranes and materials for energy technologies. **B. W. Rowe**, K. A. Page, C. L. Soles

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications II (Randolph 331)

B. Freeman, *Organizer*

1:45 Nexar™ membranes for energy and environmental applications. **C. L. Willis**

2:15 Room temperature and solventless fabrication of antifouling zwitterionic coatings. **R. Yang**, K. K. Gleason

2:35 Micromolded porous polymers. **R. Lammertink**, E. Karatay, S. Haase, M. Bikel, Z. Çulfaz, M. Wessling

3:05 Next generation membranes for forward and pressure retarded osmosis. **J. R. McCutcheon**, N. Bui, J. Arena, L. Huang, S. Manickam

3:35 Break.

3:50 New thermosensitive polymeric adsorbents for removal of metal ions from aqueous effluents. A. Graillot, **S. Monge**, D. Bouyer, C. Faur, J. Robin

4:10 Synthesis and characterization of sulfonated poly(arylene thioether) block copolymer. **D. Shin**, S. Lee, C. Lee, K. Lee, C. Park, J. E. McGrath, M. Zhang, R. B. Moore, M. D. Lingwood, L. A. Madsen, Y. Kim, I. Hwang, Y. Lee

4:30 Use of polymers as stabilizers and porogens in mixed matrix membrane synthesis. **L. F. Greenlee**

5:00 Alginate entrapped Fe-Zr mixed oxide for decontamination of fluoride from water bodies. **R. Dey**

5:20 Preparation and mechanism of plla/tpu porous membrane: Influence of coagulation bath composition. Q. Xing, R. Li, **X. Dong**, D. Wang

5:40 Synthesis and characterization of model crosslinked polyamide films for water purification. P. M. Johsnon, E. P. Chan, J. Chung, J. Lee, **C. M. Stafford**

Symposium: Polymer Physics (Torgersen 1030)

D. Vlassopoulos, R. Colby, *Organizers*

1:45 The low-force elasticity of (bio)polymers: There's plenty of room at the bottom. **O. A. Saleh**

2:15 Relaxation phenomena in solutions of anionic and cationic polythiophene polyelectrolytes. **J. Vohlidal**, D. Bondarev, P. Nachtigall, S. Kazim, J. Pfleger, G. Hostnik, J. Cerar, V. Vlachy

2:35 Soft matter under hard confinement. **G. A. Floudas**

3:05 Self-assembled block copolymer membranes. **V. Abetz**, A. Jung, J. Hahn, K. Buhr, J. Clodt, S. Rangou, C. Abetz, V. Filiz

3:35 Break.

3:50 Influence of block lengths on the morphology and properties of triblock PCL-PDMS-PCL triblock copolymers. M. Isik, E. Yilgor, **I. Yilgor**

4:10 Force spectroscopy of single molecules using correlated fluctuations of cantilevers. **M. Radiom**, J. Walz, M. Paul, W. Ducker

4:30 Simultaneous ionic and electronic conduction in block copolymers and their application in lithium battery electrodes. **N. P. Balsara**, A. E. Javier, S. N. Patel

5:00 Impact of diblock copolymer conformation on droplet coalescence, emulsification, and aggregation in immiscible homopolymer blends. **D. L. Green**, J. Fowler, E. Fried, T. Saito, R. Gao, T. E. Long

5:20 Morphological trends in precise copolymers. **F. Buitrago**, K. L. Opper, B. S. Aitken, T. W. Baughman, K. B. Wagener, K. I. Winey

5: 40 SCFT study on phase behaviors of linear, star, and cyclic block copolymers. **F. Qiu**

Symposium: Recent Developments in Synthesis I (Torgersen 2150)

1:45 Synthesis of reactive, and responsive copolyether materials. **N. A. Lynd**, P. Lundberg, B. F. Lee, A. Lee, C. J. Hawker

2:15 Ring-opening polymerization of heterocycles using organometallic complexes: A simple access to biodegradable polymers. C. Robert, M. J. Tschan, R. M. Gauvin, **C. M. Thomas**

2:35 Dendritic macrothiols self-assembling properties to gold surfaces: From synthesis to cell interactions. K. Öberg, J. Ropponen, A. Lundgren, M. Bergling, **M. Malkoch**

3:05 From block copolymers to metallic gyroid structures and piezoelectric nanoporous networks. V. Voet, I. Vukovic, G. ten Brinke, **K. Loos**

3:35 Break.

3:50 Synthesis, photopolymerization and adhesive properties of various acidic monomers for an application in dental materials. **Y. Catel**, N. Moszner, U. Fischer

4:10 Multifunctional PEGs for biomedical application: Synthesis and purification. **E. Sokolovskaya**, S. Braese, J. Lahann

4:30 Epoxide copolymerization: from "multifunctional peg" to unusual polymer brushes and smart surfaces. **H. Frey**, C. Mangold, C. Tonhauser, V. Reuss, M. Schoemer, C. Dingels

5:00 Lactide polymers and copolymers prepared with magnesium initiators. **M. L. Dias**, A. C. Silvino, A. C. Rodrigues, A. L. Rodrigues, P. S. Correa

5:20 Design and synthesis of thermal-responsive polypeptides from peglated poly-L-glutamates. **Z. Li**, C. Chen, S. Zhang, X. Fu

5:40 Application of CuAAC chemistry for preparing complex cyclic and multicyclic polymers. **S. Grayson**

Symposium: Recent Developments in Synthesis II (Torgersen 1020)

1:45 Hierarchically structured materials and organic nanowires from oligopeptide-modified polymers. **H. Frauenrath**, R. Szilluweit, L. Tian, R. Marty, E. Croisier, S. Liang

2:15 Direct observation of radical addition reaction in radical polymerizations by time-resolved electron spin resonance spectroscopy. **A. Kajiwara**

2:35 Stereoregulation in radical polymerization. **M. L. Coote**, I. Degirmenci, B. B. Noble, C. Y. Lin

3:05 Recent advances in the understanding of termination in radical polymerization from using the SP-PLP-EPR technique. M. Buback, B. Johannes, **G. T. Russell**

3:35 Break.

3:50 Ruthenium carborane comlexes for catalyst economy atrp of methyl methacrylate and styrene. **I. D. Grishin**, E. S. Turmina

4:10 Synthesis of heterotactic poly(4-vinyl pyridine) by free radical polymerization with cyclodextrin derivatives. **R. Saito**, H. Kamoshita, Y. Tokubuchi

4:30 Aget atom transfer radical polymerisations (atrp) in aqueous media – mechanisms for loss of control. **D. A. Lewis**, Z. Kaya, M. Hermant

5:00 Biomimetic radical polymerization via cooperative assembly of segregating templates. **R. McHale**, J. P. Patterson, P. B. Zetterlund, R. K. O'Reilly

5:20 Thermoresponsive polyoxometalates-polymer hybrids via RAFT-mediated polymerization. **J. Rieger**, J. Lesage de la Haye, T. Antoun, S. Lee, B. Hasenknopf, E. Lacôte

5:40 Living radical polymerization with organic catalyst via reversible complexation mechanism. **A. Goto**

TUESDAY EVENING

Tuesday Poster Session (Squires Commonwealth Ballrooom)

7:40 - 9:40

BASF polymer material development for battery applications. S. **Fleischmann**

New phosphorous-containing polymer sorbents. **M. N. Gorbunova**, T. D. Batueva

Xanthan and chitosan matrices for controlled release of potassium nitrate fertilizer. M. E. Daraio, **M. A. Melaj**

Thermal characterization of poly(L-lactide) composites with carbon nanotubes. **J. K. Palacios**, C. Albano, G. González, R. V. Castillo, A. Karam, M. Covis

Synthesis and characterization of thermal rearrangable (tr) polyimides for gas separation membranes. **L. Hai**, S. J. Mecham, D. Lee, J. E. McGrath

Synthesis and characterization of polyoxazoline-polysulfone triblock copolymers for potential water purification membranes. **O. Celebi**, C. H. Lee, Y. Lin, C. Arca, J. E. McGrath, J. S. Riffle

Patterning polymer thin films in linear methyl siloxanes. **C. Y. Ouyang**, J. Lee, M. E. Krysak, C. K. Ober

Modeling gas adsorption of sulphur-containing polymers of intrinsic microporosity. **K. E. Hart**, L. J. Abbott, R. Taylor, N. B. McKeown, C. M. Colina

Synthesis and characterization of cross-linked aromatic polyimides for gas separation membranes. **K. E. Gaines**, R. Guo, J. E. McGrath, B. D. Freeman, D. Sanders, Z. Smith

Ionic-liquid-induced formation of polyaniline nanostructures. **D. Pahovnik**, E. Žagar, J. Vohlidal, M. Žigon

Synthesis and characterization of superparamagnetic iron oxide nanoparticles stabilized by PEO-based 'smart' copolymers. **N. Kwon**, W. Choi, H. Kim, H. Kang, J. Lee, J. Kim

Cross-linked poly(ethylene oxide) fiber mats as polymer-gel electrolytes for lithium polymer batteries. **S. J. Forbey**, R. B. Moore

Optimizacion of copper nanoparticle dispersion in a polypropylene matrix for antimicrobial applications. **H. Palza**, I. Pinochet, K. Delgado

Functionalised carbon nanotube mixed matrix membranes of polymers of intrinsic microporosity (PIMs) for gas separation. **V. Filiz**, M. Khan, M. Rahman, S. Shishatskiy, G. Bengtson, V. Abetz

Biosynthesis of silver nanoparticles by using nopal extract and their polymeric electrospun. **M. P. Hernández Díaz**, A. S. Ledezma Pérez, J. Romero García, I. Moggio, E. M. Arias Marín, V. Orozco, A. Martínez, C. A. Martínez, S. Torres

Effect of silica based nanohybrids on dental composite resin restoratives. **E. Jung**

Facile synthesis of nano- and microparticles via radiation-induced polymerization of DCH18C6 in aqueous solution. C. H. Yu, **J. Peng**, J. Q. Li, M. L. Zhai

Formation of supramolecular hydrogel using host-guest polymer and its self-healing property. **T. Kakuta**, Y. Takashima, H. Yamaguchi, A. Harada

Adsorption study of metal ions on electrochemically synthesized poly-(2-isopropyl aniline). **A. M. Etorki**

Structure-property relationships of novel high polymer content polybenzimidazole (PBI) membranes. **M. Molleo**, B. Benicewicz, H. Ploehn, H. Gao

Enhancement in the mechanical properties of emulsion copolymers by the gradual variation in feed composition. I. effect of particle size in the butyl acrylate-styrene system. **F. F. Núñez Pérez**

Short polymeric PBA-b/co-PAA surfactants: Self-association, dynamics and application in the shear-induced gelation of strawberry particles. **A. Lamprou**, D. Xie, H. Wu, G. Storti, M. Morbidelli

Synthesis of a POSS-MWNT Nanohybrid Using 'Click' Chemistry. **H. Ong**, S. Clarke, M. Ginic-Markovic, K. Constantopoulos

Influence of water ageing process in crystalline nanodomains of lldpe/montmorillonite clay nanocomposites. **D. Komatsu**, C. M. Paranhos, A. Ruvolo-Filho

Synthesis and characterization of modified chitosan-based novel superabsorbent hydrogel: Swelling and dye adsorption behavior. **A. A. Oladipo**, M. Gazi, E. Yilmaz

Study on the hygroscopic properties of polyacrylic acid super-absorbent resin. **B. Fuchen**

Study of the thermal, mechanical and electrical properties of the PP/graphene nanocomposites obtained by in situ polymerization. **G. B. Galland**, M. A. Milani, R. Quijada, N. R. Basso

Effect of the size and surface modification on the barrier and mechanical properties of PP/SiO_2 nanocomposites. D. Bracho, H. Palza, **R. Quijada**

Evaluation of PVA hydrolysis degree on hybrid membranes properties for DEFCs applications. **J. Dutra Filho**, A. S. Gomes

Layer-by-layer nanoparticles for cancer therapy. **S. W. Morton**, Z. Poon, M. Lee, K. Herlihy, M. Napier, J. DeSimone, M. Yaffe, P. Hammond

Efficient dispersion of carbon nanotubes in polymer nanocomposites using a supercritical CO_2 aided melt blending method. **J. P. Quigley**, C. Chen, K. Herrington, D. Inglefield, T. E. Long, D. G. Baird

Site isolation of receptors using hyperbranched polymers. **G. Mann**, L. J. Twyman

Composites basead on carbon fillers and SBS elastomer. **H. P. Nogueira**, M. Felisberti

Multistage ph-responsive liposomes for mitochondrial targeting anticancer drug delivery. **R. Mo**, Q. Sun, J. Xue, N. Li, W. Li, C. Zhang, Q. Ping

Role of Arginine (R) and Histidine (H) of RH cell-penetrating peptides in pH-selectivity for tumor targeting. **T. Jiang**, Z. Zhang, Y. Zhang, H. Lv, J. Zhou, C. Li, L. Hou, Q. Zhang

Application of spray layer-by-layer assembled composite polyelectrolyte-clay thin films as selective layers in reverse osmosis membranes. **J. R. Kovacs**, P. T. Hammond

Investigation of suspension colloidal stability and shape parameter of cellulose whiskers by bulk viscosity measurement. **R. Nasseri**

Repeat-protein templates for assembly and patterning of nanostructured materials. **R. Parker**, T. Grove

Investigation of acid diffusion during laser spike annealing with systematically designed photoacid generators. **M. Krysak**, B. Jung, M. O. Thompson, C. K. Ober

Preparation and characterization of IPTES functionalized PVB nanofibers. **C. Macit**, E. Cakmakci, M. V. Kahraman

Surface functionalization of graphene oxide toward solid acid catalyst. **F. Kono**, H. Endo, T. Kawai

Unique supramolecular assembly and responsive behavior in amphiphilic polypeptide-based linear triblock copolymers. **J. Ray**, D. Savin, A. Johnson

Preparation of triblock copolymer F108 vesicles as potential drug delivery systems. C. F. Santa, J. Palacio, L. Sierra, **B. López**

Phase behavior of binary and ternary solution and ternary solutions and membranes formation by TIPS process. **R. d. Marques**, M. I. Felisberti

Electrospun poly(n-isopropylacrylamide)/graphene oxide composites. **K. M. Greenman**, Q. Hu, T. Zeng, B. Li

Polysaccharide-drug nanocomplexes for oral delivery of tuberculosis (TB) drug. **S. Mazumder**, J. M. Pereira, K. J. Edgar, R. M. Davis

Synthesis and characterization of poly(ethylene oxide)-poly(arylene ether)(PEO-PSF-PEO) triblock polymers. **A. Nebipasagil**, J. E. McGrath

Synthesis of novel amphiphilic linear block copolymers based on glycopolymers. **H. Arslan**, O. Zırtıl, V. Bütün, G. Bayramoğlu

Novel step-growth polymerization strategies for the preparation of segmented poly(dimethyl siloxane) copolymer elastomers. **D. J. Buckwalter**, T. E. Long

Synthesis of porphyrin-based covalent organic frameworks. **R. Altamimi**

Synthesis and characterization of melt processible acrylonitrile copolymers and blends. **S. A. Beck**, S. J. Mecham, P. Pisipati, J. E. McGrath

Controlled fluorination level poly(arylene ether benzonitrile) hydrophobic-disulfonated poly(arylene ether sulfone) hydrophilic multiblock copolymer for direct methanol fuel cells (dmfcs). **Y. Chen**, J. R. Rowlett, C. H. Lee, Y. Kim, Q. Li, P. Zelenay, J. E. McGrath

