Resonant Phonon Scattering in Two-dimensional Electron Systems (2DES) Driven by dc Electric Fields

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NNIN Facility utilized: Nanofabrication Center

- Non-linear transport in 2DES:
  - Use electric field as a tuner for acoustic phonon resonances
- MAJOR OBSERVATIONS:
  - Electric field tuned phonon scattering
  - Resistance peaks at the crossover to supersonic regime due to intra Landau level transitions
  - dc-induced zero-differential resistance state

Publications