TCSUH BI-WEEKLY SEMINAR

Prof. Zhifeng Ren

M. D. Anderson Chair Professor of Physics;
Texas Center for Superconductivity at the University of Houston

Thursday, September 6, 2018

Room 102, Houston Science Center
12:30 p.m. – 1:30 p.m.

Nanomaterials for Enhanced Performance in Thermoelectrics, Oil Recovery, and Water Splitting, and BAs for High Thermal Conductivity

ABSTRACT: Materials in nano scale have better properties than their bulk. In this talk, I will discuss our studies on enhancing the performance of thermoelectric materials by nanostructure, enhanced oil recovery by a novel amphiphilic nanofluid, and efficient water splitting to produce hydrogen via electrolysis by 2D nano catalysts. In addition, I will also discuss our recent work on achieving high thermal conductivity above 1000 Watts per meter per Kelvin at room temperature on single crystal boron arsenide.

BIO: Zhifeng Ren, M. D. Anderson Chair Professor of Physics at the University of Houston and TcSUH PI, conducts cutting-edge research in a number of fields, including high temperature superconductivity, carbon nanotubes, ZnO nanowires, thermoelectrics, solar absorbers, flexible transparent conductors, enhanced oil recovery, water splitting, and Bas for high thermal conductivity. He has published almost 500 papers, many of which have high impact to the fields. His discoveries have been awarded with more than 40 patents. He was ranked the 49th of the world's 500,000 Materials Scientists based on impact of papers published in the last decade from 2000 to 2010. He was elected as a fellow of the American Physical Society in 2004, a fellow of the American Association for the Advancement of Science in 2005, and a fellow of the National Academy of Inventors in 2013. He was the recipient of the Edith and Peter O'Donnell Award in Science from The Academy of Medicine, Engineering & Science of Texas (TAMEST) in 2014.
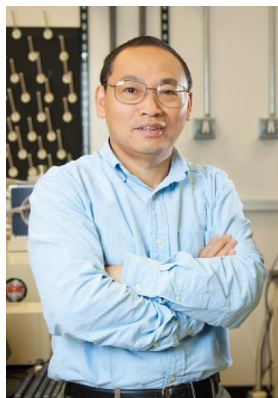
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in attending this lecture should call 713-743-8213 as soon as possible.**