Amphiphilic comb type elastomers by thiol-ene coupling reaction. **b. hazer**, e. keleş

Study of zwitterion-functionalized carbon nanotube nanocomposite membrane for reverse osmosis. **W. Chan**, A. K. Surapathi, E. Marand, K. Johnson

Hybrid miniemulsion photopolymerization in a continuous tubular reactor. **V. Daniloska**, R. Tomovska, J. M. Asua

Proton-conductive composite membranes for vanadium redox flow batteries. **D. Chen**, S. Kim, M. A. Hickner

Synthesis and characterization of α-azido-ω-thiolated heterotelechelic poly(ethylene oxide) and its application for preparation of gold nanoparticles. **W. Choi**, J. Lee, H. Kim, H. Kang, J. Lee, J. Kim

Control of peptide assembly through directional interactions. **I. Choi**, M. Lee

TiO_2/PCL Nanofibre-composite for bone tissue engineering. **K. K. Gupta**, p. K. Mishra, p. Srivastava, S. Mohanty, P. maiti

Urea functionalized multi-walled carbon nanotubes for polyurethane nanocomposites. **D. L. Inglefield**, T. E. Long

Dextran-graft-poly(hydroxyethyl methacrylate) gels: A new biosorbent for fluoride removal of water. A. Ahmari, S. Mousavi, A. Aminifazl, **M. S. Aminifazl**, R. Ahmari

Copolymerization behavior of diphenyl vinylphosphine and subsequent alkylation. **A. S. Fersner**, T. E. Long

RAFT Polymerization and lower critical solution temperatures (lcst) of salt- and temperature-responsive polyether-containing block copolymers. **A. S. Fersner**, A. E. Smith, T. E. Long

Optimizing the nanostructure of organic photovoltaic systems. **E. E. Daniels**, R. Jemison, R. D. McCullough, T. Kowalewski

Model experiments for biosensor applications: Bent core liquid crystal in a biocompatible thermoplastic elastomer. **A. C. Charif**, J. E. Puskas, A. Jakli, J. Morvan, K. Fodor-Csorba

A new route to sub-micron monodisperse latex from coalescence induced pickering emulsion polymerization in the presence of hydrophilic particles. **I. Chou**, W. Chiu

High flame retardant foamlike materials based on alginate and sodium montmorillonite clay. **H. Chen**, Y. Wang, D. A. Schiraldi

Dispersing polysaccharide nanowhiskers in ethylene-co-vinyl alcohol copolymers. **M. L. Du Toit**, M. Lutz, A. J. Van Reenen

Electrical properties of triethylene glycol stabilized $Mn_xCo_{1-x}Fe_2O_4$ nanoparticles. **H. Erdemi**, Z. Durmus, A. Baykal

Toughened thermoplastic composites based on PMMA and graphite. **A. R. Camilo**, L. F. Silveira, M. S. Santos, V. R. Adriano, L. V. Scalioni, R. B. Trinca, R. S. Marques, M. Felisberti

Effect of solvent on the morphology of cellulose acetate/polysiloxane composites. **L. R. Brandão**, M. d. Gonçalves, I. P. Yoshida

Polysulfone membranes containing silver nanoparticles. **P. F. Andrade**, M. d. Gonçalves

Effects of UV-photocrosslinking on crystallization kinetics and morphology of cinnamoyl-functionalized poly(caprolactones). **M. Gazinska**, T. Naolou, J. Piglowski, J. Kressler

Mixed matrix polymeric membranes containing zeolites and room temperature ionic liquids . **C. Atalay Oral**, S. Tantekin Ersolmaz

Chemical and biological approaches for bio-hybrid materials with tunable nanostructures. **N. A. Carter**, T. Z. Grove

Synthesis of arborescent poly(isobutylene-b-p-methylstyrene). **A. Alvarez Albarran**, J. E. Puskas, M. Luebbers

Factorial design applied to the ultrasound-assisted deacetylation of chitin. **J. A. Delezuk**, S. P. Camapana-Filho

XNBR/cellulose/clay nanocomposites - Dynamic properties. **J. G. Cosme**, J. S. Almeida, L. R. Honorato, L. L. Visconte, R. C. Nunes

Monodisperse shape-specific shape memory polymeric particles. **S. M. Brosnan**, Y. Wang, J. M. DeSimone, V. S. Ashby

Composite sPEEK / ZrO_2 membranes with protic ionic liquid for fuel cell application. **J. L. Batalha**, A. S. Gomes

Investigation of thermal sensitivity of Poly(cyclopropylmethacrylamide). A. Albayrak, M. Sölener, O. S. Kabasakal, **A. Aşkin**

Preparation of unsaturated polyesters using boric acid as a mild catalyst. **N. Alemdar**

Shape-tunable nano building blocks based on mesogen-jacketed liquid crystalline polymers. **X. Chen**, X. Liang, C. Y. Li

Effect of synthetic conditions on fluoride absorbency of poly(acrylamide) and poly(methacrylic acid) gels. M. H. Aakhbari-Shad, A. Amini-Fazl, A. Ahmari, **M. S. Amini-Fazl**

Poly(hydroxyethyl methacrylate) as a chloride absorbent: Effect of synthetic conditions. A. Amini-Fazl, M. H. Aakhbari-Shad, **M. S. Amini-Fazl**, A. Ahmari

Reductively responsive siRNA-conjugated hydrogel nanoparticles for gene silencing. **S. S. Dunn**, S. Tian, S. Blake, J. Wang, M. E. Napier, J. M. DeSimone

Effect of imidazolium ionic liquid on vulcanization properties of NBR/clay. J. P. Fontana, M. A. Bizeto, M. A. Martins, F. F. Camilo, **R. Faez**

Study of the non-isothermal quiescent crystallization of HDPE nanocomposites. **C. A. Beatrice**, A. L. Marcomini, A. C. Ferreira, R. E. Bretas

Functional nanomaterials from bis-urea macrocycles facilitate selective reactions. **S. Dawn**, L. S. Shimizu

Hydroquinone based disulfonated poly(arylene ether) hydrophilic-hydrophobic block copolymers for proton exchange membranes. **J. Rowlett**, Y. Chen, C. Lee, J. E. McGrath

PCP Pincer palladium nanoparticles supported on modified crosslink merrifield resin: A novel heterogeneous catalyst for heck coupling reactions. **B. Tamami**, M. Mohagegh, S. Ghasemi

Polymeric n-heterocyclic carbene palladium complex-grafted silica as a novel recyclable nano-catalyst for suzuki coupling reactions. **B. Tamami**, S. Ghasemi, F. Farjadian, H. Allahyari

Effect of molecular structure parameters of poly(vinyl alcohol) cyano-ethyl ester on its dielectric properties. **A. Rodionov**

Synthesis of very high molecular weight acrylonitrile/methylacrylate (AN/MA) statistical copolymers. **P. Pisipati**, S. Mecham, S. Beck, J. McGrath

Novel meta/para Polybenzimidazole random copolymer membranes for high temperature PEMFCs. **G. Qian**, B. C. Benicewicz

Gas transmission properties of polymers based on sterically hindered ethers of boron hydroxide. **G. Timirbaeva**

Formation and characterization of reverse osmosis membranes from disulfonated poly(arylene ether) copolymers via alcohol-water nanodispersion casting. **A. Shaver**, C. H. Lee, K. S. Lee, J. Cook, B. D. Freeman, J. E. McGrath

Poly(butylene 2,5-furan dicarboxylate), a biobased alternative to PBT: Synthesis and properties. **J. Zhu**, J. Cai, W. Xie, P. Chen, M. Gazzano, M. Scandola, R. A. Gross

Unsaturated polyester/cellulose nanocrystal composite. H. Kargarzadeh, I. Ahmad, **R. M. Sheltami**, I. Abdullah, A. Dufresne

Efficient simulation of protein surface adsorption using dissipative particle dynamics with specular chain reflection. **J. Stanik**, C. M. Colina

Electrospun nanofibers of PVDF/CuNWs nanocomposites. **J. F. Santos**, A. B. da Silva, R. E. Bretas, G. Gelves, U. Sundararaj

Small peptide alpha-helix triggered by molecular cyclization. **S. Sim**, M. Lee

The role of sulphonated polymer and macrovoid-free structure in the support layer for thin-film composite (TFC) forward osmosis (FO) membranes. N. Widjojo, T. Chung, C. Maletzko, **M. Weber**

Novel antimicrobial polyethylene composites prepared by metallocenic "in-situ" polymerization with TiO2 based nanoparticles. P. A. Zapata Ramírez, **H. Palza**, F. M. Rabagliati

Polyaniline nanotubes formation: Flowing template model. **M. Trchova**, J. Stejskal

Hybrid conducting polymer–silver composites. **J. Stejskal**, P. Bober, M. Trchova, J. Prokes, M. Omastova

Sythesis and characterization of high molecular weight m-PBI for use as polymer electrolyte membranes. **W. P. Steckle**

Temperature response of layer-by-layer-assembled micelles: Neutron reflectometry study. **A. Zhuk**, L. Xu, J. F. Ankner, S. A. Sukhishvili

Surface functionalization of magnetite nanoparticle with polycation and its bioconjugation. **T. Theppaleak**, B. Rutnakornpituk, U. Wichai, T. Vilaivan, M. Rutnakornpituk

Nanobiocomposites preparation and characterization of poly (lactic acid) and mixed poly(lactic acid)/polyethylene with natural and modified sepiolite, and degradative study. **C. R. Villavicencio**, M. A. Sabino

Mixed matrix membranes made from MIL-101 and polysulfone. H. B. Jeazet, **C. Staudt**, C. Janiak, N. Widjojo

Synthesis of RAFT-phosphate ligands to graft polymers from Indium Tin Oxide nanoparticles. **A. Viswanath**, P. Tao, L. S. Schadler, B. C. Benicewicz

Kinetic extraction, preconcentration, separation and trace determination of vanadium(V) with p-nitro calixarene hydroxamic acid by inductively coupled plasma mass spectrometry(ICP-MS). **J. J. Shah**

Magnetic carbon nanotubes foams by CCVD method. **C. R. Villavicencio**, A. J. Peña

Study of compounds of poly (lactic acid) with corn starch and montmorillonite clay. **C. R. Villavicencio**, C. González

Triptycene-polyureas: Porous polymers for targeted analyte sensing. **S. A. Sydlik**, T. M. Swager

Multi-responsive gold nanoparticles. **Y. Shi**, Z. Zhu, S. A. Sukhishvili

Synthesis and characterization of conducting polyaniline nanorods doped with aromatic carboxyl functionalized polystyrene. **G. J. Summers**, U. S. Waware, R. B. Maseko, R. M. Maduwa, C. A. Summers

High performance polymeric sorbents for carbon capture. **X. Zhou**, J. Niu, R. Jain, S. R. Turner, R. Yoon, D. S. Troya, R. D. Gandour, M. L. Gray

Formation of phase structure in liquid crystalline block copolymers. **T. Shiomi**, H. Takeshita, K. Takenaka

Composites membranes of poly(styrene sulfonic acid -co-maleic anhydride) PSSAMA)/poly(vinyl alcohol)(PVA)-Poly(methyl methacrylate)(PMMA) for fuel cell. **O. O. Pedroza**, P. D. Picciani, M. L. Dias

Self-assembly of dendritic-linear block copolymers with a semi-rigid dendron containing PEG tails. H. Cai, G. Jiang, **Z. Shen**, X. Fan

Synthesis, characterization and field effect transistor performance of thiophene end-capped and fullerene pendant styrene copolymer. **B. Şengez**, Z. Alparslan Kösemen, D. Malkoç, M. Aydın, B. Esat, E. Başaran, K. Esmer, F. Yılmaz

Effect of silica coating thickness on the thermal conductivity of polyurethane/silica@MWNT composites. J. Zhao, F. Du, W. Cui, X. Zhou, **X. Xie**

Assessing OMMT dispersion in PA6 nanocomposites using WAXS, TEM and X-RAY 3D microscope. **K. Szustakiewicz**, M. Gazinska, M. Zabska, J. M. Piglowski

Fabrication of topological SERS surface with one-push wrinkle processing. **M. Tamura**, H. Endo, T. Kawai

Synthesis and recognition properties of functionalized nanomaterials from pyridyl urea macrocycles. **K. Roy**, L. S. Shimizu

Ionic polymer-metal composite actuators comprising functionalized nafion composite layers. **Y. Yoo**, Y. Jung

Synthesis and characterization of multi-block poly(arylene ether sulfone) for anion exchange membrane. **X. Yuan**, N. Dixit, R. B. Moore, C. J. Cornelius

Orientation and structure of single electrospun nanofibers by confocal raman spectroscopy. **M. Richard-Lacroix**, C. Pellerin

Multiply-responsive microgels for conjugation. **J. Gaulding**, L. Lyon

Supramolecular polymerization of amphiphilic rods triggered by guest molecule. **H. Ku**

Magnetic block ionomer complexes for potential dual imaging and therapeutic agents. **N. Pothayee**, N. Pothayee, N. Jain, N. Hu, S. Balasubramanium, L. Johnson, N. Sriranganathan, R. Davis, J. Riffle

Investigating superacid sulfonate groups through measuring water-polymer interactions. **S. B. Black**, M. A. Hickner, Y. Chang, C. Bae

The language of nanomaterials and its role in intellectual property, regulatory settings and consumer perception. **J. K. Mills**

Shape memory polymers based on blends of ethylene ionomers and fatty acid salts. **R. Dolog**, R. Weiss

Poly(lactic acid)-co-poly(butylene succinate) via a simple conjugating reaction using N,N'-dicyclohexylcarbodiimide and its roles in nucleation and compatibilization for PLA/PBSblends. **R. Supthanyakul**, N. Kaabbuathong, T. Thanpitcha, S. Chirachanchai

PVDF nanocomposites for enhanced piezoelectric performance. **C. Baur**, J. DiMaio, E. McAllister, E. Wagener, B. Lund, S. Priya, D. Smith

Polymeric micro/nanofiber assemblies with controlled morphology. **J. Wang**, A. Nain

Clickable colloidal particles: Platforms and surface-modification for affinity and magnetic field-assisted bioseparations. **M. Daniele**

Acetal metathesis polymerization. **A. G. Pemba**, J. A. Flores, S. A. Miller

Mechanical analysis of polymer composites reinforced with a sandwich structure composed of e-glass fibers & polypropylene nonwoven mat. **O. B. Berkalp**

Phase separation of polymer blends with dynamical asymmetry. **W. Yu**, C. Zhou

RAFT microemulsion polymerization with a surface-active chain transfer agent: Effect of monomer solubility. **I. A. El-Hedok**, J. M. O'Donnell

Effect of electric field intensity on nanofiber morphology. A. Valipouri, **S. Hosseini**, A. Pishevar

Competing against petroleum-based plastics with sustainable feedstocks. L. Mialon, A. G. Pemba, E. Göktürk, **S. A. Miller**

High temperature shape memory polymer. **Y. Shi**, R. A. Weiss

Self-powered electrochromic polymer window. **C. Xu**, S. Yang, M. Li, J. Zheng

Gas solubility and selectivity correlation to free volume in ionic liquids. **M. Shannon**, J. Tedstone, S. Danielson

Synthesis and properties of phenylindane-containing polybenzimidazole (PBI) for proton-conducting membranes in fuel cells. **X. Li**, B. C. Benicewicz

Development of a nanoscale optical fiber biosensor assay to detect and differentiate staphylococcus aureus. Z. Zuo, **R. Heflin**, A. Bandara, T. Inzana

Bis (phenoxy) zinc catalyst: an active complex in ring-opening copolymerization of cyclohexene oxide and carboxylic acid anhydrides. **E. Hosseini Nejad**, C. -. van Melis, M. -. Bouyahyi, R. -. Duchateau, C. E. Koning

Polymerization of & in ionic liquids-based microemulsions. **F. Yan**

WEDNESDAY MORNING

Symposium: Advances in Interdisciplinary Interactions (Torgersen 1040)

D. Schiraldi, *Organizer*

10:30 Welcome.

