Carol Hall

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Professor Carol K. Hall is Camille Dreyfus Distinguished University Professor of Chemical and Biomolecular Engineering at North Carolina State University. She received her B.A. in physics from Cornell University and her Ph.D. in physics from the State University of New York at Stony Brook. After postdoctoral training in the Chemistry Department at Cornell and a brief stint as an economic modeler at Bell Laboratories, she joined the Chemical Engineering Department at Princeton University in 1977 as one of the first women to be appointed to a chemical engineering faculty in the U.S. In 1985 she joined the Chemical Engineering Department at North Carolina State University. Hall s research focuses on applying statistical thermodynamics and molecular-level computer simulation to topics of chemical, biological or engineering interest involving macromolecules or complex fluids. Current research activities include modeling of: polymer adsorption on heterogeneous surfaces, self assembly of dipolar colloidal particles, self assembly of nanoparticles for the delivery of cancer drugs, solid-fluid phase equilibria, hybridization of DNA on microarrays, and the formation of fibrils and other molecular aggregates of peptides and proteins. She is the author of over 180 publications and was elected to the National Academy of Engineering in 2005.