



STEVEN CHU, DIRECTOR Lawrence Berkeley National Laboratory

Steve Chu, 57, became Berkeley Lab's sixth Director on August 1, 2004. A Nobel Prize-winning scholar and international expert in atomic physics, laser spectroscopy, biophysics and polymer physics, Dr. Chu oversees the oldest and most varied of the Department of Energy's multi-program research laboratories. Berkeley Lab has an annual budget of more than \$520 million and a workforce of about 4,000.

His distinguished career in laboratory research began as a postdoctoral fellow in physics at the University of California's Berkeley campus from 1976-78, during which time he also utilized the facilities of Berkeley Lab. His first career appointment was as a member of the technical staff at AT&T Bell Laboratories in Murray Hill, N.J. where, from 1978-87, his achievements with laser spectroscopy and quantum physics became widely recognized. During the last four years there, he was Head of the Quantum Electronics Research Department, during which time he began his groundbreaking work in cooling and trapping atoms by using laser light took place. In 1987, he became a professor in the Physics and Applied Physics Departments at Stanford University, where he continued his laser cooling and trapping work.

This work eventually led to the Nobel Prize in Physics in 1997, an honor he shared with Claude Cohen-Tannoudji of France and United States colleague William D. Phillips. Their discoveries, focusing on the so-called "optical tweezers" laser trap, were instrumental in the study of fundamental phenomena and in measuring important physical quantities with unprecedented precision.

At the time, Dr. Chu was the Theodore and Francis Gabelle Professor of Physics and Applied Physics at Stanford University, where he remained for 17 years as highly decorated scientist, teacher and administrator. While at Stanford, he chaired the physics department from 1990-93 and from 1999-2001.



He is a member of the National Academy of Sciences, American Philosophical Society, American Academy of Arts and Sciences, Academia Sinica, and Honorary Lifetime member, Optical Society of America. He is also a foreign member of the Chinese Academy of Sciences and the Korean Academy of Sciences and Technology.

Dr. Chu has won dozens of awards in addition to the Nobel Prize, including the Science for Art Prize, Herbert Broida Prize for Spectroscopy, Richtmeyer Memorial Prize Lecturer, King Faisal International Prize for Science, Arthur Schawlow Prize for Laser Science, and William Meggers Award for Laser Spectroscopy. He was a Humboldt Senior Scientist and a Guggenheim Fellow and has received 6 honorary degrees.

Born in St. Louis and raised in New York, Dr. Chu earned an A.B. in mathematics and a B.S. in physics at the University of Rochester, and a Ph.D in physics at UC Berkeley. He maintains a vigorous research program and directly supervises a team of graduate students and postdoctoral fellows. He is author or co-author of more than 160 articles and professional papers, and over two dozen former members of his group are now professors at leading research universities around the world.