10:40 Polymer education in Japan for innovation. **M. Sawamoto**

11:15 Education in polymer science as part of soft matter nano-curriculum. **A. R. Khokhlov**

Symposium: Commercial Frontiers (Torgersen 1050)

K. Haider, *Organizer*

10:30 Structuring of polymers and nanocomposites by micromoulding and solid phase orientation. **P. D. Coates**

11:10 Innovative kraton polymers enable sustainable applications. **L. Freund**, K. Wright

11:50 Renewable polyester-polyolefin hybrids: Building material architecture for superior performance. **V. Topolkarae**v, R. McEneany, T. Eby, D. Hasha, H. Hristov

Symposium: Complex Macromolecular Systems I (McBryde 113)

L. Leibler, T. Lodge, *Organizers*

10:30 Nascent morphology of in-reactor polyolefin blends and the influence of phase separation on the crystallization morphology. **C. C. Han**, J. Jin, J. Du, H. Niu, J. Dong

11:00 New approaches for solventless nanofiber manufacturing. **C. J. Ellison**, K. Shanmuganathan, Y. Fang, D. Chou, R. K. Sankhagowit, P. Iyer

11:30 Macromolecular micro composites of polyamide-imide/polyetherimide : Third generation polymers. **S. Palsule**

11:50 Synthesis of poly(aniline-co-o-anisidine) intercalated graphene oxide composites. **B. Dong**, S. Wang, F. Hu, L. Wan, L. Zhao, H. Lu, W. Zhou, Z. Guo

Symposium: Complex Macromolecular Systems II (Holden 114)

10:30 Imidazole and imidazolium-containing polymers for nucleic acid delivery and electro-active membranes. **M. H. Allen**, S. T. Hemp, A. E. Smith, T. E. Long

10:50 Ionic conduction and dielectric response of poly(Imidazolium acrylate) ionomers. **U. Choi**, M. Lee, S. Wang, W. Liu, K. I. Winey, H. W. Gibson, J. Runt, R. H. Colby

11:10 RAFT synthesis of ABA triblock copolymers with tunable affinity toward ionic liquids for electro-active applications. **T. Wu**, D. Wang, M. Zhang, J. R. Heflin, R. B. Moore, T. E. Long

11:30 Solvation effects on counterion transport in PEO-based single-ion conducting ionomers. **J. Wang**, R. H. Colby

11:50 Ion dynamics and diffusion in an imidazolium-based organic ionic plastic crystal. **B. E. Kidd**, M. D. Lingwood, M. Lee, H. W. Gibson, L. A. Madsen

Symposium: Energy, Optics, and Optoelectronics (ICTAS 310)

S. Cheng, *Organizer*
C. Li, L. Zhu, S. Holdcroft, *Presiding*

10:30 High temperature organic ferromagnetic compositions modified DNAs and discotic LC mimics. Y. Kwon, C. Lee, D. Choi, E. Koh, Y. Geerts, **J. Jin**

11:00 Tuning ion conducting pathways using holographic polymerization. **c. Li**, D. Smith, B. Dong, R. W. Marron, T. J. Bunning

11:30 Photon-spin controlled mirror-symmetry-breaking within μm-sized spherical achiral polymer particles in optofluidic media. **W. Zhang**, K. Yoshida, M. Fujiki, X. Zhu

11:50 Photoelectrochemical properties of doped polypyrrol: Application to hydrogen production upon visible light. **B. Zitouni**

Symposium: Macromolecules and Nanotechnology I (McBryde 126)

P. Hammond, *Organizer*

10:30 Multicompartment hydrogels from ABC triblock terpolymers. **M. A. Hillmyer**

11:00 Self-organized multicompartment nanostructures from new triblock terpolymers. **A. H. Mueller**

11:30 Hierarchically structured biomimetic honeycomb polymer films via breath figures and diblock copolymer self-assembly. **M. SAVE**, L. Billon, P. Escalé, L. Rubatat

11:50 Probing the self-assembly in side chain urethane methacrylate polymers by fluorescence. K. Kumar, **A. Syamakumari**

Symposium: Macromolecules and Nanotechnology II (McBryde 129)

P. Hammond, *Organizer*

10:30 Photovoltaics using nanostructured organic-inorganic hybrids. **M. L. Chabinyc**, N. D. Treat, M. Burkhardt, C. Liman, W. Liu, K. Banerjee, C. J. Hawker

11:00 Creating continuous conducting polymer films using thermally stable nanorod surfactants. D. Kang, T. Kwon, M. P. Kim, J. Bang, **B. J. Kim**

11:30 Pyridine end-functionalized poly(3-hexylthiophene)s: CdSe ligands for potential OPV applications. **W. M. Kochemba**, S. M. Kilbey, B. G. Sumpter, J. Chen, D. L. Pickel

11:50 Nanoporous gyroid metals from block copolymer templates via electroless plating. **H. Hsueh**, R. Ho

Symposium: Macromolecules in Biotechnology and Medicine I (Torgersen 3100)

B. Ratner, *Organizer*

10:30 Core-shell carbohydrate-based block copolymers designed for the delivery of drugs and nucleic acids. **T. M. Reineke**, N. Ingle, L. Xue, M. Dalsin

11:00 Broad-spectrum antimicrobial cationic peptidopolysaccharides. **P. Li**, M. B. Chan

11:30 Controlled synthesis of PHPMA and its derivatives containing block copolymers for anticancer drug delivery. **Z. Gan**

11:50 Hybrid particle-field models of drug nanocarriers based on block-copolymer micelles. **G. Milano**, A. De Nicola, S. Hezaveh, S. Samanta, T. Kawakatsu, D. Roccatano

Symposium: Modern Methods of Characterization (McBryde 332)

Advances in Imaging Methods and General Topics

K. Beers, *Organizer*

10:30 SPM of synthetic, hybrid, and biological microgels. **V. V. Tsukruk**

11:05 Probing materials properties in atomic force microscopy of polymers. **S. Magonov**, J. Alexander, S. Belikov, C. Wall

11:40 Electron tomography of micron-thick specimens for hierarchical meso-structured materials. **H. Jinnai**

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications I (McBryde 100)

B. Freeman, M. Silverstein, *Organizers*

10:30 Polymers of intrinsic microporosity (PIMs) prepared using a novel polymerization reaction based on tröger's base formation. **N. B. McKeown**, M. Carta, M. Croad, C. G. Bezzu, R. Malpass-Evans, K. J. Msayib, Y. Rogan

11:00 Nanoporous polymers from reactive block polymers. **M. A. Hillmyer**

11:30 Mixed matrix membranes with a polymer of intrinsic microporosity. **P. M. Budd**, C. R. Mason, L. Maynard-Atem, M. P. Attfield, J. C. Jansen, G. Clarizia, P. Bernardo, F. Bazzarelli, Y. Yampolskii, L. Starannikova

11:50 Block copolymer micelle assembly with pressure-driven tunable porosity and self-repairing ability. P. Tyagi, A. Deratani, D. Bouyer, D. Cot, M. Barboiu, T. N. Phan, D. Bertin, D. Gigmes, **D. Quemener**

Symposium: Polymer Physics (Torgersen 1030)

D. Vlassopoulos, R. Colby, *Organizers*

10:30 Extensional rheology of polymer melts. **O. Hassager**

11:00 Few "simple" questions of polymer dynamics. **A. Likhtman**

11:30 Ratio function of dynamic moduli, its bounds and consistency of dynamic data for polymers. **J. Huang**

11:50 Linear viscoelasticity of sulfonated polyester ionomers. **G. J. Tudryn**, Q. Chen, R. H. Colby

Symposium: Recent Developments in Synthesis I (Torgersen 2150)

A. Mueller, C. Hawker, *Organizers*

10:30 Polymer mechanochemistry: Tactics for intimidating chemical reactions. **C. W. Bielawski**

11:00 Covalent organic frameworks as a platform for predictable molecular assembly. **W. R. Dichtel**, J. W. Colson, D. N. Bunck

11:30 Synthesis and self-organization in water of well-defined poly(oxazoline)-b-poly(acrylate) amphiphilic copolymers. B. Guillerm, V. Lapinte, **S. Monge**, J. Robin

11:50 Self-assembled nanostructures of luminescent organoboron block copolymers and star polymers. **F. Cheng**, F. Jaekle

Symposium: Recent Developments in Synthesis II (Torgersen 1020)

C. Hawker, *Organizer*

10:30 Charge transport through single molecules and polymer assemblies. S. Wei, B. Cappozzi, H. Tran, M. Gopinadhan, C. Osuji, L. Venkataraman, **L. M. Campos**

11:00 Design of semi-random conjugated polymers for organic solar cells. **B. C. Thompson**

11:30 Low band gap polymers based on cyclopentafused-polycyclic aromatic hydrocarbons. **K. N. Plunkett**

11:50 Synthesis of tetrafluorobenzene based pi-conjugated polymers via direct arylation. **T. Kanbara**

Symposium: Surfaces and Interfaces (Torgersen 1060)

T. Russell, *Organizer*

10:30 Ordering in shear-aligned block copolymer thin films. **R. A. Register**, A. P. Marencic, S. Pujari, R. L. Davis, P. M. Chaikin

11:00 Thermodynamics of crystal nucleation of polyethylene on graphite. A. Löhmann, T. Henze, **T. Thurn-Albrecht**

11:30 Multi-length scale studies of the confined crystallization in poly (l-lactide)-block-poly (ethylene glycol) copolymer. **C. C. Han**, J. Yang, Y. Liang

WEDNESDAY AFTERNOON

Symposium: Complex Macromolecular Systems I (McBryde 113)

1:45 Thermo-reversible adsorption of multivalent ions by charge neutralizing semi-IPN hydrogels. **J. Custers**, L. Stemkens, R. Sablong, D. v. Asseldonk, J. Keurentjes

2:15 All-conjugated block copoly(thiophene)s: Synthesis and chiroptical properties. **G. Koeckelberghs**

2:35 Self-assembled porosity by polymeric supramolecular framework materials. **O. T. Ikkala**, N. Houbenov, J. S. Haataja, H. Iatrou, N. Hadjichristidis, J. Ruokolainen, C. F. Faul

3:05 Complex molecular chimeras in solid state. **N. Hadjichristidis**, O. Iikkala, N. Houbenov, H. Iatrou, S. Junnila, S. Hanski, A. Hirao

3:35 Break.

3:50 Methacylate-based block copolymers as versatile platform for nanostructured materials and hybrids. **D. Pospiech**, D. Jehnichen, H. Komber, S. M. Werner, K. Eckstein, F. Näther, G. He, P. Friedel, B. Voit, C. U. Papadakis

4:10 Defectless directed self-assembling of block copolymer thin film on regularly corrugated substrates. **G. Fleury**, K. Aissou, J. Shaver, G. Pecastaings, C. Brochon, C. Navarro, S. Grauby, J. Rampnoux, S. Dilhaire, G. Hadziioannou

4:30 New modification methods for high performance polybenzoxazine thermosets. B. Kiskan, K. D. Dogan, B. Aydogan, M. U. Kahveci, Z. Beyazkilic, M. Imran, **Y. Yagci**

5:00 CO_2 assisted blending of biodegradable polyesters. **S. H. Murphy**, G. A. Leeke, M. J. Jenkins

5:20 Thiol para-fluoro "quasiclick" coupling: A versatile method to tune H-bond capability of poly(2,3,4,5,6-pentafluorostyrene) using unprotected mercapto-alcohols. **J. CHEN**, J. Duchet-Rumeau, A. Charlot, D. Portinha

5:40 Conformational control and assembly of polymer molecules induced by alkylene segment crystallization. **S. Ramakrishnan**, A. Z. Samuel, R. K. Roy

Symposium: Complex Macromolecular Systems II (Holden 114)

1:45 Ion transport and storage of ionic liquids in ionic electroactive polymer actuators. Y. Liu, **M. Ghaffari**, R. Zhao, C. Lu, N. Winograd, Q. Zhang

2:05 Translational dynamics in supramolecular phases of ionic wedge-shaped amphiphiles. **M. D. Lingwood**, B. E. Kidd, H. Zhang, J. J. Hernandez Rueda, L. Li, X. Zhu, D. A. Ivanov, M. Möller, L. A. Madsen

2:25 Influence of plasticizer on conductivity and ion states in single-ion polymer conductors. **H. Zhao**, D. King, P. Painter, R. Colby, J. Runt

2:45 Influence of charge placement on the thermal and morphological properties of segmented multiblock copolyesters. **M. Zhang**, T. E. Long

3:05 Ion conduction in polymerized ionic liquid thin films. **J. Choi**, Y. Ye, M. D. Green, Y. A. Elabd, T. E. Long, K. I. Winey

3:25 Break.

3:40 Impregnating ionic liquids into ionic polymers for mechanical actuators: Ion transport and associations. **J. Hou**, Z. Zhang, L. A. Madsen

4:00 Effect of water uptake on morphology and ionic conductivity of polymerized ionic liquid diblock and random copolymers. **S. Wang**, Y. Ye, Y. A. Elabd, K. I. Winey

4:20 Correlation of activation energy and water transport dynamics inside ionic polymers. **Z. Zhang**, M. D. Lingwood, K. B. McCreary, J. Hou, Y. Wang, L. A. Madsen

4:40 Synthesis and ion conduction of polysiloxane-based phosphonium ionomers. **S. Liang**, U. Choi, H. Zhao, J. A. Bartels, J. P. Runt, c. Ralph

5:00 Investigation of nucleobase self-assembly in supramolecular ammonium ionenes. **M. Tamami**, T. E. Long, M. Zhang, N. Dixit, R. Moore

5:20 Ion transport and storage in ionic electroactive polymer membrane. r. zhao, Y. Liu, **Y. Zhou**, M. Ghaffari, M. Lin, Q. Zhang

5:40 Nucleobase self-assembly in supramolecular adhesives. **S. Cheng**, M. Zhang, N. Dixit, R. B. Moore, T. E. Long

Symposium: Macromolecular and Nanotechnology I (McBryde 126)

P. Hammond, *Organizer*

1:45 Using RAFT for the synthesis of functional nanomaterials. **R. O'Reilly**

2:15 Facile gas phase surface modification of wood cellulose microfibrils. **M. Fumagalli**, S. Molina-Boisseau, L. Heux

2:35 Designing novel devices with chemically vapor deposited polymers. **K. K. Gleason**

3:05 Macroscopic phase separations to prepare functional polyemr particles, fibrils, and patterns. **U. Jeong**, M. Park, C. J. Park

3:35 Break.

