

# AMERICAN CHEMICAL SOCIETY

**SPRING 2020 NATIONAL MEETING & EXPO** 

MACROMOLECULAR CHEMISTRY: THE SECOND CENTURY

ACS POLY Symposium on

# STRUCTURE TO FUNCTION IN SUPRAMOLECULAR POLYMERS & MATERIALS

Organizers: Roxanne Kieltyka, Pol Besenius, John Matson

supported by









# Wednesday, March 25

# POLY: Introductory Remarks

8:00 AM - 8:05 AM Tubman, Loews Philadelphia

# POLY 554: Supramolecular polymers in robotic soft materials

8:05 AM - 8:30 AM
Tubman, Loews Philadelphia
Authors: Samuel Isaac Stupp

# POLY 555: Anisotropic polymer nanoparticles with controlled dimensions from the morphological transformation of synthetic nucleobase-functionalized nanoparticles

8:30 AM - 8:45 AM Tubman, Loews Philadelphia Authors: Dr. Zan Hua

#### POLY 556: Squaramide-based supramolecular materials: From self-assembly to biological application

8:45 AM - 9:05 AM
Tubman, Loews Philadelphia
Authors: Dr. Roxanne Kieltyka

#### POLY 557: Supramolecular molecular brushes: From structure to bioapplications

9:05 AM - 9:30 AM Tubman, Loews Philadelphia Authors: Sebastien Perrier

# POLY 558: Supramolecular block copolymer synthesis by seeded living polymerization

9:30 AM - 9:55 AM Tubman, Loews Philadelphia Authors: Frank Wuerthner

# POLY 559: Thermoresponsive hydrogel scaffolds from charge-regulated supramolecular copolymerization

9:55 AM - 10:10 AM Tubman, Loews Philadelphia Authors: Mr. Berac Marijan Christian

