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UH Hilton

FOLLOW THE NANO BRICK ROAD

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Abstract:

The seed ideas for manipulating matter at the nanoscale were planted in Richard Feynman's famous speech in 1959: There's Plenty of Room at the Bottom. Nearly 40 years after this prophetic talk, the establishment of nanoscience as a major field of research was well on its way, with major breakthroughs in synthesizing nanomaterials, characterizing their physical properties, and integrating them into devices. This talk will describe my journey into and my contributions to nanoscience. I will discuss how a confluence of resources, environment, and mentoring gave my research lab a jump-start into this exciting field as well as how collaborations and opportunities provide the fuel to continue building our yellow brick road out of nano-gold and structured nanoscale materials.

Biography:

Teri W. Odom is Charles E. and Emma H. Morrison Professor of Chemistry and Professor of Materials Science and Engineering at Northwestern University. She is an expert in designing structured nanoscale materials that exhibit extraordinary size and shape-dependent optical properties. Odom has pioneered a suite of multi-scale nanofabrication tools that has resulted in flat optics that can manipulate light at the nanoscale and beat the diffraction limit, plasmon-based nanoscale lasers that exhibit tunable color, and hierarchical substrates that show controlled wetting and super-hydrophobicity. She has also invented a class of biological nanoconstructs that are facilitating unique insight into nanoparticle-cell interactions and that show superior imaging and therapeutic properties because of their gold nanostar shape. Odom has received numerous honors and awards, including being named a Fellow of the Royal Society of Chemistry; the Carol Tyler Award from the International Precious Metals Institute; a Blavatnik Young Scientist Finalist; a Radcliffe Institute for Advanced Study Fellowship at Harvard University; the ACS Akron Section Award; an NIH Director's Pioneer Award from the National Institutes of Health; the Materials Research Society Outstanding Young Investigator Award; the National Fresenius Award from Phi Lambda Upsilon and the ACS; the Rohm and Haas New Faculty Award; an Alfred P. Sloan Research Fellowship; a DuPont Young Investigator Grant; a National Science Foundation CAREER Award; the ExxonMobil Solid State Chemistry Faculty Fellowship; and a David and Lucile Packard Fellowship in Science and Engineering. Odom was the first Chair of the Noble Metal Nanoparticles Gordon Research Conference, whose inaugural meeting was in 2010. In addition, Odom was an Associate Editor for RSC's flagship journal Chemical Science (2009-2013) and is on the Editorial Advisory Boards of ACS Nano, Chemical Physics Letters, Materials Horizons, Annual Reviews of Physical Chemistry, and Nano Letters. She serves as founding Executive Editor of the new journal ACS Photonics (2013 -).

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