

## **Daniel G. Nocera**

### **Henry Dreyfus Professor of Energy and Professor of Chemistry at the Massachusetts Institute of Technology in Boston**

Received his early education at Rutgers University where he was a Henry Rutgers Scholar, obtaining a B.S. degree in 1979 with Highest Honors. He moved to California where he began research on electron transfer reactions of biological and inorganic systems with Professor Harry Gray at the California Institute of Technology. As a graduate student with Gray, he performed the first experiments on measuring the rates for electron transfer at fixed distances in proteins. This work is widely recognized as beginning the field of biological electron transfer. After earning his Ph.D. degree in 1984, he went to East Lansing, Michigan to take up a faculty appointment at Michigan State University.

He is now Henry Dreyfus Professor of Energy and Professor of Chemistry at the Massachusetts Institute of Technology since 1997 and is widely recognized in the world as a leading researcher in energy at molecular level. He studied the basic mechanism of energy conversion in biology and chemistry with primary focus in recent years in the photogeneration of hydrogen and oxygen and pioneered each of these areas of science. He created the field of proton-coupled electron transfer (PCET) at a mechanistic level with the publication of the first ultrafast laser study of an electron transfer through a hydrogen bonded interface.

Nocera is a pioneer in the area of water-splitting reaction photogeneration of hydrogen and oxygen from water where the overall water-splitting reaction requires the coupling of multielectron processes to protons.

Nocera's research in energy conversion has been featured on the nationally broadcast television programs, ABC Nightline and PBS NOVA in the US and Explora in Europe as well as radio shows such as NPR. He developed the pilot that was used to begin the new PBS science program ScienceNow. and his PBS NOVA show was nominated for a 2006 Emmy Award. In 2005, he was awarded the Italgas Prize for his fundamental contributions to the development of renewable energy at the molecular level.