Prof. ROBERT WESTERVELT

Robert Westervelt received his Ph.D. from the University of California, Berkeley in 1977. Following a postdoctoral appointment at Berkeley, he moved to Harvard University, where he is currently Mallinckrodt Professor of Applied Physics & Physics, and Professor of Physics. He is a Fellow of the American Physical Society. Westervelt's group investigates the quantum behavior of electrons inside nanoscale semiconductor structures, and develops tools for the manipulation of biological systems. In mesoscopic physics, the group has developed liquid-helium cooled scanning probe microscopes that can image electron motion through nanoscale devices. They visualized the flow of electron waves through a two-dimensional electron gas (Topinka *et al.* 2003) and observed diffraction patterns and coherent interference (LeRoy *et al.* 2005), as well as cyclotron orbits in a magnetic field (Aidala *et al.* 2007). On the biophysics side, Westervelt's group has developed hybrid Integrated Circuit / Microfluidic chips that combine the power of CMOS technology with the biocompatibility of microfluidics (Lee, Ham & Westervelt, 2007, Hunt *et al.* 2008). Robert Westervelt is Director of the NSF-funded Nanoscale Science and Engineering Center, *Science of Nanoscale Systems and their Device Applications,* which is based at Harvard University and includes participants at MIT, UC Santa Barbara and the Museum of Science, Boston.