3:50 Immobilized interphase in polymer nanocomposites. A. Wurm, A. Sargsyan, D. Pospiech, B. Kretzschmar, **C. Schick**

4:10 Production of nanocaps by aerosol-photopolymerization. **E. Akgün**, W. Gerlinger, M. Wörner, B. Sachweh, J. Hubbuch

4:30 Matrix-free aramid plastics and molecular composites. **S. V. Kotomin**

5:00 Confinement mechanism of size-dependant behavior of electrospun polymer nanofibers and their internal structure. **A. Arinstein**

5:20 A controlled growth of a cross-linked polymeric film. **G. G. Qiao**

5:40 Recyclable supramolecular membrane: Separation of nanoparticles and proteins according to size. **E. Krieg**, H. Weissman, S. Albeck, E. Shirman, E. Shimoni, B. Rybtchinski

Symposium: Macromolecules in Biotechnology and Medicine I (Torgersen 3100)

B. Ratner, *Organizer*

1:45 Role of hot melt extrusion in improving access to HIV treatment in tanzania. **D. Lefebvre**, J. Morris, W. Schimana

2:15 Selenium-containing polymers. **H. Xu**

2:35 Novel protein transduction domain mimics inspired by natural proteins like HIV-TAT. **G. Tew**

3:05 Poly(glycerol sebacate) degradable bioelastomers: Synthesis, and oligomer precursor and polymer network characterization. D. Kafouris, **C. S. Patrickios**, F. Kossivas, C. Constantinides, N. Nguyen, C. Wesdemiotis

3:35 Break.

3:50 Application of water soluble polyfluorene derivative in proteomics and medical diagnostics. **P. K. Iyer**

4:10 Efficiency of antimicrobial modified hyperbranched polymers analogous with different microsctructures. **M. Er-Rafik**, Y. He, N. Pasquier, H. Keul, M. Moeller

4:30 TOF-SIMS Imaging of Renagel® in the rat large intestine. **E. Johnston**

5:00 Simplifying oligopeptide synthesis by a unique chemo-enzymatic strategy. X. Qin, A. C. Khuong, **R. A. Gross**

5:20 Rheological characterization of aqueous dispersions of polymer nanoparticles for applications as injectable materials. **R. Hernandez**, V. Zamora-Mora, A. Pérez, C. Mijangos

5:40 Novel ^{19}F molecular imaging agents for cancer diagnosis. **A. Whittaker**, K. Thurecht, I. Blakey, H. Peng

Symposium: Modern Methods of Characterization (McBryde 332)

Advances in Imaging Methods and General Topics

K. Beers, *Organizer*

1:45 Imaging polymer nanostructures using visible light: STED microscopy of block copolymers and colloidal crystals. **C. K. Ullal**

2:20 Functional coherent Raman imaging. **M. T. Cicerone**, Y. J. Lee, C. Hartshorn, C. Camp

2:55 Superresolution four-wave mixing microscopy. **S. J. Stranick**

3:30 Break.

3:50 Quantitative grazing incidence x-ray scattering studies of nanostructures in functional polymers: Porous polymers, brush polymers, star polymers, and block copolymers. **M. Ree**

4:25 Nanocharacterization of creep response of multiwall carbon nanotubes/epoxy composites. **M. Tehrani**, M. AlHaik

4:50 Constitutive model for high rate deformation of semicrystalline polymers. **H. Pouriayevali**, V. Shim, Y. Guo

5:15 Mechanical properties of macroporous polymer foams prepared via emulsion templating (polyH/M/LIPEs) and the impact of the internal phase ratio. **N. Graeber**, J. M. Hodgkinson, A. Bismarck

5:40 Mechanical properties of spherulitic semicrystalline nylon 6 from multiscale modeling. **S. Arabnejad**, D. W. Cheong, V. P. Shim

6:05 Characterization of polymers with the Kerr-Effect. **R. Gurarslan**, A. E. Tonelli

Symposium: Surfaces and Interfaces (Torgersen 1060)

T. Russell, *Organizer*

1:45 Nucleation and crystallization in PCL films. A. Wurm, E. Zhuravlev, R. Androsch, D. Pospiech, B. Wunderlich, **C. Schick**

2:15 Block copolymer self-assemblies and their orientation control studied by electron mictoromography. **H. Jinnai**

2:35 Formation of hierarchically structured polymer single crystals. **G. Reiter**

3:05 Nanohybrids and nanohyrid thin films from templating of chiral block copolymers. **R. Ho**

3:35 Break.

3:50 Visualization of two-dimensional single chain conformations solubilized in a miscible polymer blend monolayer by atomic force microscopy. K. Sugihara, **J. Kumaki**

4:20 Transformation of electrospun polymer fibers into microspheres driven by the Rayleigh instability. **J. Chen**, P. Fan

4:40 Solvent compartmentalization study of vesicles self-assembled in mixed solvent. **J. Hu**, W. Shen, X. Hu

5:00 Effect of polymer-colloid interactions on polymer-mediated forces and selected static and dynamic properties of polymer-nanocolloid systems. **A. Chervanyov**, G. Heinrich

5:20 Structural and electrical properties of α-ω-substituted oligothiophene monolayers. **A. Mourran**, M. Defaux, J. Wang, W. H. de Jeu, F. Gholamrezaie, U. Ziener, D. M. de Leeuw, M. Moeller

5:40 Effects of dual rf plasma treatment on polyimide films used as flexible substrate for solar cell applications. **N. Demirci Sankir**, H. Unver, E. Aydin, E. Uluer, D. Akbar, S. Bilikmen

6:00 Resonance energy transfer as a tool for probing interface formation in nanocomposites. **M. Zammarano**, D. Fox, E. McCarthy, J. Gilman, P. Maupin, L. Sung, y. k. Seok

Symposium: Advances in Interdisciplinary Interactions (Torgersen 1040)

1:45 Polymer science and engineering at the University of Southern Mississippi. **R. Y. Lochhead**

2:05 Modular, half semester graduate curriculum in polymers. **D. A. Schiraldi**

2:25 Polymer education in 2012: Where we are, where we're going. **L. J. Mathias**, R. Badger

2:45 Polymer education for middle school students. **C. A. Helfer**, N. Makki, J. Milam, J. A. Beese

3:05 Changing lives: CLiPS Polymer envoys program for high school students. **P. Bligh-Glover**

3:25 Break.

3:40 Controlled fabrication and modification of polymer and carbon nanocomposites for multifunctional applications. **L. Dai**

4:00 Rational design of polysaccharides for drug delivery. **K. J. Edgar**, L. S. Taylor, H. Liu, S. Fox, N. Kar, G. Ilevbare

4:20 High performance fibers: Past, present, and future. **S. Kumar**

4:40 Tutorial: Chemistry and properties of polymeric biomaterials – Polyethers, Polyesters and Polyanhydrides. **J. Riffle**

Symposium: Commercial Frontiers (Torgersen 1050)

K. Haider, *Organizer*

1:45 Structure-property correlation of olefin block copolymers and their blends with polypropylene. G. Liu, X. Zhang, H. Chen, K. Walton, G. Marchand, **D. Wang**

2:25 Preparation of biomedical polyolefins and investigationon their biocompatibility. **J. Yin**

3:05 New enzymatic approaches for polymer modification. **E. Herrero Acero**, K. Greimel, A. Marold, D. Ribitsch, I. Druzhinina, C. P. Kubicek, G. M. Guebitz

3:30 Break.

3:45 Expanding commercial frontiers for agricultural plastics: New materials and improved design. **P. Picuno**

4:25 Assessing the potential of silicone rubber waste as aggregate in asphalt mixes. **C. G. dos Santos**, N. L. Lopes Filho, G. M. Martins, H. C. Alves, E. A. Sa, G. Fernandes

4:50 Influence of phosphorus/nitrogen pendants on the flammability of styrenics. **B. A. Howell**

5:15 Water treatment with polymeric materials at various length scales. F. Liang, C. Zhang, **D. Qiu**

Symposium: Energy, Optics, and Optoelectronics (ICTAS 310)

S. Cheng, *Organizer*

1:45 Some new design strategies for second-order nonlinear optical polymers and dendrimers. **Z. Li**

2:15 Non-linear absorption polymeric array from controlled radical polymerization and “click” chemistry. **Z. Chen**, C. Liao, R. Price, K. S. Schanze

2:35 Novel ferroelectric polymers for high energy density and low loss dielectrics. **L. Zhu**

3:05 Anti-reflection, anti-scratch coatings via self-assembly of silica nanoparticles and crosslinking polyelectrolytes. **J. S. Metzman**, J. R. Heflin

3:25 Break.

3:40 Colocalized plasmonic detection of nanoparticle-mediated DNA hybridization. Y. Oh, W. Lee, **D. Kim**

4:00 Holographic polymer dispersed liquid crystal gratings doped with functionalized POSS. H. Peng, S. Bi, **X. Xie**, X. Zhou, Y. Liao

4:20 Structural effects on the nano-scale morphology and conductivity of ionomer blends. **S. Holdcroft**, T. Weissbach, E. M. Tsang, A. C. Yang, R. Narimani, B. J. Frisken

4:50 Quantitative ^{1}H NMR analysis of the degradation mechanisms in anion exchange polymers for fuel cell applications. **S. A. Nuñez**, M. A. Hickner

5:10 Sulfonated poly(aryl ether ketone) designed for fuel cell membrane application. K. Marestin, E. Chauveau, **R. Mercier**

5:30 Homopolymer and diblock copolymer-azobenzene complexes through hydrogen bonding: Self-assembly and stable photoinduced optical anisotropy. **J. del Barrio**, E. Blasco, L. Oriol, R. Alcalá, C. Sánchez

Symposium: Macromolecular and Nanotechnology II (McBryde 129)

P. Hammond, *Organizer*

1:45 Formation of monodisperse polymer-ferrimagnetic nanoparticle complexes and their self-assembly. Q. Dai, D. Berman, P. Jubert, K. Virwani, J. Frommer, **A. Nelson**

2:05 Oil based nanocomposite of silane covered magnetite(Fe_3O_4). E. Bingöl, **A. T. Erciyes**

2:25 Novel in-situ polymerization nanocomposite inorganic honey comb polymer nanofiber in organic polymer nanofiber. **S. Pilehvar**, H. Mortazavi, M. Ghoranneviss, P. Kaveh, M. Arabsarhangi, S. Niknezhad

2:45 Preparation of copper oxide nanotubes via an unusual assemble behavior of homopolymer PAA. Y. Liang, **X. Hu**

3:05 Incorporation of natural fibers as fillers into polyehtylene matrix. **M. Lutz**, A. J. Van Reenen, M. L. Du Toit

3:25 Break.

3:40 Reinforcement of PVC matrix with cellulose nanocrystals: effect of silane treatment. **R. M. Sheltami**, I. Ahmad, H. Kargarzadeh, I. Abdullah

4:00 Versatil tioladed polymers by atom transfer radical polymerization. **I. Quijada-Garrido**, O. García, M. Palacios Cuesta, N. Guarrotxena, R. París, M. Liras

4:20 Degradable polyanhydride materials for imprint lithography applications. **Q. Lou**, D. A. Shipp

4:40 Organic/inorganic nanocomposites of polybenzimidazole: Role of inorganics structures. **T. Jana**, S. Ghosh

5:00 Yielding in concentrated protein solutions: Protein adsorption at the air/water interface or bulk aggregation? **M. Castellanos**, J. A. Pathak, R. H. Colby

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications I (McBryde 100)

B. Freeman, M. Silverstein, *Organizers*

1:45 Porous polymers by emulsion templating. **N. R. Cameron**

2:15 Colloidally templated and porous conducting polymer arrays. **R. C. Advincula**

2:45 Open porous microcellular membranes by emulsion templating. I. Pulko, **P. Krajnc**

3:05 Porous emulsion-templated polymers from nanoparticle Pickering emulsions. **M. S. Silverstein**, I. Gurevitch

3:25 Break.

3:45 Fundamentally green polymer/clay aerogels. **D. A. Schiraldi**

4:15 Supermacroporous gels produced by polymerization in frozen state. **B. Mattiasson**, H. Kirsebom

4:45 Porous membranes from stimuli responsive ionic liquid polymers. **J. Texter**

5:05 Novel nanoporous membranes for Cr(VI) removal from aqueous solutions. **M. Sankir**, L. Semiz, N. Demirci Sankir

5:25 Virtual synthesis and characterization of intrinsically microporous materials. **L. J. Abbott**, K. E. Hart, C. M. Colina

5:45 Porous membranes based on electrospun nanofibers and their applications. **Y. Xia**

Symposium: Polymer Physics (Torgersen 1030)

D. Vlassopoulos, R. Colby, *Organizers*

1:45 Rheology as a method for inferring long-chain branching. **R. G. Larson**

2:15 Microscopic structure-phase-property relationships in polymer nanocomposites. **K. S. Schweizer**, S. Kim, L. M. Hall, C. F. Zukoski

2:35 Non-einstein viscosity behavior of polymer nanocomposites. **S. Kumar**

3:05 Properties of mutiwalled carbon nanotube suspensions in polymer melts. **P. J. Carreau**, S. Abassi, A. Derdouri

3:35 Break.

3:50 Time, temperature, and shear strain rate dependent yielding and stiffness recovery in a nanoparticle-filled poly(dimethylsiloxane). **D. Dillard**, L. Yan, R. West, G. Gordon, K. Rubis, L. D. Lower

4:10 Primitive path network, structure and dynamics of SWCNT / polymer nanocomposites. **A. Karatrantos**, N. Clarke, K. I. Winey, R. J. Composto

4:30 On the dynamics of polymers in nanocomposites and under confinement. **D. Richter**

5:00 Nonisothermal crystallization kinetics of poly(butylene terephthalate)/multiwalled carbon nanotubes nanocomposites. **K. A. Bhave**, P. M. Deshpande, S. Wagle, M. J. Kulkarni

5:20 903. An effect of surface properties and aspect ratio of organosmectites on crystallization and orientational structure of PVDF nanocomposites. **A. Kiersnowski**, M. Gazińska, K. Kolman, G. Kircher, M. Mezger, B. Hou, M. Paulus, K. Chrissopoulou, S. H. Anastasiadis

5:40 Type III LAOS behavior of polymer melts. A. Pandey, E. Andablo-Reyes, S. Rastogi, **A. Lele**

Symposium: Recent Developments in Synthesis I (Torgersen 2150)

1:45 Synthesis of Functional Polymer Nanoobjects from Block Copolymers. D. Yao, **Y. Chen**

2:15 Synthesis and adhesive properties of acrylates with H-bonding moities. **S. Pensec**, C. Fonteneau, O. Herscher, X. Callies, G. Ducouret, J. Chenal, L. Chazeau, C. Creton, L. Bouteiller

2:35 Dynamic-covalent macromolecular architectures. A. P. Bapat, S. Mukherjee, J. G. Ray, D. A. Savin, **B. S. Sumerlin**

3:05 Smart polymeric sensors based on responsive polymers. **R. Hoogenboom**

3:35 Break.

