

# Spring ACS National Meeting Orlando, Florida

March 30 - April 4, 2019

## PROF Program

# PROF

## Division of Professional Relations

R. Libby, *Program Chair*

### SUNDAY MORNING

#### Wolfrom Award

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

#### Issues Challenging Entrepreneurs & Start-ups

Sponsored by SCHB, Cosponsored by PROF

#### Horton Award

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

#### New Horizons: Early-Career Researchers in Renewable Materials: Symposium in honor of the Kingfa & PhD Student Prize Winners

Sponsored by CELL, Cosponsored by ANYL and PROF

#### Contributions of a Simple Chemist: How Professor Ronald Atlee Hites Changed Environmental Chemistry

Sponsored by ENVR, Cosponsored by PROF<sup>‡</sup>

**SUNDAY AFTERNOON**

Hilton Orlando - Orange G

**Leadership & Inclusive Excellence in STEM: Impact of Teacher-Scholars on Diversity**

Cosponsored by PRES

P. K. Dorhout, *Organizer, Presiding*

**1:30** Introductory Remarks.

**1:35 PROF 1.** Leadership and inclusive excellence in STEM: Impact of teacher-scholars on diversity. **P.K. Dorhout, M. Dennin**

**1:55 PROF 2.** One top-down evidenced-based approach to inclusive excellence in chemistry departments. **R. Hernandez**

**2:15 PROF 3.** Plugging the length of the leaky pipeline: The importance of mentoring and community. **K. Bjorkman**

**2:35 PROF 4.** You belong here: Creating safe spaces for failure. **J.M. Heemstra**

**2:55** Panel Discussion.

**3:25** Concluding Remarks.

**Hudson Award**

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

**Chemical Angel Network: Chemists Investing in Chemical Companies-Invited**

Sponsored by BMGT, Cosponsored by PROF and SCHB<sup>‡</sup>

**Starting a Successful Research Program at a PUI**

Sponsored by YCC, Cosponsored by PROF

**Isabell Award**

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

**Strengthening Your Patent Rights in Light of Recent Federal Circuit Court Decisions**

Sponsored by CHAL, Cosponsored by PROF

**Strengthening Your Patent Rights in Light of Recent Federal Circuit Court Decisions**

Sponsored by CHAL, Cosponsored by PROF

**Gin New Investigator Award**

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

**New Horizons: Early-Career Researchers in Renewable Materials: Symposium in honor of the Kingfa & PhD Student Prize Winners**

Sponsored by CELL, Cosponsored by ANYL and PROF

**SUNDAY EVENING**

**CINF Scholarships for Scientific Excellence: Student Poster Competition**

Sponsored by CINF, Cosponsored by PROF

**MONDAY MORNING**

Hilton Orlando - Orange A

**LGBTQ+ Graduate Student & Postdoctoral Scholar Research Symposium**

Cosponsored by AGFD, ANYL, BIOL, BIOT, CARB, CELL, CHED, CMA, COLL, COMP, ENVR, GEOC, I&EC, MEDI, MPPG, NUCL, ORGN, PHYS, PMSE, POLY, PRES, WCC and YCC

**M. Morris, T. P. Yoon, *Organizers***

**I. M. Blythe, *Presiding***

**9:00** Introductory Remarks.

**9:05 PROF 5.** Blocky bromination of syndiotactic polystyrene via post-polymerization functionalization in the heterogeneous gel state. **K.F. Noble, R.B. Moore**

**9:25 PROF 6.** Design of ultra-robust supramolecular assemblies for engineering applications. **T. Christoff-Tempesta, J. Tian, D. Kim, A. Lew, W. Lindemann, J. Ortony**

**9:45 PROF 7.** Elucidating homeomorphic isomerism in macrobicycles of the pnictogen-series. **A. Ehnbohm, J.E. Kuszynski, L. Perez, M.B. Hall, J.A. Gladysz**

**10:05** Intermission.

**10:15 PROF 8.** Macroscale model for hands-on activities demonstrating transmission electron microscopy. **N.V. Hudson-Smith, M. Cahill, N. Klein, M. Krause, C.L. Haynes**

**10:35 PROF 9.** pH-dependent interaction of phosphate and lithium cobalt oxide nanoparticles: Combined spectroscopic and calorimetric study. **E. Laudadio, P. Ilani-Kashkouli, D. Jones, J.W. Bennett, S.E. Mason, N. Kabengi, R.J. Hamers**

**10:55** Introductory Remarks.

**11:00 PROF 10.** Bridging biological inspiration and materials synthesis: Metal-organic framework artificial photosynthetic arrays. **A. Chakraborty, W. Maza, A.J. Morris**

