

# Magnetoconductance of Fano Systems

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We study the magnetotransport properties of a side attached Quantum Dot placed between ferromagnetic electrodes. The side-attached Q.D. has been previously used to probe coherent transport, as it is a simple way to obtain quantum interference and Fano line shapes in transmittance. We find that the magnetoconductance is a nonmonotonic function of the gate-voltage and it shows a maximum at the Fano resonance. For asymmetric coupling, the spin polarization of the dot can be reversed and also negative magnetoconductance may occur. Next we consider the magnetotransport through a quantum ring that is another Fano system and a classical tool for the study of Aharonov-Bohm oscillations.

9.7 cm

13.4 cm

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