

2017 Outstanding Graduate Research

John W. Colson
Cornell (Will Dichtel)

The winner of the 2017 Henkel Award for Outstanding Graduate Research in Polymer Chemistry is **John W. Colson** from ClostraBio, Inc. He earned his Ph.D. in 2015 at Cornell University with Prof. William Dichtel for preparation of two-dimensional covalent organic framework polymers interfaced with single layer graphene and application of the polymers with graphene sheets as materials for optoelectronic devices. After postdoctoral research at the University of Chicago with Profs. Matthew Tirrell and Paul Nealey, Dr. Colson now works at ClostraBio, Inc., in Chicago, IL.

Given annually, the Henkel Award recognizes the author of the best Ph.D. thesis in polymer chemistry during the three years preceding the date of the award. The award is sponsored by the Henkel Corporation and the ACS Divisions of Polymer Chemistry and Polymer Science: Materials and Engineering, and is administered by PolyEd, the polymer education committee. The award symposium in his honor was held in the POLY program at the ACS National Meeting in Washington, DC on August 23, 2017.



John Colson, Marc Hillmyer (POLY Chair), C.W. Paul (Henkel)

2016 Outstanding Graduate Research

Maxwell Robb
UCSB (Craig Hawker)

The winner of the 2016 Henkel Award for Outstanding Graduate Research in Polymer Chemistry is **Dr. Maxwell Robb** who earned the Ph.D. with Prof. Craig Hawker at University of California Santa Barbara for research in the field of organic electronics. He designed a new synthetic strategy for the straightforward preparation of donor-acceptor conjugated copolymers that contain well-defined functional chain-ends. These novel materials enable determination of fundamental optical and electronic properties of D-A copolymers. His technology also enables the investigation of nanoscale self-assembly with conjugated polymers. He designed a new series of perylene-based organic materials that show great promise in the emerging area of organic thermoelectric materials. Devices have already been fabricated with thermoelectric performance better than anything previously reported. This strategy is a new paradigm in the chemistry of conjugated materials for renewable energy applications. Dr. Robb did undergraduate research with Prof. Dan Knauss at the Colorado School of Mines and is currently a postdoctoral researcher with Prof. Jeffrey Moore at the University of Illinois. The award symposium in his honor was held in the PMSE program at the ACS National Meeting in Philadelphia August 23, 2016.



Maxwell Robb, C. W. Paul (Henkel)

POLY Awards
Outstanding Graduate Research- Past Awardees
2011-2020

2015 Outstanding Graduate Research

Jessica Kramer
UCLA (Tim Demming)

Jessica Kramer is the winner of the 2015 Henkel Award for Graduate Research in Polymer Chemistry. The award was presented at a symposium held in her honor at the ACS National Meeting in Boston, MA, August 16-20.

Dr. Kramer completed the Ph.D. in Chemistry in 2013 at UCLA with Prof. Tim Demming. In her Ph.D. research she prepared functional glycosylated polypeptides with controlled placement of sugar groups via living polymerization of highly pure glycosylated alpha-amino acid-N-carboxyanhydride monomers. She is now a NIH and UC Chancellor's Postdoctoral Fellow with Prof. Carolyn Bertozzi at the University of California - Berkeley. The award was supported financially by Henkel.



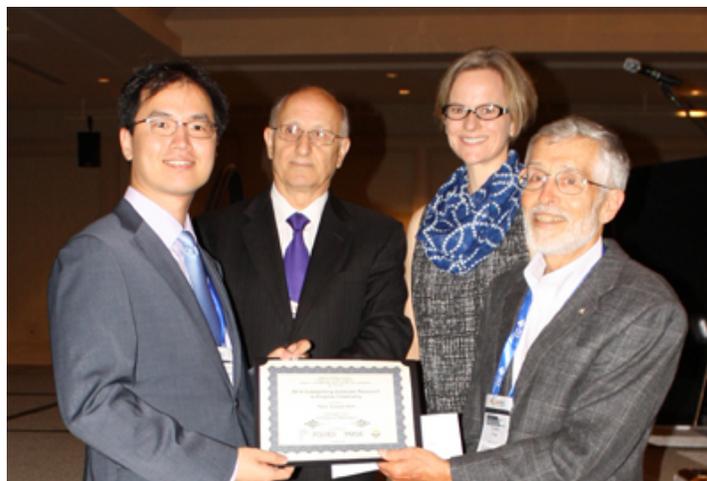
Jessica Kramer, Rigoberto Advincula (POLY chair), C. W. Paul (Henkel)

POLY Awards
Outstanding Graduate Research- Past Awardees
2011-2020

2014 Outstanding Graduate Research

Felix Sunjoo Kim
Univ. Washington (Sam Jenekhe)

The 2014 Award for Outstanding Graduate Research in polymer chemistry was presented to Dr. Felix Sunjoo Kim at the ACS national meeting in San Francisco August 10-14. Dr. Kim completed a PhD in chemical engineering in 2012 at the University of Washington with Prof. Sam Jenekhe. His PhD research on the charge transport properties of polymer semiconductors and polymer-based thin film transistors has resulted in more than 30 articles in leading journals. He is now a tenure-track assistant professor in chemical engineering and materials science at the Chung-Ang University in Seoul, Korea. The award was supported financially by POLY, PMSE, and PolyEd.