**Senior Chemists' Career Stories: Chemistry for New Frontiers**

Sponsored by SCHB, Cosponsored by PROF, SCC<sup>‡</sup> and YCC

**A Decade Later: The Death of Sheri Sangji as a Catalyst for a Change in Safety Culture**

Sponsored by CHAS, Cosponsored by CCS and PROF

**The Tenure-Track & Beyond: Academic Career Perspectives from Young Chemists**

Sponsored by YCC, Cosponsored by CHED and PROF

**New Horizons: Early-Career Researchers in Renewable Materials: Symposium in honor of the Kingfa & PhD Student Prize Winners**

Sponsored by CELL, Cosponsored by ANYL and PROF

**2019 Geochemistry Division Medal Symposium in Honor of Everett Shock**

Sponsored by GEOC, Cosponsored by PROF‡

**Excellence in Graduate Polymer Research: Biobased, Degradable & Chain-Exchange Polymers**

Sponsored by POLY, Cosponsored by PRES, PROF‡, SOCED‡ and YCC‡

**MONDAY AFTERNOON**

Hilton Orlando - Orange A

**LGBTQ+ Graduate Student & Postdoctoral Scholar Research Symposium**

Cosponsored by AGFD, ANYL, BIOL, BIOT, CARB, CELL, CHED, CMA, COLL, COMP, ENVR, GEOC, I&amp;EC, MEDI, MPPG, NUCL, ORGN, PHYS, PMSE, POLY, PRES, WCC and YCC

**M. Morris, T. P. Yoon, *Organizers*****E. Laudadio, *Presiding*****1:00** Introductory Remarks.**1:05 PROF 11.** Supporting diversity in the classroom with open-access chemical assessments. **J.R. Silverman****1:25 PROF 12.** Stereoselective synthesis of haemanthamine and related *Amaryllidaceae* alkaloids. **P.D. Parker**, G.A. Edwards, J.G. Pierce**1:45 PROF 13.** Moving towards greener methods of intermolecular carbonyl-olefin metathesis. **I.M. Blythe**, C. Schindler**2:05 PROF 14.** Applying automation to chiral resolutions: High-throughput preferential crystallization enabled by new technology. **R. Chung**, J. Hein**2:25** Intermission.**2:40 PROF 15.** Biosynthesis of the side ring system of nosiheptide. **B. Wang**, J. LaMattina, E. Badding, S.J. Booker**3:00 PROF 16.** Reactions of reactive electrophiles with mitoNEET. D. Arnett, A. Quillin, **M. Konkle****3:20 PROF 17.** Panel discussion: The LGBTQ+ community in chemistry – new frontiers for graduate students and postdoctoral scholars. **M. Morris**, T.P. Yoon**Frank H. Field & Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry**

Sponsored by ANYL, Cosponsored by PROF‡

**Kathryn C. Hach Award for Entrepreneurial Success**

Sponsored by SCHB, Cosponsored by ANYL, BMGT and PROF

**Beyond the Bench: Non-Traditional Careers in Chemistry**

Sponsored by CHAL, Cosponsored by BMGT, PROF and YCC

**Chemistry in Space: Future Directions**

Sponsored by YCC, Cosponsored by AGFD, ANYL, BIOT, BMGT, CHAS, ENVR, FLUO, GEOC, HIST, I&EC, MEDI, POLY and PROF

**New Horizons: Early-Career Researchers in Renewable Materials: Symposium in honor of the Kingfa & PhD Student Prize Winners**

Sponsored by CELL, Cosponsored by ANYL and PROF

**ACS Award for Research at an Undergraduate Institution: Symposium in Honor of Carol A. Parish**

Sponsored by COMP, Cosponsored by PROF

**2019 Geochemistry Division Medal Symposium**

Sponsored by GEOC, Cosponsored by PROF

**Excellence in Graduate Polymer Research: New Structures & Applications**

Sponsored by POLY, Cosponsored by PRES, PROF, SOCED and YCC

**MONDAY EVENING**

Orange County Convention Center  
West Hall C

**Sci-Mix**

**8:00 - 10:00**

**PROF: 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32.** See Tuesday Poster Session Listing.

**TUESDAY MORNING****ACS Award in Chromatography**

Sponsored by ANYL, Cosponsored by PROF‡

**ACS-CEI Award for Incorporation of Sustainability into Chemistry Education**

Sponsored by CHED, Cosponsored by CEI and PROF

**Bridging the (Safety) Gap between Academia & Industry**

Sponsored by PRES, Cosponsored by CA, CCS, CHAS‡, CHED, PROF and YCC

**ACS Award for Computers in Chemical & Pharmaceutical Research in Honor of Arnie Hagler**

Sponsored by COMP, Cosponsored by PROF

**ACS Award for Encouraging Women into Careers in the Chemical Sciences: Symposium in honor of Ruth Baltus**

Sponsored by WCC, Cosponsored by PROF

**Patent Insights for Pharmaceutical Companies**

Sponsored by CHAL, Cosponsored by PROF

**ACS Award for Achievement in Research for the Teaching & Learning of Chemistry**

Sponsored by CHED, Cosponsored by PROF

**ACS Award for Research at an Undergraduate Institution: Symposium in Honor of Carol A. Parish**

Sponsored by COMP, Cosponsored by PROF

**Excellence in Graduate Polymer Research: Approaches to Polymer Synthesis**

Sponsored by POLY, Cosponsored by PRES, PROF, SOCED and YCC

**TUESDAY AFTERNOON**

Orange County Convention Center: Expo Hall

**LGBTQ+ Graduate Student & Postdoctoral Scholar Research Poster Session**

Cosponsored by ENVR, GEOC, I&EC, MEDI, MPPG, NUCL, ORGN, PHYS, PMSE, POLY, WCC and YCC

