

**Undergraduate Research in Polymer Science Symposium
POLY, ACS Spring 2021**

Monday, April 12, 5:00 – 8:00 p.m. PDT

5:00 – 5:20 Compatible conjugated blends: Impact on the morphology and mechanics of flexible electronics

Zachary Ahmad

5:20 – 5:40 Effect of precise control of crosslink density on the thermal, mechanical and conductive properties of crosslinked ionene networks

Alexander Thome

5:40 – 6:00 Using ARGET ATRP to synthesize block copolymers containing PDMAEMA and characterizing smart properties using DLS and UV-Vis

Sorfina Suzali

6:00 – 6:20 Predicting the bandgap of donor-acceptor conjugated polymers

Anna Peterson

6:20 – 6:40 Intermission

6:40 – 7:00 Pre-ceramic hairy nanoparticles: Investigating monomer variations of polycarbosilane-grafted nanoparticles

Christina Thompson

7:00 – 7:20 Simulation-informed rational design of 1D photonic crystals

Clayton Keene

7:20 – 7:40 Stress relaxation through dynamic covalent exchange in polyanhydrides

Rebecca Meacham

7:40 – 8:00 Ambient reactive extrusion-additive manufacturing of thermoplastic polyurethanes

Erich Loewer

Tuesday, April 13, 4:05 – 8:40 p.m.

4:05 – 4:55 CAREER PANEL (via Zoom)

5:00 – 5:20 Photocurable nanocomposites for the use of synthetic cartilage replacements

Alexis Hocken

5:20 – 5:40 Molecular docking simulations to assess the estrogenic activity of lignin-derivable bisphenol A alternatives and their polymerization via additive manufacturing

Alice Amitrano

5:40 – 6:00 Development of resveratrol/cyclodextrin inclusion complex nanofibrous webs for fast-dissolving dietary supplement

Deniz Tekant

6:00 – 6:20 Synthesis and characterization of glycodendrimersomes for bioimaging applications

Patrick Aghadiuno

6:20 – 6:40 Intermission

6:40 – 7:00 Electrohydrodynamic encapsulation of curcumin-cyclodextrin inclusion complexes in chitosan/pectin nanofibrous webs

Antonio Saporito

7:00 – 7:20 Reactivity ratios of RAFT polymerization of tert-butyl acrylate and a thiolactone-functionalized acrylamide

Anne Rolsma

7:20 – 7:40 Influencing polymer solubility with thermally-responsive diels-alder monomers

Greg Bisbjerg

POSTERS

Synthesis, polymerization, and characterization of self-healing thiol-ene networks

Elizabeth Holliday

Cellulose-based, 1,2,3-Triazolium-functionalized Polymerized Ionic Liquids: Thermal Properties, Ionic Conductivities and Morphological Analysis

Rose Miller

Photo controlled polymerization of amphiphilic block copolymer in aqueous solution

Olufemi Olatidoye

Thermochemical Analysis of Polysulfone-Nanodiamond Mixed Matrix Membranes

Kaitlyn Hillery

Analysis of print parameter effects on interlayer adhesion of semi-crystalline polymers processed using fused-filament-fabricated parts

Jocelyn Riet

Imidazolium-Containing Thiol-yne Ionene Networks: Thermal, Mechanical and Conductive Properties

Katelyn Lindenmeyer

Quick evaluation of grafting-from techniques to synthesize salt resistant CNC-polymer hybrids as additives in water based drilling fluids using a scaled-down fluid retention testing device

Ron Volkovinsky

Investigation of structure-property relationships of de novo amyloid peptides and stereospecific glycopolymers for composite glycohydrogels

Taylor Hausman

Modification of Inverse Vulcanized Polymers.

Kai Sluder

Imidazole-Based Blocking Agents for Covalently Adaptable Polyurethane Thermosets

Kimberly Pham

Disulfide cross-linked poly(acrylamide-co-acrylonitrile) microgels: Synthesis, properties, and de-cross-linking kinetics

Ricardo Perez

Mesoscale modeling of nanogel degradation: Effect of crosslink density and particle size

Eric Miller

Sustainable approaches to ring-opening polymerizations and post-polymerization modification

Anna Zeleny

Trials of quantifying polymer transitions

Ginger Brown

Using RAFT polymerization to purify water using metal-binding polymers

Blanch Khouri Sader; Sneha Polam

Evaluation of dispersion conditions on the oxygen barrier properties of polyisobutylene-grafted graphene oxide nanocomposite films

Sarah Landrum

Blending electronic and ionic conductive polymers for use in p-doped organic electrochemical transistors

Sinclair Combs

Donor/Acceptor Interactions of New Fluorene Based Small Molecules with P3HT

Brycelyn Boardman

Fluorescent Bio-Based Films from Chitosan and Fluorene Based Small Molecules

Brycelyn Boardman

Optimizing the synthesis of single-ion conducting polymer electrolytes using graft through and graft to techniques via ring opening metathesis polymerization and click chemistry

Phuc Phan; David Yun; Judson Yancey

Blending of conductive and electrochromic polymers for ITO-free smart labels

Lakshmi Panchumarti

Highly Stretchable, Room Temperature Self-Healing Polymer via Dynamic Resealable Intermolecular Network for Applications in Aerospace and Electronics

John Veracka

Role of length in the ultrasonication of asymmetric polymer topologies

Greg Bisbjerg

Silymarin Complex as a Potential Drug Formulation for Intestinal track Inflammatory Diseases

Amelia Hartnett

3D printed pdms LEGO microfluidic device for drug delivery of anti-cancer therapeutics

Courtne Hanlan

Selective precipitation of toxic metal ions by charged polysulfide p(S-DADM)

Cameron Call

Synthesis of polysulfides using polar monomers to form sulfur-containing hydrogels

Nicole Bliss