

Abstract Submitted
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Anomalous magnetic susceptibility and Hall effect from valley degrees of freedom TIANYI CAI, WANG YAO, The university of Texas at Austin, JUNREN SHI, Chinese Academy of Science, QIAN NIU, The university of Texas at Austin — With a staggered sublattice potential, sizable gaps can occur in epitaxial graphenene films. Magnetic and transport properties of this system are studied. We predict large signal of magnetic susceptibility and relate it to the intrinsic large magnetic moments of electrons. There is also an anomalous contribution to the ordinary Hall effect, which is due to the valley dependent Berry phase.

Tianyi Cai
The university of Texas at Austin

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