

c&en

CHEMICAL & ENGINEERING NEWS

AUGUST 14/21, 2017

The science
behind the
dicamba
herbicide
debacle
P.27

Why staring
at the solar
eclipse is a
bad idea
P.31



c&en's
TALENTED TWELVE

We've collected them all!
This year's team of rising
stars is assembled inside.

P.40



ACS
Chemistry for Life®

AWARDS

ACS 2018 national award winners

LINDA WANG, C&EN WASHINGTON

Following are the recipients of awards administered by the American Chemical Society for 2018. With the exception of the Arthur C. Cope Scholars, recipients will be honored at the awards ceremony on Tuesday, March 20, 2018, in conjunction with the 255th ACS National Meeting in New Orleans. Nominations are being accepted for the 2019 national awards through Nov. 1. For more information, visit www.acs.org/nationalawards.

ACS Award for Achievement in Research for the Teaching & Learning of Chemistry, sponsored by the ACS Exams Institute, **George M. Bodner**, Purdue University.

ACS Award for Affordable Green Chemistry, sponsored by Dow Chemical and endowed by Rohm and Haas, **B. Frank Gupton**, Virginia Commonwealth University, and **D. Tyler McQuade**, Defense Advanced Research Projects Agency.

ACS Award for Computers in Chemical & Pharmaceutical Research, sponsored by the ACS Division of Computers in Chemistry, **Jürgen Bajorath**, University of Bonn and University of Washington.

ACS Award for Creative Advances in Environmental Science & Technology, sponsored by the ACS Division of Environmental Chemistry, *Environmental Science & Technology*, and *Environmental Science & Technology Letters*, **Barbara J. Turpin**, University of North Carolina, Chapel Hill.

ACS Award for Creative Invention, sponsored by ACS Corporation Associates, **Robert S. Kania**, Pfizer.

ACS Award for Creative Work in Fluorine Chemistry, sponsored by the ACS Division of Fluorine Chemistry, **Erhard Kemnitz**, Humboldt University of Berlin.

ACS Award for Creative Work in Synthetic Organic Chemistry, sponsored by MilliporeSigma, **Brian M. Stoltz**, California Institute of Technology.

ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry, sponsored by Strem Chemicals, **Thomas**

B. Rauchfuss, University of Illinois, Urbana-Champaign.

ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences, sponsored by the Camille & Henry Dreyfus Foundation, **Jani C. Ingram**, Northern Arizona University.

ACS Award for Encouraging Women into Careers in the Chemical Sciences, sponsored by the Camille & Henry Dreyfus Foundation, **Rebecca T. Ruck**, Merck & Co.

ACS Award for Research at an Undergraduate Institution, sponsored by Research Corporation for Science Advancement, **Joseph J. Pesek**, San José State University.

ACS Award for Team Innovation, sponsored by ACS Corporation Associates, **Vladimir G. Beylin**, **Brian P. Chekal**, and **Nga M. Do**, Pfizer; **Brian P. Jones**, Pfizer Central Research; **Nathan D. Ide**, AbbVie; **Peter L. Toogood**, Lycera; **Hairong (Angela) Zhou**, Genentech; and **David W. Fry**.

ACS Award in Analytical Chemistry, sponsored by the Battelle Memorial Institute, **Michael Lawrence Gross**, Washington University in St. Louis.

ACS Award in Applied Polymer Science, sponsored by Eastman Chemical, **Paula T. Hammond**, Massachusetts Institute of Technology.

ACS Award in Chromatography, sponsored by MilliporeSigma, **Janusz Boleslaw Pawliszyn**, University of Waterloo.

ACS Award in Colloid Chemistry, sponsored by Colgate-Palmolive, **Håkan Wennerström**, Lund University.

ACS Award in Industrial Chemistry, sponsored by the ACS Division of Industrial & Engineering Chemistry, **George P. Lahm**, DuPont Crop Protection.

ACS Award in Inorganic Chemistry, sponsored by Aldrich Chemical, **James Moers Mayer**, Yale University.

ACS Award in Organometallic Chemistry, sponsored by the Dow Chemical Foundation, **Clifford P. Kubiak**, University of California, San Diego.

ACS Award in Polymer Chemistry, sponsored by ExxonMobil Chemical, **Carlton G. Willson**, University of Texas, Austin.

ACS Award in Pure Chemistry, sponsored by the Alpha Chi Sigma Fraternity and the Alpha Chi Sigma Educational Foundation, **Mircea Dincă**, Massachusetts Institute of Technology.

ACS Award in Separations Science & Technology, sponsored by Waters Corp., **Massimo Morbidelli**, Swiss Federal Institute of Technology (ETH), Zurich.

ACS Award in Surface Chemistry, sponsored by Proctor & Gamble, **Stacey F. Bent**, Stanford University.

ACS Award in the Chemistry of Materials, sponsored by DuPont, **Elsa Reichmanis**, Georgia Institute of Technology.

ACS Award in Theoretical Chemistry, sponsored by the ACS Division of Physical Chemistry, **Emily Ann Carter**, Princeton University.

Award for Volunteer Service to the American Chemical Society, sponsored by ACS, **Carol A. Duane**, D&D Consultants of Mentor.

Alfred Bader Award in Bioinorganic or Bioorganic Chemistry, sponsored by the Alfred R. Bader Fund, **Alison Butler**, University of California, Santa Barbara.

Earle B. Barnes Award for Leadership in Chemical Research Management, sponsored by the Dow Chemical Foundation, **Margaret M. Faul**, Amgen.

Ronald Breslow Award for Achievement in Biomimetic Chemistry, sponsored by the Ronald Breslow Award Endowment, **David R. Liu**, Harvard University.

