

## Publication

Aharonov-Bohm oscillations and resonant tunneling in strongly correlated quantum dots

### **JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**

**ID** 102837

**Author(s)** Bruder; Fazio; Schoeller

**Author(s) at UniBasel** Bruder, Christoph ;

**Year** 1996

**Title** Aharonov-Bohm oscillations and resonant tunneling in strongly correlated quantum dots

**Journal** Physical review letters

**Volume** 76

**Number** 1

**Pages / Article-Number** 114-117

We investigate Aharonov-Bohm oscillations of the current through a strongly correlated quantum dot embedded in an arbitrary scattering geometry. Resonant-tunneling processes lead to a flux-dependent renormalization of the dot level. As a consequence, we obtain a fine structure of the current oscillations, which is controlled by quantum fluctuations. Strong Coulomb repulsion leads to a continuous bias voltage dependent phase shift and, in the nonlinear response regime, destroys the symmetry of the differential conductance under a sign change of the external flux.

**Publisher** American Physical Society

**ISSN/ISBN** 0031-9007

**edoc-URL** <http://edoc.unibas.ch/dok/A5252864>

**Full Text on edoc** No;

**Digital Object Identifier DOI** 10.1103/PhysRevLett.76.114

**PubMed ID** <http://www.ncbi.nlm.nih.gov/pubmed/10060447>

**ISI-Number** WOS:A1996TN03700029

**Document type (ISI)** Article