

Abstract Submitted  
for the MAR08 Meeting of  
The American Physical Society

**Control of exciton fluxes** ALEX HIGH, AARON HAMMACK, E.E. NOVITSKAYA, LEONID BUTOV, University of California at San Diego, MICAH HANSON, ARTHUR GOSSARD, University of California at Santa Barbara — We present proof of principle for control of excitonic fluxes by gate in mesoscopic devices. Since excitons are bosonic particles, control of exciton fluxes can extend mesoscopics, the field which electron transport in potential reliefs, to bosons. Also, as are coupled to light, the control of exciton fluxes may lead to development of new optoelectronic devices. The demonstrated devices as a directional switch, star switch, and flux merger.

Alex High  
University of California at San Diego

Date submitted: 03 Dec 2007

Electronic form version 1.4