Nanotechnology for Energy, Environment and Textile

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Nanotechnology has provided a novel technology platform which can address critical energy and environmental problems and enable new opportunities. In the past decade, my group has conducted research on innovative ideas to address problems related to energy conversion, storage and saving, and environment cleaning (air, water and soil), to create new opportunities in wearable applications. Here I will show exciting examples, including: 1) high energy battery materials including Si and Li metal anodes and S cathodes; 2) electrochemical tuning of catalysts; 3) Water disinfection using conducting nanofilters and uranium extraction for seawater. 4) Nanofiber air filters for efficient PM2.5 removal and low air resistance. 5) Cooling and heating textile for personal thermal management. Nanotechnology represents the most important foundational technology platform to impact nearly all areas of applications.

Yi Cui Biography

Yi Cui is a Professor in the Department of Materials Science and Engineering at Stanford University. He received B.S. in Chemistry in 1998 at the University of Science and Technology of China (USTC), Ph.D in 2002 at Harvard University. After that, he went on to work as a Mk as a Mk as a Mk as13 Tm0 g0 G84f9hstdo(Ha)0.0orein32 84 BDC 4( )-79ork 0