

Controlled Dephasing in Mesoscopic Systems

Mordehai HEIBLUM

Weizmann Institute of Science
Faculty of Physics
Department of Condensed Matter Physics
234 Herzl St.
76100 Rehovot
ISRAEL

Dephasing processes, converting coherent systems to classical ones, are at the focus of intensive research. I'll describe a few experiments, performed in mesoscopic electronic systems, where dephasing is introduced by an artificial and well controlled environment ('path detector') - thus allowing a better understanding of such ubiquitous processes.