Herbert C. Brown Award for Creative Research in Synthetic Methods, sponsored by the Purdue Borane Research Fund and the Herbert C. Brown Award Endowment, **Gregory C. Fu**, California Institute of Technology.

Alfred Burger Award in Medicinal Chemistry, sponsored by Gilead Sciences, **Dennis C. Liotta**, Emory University.

James Bryant Conant Award in High School Chemistry Teaching, sponsored by the *Journal of Chemical Education* and ChemEd X, **Brian John Kennedy**, Thomas Jefferson High School for Science & Technology.

Arthur C. Cope Award, sponsored by the Arthur C. Cope Fund, **Steven V. Ley**, University of Cambridge.

Arthur C. Cope Scholar Awards, sponsored by the Arthur C. Cope Fund, **Emily P. Balskus**, Harvard University; **Naoto Chatani**, Osaka University; **William (Bill) F. Degrado**, University of California, San Francisco; **Frank Glorius**, University of Münster; **Robert R. Knowles**, Princeton University; **Dawei Ma**, Shanghai Institute of Organic Chemistry, Chinese Academy of Science; **Heather D. Maynard**, University of California, Los Angeles; **James P. Morken**, Boston College; **G. K. Surya Prakash**, University of Southern California; **Keith Woerpel**, New York University.

Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis by a Young Investigator, sponsored by the Pfizer Endowment Fund, **Seth B. Herzon**, Yale University.

F. Albert Cotton Award in Synthetic Inorganic Chemistry, sponsored by the F. Albert Cotton Endowment Fund, **A. S. Borovik**, University of California, Irvine.

Peter Debye Award in Physical Chemistry, sponsored by DuPont, **Paras Nath Prasad**, University at Buffalo.

Frank H. Field & Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry, sponsored by Waters

Corp., **Carol Vivien Robinson**, University of Oxford.

Francis P. Garvan-John M. Olin Medal, sponsored by the Francis P. Garvan-John M. Olin Medal Endowment, **Valerie J. Kuck**, Bell Laboratories (later became Lucent Technologies).

James T. Grady-James H. Stack Award for Interpreting Chemistry for the Public, sponsored by ACS, **Bassam Z. Shkhashiri**, University of Wisconsin, Madison.

Harry Gray Award for Creative Work in Inorganic Chemistry by a Young Investigator, sponsored by the Gray Award Endowment, **Dwight S. Seferos**, University of Toronto.

Ernest Guenther Award in the Chemistry of Natural Products, sponsored by Givaudan, **David R. Williams**, Indiana University, Bloomington.

Kathryn C. Hach Award for Entrepreneurial Success, sponsored by the Kathryn C. Hach Award Fund, **Javier García Martínez**, University of Alicante, Rive Technology.

Joel Henry Hildebrand Award in the Theoretical & Experimental Chemistry of Liquids, sponsored by ExxonMobil Research & Engineering, **Lawrence R. Pratt**, Tulane University.

Ralph F. Hirschmann Award in Peptide Chemistry, sponsored by Merck Research Laboratories, **Lila M. Gierasch**, University of Massachusetts, Amherst.

Frederic Stanley Kipping Award in Silicon Chemistry, sponsored by Dow Corning, **Tamejiro Hiyama**, Chuo University.

Irving Langmuir Award in Chemical Physics, sponsored by ACS and the ACS Division of Physical Chemistry, **George William Flynn**, Columbia University.

Josef Michl ACS Award in Photochemistry, sponsored by the Josef Michl Award Endowment, **Jack Saltiel**, Florida State University.

E. V. Murphree Award in Industrial & Engineering Chemistry, sponsored by ExxonMobil Research & Engineering, **Linda J. Broadbelt**, Northwestern University.

Nobel Laureate Signature Award for Graduate Education in Chemistry,

sponsored by Avantor Performance Materials, **Aleksandr V. Zhukhovitskiy** (student), University of California, Berkeley, and **Jeremiah A. Johnson** (preceptor), Massachusetts Institute of Technology.

James Flack Norris Award in Physical Organic Chemistry, sponsored by the ACS Northeastern Section, **Cynthia J. Burrows**, University of Utah.

George A. Olah Award in Hydrocarbon or Petroleum Chemistry, sponsored by the George A. Olah Award Endowment, **Oliver C. Mullins**, Schlumberger-Doll Research.

George C. Pimentel Award in Chemical Education, sponsored by Cengage Learning and the ACS Division of Chemical Education, **Pratibha Varma-Nelson**, Indiana University-Purdue University Indianapolis.

Priestley Medal, sponsored by ACS, **Geraldine (Geri) Richmond**, University of Oregon.

Glenn T. Seaborg Award for Nuclear Chemistry, sponsored by the ACS Division of Nuclear Chemistry & Technology, **Suresh C. Srivastava**, Brookhaven National Laboratory.

Gabor A. Somorjai Award for Creative Research in Catalysis, sponsored by the Gabor A. & Judith K. Somorjai Endowment Fund, **David W. C. MacMillan**, Princeton University.

George & Christine Sosnovsky Award for Cancer Research, sponsored by the George & Christine Sosnovsky Endowment Fund, **Paul J. Hergenrother**, University of Illinois, Urbana-Champaign.

E. Bright Wilson Award in Spectroscopy, sponsored by the E. Bright Wilson Endowment, **Richard J. Saykally**, University of California, Berkeley.

Ahmed Zewail Award in Ultrafast Science & Technology, sponsored by the Ahmed Zewail Endowment Fund established by Newport Corp., **Xiaoyang Zhu**, Columbia University.

National Fresenius Award, sponsored by Phi Lambda Upsilon, the National Chemistry Honor Society, **Thomas John Maimone**, University of California, Berkeley. ■