

## Biographical Profile

**Ahmed Hassan Zewail** is the Linus Pauling Chair professor of chemistry and professor of physics at the California Institute of Technology (Caltech). For ten years, he was the Director of the National Science Foundation's *Laboratory for Molecular Sciences* (LMS), and is currently the Director of the *Center for Physical Biology* at Caltech. He received his early education in Egypt, and in the U.S. completed a Ph. D., from the University of Pennsylvania, and a postdoctoral (IBM) fellowship at the University of California, Berkeley, before joining the faculty at Caltech.

Dr. Zewail was awarded the 1999 Nobel Prize for his development of the field of *Femtochemistry*, making possible observation of phenomena on the femtosecond ( $10^{-15}$  second) timescale, the scale of atomic motion. Since then, at the Physical Biology Center, the main focus of research has been on the development of another field, *4D Electron Microscopy*, for the direct visualization of materials and biological behavior in the four dimensions of *space* and *time*. With the aid of spectroscopy and large-scale computations, the goal is to understand complexity of structures and simplicity of functions.

For his contributions to science and for his public service, Dr. Zewail has garnered honors and awards from around the globe. *Honorary Degrees* in the sciences, arts, philosophy, law, medicine, and humane letters have been conferred on him from 40 universities, including, Oxford, Cambridge, Peking, École Normale Supérieure, and the University of Pennsylvania. He has been decorated with Orders of State and Merit, and with the Order of the Grand Collar of the Nile, Egypt's highest state honor. Postage Stamps have been issued in commemoration of his contributions to science and humanity. Among the other honors he has received are the Albert Einstein World Award, Benjamin Franklin Medal, Leonardo da Vinci Award, Robert A. Welch Award, Wolf Prize, King Faisal Prize and the Othmer Gold Medal. In his name, international prizes have been established in Amsterdam, Cairo, Detroit, Trieste, and Washington (DC), and the AZ Foundation in Cairo is now providing support for the dissemination of knowledge and for merit awards in arts and sciences.

Dr. Zewail serves on national and international boards, and is an elected member of academies and learned societies, including the American Philosophical Society, National Academy of Sciences, Royal Society of London, French Academy, Russian Academy, and the Swedish Academy. He has been Chief Editor of chemical physics letters for 16 years and presently is the Honorary Advisory Editor. For TIAA-CREF, he served as a member of the board of directors, and currently is a member of the boards of trustees, boards of directors, and scientific advisory boards for institutions concerned with academic, culture and world affairs. On April 27, 2009, President Barack Obama appointed him to the President's Council of Advisors on Science and Technology.

In California, Dr. Zewail resides with his wife Dema Faham, and he is a proud father of four children: Maha, Amani, Nabeel, and Hani; two of them have scholarly bonding to Caltech and Berkeley. Over the years he has mentored more than 300 members of his research school, and published more than 500 articles and treatises. His celebrated biography, "*Voyage through Time*", and "*Age of Science*", which has now been published in 17 languages and editions, offers an exposé of his life, science and world affairs until the receipt of the Nobel Prize.