

# 2009 Esselen Award Winner

## Chad A. Mirkin

- a brief Biography -

### CHAD A. MIRKIN

**Director of the International Institute for Nanotechnology, George B. Rathmann  
Professor of Chemistry, Professor of Biomedical Engineering, Professor of  
Biological and Chemical Engineering, Professor of Medicine and Professor of  
Materials Science and Engineering, Northwestern University**

Chad A. Mirkin received his B.S. degree from Dickinson College and his Ph.D. from Pennsylvania State University. He was an NSF postdoctoral fellow with Mark Wrighton at M.I.T. prior to joining the Department of Chemistry at Northwestern University in 1991.

Dr. Mirkin is the author of more than 345 manuscripts and over 350 patents. He is the founder of two companies, Nanosphere and NanoInk, which are commercializing nanotechnology applications in the life science and semiconductor industries. He is listed as one of the top five most cited chemists in the world and is the most cited nanomedicine researcher in the world. He is a fellow of the American Association for the Advancement of Science and recipient of numerous awards including the Camille and Henry Dreyfus Teacher-Scholar Award, the ACS award in Pure Chemistry, the ACS Nobel Laureate Signature Award for Graduate Education in Chemistry, the Feynman Prize in Nanotechnology and an NIH Director's Pioneer Award.

Dr. Mirkin's research has led to a plethora of commercialized technologies that are impacting numerous fields from medicine and biology to materials science and engineering. The award recognizes his invention of the polyvalent oligonucleotide nanoparticle conjugate that pioneered the use of nanoparticles in biodiagnostic systems as exemplified in the Verigene System. In addition, his development of dip pen nanolithography (DPN) has led to its use in the fabrication of novel devices for semiconductor circuitry and nanocombinatorial biomolecular arrays. Dr. Mirkin's commitment to public outreach is evidenced by his development of nanochemistry exhibits for the Museum of Science and Industry in Chicago, weekend science programs for boy scouts and girl scouts, research experience programs for college and secondary school students, and an interactive website exploring nanotechnology. Links to these and other programs are available at Dr. Mirkin's website for the International Institute for Nanotechnology, [www.iinano.org](http://www.iinano.org).

<http://chemgroups.northwestern.edu/mirkingroup/>