Felix Kim, J. Baghdadaci (PMSE), Kate Beers (POLY chair), W. Ford (PolyEd)

2013 Graduate Research

Hua Lu
UIUC (Jianjun Chen)

The 2013 AkzoNobel Award for Outstanding Graduate Research in Polymer Chemistry was presented to **Dr. Hua Lu** at the ACS National Meeting in Indianapolis, September 7-11. Dr. Lu completed a Ph.D. in Materials Science & Engineering in 2011 at the University of Illinois at Urbana-Champaign with Prof. Jianjun Cheng. His Ph.D. research on the controlled synthesis of polypeptides by ring opening polymerization of N-carboxy amino acid anhydrides has wide utility for making functional biomaterials for drug delivery and gene delivery applications. Using N-trimethylsilylamines as catalysts produces polypeptides of controlled length and low polydispersity. One pot synthesis by sequential ring-opening metathesis polymerization and NCA ring-opening polymerization produces polymer brushes with helical side chains. Dr. Lu's Ph.D. research appears in more than fourteen articles in leading journals. He is now a Damon Runyan Postdoctoral Research Fellow with Prof. Peter Schultz at the Scripps Research Institute.



Hua Lu, Keimpe van den Berg (Akzo Nobel)

2012 Outstanding Graduate Research

Garrett Miyake
Colorado State (Eugene Chen)

The winner of the 2012 AkzoNobel Award for Outstanding Graduate Research in Polymer Chemistry is **Dr. Garret Miyake**, who earned the Ph.D. in 2011 at Colorado State University under the mentorship of Prof. Eugene Chen. He also spent a summer doing research as an NSF-EAPSI Fellow with Prof. Eiji Yashima at the University of Nagoya, Japan. Dr. Miyake is now a postdoctoral researcher at California Institute of Technology with Prof. Robert Grubbs.

In his Ph.D. research Dr. Miyake accomplished the asymmetric coordination polymerization of achiral polar vinyl monomers into optically active, chiral vinyl polymers. He and a graduate student colleague prepared enantiomeric, cationic ansa-zirconocenium ester enolate catalysts via an 11-step synthesis and employed the catalysts to prepare optically active poly(N,N-diarylacrylamides). He also accomplished the first coordination addition polymerization of N,N-dialkylmethacrylamides and the first kinetic resolution of racemic methacrylamides by chiral metallocene catalysts. Dr. Miyake made important progress in the use of frustrated Lewis pair and organolanthanide catalysts for efficient polymerization of naturally renewable monomers into sustainable polymers that are alternatives for polymers based on petroleum. He also discovered the first kinetic resolution polymerization of racemic lactide using chiral organic catalysts. This method enables the synthesis of biomedical polymers such as polylactide with no trace of metal residues. Dr. Miyake's Ph.D. research appears in twelve papers in leading chemistry journals.

The award will be presented at a symposium in honor of Dr. Miyake at the American Chemical Society National Meeting in Philadelphia August 19-23, 2012 in the Division of Polymeric Materials Science and Engineering.



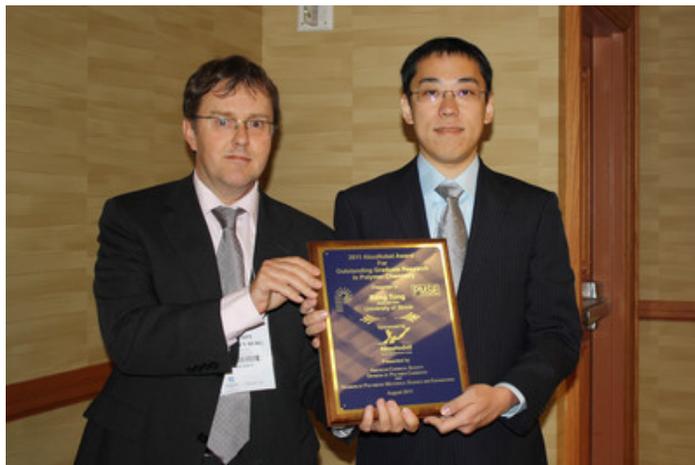
Garret Miyake, Keimpe van den Berg (Akzo Nobel)

2011 Outstanding Graduate Research

Rong Tong **UIUC (Jianjun Cheng)**

Dr. Tong earned the Ph.D. in Materials Research and Engineering in 2010 at the University of Illinois at Urbana-Champaign under the mentorship of Prof. Jianjun Cheng. The award is given for the best Ph.D. thesis in polymer chemistry during the three years prior to the year of the award, and is administered by PolyEd, the polymer education committee of the ACS jointly sponsored by the Division of Polymer Chemistry (POLY) and the Division of Polymeric Materials: Science and Engineering (PMSE). The award was presented August 30 at a POLY symposium in honor of Dr. Tong at the ACS National Meeting in Denver.

Dr. Tong's research focused on nanoconjugation, a novel polymerization chemistry for making anticancer polymeric nanomedicine by controlled, regioselective polymerization of lactide. He expanded this technique to doxorubicin and many other complex therapeutic molecules, and demonstrated chemoselective and regioselective polymerizations via the use of rationally designed catalysts. He extended the research to aptamer liposomes for breast cancer targeting. Dr. Tong's Ph.D. research has appeared in 14 publications in leading scientific journals.



Keimpe van den Berg (Akzo Nobel), Rong Tong