

Daniel C. Coy, Ph. D.

Professional Biography

February, 2006

Dan Coy received his B.S. degree summa cum laude in 1986 from the Iowa State University Chemical Engineering Department. After two years with Procter & Gamble as a Process Engineer, he returned to Iowa State University to pursue a Ph. D. in Chemical Engineering. His dissertation, *Visualization of Fundamental Thermodynamic Surfaces using Advanced Computer Graphics*, comprises an extensive set of visualizations of the fundamental energy and equation-of-state surfaces originally postulated by J. Willard Gibbs. The work is showcased at <http://www.public.iastate.edu/~jolls/> and helped guide the U.S. Post Office in designing a stamp commemorating Gibbs in 2005. Dan was an Amoco Doctoral Research Fellow and received the ISU Research Achievement Award for this work. Dan was also presented with the Iowa State University College of Engineering Professional Progress in Engineering Award in 2004.

After receiving his Ph. D., Dan took an industrial research position with the Nalco Chemical Company pilot plant. At Nalco, he was a key member of the Ultimer® team that commercialized several revolutionary water treatment polymers. For his contributions, he was awarded an R&D 100 Award, the U.S. Presidential Green Chemistry Award, The Illinois Pollution Prevention Award, and the Nalco Chairman's Achievement Award. Dan spent four years at Nalco developing advanced new Computational Fluid Dynamics techniques for modeling stirred tank reactors and other process equipment. The results were used to improve equipment from the laboratory to commercial reactors. His collaborative efforts with Cray Research and the University of Alberta were presented at multiple meetings of the American Institute of Chemical Engineers and the North American Mixing Forum. During his last two years at Nalco, Dan was Group Leader of the Ultimer® research team.

Dan joined Nanophase Technologies Corporation team at the end of 1999 as a Senior Scientist. Dan's first work included applying Computational Fluid Dynamics modeling to Nanophase Plasma Vapor Synthesis and NanoArc® Synthesis to bring about significant improvements in process efficiencies and product quality. Dan is also a key member of the team that developed the Nanophase commercial dispersion process used to supply high-quality dispersions for extremely demanding applications such as Chemical Mechanical Planarization (CMP), high-end glass polishing, and abrasion resistant clear coatings for high-end paints. Dan was promoted to Director of Engineering in 2002. In this position, Dan is using his broad technical experience to ensure that engineering efforts are tightly aligned with the business needs, and help communicate the technical capabilities of the company to customers and investors.

Finally, in the fall of 2003, Dan was elected to second vice chair of the Nanoscale Science and Engineering Forum (NSEF) of the American Institute of Chemical Engineers. He is currently serving as Chair of the Forum.