

Esselen Award for C. A. Mirkin

Chad A. Mirkin (Northwestern University, Evanston, IL, USA) received the Gustavus J. Esselen Award of the Northeastern Section of the American Chemical Society. The prize is awarded for achievements in science and technology that contribute to public well-being. Mirkin was honored for the discovery of nanoparticle–oligonucleotide conjugates with applications in bionanotechnology. Mirkin, together with Ahmed H. Zewail (Nobel Prize for Chemistry 1999), was also appointed to the scientific advisory committee (PCAST) of US president Barack Obama.

Mirkin earned his Ph.D. in 1989 at Pennsylvania State University under G. L. Geoffroy and then worked at the Massachusetts Institute of Technology with M. Wrighton. In 1991 he moved to Northwestern University in Evanston, where he is currently professor and director of the Institute for Nanotechnology. He studies the directed construction of architectures of molecules and materials on the nanometer scale and the application of these building blocks in analysis, lithography, catalysis, and optics. He recently reported in *Angewandte Chemie*, the International Advisory Board of which he is a member, on long-distance surface-enhanced Raman scattering on AuNi nanowires^[1a] and on the construction of a molecular wire in situ using click chemistry.^[1b] Mirkin is also a member of the editorial boards of *Advanced Materials* and *Small*.

K. M. Shokat and A. Warshel Elected to the US National Academy of Sciences

The National Academy of Sciences of the USA has elected new members, among them the pioneer of the WWW Tim Berners-Lee and the Nobel Laureate Harald zur Hausen (Medicine 2008; his award lecture will appear soon in *Angewandte Chemie*)^[2] as well as the chemists K. M. Shokat and A. Warshel.

Kevan M. Shokat (University of California, San Francisco and Berkeley, and Howard Hughes Medical Institute) develops chemical approaches to understand and control signaling. These chemical protocols are used to create a pharmacological map of cellular signals. In *ChemBioChem*, of which he is an Editorial Board member, he discussed targets for small-molecule kinase inhibitors,^[3a] and he reported in *Angewandte Chemie* on carbohydrate sulfotransferase inhibitors.^[3b]

Shokat studied at Reed College in Portland (Oregon) and received his Ph.D. in 1991 at the University of California in Berkeley under P. G. Schultz. From 1992 to 1994 he conducted postdoctoral research with C. C. Goodnow at Stanford

University. He then moved to Princeton as assistant professor, and was made associate professor in 1998. In 1999 he joined the faculty of the University of California in San Francisco. Since 2001 he has also been professor in Berkeley, and since 2005 he has additionally been an investigator at the Howard Hughes Medical Institute.

Arieh Warshel (University of Southern California, Los Angeles, USA) is interested in the theoretical description of the function of biological molecules and other complex systems. He is a pioneer of computer simulation, and especially the combination of quantum and molecular mechanics.^[4a] His group simulates enzyme catalysis and protein function, dynamic photobiological processes, and chemical reactions in solution. In *ChemPhysChem* he recently reported on the comparison of phosphate hydrolysis models^[4b] and on the interpretation of the activation entropy of associative and dissociative mechanisms of this reaction.^[4c]

Warshel studied at the Technion in Haifa and the Weizmann Institute in Rehovot (Israel), where he received his Ph.D. in 1969 under S. Lifson. He was a postdoctoral fellow at Harvard University before returning to the Weizmann Institute in 1972. 1974–1976 he was a guest researcher at the MRC Laboratory of Molecular Biology (Cambridge). From 1976 to 1978 he was assistant professor at the University of Southern California (USC). In 1977 the Weizmann Institute named him associate professor, a position he attained at USC in 1979. He has been professor of chemistry at USC since 1984 and of chemistry and biochemistry since 1991.

Awarded...



C. A. Mirkin



K. M. Shokat



A. Warshel

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