3:50 Novel step-growth polymerization routes to high molecular weight silicones. **J. Goff**, B. Arkles, E. Kimble

4:10 Multifunctional polymers obtained by polycondensation reaction. **H. Keul**, S. Ullmann, S. Mommer, M. Moeller

4:30 New condensation polymers from fluoro-olefins and bisphenols: Mechanism and performance creation. **D. W. Smith Jr.**, B. R. Lund, D. K. Dei, J. Wu, B. Sharma

5:00 Synthesis and polycondensation of bio-based macrodiols containing ferulic acid. **F. Pion**, A. F. Reano, P. Ducrot, F. Allais

5:20 Synthesis of poly(amic acid)s by Thiol-ene polymerization. **K. L. Poetz**, K. A. Murphy, D. A. Shipp

5:40 Gree polymer chemistry: New living dithiol polymerization involving cyclic intermediates. **J. E. Puskas**, E. Q. Rosenthal-Kim

Symposium: Recent Developments in Synthesis II (Torgersen 1020)

1:45 Controlling semiconducting polymer architectures. **C. K. Luscombe**, M. Yuan, K. Okamoto, M. Durban

2:15 Synthesis and properties of new vapor-born soluble homo- and copolymers of akyl-substituted [2.2]paracyclophanes and vinylmonomers. **I. E. Paulus**, A. K. Bier, M. Bognitzki, A. Greiner

2:35 Catalyst-transfer condensation polymerization for the synthesis of n-type π-conjugated polymers. **T. Yokozawa**, Y. Nanashima

3:05 Investigating the impact of conjugation pathway on the optical and electronic properties of benzobisoxazole based polymers. **M. Jeffries-EL**, J. J. Intemann, E. S. Hellerich, B. C. Tlach, R. Shinar, J. Shinar

3:35 Break.

3:50 Fullerene as a monomer. E. Dupeu, C. Dagron-Lartigau, **R. C. Hiorns**

4:10 Trivalent cobalt complex mediated formation of CO_2 copolymers from epoxides: Activity, selectivity and stereochemistry control. **X. Lu**

4:30 In situ end functionalized of the GRIM metathesis polymerization: Influence of additives and reaction conditions. **D. L. Pickel**, W. M. Kochemba, S. M. Kilbey

5:00 Allyl-terminated polar macromonomers synthesized by metallocene-catalyzed polymerization of 10-undecene-1-ol. **U. Schulze**, M. Johannsen, K. Sahre, H. Komber, B. Voit

5:20 2D periodic network polymers by rational organic synthesis. **J. Sakamoto**, A. D. Schlüter

5:40 Controlled synthesis of polyhydroxy telechelic polyethers by combination of phosphazene base and triisobutylaluminum. A. Brocas, A. Deffieux, N. Le Malicot, **S. Carlotti**

WEDNESDAY EVENING

Wednesday Poster Session (Squires Commonwealth Ballrooom)

7:40 - 9:40

Foam-forming and wetting ability of polymeric cationic surface-active substances. **D. Usmanova**, R. Ismailov, A. Mirhoji

Thermosetting networks derived from disulfonated poly(arylene ethers) for water purification reverse osmosis membranes. **B. J. Sundell**, D. Lee, C. Lee, O. Lane, J. E. McGrath, J. Cook, B. D. Freeman

Influence of countercation on the thermomechanical and rheological behavior of randomly sulfonated copolyesters. **M. Zhang**, T. E. Long

Titanates: A green catalyst system for degradable biomaterials. **M. Zhu**, J. Fan, Y. Li, G. Zhang, M. P. Aldred

Dipole formation across polyethylene film exposed to inverted corona discharge. **J. S. Bernardes**, L. P. Santos, F. Galembeck

Control radical polymerization under ^{60}Co γ-irradiation. **Z. Zhang**

Helix-sense-selective polymerization of achiral phenylacetylene having two bulky imino substituents. **Y. Zang**, M. Teraguchi, T. Kaneko, T. Aoki

Synthetic receptor for phosphorylated peptides. S. Zhang, L. Han, C. Li, J. Wang, W. Wang, **Z. Yuan**

Synthesis and characterization of starlike copolymers with defined structure based on multifunctional coupling agents in melt. **H. Zhang**, L. Jakisch, F. Böhme, B. Voit

Synthesis of ABC type miktoarm star copolymers by triple click chemistry. **G. Yilmaz**, B. Iskin, Y. Yagci

Photoinduced reverse ATRP of methyl methacrylate using camphorquinone/benzhydrol system. **O. S. Taskin**, G. Yilmaz, Y. Yagci

Controlled bimodal molecular weight distribution polymers via one-step/one-pot raft polymerization. **L. Zhang**, J. Qin, Z. Cheng, X. Zhu

Mesogenic initiator for anionic polymerization of epoxide monomers. **A. Hesse**, A. M. Hofmann, H. Frey

Synthesis of low bandgap, alternating electron donor and acceptor conjugated polymers. **C. Yu**

Living anionic polymerization of divinylbenzenes. **S. Tanaka**, M. Matsumoto, R. Goseki, T. Ishizone, A. Hirao

Cyclic polymers with pendent carbazole via combination of ATRP and click reaction. X. Zhu, **N. Zhou**, X. Zhu

Preparation of micron-sized monodisperse poly(ionic liquid) particles by dispersion polymerization. **M. Tokuda**, H. Minami, Y. Mizuta

Effect of spacer length on association of nucleobase-containing ammonium ionenes. **K. Zhang**, M. Tamami, T. E. Long

Synthesis and polymerization of precision boronic acid polymers. **C. Simocko**, T. Young, K. B. Wagener

Synthesis of optically active poly(m-phenyleneethynylene-aryleneethynylene)s bearing hydroxy groups and examination of the higher order structures. **H. Sogawa**, M. Shiotsuki, F. Sanda

Novel ionic polymer membranes and effects of humidity on ionic liquid electromechanical bending actuators fabricated by layer-by-layer deposition. **D. Wang**, R. Gao, T. Wu, M. D. Green, T. E. Long, J. R. Heflin

Synthesis of polystyrene-b-poly(TEMPO-substituted methacrylate) by anionic polymerization of the radical monomer for an electroactive material. **T. Sukegawa**, H. Omata, I. Masuko, K. Oyaizu, H. Nishide

Solvent effects in alternating ADMET polymerization. **M. D. Schulz**, K. B. Wagener

Photoinduced free radical promoted copper(I)-catalyzed click chemistry for macromolecular syntheses. **M. Tasdelen**, G. Yilmaz, B. Iskin, Y. Yagci

Synthesis and characterization of metal nanoparticles immobilized onto polymer-inorganic composite microgels. **Y. Zhang**

Rheo-NMR and self-diffusion studies of complex viscosity modifiers. **K. G. Wilmsmeyer**, J. A. Wahmhoff, K. G. Beshah, L. A. Madsen

Green synthesis of methacrylated trimethylolpropane cyclic carbonate, a novel monomer for isocyanate free functional polymers. **S. Pyo**, R. Hatti-Kaul

Controlled radical polymerization of stilbene derivatives with maleic anhydride. **A. M. Savage**, Z. Kiernan, S. R. Turner

Shape memory behavior of side-chain crystalline polymers. **P. Fei**, K. A. Cavicchi

Amphiphilic block copolymer surfactants based on well-defined poly(vinyl acetate-block-vinyl alcohol). **M. H. Repollet-Pedrosa**, R. L. Weber, A. L. Schmitt, M. K. Mahanthappa

Nonfouling microgel layer-by-layer films – Resistance to bacterial adhesion. **M. W. Spears**

Novel acrylonitrille based terpolymer with tunable glass transition temperature. **R. verma**, B. betchlor, A. lowe, K. J. Balkus, D. W. Smith

Regioselective synthesis of curdlan derivatives. **R. Zhang**, K. J. Edgar

Corannulene containing polymers. **M. C. Stuparu**

Self-healing polymers cross-linked by photoinduced radical reshuffling units. **Y. Amamoto**, H. Otsuka, A. Takahara, K. Matyjaszewski

Direct fluorination of recycled ground rubber tire particles: a x-ray photospectroscopy study. **S. Yagneswaran**, B. R. Lund, D. W. Smith

Tandem synthesis of alternating polyesters from renewable resources. **C. Robert**, C. M. Thomas

Facile synthesis of perfluorocycloalkenyl (PFCA) aryl ether polymers. **B. Sharma**, S. Liff, D. W. Smith

Characterization of lipid bilayers formed between ionic liquid droplets. **T. T. Young**, T. E. Long, D. J. Leo

Green polymer chemistry: New living polymerization of dithiols involving cyclic intermediates. **E. Q. Rosenthal-Kim**, J. E. Puskas

Effects of alkyl glucosides on the enzymatic hydrolysis of model cellulose and lignocellulosic substrates. **X. Tan**, M. Roman

Super toughened polylactide materials: Reacive blending with pre-heat processed natural rubber. **C. Zhang**, Y. Huang, L. Jiang, Y. Dan

Exploring limitations at low copper levels with ARGET ATRP. **K. A. Payne**

Incorporating GlyAlaGlyAla peptide into polyurethane backbone to mimic chain and aggregation structure of silk fibroin. **H. LIU**, W. XU

Optical dna sensors based on photoluminescent polymers. **A. R. Gulur Srinivas**, D. Barker, J. Travas-Sejdic

(N^1E,N^4E)-N^1,N^4-bIs(pyridine-2yl) methylene) benzene-1,4-diamine lıgand as new bınuclear catalyst complex in ATRP. **H. Arslan**, M. G. Kaptan, O. Zırtıl, E. Hanhan, &. Şen

Synthesis and solution rheology of adenine-containing polyelectrolytes for electrospinning. **S. T. Hemp**, M. T. Hunley, S. Cheng, K. C. DeMella, T. E. Long

Characterization of polyethylene synthesized by zirconium single site catalysts. **A. A. Alsaygh**, F. D. Alsewailem, I. M. Al-Najjar, V. Kuznetsov

Arm-first, core-crosslinked stars containing dynamic-covalent Diels-Alder linkages. **A. P. Bapat**, J. G. Ray, D. A. Savin, B. S. Sumerlin

Columnar coordination compounds of copper in the reactions of urethane formation. **I. Davletbaeva**

Triblock copolymers of 1-(4-vinylbenzyl)Imidazole and Poly(ethylene glycol) for biological and electroactive technologies. **C. Jangu**, T. E. Long

Facile synthetic route for conjugated bottle-brush polymers. **S. Ahn**, D. L. Pickel, W. M. Kochemba, S. M. Kilbey II

Surface functionalization of silica nanoparticles and their assemblies on silicon wafer for Janus particle synthesis. **J. Li**, B. C. Benicewicz

Synthesis of film-forming polyurethanes by using diphenylolpropane. **I. N. Bakirova**

Visible light induced atom transfer radical polymerization. **M. Ciftci**, M. A. tasdelen, Y. Yagci

Mechanistic investigations of controlled radical polymerization mediated by amine-bis(phenolate) iron(III) complexes. **L. E. Allan**, M. P. Shaver

Interfacing liquid chromatography with multi-dimensional mass spectrometry for the structural characterization of a nonionic surfactant. **B. C. Katzenmeyer**, C. Wesdemiotis

Supramolecular ionic copolymers. **N. Brostowitz**, K. A. Cavicchi, R. A. Weiss

Recent technological advancements in polyetherimides. **M. L. Kuhlman**

Photoswitchable gel assembly system based on complexation of cyclodextrins with azobenzenes. **Y. Kobayashi**, R. Kobayashi, Y. Takashima, A. Hashidzume, H. Yamaguchi, A. Harada

Preparations of polystyrene/magnesium hydroxide composite particles by seeded dispersion sol-gel process in an ionic liquid. **K. Kinoshita**, H. Minami

Polythiophene containing multifunctional phenacylium photoinitiator. **M. Aydin**, K. D. Demir, K. Takagi, Y. Yagci

Tuning mechanical properties in electroplastic elastomer hydrogels. **J. T. Auletta**, R. D. Harris, P. Calvo-Marzal, M. P. Delaney, N. M. Perri, S. M. Motlagh, T. Pan, W. W. Clark, L. M. Weiland, D. H. Waldeck, T. Y. Meyer

Controlled carbocationic copolymerization of isobutylene with alloocimene. **A. L. Gergely**, J. E. Puskas, G. Kaszas

Syndiotactic precision poly(ethylene-co-vinyl amine): Synthesis and thermal characterization. **C. S. Few**, K. B. Wagener

Glass transition in ultra thin films measured by differential AC-Chip calorimetry. **H. Huth**, D. Zhou, M. Ahrenberg, C. Schick

Preparation and characterization of thermoplastic polyurethane polytetraflouroethylene blends. **F. Guner**, I. Demiryol

Synthesis and characterization of copolyesters with high melting points. **K. W. Barr**, Y. Liu, S. R. Turner

Effect of photo-curing time on constitutive and fracture properties of silicone semi interpenetrating network organogels. **O. Kaymakci**, B. Mukherjee, R. B. Moore, D. A. Dillard, R. C. Batra

Elastomer functionalization by thiol-ene chemistry using LCST polymers. **A. Hermann**, R. Mruk, R. F. Roskamp, R. Zentel

Synthesis of stimuli-responsive diblock copolymer brushes by combination of SET-LRP and RAFT polymerization techniques. **S. Demirci**, S. Kinali-Demirci, T. Caykara

Synthesis and properties of triptycene-containing polyurethanes. **Z. Chang**, S. Turner

Self-assembly of polystyrene-poly (n-isopropylacrylamide) star colymers. **J. Hinestrosa**, J. P. LeJeune, M. Kilbey, J. M. Messman

Synthesis and characterization of macroporous dna hydrogels. **P. Karacan**, O. Okay

Superparamagnetic nanoparticles functionalized with surface-immobilized fluorescent conjugated polymers. **S. Chatterjee**, E. E. Nesterov, P. Russo

Microgel films with tuned phase transition temperatures. **K. C. Clarke**, L. A. Lyon

Fabrication of orthogonal peptide concentration gradient surfaces for directing stem cells differentiation. **Y. Ma**, L. A. Smith Callahan, C. M. Stafford, M. L. Becker

Novel determination of Niobium polymeric complication with Phethalizinones and composite formation. **A. A. Alowais**

Crack path selection in epoxy adhesive bonded joints with weakened interfaces. **Y. L. Guan**, D. C. Ohanehi, J. G. Dillard, R. C. Batra, D. A. Dillard

Photochemical crosslinking of thermoresponsive PEG-polymers. **M. Henze**, O. Prucker, J. Rühe

Phase separation induced by a polymerization in a polystyrene-modified epoxy resin: Effect of polystyrene molecular mass. **J. Lopez**, M. Rico, B. Montero, R. Bellas

Hierarchical porous PDMS membrane for diesel particulate filtration. **X. Huang**, A. Strzelec, N. S. Zacharia

Photocaged pendent thiol polymer brush surfaces for post-polymerization modifications via thiol-click chemistry. **R. M. Hensarling**, E. A. Hoff, A. L. LeBlanc, W. Guo, S. B. Rahane, D. L. Patton

DSC thermal analysis of thermosetting bismaleimides eutectic mixtures. **A. Fallahi**, F. Afshar Taromi

Synthesis and complexation of photocrosslinkable liquid crystalline stilbene dimers. **Y. Chai**, X. Xu, C. Pugh

Functionalized vinylbenzocyclobutene crosslinking agents. J. S. Baker, W. Storms, **A. R. Amrutkar**, C. Pugh

Synthesis of biodegradable hyperbranching polyacrylates. **G. C. Garcia**, C. Pugh

RAFT polymerization of 4-vinylimidazole: Opportunities for amphoteric block copolymers. **M. H. Allen**, S. T. Hemp, A. E. Smith, T. E. Long

Simulation of micellar shuttle poly(N-isopropylacrylamide-block-ethylene-oxide) from water to ionic liquid. **L. Vicente**, M. Rodríguez-Hidalgo, C. Soto-Figueroa

Organic-inorganic hybrid polymer composites. **M. Sitthiracha**

Role of solvents in the unique radical polymerization initiated with some kinds of ionic liquids. **S. Kanno**