# POLY: Intermission

10:10 AM - 10:40 AM
Tubman, Loews Philadelphia

# POLY 560: Extracellular mimicking BTA supramolecular synthetic viscoelastic hydrogels for chondrocytes culture

10:40 AM - 10:55 AM Tubman, Loews Philadelphia Authors: Mr. shahzad Hafeez

# POLY 561: Highly tunable, catalyst-free dynamic covalent bonds and their incorporation into networks

10:55 AM - 11:15 AM Tubman, Loews Philadelphia Authors: Neil Dolinski

# POLY 562: Elucidating the interplay between structure and dynamics of functional supramolecular assemblies in water

11:15 AM - 11:35 AM
Tubman, Loews Philadelphia
Authors: Ms. Sandra Schoenmakers

# POLY 563: Controlling dynamic gels

11:35 AM - 12:00 PM Tubman, Loews Philadelphia Authors: Prof. Dave J. Adams

# Wednesday, March 25

# POLY: Introductory Remarks

1:00 PM - 1:05 PM Tubman, Loews Philadelphia

# POLY 607: Stimuli-responsive supramolecular microgels

1:05 PM - 1:25 PM Tubman, Loews Philadelphia Authors: Prof. Andrij Pich

# POLY 608: Grafting by complexation: Bottlebrush polymer based on host-guest interaction

1:25 PM - 1:40 PM Tubman, Loews Philadelphia Authors: Mohammed Alaboalirat

# POLY 609: Chirality in the design of tripeptides that form supramolecular functional hydrogels

1:40 PM - 2:05 PM Tubman, Loews Philadelphia Authors: Prof. Silvia Marchesan

# POLY 610: Supramolecular polymerization of N-annulated perylenes: Pathway complexity and helical organization

2:05 PM - 2:30 PM
Tubman, Loews Philadelphia
Authors: Prof. Luis Sánchez

#### POLY: Intermission

2:30 PM - 3:00 PM
Tubman, Loews Philadelphia

# POLY 611: Competing hydrogen bonding pattern yields thermo-thickening supramolecular polymer

3:00 PM - 3:20 PM
Tubman, Loews Philadelphia
Authors: Laurent Bouteiller

# POLY 612: Dynamic hydrogels via supramolecular crosslinks and slide-rings

3:20 PM - 3:45 PM Tubman, Loews Philadelphia Authors: Matthew Webber

# POLY 613: Next-generation stimuli-responsive materials using sequence-defined redox-responsive polymers

3:45 PM - 4:10 PM
Tubman, Loews Philadelphia
Authors: Prof. Jonathan C Barnes

# POLY 614: Influence of light, acid and metal coordination on hierarchical self-assembly processes

4:10 PM - 4:30 PM
Tubman, Loews Philadelphia
Authors: Prof. Gustavo Fernández

# Thursday, March 26

# POLY: Introductory Remarks

8:00 AM - 8:05 AM

Penn (Loews), Loews Philadelphia

# POLY 660: H-Bonding regulated directional supramolecular assembly and functional biomaterial

8:05 AM - 8:30 AM

Penn (Loews), Loews Philadelphia

Authors: Prof. Suhrit Ghosh

# POLY 661: Self-assembly as a tool for tuning electrochromic materials

8:30 AM - 8:55 AM

Penn (Loews), Loews Philadelphia

Authors: Dr. Emily Draper

# POLY 662: Stimuli-responsive supramolecular polymer networks

8:55 AM - 9:20 AM

Penn (Loews), Loews Philadelphia

Authors: Christoph Weder

# POLY 663: Nucleic acid delivery by thermosensitive polyplexes

9:20 AM - 9:35 AM

Penn (Loews), Loews Philadelphia

Authors: Prof. Tina Vermonden

# POLY 664: Engineered hydrogels from guest-host interactions for biomedical applications

9:35 AM - 10:00 AM

Penn (Loews), Loews Philadelphia

Authors: Jason A Burdick

#### POLY: Intermission

10:00 AM - 10:30 AM

Penn (Loews), Loews Philadelphia

# POLY 665: Role of hydrogen-bonding in supramolecular electronics: Supramolecular chirality, optoelectronic properties and photoconductivity

10:30 AM - 10:55 AM

Penn (Loews), Loews Philadelphia

Authors: Dr. Amparo Ruiz Ruiz Carretero

# POLY 666: Controlling exchange dynamics in supramolecular nanofibers

10:55 AM - 11:20 AM

Penn (Loews), Loews Philadelphia

Authors: Prof. Julia Ortony

# POLY 667: Squaramides as versatile tools for the development of supramolecular polymers

11:20 AM - 11:40 AM

Penn (Loews), Loews Philadelphia

Authors: Dr. Bartolomé Soberats

# POLY 668: Hydrogen-bonding motifs in hybrid hydrogels for selective mechanical interactions

11:40 AM - 12:00 PM

Penn (Loews), Loews Philadelphia

Authors: Mr. Louis Pitet

#### Thursday, March 26

# POLY 721: Benzoyl peroxide mediated aqueous free-radical polymerization of peptide amphiphiles

1:00 PM - 1:15 PM

Penn (Loews), Loews Philadelphia

Authors: Dr. Mark Struble

# POLY 722: Programming supramolecular multivalent interactions for the polymerization of Janus 3D DNA origami

1:15 PM - 1:30 PM

Penn (Loews), Loews Philadelphia

Authors: Mr. Sebastian Lars Löscher

# POLY 723: Effect of concentration on the synthesis of poly[n]catenanes

1:30 PM - 1:45 PM

Penn (Loews), Loews Philadelphia

Authors: Marissa Tranquilli

# POLY 724: Removal of GenX and perfluorinated alkyl substances from water by amine-functionalized covalent organic frameworks

1:45 PM - 2:00 PM

Penn (Loews), Loews Philadelphia

Authors: Ms. Woojung Ji

# POLY 725: Aqueous self-assembly of bottlebrush, star-shaped, and linear amphiphilic block copolymers

2:00 PM - 2:15 PM

Penn (Loews), Loews Philadelphia

Authors: Mei Dong

# POLY 726: Polymorphism in supramolecular polymerization

2:15 PM - 2:30 PM

Penn (Loews), Loews Philadelphia

Authors: Marius Wehner

# POLY 727: Investigating the influence of core-forming block mobility on the micelle: Unimer equilibrium

2:30 PM - 2:45 PM

Penn (Loews), Loews Philadelphia

Authors: Ryan Carrazzone

# POLY 728: Bulk bottlebrush polymers and semi-dilute polyelectrolytes exhibit structural similarities

2:45 PM - 3:00 PM

Penn (Loews), Loews Philadelphia

Authors: Dr. Joel M Sarapas

# POLY: Intermission

3:00 PM - 3:30 PM

Penn (Loews), Loews Philadelphia

# POLY 729: Electric/chemical [3]catenane motor

3:30 PM - 3:45 PM

Penn (Loews), Loews Philadelphia

Authors: Dr. long zhang

# POLY 730: Doubly-charged ABA triblock copolymers: Thermomechanically-robust physical network and hierarchical microstructures

3:45 PM - 4:00 PM

Penn (Loews), Loews Philadelphia

Authors: Xi Chen

# POLY 731: Supramolecular alloying as a facile approach to control crystallinity and morphology in polymer nanostructures

4:00 PM - 4:15 PM

Penn (Loews), Loews Philadelphia

Authors: Eric Bruckner

# POLY 732: Gels via interfacial complexation of peptide amphiphiles and polyelectrolytes

4:15 PM - 4:30 PM

Penn (Loews), Loews Philadelphia

Authors: Thomas Cotey

# POLY 733: Polymer brushes on ureidopyrimidinone-biomaterial surfaces by surface-initiated ATRP

4:30 PM - 4:45 PM

Penn (Loews), Loews Philadelphia

Authors: Ms. Muhabbat I. Komil

# POLY 734: Healable supramoelcular polymers

4:45 PM - 5:00 PM

Penn (Loews), Loews Philadelphia

Authors: Dr. Lewis Hart