Universität Basel

Research Project

Valleytronics in Strain-Engineered Graphene

Third-party funded project

Project title Valleytronics in Strain-Engineered Graphene
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We aim to explore strain induced effects in the electrical properties of clean ballistic graphene. Graphene can be strained to >20% yielding gigantic pseudo-magnetic fields which act on the valley-degree of freedom. This opens the door to valleytronics with observable electro-optical effects in ballistic graphene, such as angle-dependent refraction at a p-n interface that dependy on the valley degree of freedom.

Keywords graphene; valleyphysics; strain
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