Hierarchically porous polymer nanoparticle assemblies with modular functionality. **K. L. Killops**, C. Rodriguez, N. A. Lynd, C. J. Hawker

Synthesis and enzymatic degradation of aliphatic-aromatic copolyesters. **P. G. Parzuchowski**, K. Tomczyk, E. Wawrzynska, I. Steinborn-Rogulska, G. Rokicki

Copolymerization of CO_2 and propylene oxide：Effect of double metal cyanide complex's crystallinity on activity. **Y. Qin**, Z. Li, X. Wang, X. Zhao, F. Wang

Polymerization of methacrylates containing cationic or PEO groups by various procedures of ATRP: Scope and limitations. **R. Makuska**, C. Visnevskij

Iron catalyzed ATRP of styrene with ppm levels of $Fe^{III}Br_3$ using thermal initiators or reducing agents. **K. Mukumoto**, Y. Wang, K. Matyjaszewski

UV-visible absorption and fluorescence spectra of substituted polyacetylenes. **T. Masuda**, S. Watanabe, M. Hara, T. Sakaguchi, T. Hashimoto

Expanding the scope of vinyl ester polymerizations using vanadium bis(imino)pyridyl chloride complexes. **M. R. Perry**, L. E. Allan, M. P. Shaver

Oxanorbornene-based ionic liquid monomers and their polymers: Synthesis and characterization of polymeric ionic liquids. **A. Murugan**, D. V. Schoonover, T. L. Price, H. W. Gibson

Straightforward and highly efficient synthesis of diselenocarbamates and diselenocarbonates for using as effective agent in controlled free radical polymerization. **X. Pan**, J. Zeng, J. Zhu, Z. Zhang, W. Zhang, X. Zhu

Redox-responsive self-healing materials formed from host-guest polymers. **M. Nakahata**, Y. Takashima, H. Yamaguchi, A. Harada

Imidazolium based ionic liquid as initiators in ring opening polymerization of e-Caprolactone: End-functional polymers and block copolymers. **T. L. Price**, A. Mittal, U. Choi, H. W. Gibson, R. H. Colby

RAFT Synthesis of CO_2-responsive (co)polymers. **J. Quek**, P. J. Roth, A. B. Lowe

Remarkable stereocontrol in the polymerization of 1-alkenes using a simple scandium catalyst system. **Y. Pan**, T. Xu, G. Yang, X. Lu

New strategies for the synthesis and end-functionalization of poly(2-vinylpyridine) by living anionic polymerization. **A. Natalello**, C. Tonhauser, E. Berger-Nicoletti, H. Frey

Sugar overcomes oxygen inhibition in photoinitiated free radical polymerization. **F. Oytun**, M. U. Kahveci, Y. Yagci

Synthesis of poly(methyl methacrylate) particles by emulsifier-free, organotellurium-mediated living radical emulsion polymerization (emulsion terp). **Y. Kitayama**, K. Kishida, H. Minami, M. Okubo

Star and brush copolymers derived from rotaxanes. M. A. Rouser, M. Lee, Z. Niu, D. Nagvekar, **T. L. Price Jr.**, H. W. Gibson

6-(4′-Ethyl-carboxybiphenyl-4-oxy)-hexanoic acid esters of hydroxypropylcellulose. **D. Lòpez-Velazquez**

Polyethylene surface corona charging without oxidation. **L. P. Santos**, J. S. Bernardes, F. Galembeck

Surface and optical properties of impact poly(propylene): Effect of ethylene-propylene copolymer composition. **M. Lee**, Y. Chun, J. Park, C. Choi

Periodic vinyl copolymers containing γ-butyrolactone via ADMET polymerization of disigned diene monomers with built-in sequence. **Z. Li**, L. Li, X. Deng, L. Zhang, B. Dong, F. Du, Z. Li

Miscibility and dynamics of phase separation of poly(ε-caprolactone)in acetone + carbon dioxide fluid mixtures at high pressures. E. Kiran, **S. Takahashi**, H. Grandelli, J. C. Hassler

Peptide-functionalized hydrogels for enhancing biocompatibility of encapsulating materials. A. Durackova, J. Vana, M. Lahova, S. Bekesova, L. Skultety, V. Proks, J. Kucka, **I. Lacik**

Synthesis of poly(N-sulfonylamidines) via Cu-catalyzed multicomponent coupling reactions. T. Choi, **I. Lee**, H. Kim

UV-curable maleimide terminated telechelic oligomer. **J. Wu**, M. D. Soucek

Synthesis and characterization of silica encapsulated with sodium tungstate. **D. Shen**, Y. Li, Y. Shi, Z. Fu, Z. Zhang

Biopolyurethane and peach palm microfibrils woven composites: effect of composition and the accelerated aging test on mechanical behavior. M. Z. Farina, J. F. Rocha, A. P. Pezzin, **D. A. Silva**

Towards soluble one-handed helical chiral polystyrene. **N. Meyer**, R. Sander, C. M. Thiele, M. Rehahn

Bio-orthogonal, ambient three-fold metal free efficient ("click") reactions based on multifunctionalzed Polycaprolactone thin films. **F. Lin**, J. Zheng, J. Zhou, M. L. Becker

Synthesis of Polydisulfides as Dynamic Materials. **B. T. Michal**, S. J. Rowan

Synthesis and characterization of poly (acrylonitrile-co-1-vinylimidazole-co-isoprene) terpolymer. **S. F. Mahmood**, W. F. Deng, B. F. Batchlor, A. F. lowe, K. J. Balkus, Jr, D. J. Yang, D. W. Smith, Jr

Norbornyl-based ROMP polymers containing imidazolium units. **D. V. Schoonover**, T. L. Price, A. Murugan, M. Lee, U. Choi, R. H. Colby, H. W. Gibson

Layer-by-layer (LbL) assembly of multilayer films made from chitosan and a synthetic humic acid polyelectrolyte. **C. W. Slate**, H. F. Webster

Linear vs. cyclic architecture of PEG nanoparticle coatings for drug delivery. **G. R. Montenegro**, C. Pugh

Implications of Nafion® morphology based upon uptake of large cationic complexes. **E. M. Naughton**, R. B. Moore

Core-shell nanoassemblies with a liquid-crystal-like cores. Effect of ionic strength. **M. Uchman**, M. Gradzielski, J. Bednár, M. Štěpánek, K. Procházka

Potential of ionic liquids as a novel initiator of radical polymerization. **S. Kanno**

Mono-addition synthesis of polystyrene-fullerene (C_{60}) conjugates by thiol-ene chemistry. **B. Iskin**, G. Yilmaz, Y. Yagci

Synthesis and cationic ring-opening polymerization of novel 1,3-dehydroadamantanes. **S. Inomata**, Y. Harada, Y. Nakamura, T. Ishizone

Preparation, electrical and thermal properties of processable conducting copolymers of polyaniline and poly(2-bromoaniline). **U. S. Waware**

Characterization of the reaction occuring between hydroxylated polydimethylsiloxanes and $Ti(OBu)_4$. **L. Autin-Comaills**, P. Cassagnau, A. Seggio, V. Monteil, R. Spitz

Morphologies of precise acid- and ion-containing copolymers. **K. I. Winey**

Surface morphology study of biaxially oriented polypropylene, poly(methyl methacrylate) and polyvinyl chloride after low-pressure nitrogen DC plasma treatment. **S. Pilehvar**, P. Kaveh, H. Mortazavi, M. Ghoranneviss, F. Amanizadeh, A. Hasanzadeh

Production of light weight automobile spare parts. **A. H. Elalem**, M. A. aLSHARIF, R. H. Belhaj

Solid-phase synthesis of ammonium ionenes. **M. T. Hunley**, K. L. Beers

Effect of blending on thermal behavior of bismaleimide and cardanol based bisbenzoxazine monomer. **S. N K**, J. Bijwe, I. K. Varma

Perfluorinated amphipolar polymers at interfaces. **M. Klapper**, T. Schuster, C. Geidel, D. Vollmer, L. Mammen, K. Müllen, F. E. Golling

Jute fiber /chemically modified polypropylene composites with in-situ fiber/matrix interfacial adhesion. **S. Palsule**, A. A. Singh, P. M. Lakra

Hydrophilization of silicone-urea copolymer surfaces. S. Bilgin, M. Isik, E. Yilgor, **I. Yilgor**

Thiol-functionalized poly(ethylene glycol)s. **A. Southan**, C. Schuh, G. Tovar

Coating SiC films on styrene acrilonitrile and polystyrene surfaces by magnetron sputterin. **H. Atakul**, D. Asureciler, M. Akay

Investigation on the mechanism of inverse emulsion polymerization of acrylamide using redox initiators by working at critical micelle concentration (CMC) of emulsifier. **Z. Abdollahi**

Pectin and polygalacturonic acid: Their model surfaces and interactions with cellulose and xyloglucan. **X. Zhang**, A. R. Esker

Influence of chain-length dependence of termination on kinetics of free radical styrene/divinylbenzene copolymerization. **A. N. Nikitin**, M. Wulkow, C. Schütte

Different morphologies and particle sizes distribution of different monomers solubility in water under ultrasonic irradiation. **M. A. Bahattab**

Miscibility in molecular composites of poly-p-phenylene-terephthalamide (PPTA) / polyetheretherketone (PEEK). **S. Palsule**, A. Baijal

General strategy for controlled formation of hydrogels at nano-, micro- and macro- scales. **D. Wu**, J. Zhang

Breath figures and coffee-ring effect: Towards unprecented hierarchical ordered surfaces. **J. Rodriguez-Hernandez**, A. de Leon, A. del Campo, M. Fernandez-Garcia, A. Munoz-Bonilla

Solid-supported enzyme catalyst models for ring-opening polymerization. **S. V. Orski**, S. Kundu, R. Gross, K. L. Beers

Thiolated and PEGylated nanoparticles for applications in mucosal drug delivery. **V. Khutoryanskiy**, G. Irmukhametova, G. Mun

Stimuli-responsiveness of polyamidoamine (PAMAM) dendrimers adsorbed on silica substrates. **M. Porus**

Spontaneous wrinkling type patterns in azlactone based functional polymer thin films. **M. Ramanathan**, B. S. Lokitz, J. M. Messman, M. S. Kilbey

Synthesis of pegylated silica nanoparticles for biomedical applications. **K. Natte**, G. Orts-Gil, W. Österle, J. Friedrich

Novel functional macroporous supports: From preparation to application. **A. Lamprou**, B. de Neuville, M. Soos, G. Storti, M. Morbidelli

Polyurethane adhesive system from castor oil modified by a transesterification reaction. **M. F. Valero**

Transamidation of polyamide-6,6 in the solid state. **A. Jeyakumar**

Dip-coating regimes observed with supramolecular diblock copolymer thin films. **S. Roland**, C. Pellerin, R. E. Prud'homme, C. G. Bazuin

In-situ polycondensation induced self-assembly micelles as a versatile particulate emulsifier. **C. Yi**

Hydrated zinc chloride, a potential solvent for cellulose. **S. Sen**, J. D. Martin, D. A. Argyropoulos

Comparative study of maleated and glycidyl methacrylate functionalized terpolymers ascompatibilizers for LDPE-wood flour composites. **E. Bayramli**, Y. Altun, M. Doğan

Functionalization of titanium, nano-diamond and graphene surfaces with macromolecules prepared from biomimetic anchors. P. Woisel, C. Zobrist, D. Fournier, C. Detrembleur, R. Boukherroub, S. Szunerits, **L. Sambe**

Studies of degradation and hydration behaviour of triblock copolymers. **F. Azemar**

Ionically conductive polymers incorporating imidazolium moieties. **H. W. Gibson**, M. Lee, A. Mittal, D. V. Schoonover, T. L. Price, A. Murugan, U. Choi, D. Salas-de la Cruz, R. H. Colby, K. I. Winey

Self-assembly of amphiphilic hexaphenylbenzene. **K. Wunderlich**, M. Klapper, K. Müllen

Effect of surfactant concentration on the mechanical properties of hydrophobically modified polyacrylamide hydrogels. **A. Argun**, D. C. Tuncaboylu, O. Okay

Hardwood/grafted polypropylene composites with in-situ interfacial adhesion generated by chemical modification of matrix. **S. Palsule**, P. M. Lakra, A. A. Singh

THURSDAY MORNING

Virginia Tech
Torgersen 1050

Symposium: Commercial Frontiers

K. Haider, *Organizer*

10:30 Lithium ion battery and polymer materials. **A. Yoshino**

11:10 Layered inorganic oxide stabilized conducting polyaniline for electrode material of supercapacitor. **X. Wang**, S. Zhou, H. Zhang, J. Li, F. Wang

11:50 Rapid scalable electrostatic assembly for electrochemical energy. S. Kim, **N. Hyder**, K. Saetia, Y. Shao-Horn, P. T. Hammond

Symposium: Complex Macromolecular Systems I (McBryde 113)

L. Leibler, T. Lodge, *Organizers*

10:30 Water-soluble polyelectrolyte-surfactant complexes with crystalline cores. M. Uchman, M. Štěpánek, S. Prévost, M. Gradzielski, B. Angelov, **K. Prochazka**

11:00 CO_2-switchable block copolymer self-assembly. D. Han, B. Yan, O. Boissiere, **Y. Zhao**

11:30 MIPSILP: Polymers molecularly imprinted with ionic liquids as novel carrier systems for supported ionic liquid phase catalysis. W. Fuerst, **O. Brueggemann**

11:50 Ion transport and storage in ionic electroactive polymer actuators. **Q. Zhang**, Y. Liu, J. Lin, M. Lin, M. Ghaffari, R. Zhao, C. Lu, R. H. Colby, N. Winograd, J. R. Heflin, D. Wang, B. L. Wardle, H. Cebeci, R. G. de Villoria

Symposium: Complex Macromolecular Systems II (Holden 114)

10:30 Self-folding of single polymer chains with Cucurbit[8]uril in water. **J. del Barrio**, E. A. Appel, J. Dyson, O. A. Scherman

10:50 Self-assembly of amphiphilic glycopolymers into honeycomb structured-polymer films: Influence of polymer microstructure. **P. Escalé**, L. Rubatat, M. H. Stenzel, M. Save, L. Billon

11:10 Chemotactic polymersomes. **S. Nyberg**, D. Cecchin, L. Ruiz Perez, G. Battaglia

11:30 Phase behavior of pure pluronic block copolymers. **H. Park**, C. Y. Ryu

11:50 Self-assembled conductive network composites in ionic liquid polymeric electromechanical actuators. **J. R. Heflin**, R. Montazami, D. Wang

Symposium: Energy, Optics, and Optoelectronics (ICTAS 310)

S. Cheng, *Organizer*
I. Samuel, L. Wang, Q. Pei, *Presiding*

10:30 Design concepts on conjugated polymers for highly efficient opto-electronic devices. **S. Chen**

11:00 Formation of stable PIN junction in polymer thin films: Mechanism, materials, and stretchable light emitting diodes. **Q. Pei**

11:30 Poly(p-phenylene vinylenes): Impact of constitutional defects on the performance of light-emitting devices. **N. Vilbrandt**, M. Rehahn

11:50 Thermally cross-linkable fluorene-bridged triple-triphenylamines with terminal vinyl groups to enhance electroluminescence of MEH-PPV: Synthesis, curing and optoelectronic properties. **C. Wu**, Y. Yang, S. Fang, Y. Chen

Symposium: Macromolecules and Nanotechnology I (McBryde 126)

P. Hammond, *Organizer*

10:30 Stimuli-responsive mechanically dynamic cellulose whisker nanocomposites. **S. J. Rowan**

