

**THE DEPARTMENT OF ENERGY**  
**Office of Public Affairs**

---

News Media Contact: [\(202\) 586-4940](tel:(202)586-4940)

For Immediate Release: Thursday, October 10, 2012

**Secretary of Energy Chu Congratulates 2012  
Chemistry and Physics Nobel Laureates**

Washington – Secretary of Energy Steven Chu today congratulated Robert J. Lefkowitz and Brian K. Kobilka for winning the 2012 Nobel Prize in Chemistry “for studies of G-protein–coupled receptors” and Serge Haroche and David J. Wineland for winning the 2012 Nobel Prize in Physics for “ground-breaking experimental methods that enable measuring and manipulation of individual quantum systems.”

Drs. Haroche and Wineland, good friends since the 1980s, have developed methods for manipulating the quantum states of ions and photons that lie at the heart of quantum physics principles that could lead to quantum computers and more precise atomic clocks,” said Secretary Chu, who is a 1997 Nobel Laureate in Physics.

Drs. Lefkowitz and Kobilka have revealed the inner workings of this important class of chemical receptors that allow cells to receive signals from their environment. These receptors are responsible for how we sense light, taste, smell, respond to stress and neuron signaling. Roughly half of all our medications send signals to cells through G-protein receptors.

“It is especially gratifying that Dr. Kobilka and his fellow researchers used the Advanced Photon Source (APS) at the Department of Energy’s Argonne National Lab to reveal a high-resolution structure of a cell receptor in the act of signaling. In the past decade, work done at Department of Energy Laboratories has been recognized with 4 Chemistry and 3 Physics Nobel Prizes. Since 2001, scientists at the National Institute of Standards and Technology have received three Nobel Prizes, and researchers working at or using NASA facilities have been recognized with three times as well. The foundation of this world class science has been the result of long-term, stable federal government investments.”

Dr. Lefkowitz is the James B. Duke Professor of Medicine, and Professor of Biochemistry at Duke University Medical Center in Durham, NC.

Dr. Kobilka is a Professor of Medicine and Professor of Molecular and Cellular Physiology at Stanford University School of Medicine in Stanford, CA.

Dr. Haroche is a professor at Collège de France and Ecole Normale Supérieure, Paris, France.

Dr. Wineland is Group Leader and NIST Fellow at the National Institute of Standards and Technology and University of Colorado, Boulder.

The Nobel Prize news releases are at:

[http://www.nobelprize.org/nobel\\_prizes/chemistry/laureates/2012/press.html](http://www.nobelprize.org/nobel_prizes/chemistry/laureates/2012/press.html)

[http://www.nobelprize.org/nobel\\_prizes/physics/laureates/2012/press.html](http://www.nobelprize.org/nobel_prizes/physics/laureates/2012/press.html)

**Information about the APS can be found [HERE](#)**

Additional information about Dr. Kobilka's work at the APS can be found at: [http://science.energy.gov/news/in-focus/2011/09-08-11/..](http://science.energy.gov/news/in-focus/2011/09-08-11/)

###