Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

A Three-Terminal Carbon Nanorelay Y.W. PARK, S.W. LEE, D.S. LEE, S.H. JHANG, School of Physics and NSI-NCRC, Seoul National U, Seoul, Korea, R.E. MORJAN, M. SVENINGSSON, O.A. NERUSHEV, ELEANOR E.B. CAMPBELL, Department of Experimental Physics, Gothenburg U and Chalmers U of Technology, Gothenburg, Sweden — Three-terminal nanorelay structures were fabricated with multiwall carbon nanotubes (MWNTs). The nanotube relays were deflected by applying a gate voltage until contact (mechanical and/or electrical) was made with a drain electrode, thus closing the circuit. It was possible to achieve multiple switching cycles, showing that carbon nanotubes are suitable and practical systems for developing nanoelectromechanical devices of this kind.

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Date submitted: 08 Dec 2004 Electronic form version 1.4