11:00 Stimuli-responsive nanostructures from aqueous assembly of rod amphiphiles. **M. Lee**

11:30 Advanced biomaterials and bio-nano conjugates from biologically inspired protein polymer: Responsiveness of engineered resilin-mimetic protens. **N. K. Dutta**, R. K. Balu, M. Y. Truong, N. Roy Choudhury, C. M. Elvin, A. J. Hill

11:50 Hierarchical assembly of isodiameteric polymeric micro/nanofibers in aligned configurations using STEP technique. **J. Wang**, A. Nain

Symposium: Macromolecules and Nanotechnology II (McBryde 129)

P. Hammond, *Organizer*

10:30 Metal oxide/polymer hybrid nanoparticles with versatile functionality prepared by controlled surface crystallization. **V. Fischer**, K. Landfester, R. Munoz-Espi, I. Lieberwirth, G. Jakob

10:50 Using nanosilica to finely tune polyamide 6/polypropylene blends morphology and properties. **L. Bonnaud**, F. Laoutid, P. Dubois

11:10 Smart hybrid latexes as binders for paints with improved chemical resistance. **S. Piçarra**, J. Martinho, J. Farinha

11:30 Diamine-based benzoxazine dimers molecular assembly: Will molecular interaction under different concentrations induce different morphologies? **P. Tanphibal**, S. Chirachanchai

11:50 Effect of reaction conditions on the synthesis of macrocyclic amide compounds and a study of their complexation behavior using ^{1}H NMR. **H. F. SLEEM**

Symposium: Macromolecules in Biotechnology and Medicine I (Torgersen 3100)

B. Ratner, *Organizer*

10:30 Plastic viruses. **G. Battaglia**

11:00 Metal-chelating polymers for multiplexed immunoassays and for radioimmunotherapy. **M. A. Winnik**, D. Majonis, N. Illy, O. Ornatsky, P. Liu, Y. Lu, M. Nitz, A. J. Boyle, R. M. Reilly

11:30 Signaling gas delivery from supramolecular polymers. **J. B. Matson**, M. J. Webber, B. Weber, V. K. Tamboli, S. I. Stupp

11:50 Embedded enzymatic biomaterial degradation: Solution for tunable lifetime biomaterials. **M. Ganesh**, R. Gross

Symposium: Macromolecules in Biotechnology and Medicine II (Torgersen 1040)

10:30 Self-assembly of bionanoparticles for biomedical application. **Q. Wang**

11:00 Construction of giant glycopolymer vesicles. **A. M. Eissa**, N. R. Cameron

11:30 Effect of surface wetability and roughness on protein adsorption for castor oil/polyetylene glycol-based polyurethane surfaces. **F. Guner**

11:50 Multiblock copolymers of the biodegradable polyesters via simple amidation reactions. Z. Akkirman, **B. Hazer**

Symposium: Modern Methods of Characterization (McBryde 332)

Advances in Scattering

K. Beers, *Organizer*

10:30 Structure and dynamics of polymers by various quantum beams. **T. Kanaya**

11:05 Using copolymers to control the formation and stability of vesicles-A stopped-flow SANS/SAXS study. K. Bressel, S. Prevost, P. Heunemann, I. Grillo, J. Gummel, T. Narayanan, **M. Gradzielski**

11:40 Characterization of polymer micelles in copolymer solutions by scattering techniques. **T. Sato**

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications I (McBryde 100)

B. Freeman, *Organizer*

10:30 Protic ionic liquids as novel coagulating solvents for regenerated silk fibroin. **N. Byrne**, X. Wang

11:00 Aluminum complexes for the living and immortal ring-opening polymerization of rac-β-butyrolactone, rac-lactide and ε-caprolactone. **E. D. Cross**, M. P. Shaver

11:30 Kinetic study of the production of poly (3-hydroxybutyrate) from jatropha oil by Cupriavidus necator H16. **D. Reddy prasad**, A. Fatima, M. Rahman Khan, H. bt Abdullah, R. Yunus

11:50 Development of waste cotton fabrics (WCF) reinforced composites. M. S. Bodur, **M. Bakkal**, M. Savas, O. B. Berkalp

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications II (Randolph 331)

B. Freeman, *Organizer*

10:30 Nanocomposite membranes for liquid separations: Sustainable water purification and bio-alcohol recovery. **M. Lind**

11:00 Removal of Cu^{+2} ions from aqueous solutions using crosslinked Polyacrylamide (PAA) hydrogels. Z. Boyuneğmez, &. Kaya, F. Tümsek, M. Şölener, **O. S. Kabasakal**

11:30 Surface modification of electrospun cellulose acetate nanofibers via RAFT polymerization. **S. Demirci**, A. Celebioglu, T. Uyar

11:50 Synthesis of multifunctional superabsorbent hydrogel poly(acrylic acid/acrylamide/sodium humate) for the removal of Cu^{2+} ions and methylene blue dye. **R. singhal**

Symposium: Polymer Physics (Torgersen 1030)

D. Vlassopoulos, R. Colby, *Organizers*

10:30 Cavitation in nanocomposites probed by real time small angle x-ray scattering (SAXS). H. Zhang, A. K. Scholz, A. Hexemer, H. R. Brown, F. Vion-Loisel, E. J. Kramer, **C. Creton**

11:00 Cavitation rheology of polymer networks: Living and not. **A. J. Crosby**

11:30 Study on complex phase separation behavior of the ultra-high molecular weight polyethylene/liquid paraffin system. S. Liu, **C. Zhou**, W. Yu

Symposium: Recent Developments in Synthesis I (Torgersen 2150)

A. Mueller, C. Hawker, *Organizers*

10:30 Mechanistic transformation of active species during vinyl polymerizations using dormant C–S covalent bond. **K. Satoh**, M. Kamigaito

11:00 Poly(styrene-block-vinyl acetate) synthesized with a single RAFT agent with no "switching". L. A. Dayter, K. A. Murphy, **D. A. Shipp**

11:30 Iron-Mediated AGET ATRP for water-soluble poly(ethylene glycol) monomethyl ether methacrylate. **Z. Cheng**, W. He, J. Miao, L. Zhang, X. Zhu

11:50 New group 4 metal anilidopyridylpyrrolide complexes as olefin polymerization catalysts: A further level of complexity for the elusive active species of pyridylamido catalyts. G. Li, M. Lamberti, A. Macchioni, C. Zuccaccia, **C. Pellecchia**

Symposium: Recent Developments in Synthesis II (Torgersen 1020)

C. Hawker, *Organizer*

10:30 Lifting off polymer brushes: From surface coatings to nanoparticles. **C. Ohm**, C. K. Ober

11:00 Regio- and stereoregular polymers produced by ROMP of 3-substituted cyclooctenes. **M. A. Hillmyer**

11:30 Engineering polymers based on 1,1-diphenylethylene derivatives: Polymer substrates for membrane development. **G. J. Summers**, G. M. Kasiama, C. A. Summers

11:50 Anionic polymerization of 2-phenyl[3]dendralene and 2-(4-methoxyphenyl)[3]dendralene. **K. Takenaka**, H. Takeshita, M. Miya, T. Shiomi

Symposium: Surfaces and Interfaces (Torgersen 1060)

T. Russell, *Organizer*

10:30 Capsules from films and films with capsules for controlled and remote release. **H. Moehwald**

11:00 Biomimetic water transport surface inspired by wharf roach, ligia exotica. **M. Shimomura**, T. Hariyama

11:30 Writing with enzymes: Creating well-defined patterns and holes on biomaterials. **M. Ganesh**, R. Gross, M. Rafailovic

11:50 Evaluation of ROMP-based zwitterionic surfaces for nonfouling applications. **K. A. Gibney**, S. Colak, G. N. Tew

THURSDAY AFTERNOON

Symposium: Complex Macromolecular Systems I (McBryde 113)

L. Leibler, T. Lodge, *Organizers*

1:45 Morphology and conductivity of ionic liquid containing block copolymers under water-free conditions. **M. Park**, S. Kim, J. Hong

2:15 Ionomer design principles for ion-conducting energy materials. **R. H. Colby**, M. J. Janik, W. Liu, H. Shiau

2:35 Correlating morphology and ion transport in polymerized ionic liquids. **K. I. Winey**

3:05 Polymers in ionic liquids: Dawn of neoteric solvents and innovative materials. **M. Watanabe**

3:35 Break.

3:50 Structure-property correlations of polymerized ionic liquids for electro-active membranes. **T. E. Long**, M. H. Allen, S. T. Hemp, T. Wu, R. Gao

4:10 Supramolecular chemistry applied to polymers. **H. W. Gibson**, M. Lee, Z. Niu, T. L. Price, Jr., D. V. Schoonover, M. A. Rouser, C. Slebodnick

4:30 Polymeric ionic liquids: Broadening the properties and applications of polyelectrolytes. **D. Mecerreyes Molero**

5:00 Thermo-reversible gelation based on self-assmbly of triblock copolymers in an ionic liquid. **Y. Kitazawa**, T. Ueki, S. Imaizumi, L. McIntosh, T. P. Lodge, M. Watanabe

5:20 Ionic liquid polymers of ionic liquids. H. Gu, D. Chojnowski, **J. Texter**

5:40 Ion tranport in polymerized ionic liquid block and random copolymers. Y. Ye, J. Choi, T. Wang, K. I. Winey, **Y. A. Elabd**

Symposium: Complex Macromolecular Systems II (Holden 114)

1:45 Morphological transitions and toroidal micelles from a ABC triblock copolymer containing a liquid crystalline block. **X. Li**, G. Liu

2:05 Temperature controlled macromolecular self-assembly of biocompatible pH responsive copolymer PMPC-b-PDPA. **R. T. Pearson**, N. J. Warren, S. P. Armes, G. Battaglia

2:25 Interaction of double hydrophilic block polyelectrolytes with oppositely charged ionic surfactants in aqueous solutions: Differences in co-assembly behavior. **M. Stepanek**, M. Uchman, J. Hajduova, J. Skvarla, K. Prochazka, B. Angelov, M. Slouf, G. Mountrichas, C. Mantzaridis, S. Pispas

2:45 Preparation of supramolecular diblock copolymers via ionic interactions. **L. Zhang**, R. F. Storey, K. A. Cavicchi, R. A. Weiss

3:05 Multiphase and multisacle structures of regioregular poly(3-hexylthiophene) in THF solution. **H. Cheng**, C. C. Han

3:35 Break.

3:50 Nanodomains on bulk polymers: Novel hybrid surface modification characterized by wetting dynamics and morphology. **S. S. Nair**, D. B. Henke, S. Chakrabarty, K. J. Wynne

4:10 Network constrained surface phase seperation. **C. Wang**, W. Zhang, K. J. Wynne

4:30 Polycarbonate copolymers with enhanced thermal performance. **R. H. Lambeth**, A. J. Hsieh

4:50 Probing the structure-property relationship in hydroxyl-functionalized polypropylenes. **S. Gupta**, T. M. Chung, R. A. Weiss

5:10 Probing polymer chain scission with mechanically induced chemiluminescence. **Y. Chen**, R. Jakobs, R. Sijbesma

5:30 Closed cell poly (oxymethylene) foam. **N. Mantaranon**, S. Chirachanchai, D. Sunaga

5:50 Simulation of reacting polymer melts by dissipative particle dynamics: New insights into microstructure formation. **A. V. Berezkin**, D. V. Guseva, Y. V. Kudryavtsev

Symposium: Macromolecules and Nanotechnology I (McBryde 126)

P. Hammond, *Organizer*

1:45 Multicompartment/multicomponent micelles with block copolymer blending through kinetic control of solution assembly. **D. Pochan**

2:15 Preparation of double-hydrophilic block copolymer architectures through a supramolecular handcuff binding motif. **U. Rauwald**, X. Loh, J. Del Barrio, T. Lee, J. M. Zayed, O. A. Scherman

2:35 One-step multipurpose surface functionalization by adhesive catecholamine. **H. Lee**

3:05 Mechanical tuning in bio-inspired polymer nanocomposites. **L. T. Korley**, D. A. Stone, N. D. Wanasekara, J. Johnson, E. Stachew, B. Yavitt

3:35 Break.

3:50 Towards supramolecular light-responsive thermoplastic elastomers. **X. Wang**, Y. Zhao, C. Bazuin

4:10 Structural changes induced by temperature on liquid crystalline polymer vesicles. **S. Hocine**, A. Brûlet, L. Jia, M. Rager, J. Yang, A. Di-Cicco, M. Li

4:30 Macromolecular scaffolding of protein cages. **J. Cornelissen**

5:00 Structural changes in liquid crystal polymer vesicles induced by external stimuli: Temperature change, magnetic field or UV irradiation. **A. BRULET**, S. Hocine, M. Li, L. Jia

5:20 Maximizing signal transduction within macromolecules: Large and efficient conformational changes of photoresponsive foldamers. **Z. Yu**, S. Hecht

5:40 Solution self-assembly and responsiveness in polypeptide-based triblock and star copolymers. J. G. Ray, A. J. Johnson, J. T. Ly, S. S. Naik, C. Easterling, **D. A. Savin**

Symposium: Macromolecules in Biotechnology and Medicine I (Torgersen 3100)

B. Ratner, *Organizer*

1:45 Multifunctional polymersomes in synthetic biology. **J. Gaitzsch**, D. Appelhans, P. Schwille, G. Battaglia, B. Voit

2:15 Mixed polymer brush biointerface for controlling adhesion and differentiation of cells. **K. Yancey**

2:35 Immunosensor based on SERS active polymer-encapsulated nanotags. **N. Guarrotxena**

3:05 Development of easily processable polymer hydrogels for biomedical applications. **C. Sammon**, V. Boyes, C. Le Maitre, S. Sabnis, B. Barthrop, J. Foulkes

3:35 Break.

3:50 Grafting polymers from bacterial cellulose via atom transfer radical polymerization. **A. M. Barros-Timmons**, P. S. Lacerda, C. S. Freire, A. J. Silvestre

4:10 Effect of the monomer ratio on the prednisone adsorption/desorption kinetics in PLGA prepared by step grow polymerization. **C. P. Rueda**, M. d. Corea, E. G. Palacios, J. I. Chairez

4:30 Bio-environment sensitive polymer nano-assemblies for intracellular drug release. **X. Shuai**

5:00 Rapid hemostat and sustained antibiotic release from multilayer films for wound dressings. **B. B. Hsu**, F. R. Jensen, P. T. Hammond

5:20 Fabrication of bioabsorbable surgical suture via electrospinning process. F. Haghighat, **S. Hosseini**

5:40 Micelles based on Gold-Glycopolymer Complexes as a macromolecular version of auranofin. **M. Stenzel**, S. Perason

Symposium: Macromolecules in Biotechnology and Medicine II (Torgersen 1040)

1:45 Role of aligned polymer fibers in tissue engineering. **K. Sheets**, A. Nain

2:15 Microwave effects on water-soluble polymers in aqueous solutions. **V. Khutoryanskiy**, J. Cook

2:35 pH-Sensitive polymer-modified liposomes as an antigen delivery system for cancer immunotherapy. **E. Yuba**, A. Harada, Y. Sakanishi, S. Watarai, K. Kono

3:05 Structure-activity relationship of guanidine-containing ROMP-polymers for gene delivery. **F. Sgolastra**, K. Zhang, B. A. Osborne, G. N. Tew

3:35 Break.

