



Contribution ID: 344

Type: **Talk**

[413] Electronic Transport in Polaritonic Semiconductor Heterostructure Systems

Tuesday, 31 August 2021 17:00 (15 minutes)

We present resonant tunneling diodes, which feature intersubband transitions that are strongly-coupled to the cavity field. By using double-metal cavities with different resonant frequencies we show the infamous avoided-crossing property of the intersubband polaritons.

Resonant tunneling diodes are ideal systems for investigating resonant electronic transport in systems, which are strongly-coupled to the light field. We find that by applying different current densities, we can modulate the coupling-strength of the hybrid system.

Primary authors: LIMBACHER, Benedikt (TU Wien); KAINZ, Martin Alexander; SCHÖNHUBER, Sebastian (Photonics Institute, TU Wien); Dr WENCLAWIAK, Moritz (Photonics Institute, TU Wien); Mr DERNTL, Christian (Photonics Institute, TU Wien); ANDREWS, Aaron Maxwell (Institute of Solid State Electronics E362, TU Wien); DETZ, Hermann (Institute of Solid State Electronics E362, TU Wien); STRASSER, Gottfried (TU Wien); SCHWAIGHOFER, Andreas (Institute of Chemical Technologies and Analytics, TU Wien); LENDL, Bernhard (TU Wien); DARMO, Juraj (TU Wien); UNTERRAINER, Karl (TU Wien)

Presenter: LIMBACHER, Benedikt (TU Wien)

Session Classification: Atomic Physics and Quantum Optics

Track Classification: Atomic Physics and Quantum Optics