

2016 Acta Materialia Inc. Hollomon Award

The recipient of the 2016 Acta Materialia Inc. Hollomon Award for Materials and Society is Dr. Julie Schoenung of the Department of Chemical Engineering and Materials Science at the University of California at Irvine.

Dr. Schoenung received her B.S. in Ceramic Engineering from the University of Illinois and her M.S. and Ph.D. degrees in Materials Engineering from MIT. Since then she has been in California, first at California State Polytechnic University, 1989-2001 and then, after a year at the University of California at Irvine, she moved to the UC Davis campus until 2015, when she moved back to UC Irvine.



Dr. Schoenung's research activities have emphasized advanced structural materials and green engineering. In the former field, she and her students have developed the cryomilling process to improve the oxidation behavior of thermal barrier coatings, and to produce boron carbide reinforced aluminum nanocomposites with extremely high strength and tolerance to high strain rate deformation. More recently, this group has produced room temperature plasticity in dense, nano-grained ceramics created by high pressure spark plasma sintering.

Dr. Schoenung's other significant activities have been in "green engineering" – to develop processes that use less-toxic chemicals, require less energy and produce less pollution. She and her colleagues have helped define opportunities for product designers, materials scientists, and manufacturers to use alternative assessment methods and materials life cycle analysis for "sustainable design-for-the environment strategies". She has focused particularly on the electronic-waste problem, for example by studying environmentally designed electronics and pollution prevention in printed wiring board manufacturing. Dr. Schoenung serves on the Green Ribbon Science Panel of the California Environmental Protection Agency for Toxic Substance Control and is an advisor to the Alternative Materials Assessment Project. She is a member of the "Environmentally Conscious Electronics Roadmap Development Team" of the International Electronics Manufacturing Initiative and a member of the "Chemical Hazard Assessment Workgroup" and the "Sustainable Materials Workgroup, both of Biz NGO. Dr. Schoenung is a Fellow of ASM and of the Max Planck Institute and the recipient of several awards, including the Chime Bell Award from the Hubel Province, China.