3:50 Synthesis, characterization and shape memory properties of poly(ethylene glycol) and castor oil based polyurethanes. B. Adsay, **D. Dalgakıran**, S. F. Güner

4:10 In vitro degradation of porous PLA/QDs scaffolds. **X. Gong**, C. Tang, W. Li, G. Zhang, X. Wang, J. Jiang, J. Liu

4:30 Novel self-catalyzed degradable cationic polymer for siRNA delivery. **N. Truong Phuoc**, Z. Jia, M. Burgess, E. Payne, N. McMillan, M. J. Monteiro

5:00 Blackberry-like particles assembled from fluorescent-labeled quaternized amphiphilic chitosan: Preparation and their potential for bioimaging. K. Taboonpong, T. Vilaivan, **V. P. Hoven**

5:20 Phosphonium-based block copolymers as gene delivery. **A. E. Smith**, S. T. Hemp, M. M. Allen, Jr., J. M. Bryson, T. E. Long

5:40 Synthesis of macromolecules with defined chirality and their strereoslective enzymatic modification. **B. Yeniad**, O. N. Koklukaya, H. Naik, R. Amir, C. E. Koning, C. J. Hawker, A. Heise

Symposium: Modern Methods of Characterization (McBryde 332)

Advances in Scattering

K. Beers, *Organizer*

1:45 Molecular dynamics and neutron scattering study of the dependence of polyelectrolyte dendrimer conformation on counterion behavior. **B. Wu**, T. Egami, X. Li, Y. Liu, Y. Wang, C. Do, L. Porcar, K. Hong, L. Liu, G. Smith, S. Smith, W. Chen

2:20 Grazing incidence scattering studies of thin films of molten polymers and nanoparticles. **S. Sinha**

Symposium: Surfaces and Interfaces (Torgersen 1060)

T. Russell, *Organizer*

1:45 Azobenzene polymer coatings for solar energy harvesting and reversible surface photo-physics. **C. Barrett**, Z. Mahimwalla, A. Goulet-Hanssens, T. Singleton

2:15 Facile preparation of superhydrophobic polymer surfaces. **I. Yilgor**, S. Bilgin, M. Isik, E. Yilgor

2:35 Bio-inspired, smart, multifunctional interfacial materials. **L. Jiang**

3:05 New methods for the generation of Surface-attached polymer networks – From multilayers to bioengineered surfaces. **J. Rühe**

3:35 Break.

3:50 Stimuli responsive plating of graphene fom water. **J. Texter**, D. Ager

4:10 Investigating post-polymerization modification of thiol-clickable polymer brushes via neutron reflectivity. **D. L. Patton**, R. M. Hensarling, W. Guo, E. A. Hoff, A. P. LeBlanc

4:30 Directed assemblies of block copolymer-based supramolecules toward responsive nanomaterials. **T. Xu**

5:00 RAFT-mediated polymerization of 2-(2-methoxyethoxy)ethyl methacrylate from self-assembled monolayers on silicon substrate. **T. Caykara**, A. Zengin

5:20 Intumescent multilayer thin films as environmentally-friendly flame retardant. **J. C. Grunlan**

5:40 Functional surfaces derived from reactive polymers poly(glycidyl methacrylate) and poly(vinyldimethylazlactone). **J. M. Messman**, B. S. Lokitz, J. Hinestrosa, E. Soto-Cantu, J. F. Ankner, S. Kilbey, II

Symposium: Commercial Frontiers (Torgersen 1050)

K. Haider, *Organizer*

1:45 Plexcore® OC: Aqueous and non-aqueous solution processed HILs for organic electronics applications. **C. T. Brown**, N. Chopra, V. Seshadri, J. Wang, J. Muehlbauer, R. Swisher, B. Woodworth, S. Li, M. Mathai, C. Grenier, E. Sheina, C. McGuiness

2:25 Synthesis, self-assembly, and dielectric properties of oligoaniline-based block copolymer nanodielectric materials. **C. G. Hardy**, D. Gonzalez-Delozier, M. Islam, H. J. Ploehn, C. Tang

3:05 Self-assembling conductive polymer-metal networks and their use in lightning strike protection. **T. D. Fornes**, S. B. Carruthers, S. G. Gaynor

3:30 Break.

3:45 Turning an unexpected discovery into a polymer/clay aerogel business. **D. A. Schiraldi**

4:25 Polymer nanocomposites with cellulose nanocrystals. **C. Weder**

5:05 Transparent blends of polycarbonate and polymethylmethacrylate. **J. Kamps**, R. l'Abee, T. Hoeks

5:30 Study of the barrier properties of new packaging with recycled PET and oxygen scavengers. **C. Lixon Buquet**, S. Marais

Symposium: Energy, Optics, and Optoelectronics (ICTAS 310)

S. Cheng, *Organizer*

1:45 Ring fusion and heteroatom effects in low band gap conjugated polymers for OFET and OPV applications. **M. Heeny.**

2:15 A polymeric approach to understanding complicated solid-state interactions in mechanochromic luminescence materials. X. Sun, X. Zhang, X. Li, T. Xie, **G. Zhang**

2:35 Organic semiconductors for light-emission, solar cells and laser sensing. I. A. Wright, A. L. Kanibolotsky, S. A. Thomson, J. Cameron, T. Tuttle, S. J. Coles, P. J. Skabara, C. T. Howells, Y. Wang, S. Gambino, **I. D. Samuel**

3:05 Conjugated polymers as light harvesting complexes for two-photon applications. **Q. Xu**

3:35 Break.

3:50 Nonreversible electrochromatic graphene/polydiacetylene composites with adjustable critical current. W. Zhang, H. Xu, Y. Chen, **L. Fan**

4:10 Triarylamine-enchained fluoropolymers: Synthesis and characterization. D. K. Dei, **B. R. Lund**, J. Wu, B. Sharma, D. W. Smith Jr.

4:30 Phosphorescent dendrimers and polymers for solution processed PLED. **L. Wang**

5:00 Stilbene-containing partially aromatic liquid crystalline polyesters for electronic applications. **A. M. Nelson**, T. E. Long

5:20 Novel biaxially extended octithiophene-vinylene copolymer for highly environmental stable optoelectronic device applications. **H. Wu**, C. Lu, W. Lee, C. Lin, Y. Chiu, W. Chen

5:40 Combination of molecular, morphological and interfacial engineering to achieve highly efficient and stable plastic solar cells. C. Chang, S. Hung, C. Hsu, **Y. Cheng**

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications I (McBryde 100)

B. Freeman, *Organizer*

1:45 Bleached sugarcane bagasse cellulose as reinforcement in polypropylene composites: A preliminary study. **P. C. Mileo**, L. C. Rodrigues, A. R. Gonçalves

2:15 In-vitro degradation of modified starch-blended thermoplastic polyurethane. **M. F. Valero**

2:35 Metal-ligand containing polymers. **G. Tew**

3:05 Development of novel lignin polyurethane thermoplastics. **T. Saito**, M. A. Hunt, J. H. Perkins, A. K. Naskar

3:35 Break.

3:50 Biohybrid materials synthesized via surface-initiated controlled radical polymerization of functional monomers from renewable wood fibers. **M. Save**, L. Billon

4:10 Development of a novel bioplastic: Biotransformation and polycondensation of ω-hydroxyl fatty acids. **F. Liu**, J. Cai, W. Xie, R. Gross

4:30 Polyionic liquids derived from new 4-vinylimidazolium monomers. **T. W. Smith**, M. Zhao, F. Yang, D. Smith, P. Cebe

5:00 Efficient enzymatic route to unsaturated poly(glycerol-co-oleic diacid) with linoleic acid side chains. **Y. Zhang**, S. Spinella, W. Xie, J. Cai, Y. Yang, Y. Wang, R. Gross

5:20 Design of cyclodextrin-based photopolymers with enhanced molecular recognition properties: A template-free high-throughput approach. **P. Xiao**, T. Hettich, P. F. Corvini, Y. Dudal, G. Schlotterbeck, P. Shahgaldian

5:40 Precision radical polymerization of renewable vinyl monomers. **M. Kamigaito**, K. Satoh

Symposium: Polymer and Polymer-Based Membranes for Energy and Environmental Applications II (Randolph 331)

B. Freeman, *Organizer*

1:45 Synthesis of ruthenium-cation-based anion exchange membranes by ring-opening metathesis polymerization. **Y. Zha**, M. L. Disabb-Miller, Z. D. Johnson, M. A. Hickner, G. N. Tew

2:15 Anion exchange membrane synthesized by radiation-induced RAFT-mediated graft polymerization for vanadium redox flow battery. Y. Wang, J. Peng, J. Yuan, J. Qiang, **M. Zhai**

2:35 Effect of liquid crystalline ionomers on the conductivity of PMMA-PEO-$LiClO_4$ blend polymer electrolytes. **Z. Ailing**, N. Guizhou, L. Sanxi, W. song, L. zhenqian

3:05 Polyaniline: Electrochemical transport. **D. Das**, A. Datta, A. Q. Contractor

3:35 Break.

3:50 Investigation on polymer blend electrolytes for its application in EDLCs using coconut shell based activated charcoal. **A. Jain**, S. K. Tripathi, A. Gupta, M. Mishra

4:10 Electrochemical activity and biosensitivity of free-standing electrospun carbon nanofiber webs. **X. Mao**, F. Simeon, G. C. Rutledge, A. Hatton

4:30 Studies on nano gel polymer electrolyte based EDLCs. **S. K. Tripathi**, A. Jain, A. Gupta, M. Mishra

5:00 Correlating Raman spectroscopy characterization of organic photovoltaic active layers to polymer crystallinity. **L. Thompson**, B. Mandrell, H. Chen, J. P. Camden, M. D. Dadmun

5:20 Covalent triazine-based frameworks - Cooler ways to solid-state gas storage materials. **M. J. Bojdys**, S. Ren, A. I. Cooper

5:40 Study on conjugated polymer/Tio_2 composites used as photocatalyst of degrading organic pollutants. **Y. Dan**

Symposium: Polymer Physics (Torgersen 1030)

D. Vlassopoulos, R. Colby, *Organizers*

1:45 Preparation and structural characterization of high-strength ion gels. K. Fujii, H. Asai, **M. Shibayama**

2:15 Elongational rheology of nipam-based hydrogel. **F. J. Stadler**, T. Friedrich, B. Tieke, C. Bailly

2:35 Long term behaviour of cured PDCPD. Y. Vidavsky,Y. Navon, N.G. Lemcoff, **M. Gottlieb**

3:05 Combined main-chain/side-chain liquid crystalline polymer with main-chain on the basis of "jacketing" effect. **E. Chen**, H. Xie, H. Zhang, Q. Zhou

3:35 Break.

3:50 Lattice - Fluid binary parameters for phase separated mixtures of PCL-PMMA. **C. C. Riccardi**, E. Serrano, W. F. Schroeder

4:10 Synthesis and characterization of processable conducting copolymers of poly(aniline-co-2-fluoroaniline). **U. S. Waware**

4:30 Monitoring the structural evolution of P3HT/PCBM bulk heterojunctions: Competition between crystallinity and miscibility. **M. Dadmun**, H. Chen, S. Hu, H. Zang, B. Hu

5:00 Surface coil effects on sheet polymer morphologies. **M. Han**, E. Sim

5:20 Multiscale simulation of polyurethane network. **A. V. Berezkin**, P. Biedermann

5:40 Molecular dynamics simulation study on the multiphase formation controlled by intersegmental interactions in polyurethanes. **E. Yildirim**, M. Yurtsever

Symposium: Recent Developments in Synthesis I (Torgersen 2150)

1:45 Enzymatic transformation of polymers as precise tool for post-synthetic manipulation. **P. Wilke**, H. G. Börner

2:15 Fixed diradical generation on solid microspheres for surface initiated polymerization. B. Gure, **N. Bicak**

2:35 Lipase catalyzed synthesis of six-membered cyclic carbonates as monomers for production of isocyanate free polymers. **R. Hatti-Kaul**, S. Pyo

2:55 Multicomponent reactions for new polymer synthesis. X. Deng, L. Li, Z. Li, A. Lv, F. Du, **Z. Li**

3:15 Cyclic polymers as a building block. **k. zhang**

3:35 Break.

3:50 One-pot synthesis of branched P(St-co-MAn) copolymers via the mercapto chain-transfer polymerization and their self-assembly micelles applied to disperse carbon nanotubes. **J. Liu**, X. Xiong, X. Liu

4:10 Polymerization of 1,3-pentadiene and copolymerization with ehylene promoted by titanium complexes containing a tetradentate [OSSO]-Type bis(phenolato) ligand. **C. Capacchione**, C. Costabile, D. Saviello, A. Proto

4:30 Synthesis and characterization of dendritic-like polymers based on the convergent assembly of poly(ethylene oxide) blocks onto zinc tetraphenylporphyrin branching point.. **A. Wirotius**, M. Schappacher, A. Deffieux

4:50 Efficient nitrogen-15 enrichment of polycarbodiimides for direct probing of regioregularity. **J. D. DeSousa**, J. F. Reuther, B. M. Novak

5:10 One-pot RAFT-mediated radical emulsion polymerization: A direct way toward self-assembled amphiphilic block copolymers. **W. Zhang**, J. Rieger, F. D'agosto, B. Charleux

5:30 Ambient synthesis of polyaniline in functionalized sulphoic acids in non-aqueous solvent. **K. G. Manjunatha**

Symposium: Recent Developments in Synthesis II (Torgersen 1020)

1:45 Synthesis of precision acid polymers. **K. Wagener**, K. Winey, F. Buitrago, M. Seitz

2:15 Facile access to functional exo-7-oxanorbornenes via thiol-Michael chemistry: Their ring-opening metathesis polymerization and subsequent mechanical properties. **J. A. van Hensbergen**, M. Liu, A. B. Lowe, R. P. Burford

2:35 Titanium alkoxides complexes of aminodiol based ligands for the ring-opening polymerization of cyclic esters and carbonates. D. Dakshinamoorthy, **F. Peruch**

2:55 Synthesis of aliphatic-aromatic poly(ester-carbonate)s without use of phosgene. **G. Rokicki**, T. Brulinski, K. Tomczyk, M. Mazurek, P. G. Parzuchowski

3:15 Tandem Ring-Opening/Ring-Closing Metathesis Polymerization: Extremely Fast Polymerization from Unreactive Functional Groups. **H. Park**, T. Choi

3:35 Break.

3:50 One-pot synthesis of fully π-conjugated polymeric molecular wires via chain-growth Suzuki polymerization and their optoelectronic properties. **E. Elmalem**, W. T. Huck, R. H. Friend

4:10 Thermo- and pH-resposive polyacetylenes bearing betaine moieties. **K. Terada**, M. Minamioka, T. Ando, S. Hirohara, M. Tanihara

4:30 Controlled synthesis of poly(ionic liquid) nanoparticles with highly ordered innerstructure. **J. Yuan**, S. Soll, M. Antonietti

5:00 Design and synthesis of folded polymeric structures. **P. J. Stals**, A. R. Palmans, E. Meijer

5:20 Mechanism of highly selective photocyclicaromatization of cis-cisoidal helical poly-(phenylacetylene)s in membrane state for petit top-down preparation of self-supporting supramolecular polymeric membranes. Y. Zang, Y. Abe, **T. AOKI**

5:40 Synthesis and chiroptical properties of polyacetylenes bearing amino acid moieties at the side chains. **F. Sanda**, S. Kumazawa, K. Takahashi, J. Rodriguez Castanon, N. Onishi, M. Shiotsuki