**M. Morris, T. P. Yoon, *Organizers***

**3:00 - 5:00**

**PROF 18.** Interaction of tumor homing LyP-1 peptide designed as lipid-polymer hybrid nanoparticle with overexpressed cell surface protein p32 using osteosarcoma tumor model. **R. Marasini**, T.D. Nguyen, S. Rayamajhi, S. Aryal

**PROF 19.** Correlation of shear response and temporal stability of supramolecular hydrogels as a function of gelation method. **E. Quigley**, B.L. Nilsson

**PROF 20.** Progress toward the total synthesis of falcatin A. **S.D. Mendoza**, S.E. Reisman

**PROF 21.** Insights into the complex electronic structure of CeB<sub>6</sub>. **J. Mason**, H. Harb, J. Topolski, C. Huizenga, J. Ewigleben, H.P. Hratchian, C. Jarrold

**PROF 22.** Residue specific characterization of proline-rich motif recognition via infrared spectroscopy. **G. Bukowski**, M.C. Thielges

**PROF 23.** Oversaturation of the Carolacton scaffold leads to improved inhibition of *Streptococcus mutans* growth during biofilm growth. **A. Scharnow**, A. Solinski, J. Rosenfeld, A. Fraboni, W. Wuest

**PROF 24.** Development of chemical tools to probe quorum sensing in *Escherichia coli*. **S.A. Early**, M.J. Styles, H.E. Blackwell

**PROF 25.** Assessing the chemical water quality of Haitian waters: A non-targeted assessment of organic contaminants in the developing world. **J. Ulrich**, N. Madani, T. Sabo-Attwood, L. Ferguson

**PROF 26.** How spacial distance affects spin coupling of  $\sigma$ -type aromatic polyradicals. **D. Ding**, H.I. Kenttamaa

**PROF 27. Interaction of a fluorescent teixobactin analogue with bacteria.** **M. Morris**, **M. Malek**, **M. Hashemian**, J.S. Nowick

**PROF 28.** Tannic acid: A novel intumescent agent in epoxy systems. **M. Korey**, J.P. Youngblood, J.A. Howarter

**PROF 29.** Modeling the formation and fate of halogenated estrogens. **C. Hutchinson**, D.R. Griffith

**PROF 30.** Computational investigation of single nucleotide polymorphisms in human DNA polymerase  $\kappa$ . **E.M. Leddin**, A. Walker, N.M. Antczak, H. Stern, C. Palad, T.A. Coulther, R. Swett, P.J. Beuning, G.A. Cisneros

**PROF 31.** Family of isostructural actinide complexes with utilization of a redox active ligand for studying periodic trends across the series. **S.S. Galley**, S.C. Bart, T.E. Albrecht-Schmitt

**PROF 32.** Soluble zwitterionic poly(sulfobetaine) destabilizes proteins. **K.A. Miller**, L. Kisley, C. Davis, D. Guin, E.A. Murphy, M. Gruebele, D.E. Leckband

**Improving Academic Safety Culture: Undergraduate & Graduate Student Leadership in Laboratory Safety**

Sponsored by CHAS, Cosponsored by CCS and PROF

**ACS Award in Analytical Chemistry**

Sponsored by ANYL, Cosponsored by PROF

**Eli Lilly Travel Awards 30th Anniversary symposium**

Sponsored by WCC, Cosponsored by PROF

**ACS Award for Computers in Chemical & Pharmaceutical Research in Honor of Arnie Hagler**

Sponsored by COMP, Cosponsored by PROF

**ACS Awards Lectures**

Sponsored by COLL, Cosponsored by PROF

**ACS Award for Achievement in Research for the Teaching & Learning of Chemistry**

Sponsored by CHED, Cosponsored by PROF

**ACS Award for Research at an Undergraduate Institution: Symposium in Honor of Carol A. Parish**

Sponsored by COMP, Cosponsored by PROF

**Excellence in Graduate Polymer Research: Conjugated & Electroactive Polymers**

Sponsored by POLY, Cosponsored by PRES, PROF, SOCED and YCC

**TUESDAY EVENING**

**Wiley Computers in Chemistry Outstanding Postdoc Award**

Sponsored by COMP, Cosponsored by PROF

**WEDNESDAY MORNING**

**Global Entrepreneurship: Business at the Frontiers of Chemistry**

Sponsored by SCHB, Cosponsored by PROF