NREL's Alex Zunger Wins Prestigious Tomassoni Physics Prize and Science Medal

National Renewable Energy Laboratory

Dr. Alex Zunger, a Research Fellow at the U.S. Department of Energy's National Renewable Energy Laboratory, has been awarded two prestigious scientific honors - the 2010 Tomassoni Physics Prize and the Science Medal of Scola Physica Romana. These international prizes are administered by the University of Rome, Italy.

Dr. Zunger will receive the honors in a ceremony on June 14 at the University of Rome.

The “Felice Pietro Chisesi e Caterina Tomassoni” Prize is awarded annually to an individual scientist for outstanding achievement in physical sciences. The Science Medal that accompanies the Tomassoni Prize honors the tradition of physics research established at the university in the 1920s by Nobel laureate Enrico Fermi.

The judges announced that Dr. Zunger was selected for “his fundamental contributions to the development of the Quantum Theory of Real Solids." According to the citation, this foundational work paved the way for Dr. Zunger’s development of the concept of “inverse band structure" in the past 10 years, a work that promises to usher in a new era of material science.

“Dr. Zunger is taking a unique approach to the fundamental understanding of advanced materials that could dramatically increase the scale and speed of how we design new semiconductors," NREL Director Dr. Dan Arvizu said. "The Tomassoni Physics Prize and the Science Medal affirm that Dr. Zunger's research is fundamental to our renewable energy future."

"The work on inverse design was done collaboratively with my post-docs and colleagues at NREL, without whom this would have been impossible — in particular Alberto Franceschetti, Sergey Duidy, Mayeul D'Avezac, and Paulo Piquini," Dr. Zunger said.

Dr. Zunger directs the new NREL-led Center for Inverse Design, a $20 million research endeavor aiming to turn materials design on its head at the atomic level.

The center's approach is to theorize the properties of a "dream material" for semiconductors and other important technologies. Then the theoreticists seek to successfully arrange them on the atomic scale in collaboration with experimentalists.

The center's success could accelerate the pace of materials discovery and trigger leaps in performance and efficiency in everything from sensors to lasers to solar panels.

Dr. Zunger is the recipient of the American Physical Society Rahman Prize, the TMS John Bardeen Prize, and the J. Guttenberg Award. He is the author of more than 150 papers in Physical Review Letters and Rapid Communication. He is the author of the fifth highest impact paper ever to be published in Physical Review and has an"h-number" of 86 – a measure of citations and publications.

NREL is the U.S. Department of Energy's primary national laboratory for renewable energy and energy efficiency research and development. NREL is operated for DOE by the Alliance for Sustainable Energy, LLC.

####

Visit NREL online at www.nrel.gov [1]

SOURCE [2]

Source URL (retrieved on *12/11/2013 - 10:27am*):
http://www.chem.info/news/2010/06/nrels-alex-zunger-wins-prestigious-tomassoni-physics-prize-and-science-medal

Links:
[1] http://www.nrel.gov/
[2] http://www.nrel.gov/news/press/2010/857.html