Materials Science & Engineering

seminar

Batteries: Now and Future

March 25, 2016 at 1:30pm in SCOB 101

abstract

Inorganic nanoparticles have been widely used as Increased demands of batteries for applications in consumer electronics, electric vehicle and grid present opportunities and challenges for rechargeable batteries. This lecture will analyze the nature of energy storage, the existing technology and present the promising future batteries, which can have significantly higher energy density, lower cost, better safety and longer life. Novel battery chemistries and materials are key for a revolutionary change.

biosketch

Yi Cui is an Associate Professor in the Department of Materials Science and Engineering at Stanford University. He received his Ph.D in Chemistry at Harvard University (2002), B.S. in Chemistry at the University of Science and Technology of China (1998). He was a Miller Postdoctoral Fellow at University of California, Berkeley before joining Stanford University as an Assistant Professor in 2005. His current research is on nanomaterials design for energy and environment and two-dimensional materials.

Yi Cui

Dept. Materials Science and Engineering
Stanford University

biosketch (cont'd) Yi Cui is an Associate Editor of Nano Letters. He is a co-director of the Bay Area Photovoltaic Consortium of the US Department of Energy. He is a highly proliferate materials scientist and has published ~310 research papers, filed more than 40 patent applications and give ~300 plenary/keynote/invited talks. In 2014, he was ranked NO.1 in Materials Science by Thomson Reuters as "The World's Most Influential Scientific Minds". He has received numerous honors including MRS Fellow (2016), MRS Kavli Distinguished Lectureship in Nanoscience (2015), Resonate Award for Sustainability (2015), Inaugural Nano Energy Award (2014), Blavatnik National Award Finalist (2014), Wilson Prize (2011), the Sloan Research Fellowship (2010), KAUST Investigator Award (2008), ONR Young Investigator Award (2008), MDV Innovators Award (2007), Technology Review World Top Young Innovator Award (2004). He has founded Amprius Inc. (2008) to commercialize the breakthrough high-energy battery technology and co-founded 4C Air Inc. (2015) to commercialize the PM2.5 filtration technology from his lab.