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标题: Intrinsic Terahertz Plasmons and Magnetoplasmons in Large Scale Monolayer Graphene

作者: Crassee, I (Crassee, I.); Orlita, M (Orlita, M.); Potemski, M (Potemski, M.); Walter, AL (Walter, A. L.); Ostler, M (Ostler, M.); Seyller, T (Seyller, Th.); Gaponenko, I (Gaponenko, I.); Chen, J (Chen, J.); Kuzmenko, AB (Kuzmenko, A. B.)

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摘要: We show that in graphene epitaxially grown on SiC the Drude absorption is transformed into a strong terahertz plasmonic peak due to natural nanoscale inhomogeneities, such as substrate terraces and wrinkles. The excitation of the plasmon modifies dramatically the magneto-optical response and in particular the Faraday rotation. This makes graphene a unique playground for plasmon-controlled magneto-optical phenomena thanks to a cyclotron mass 2 orders of magnitude smaller than in conventional plasmonic materials such as noble metals.

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地址: [Crassee, I.; Gaponenko, I.; Kuzmenko, A. B.] Univ Geneva, Dept Phys Mat Condensee, CH-1211 Geneva, Switzerland

[Orlita, M.; Potemski, M.] CNRS UJFUPS INSA, Grenoble High Magnet Field Lab, F-38042 Grenoble 09, France

[Ostler, M.; Seyller, Th.] Univ Erlangen Nurnberg, Lehrstuhl Tech Phys, D-91058 Erlangen, Germany

[Chen, J.] CIC NanoGUNE Consolider, Donostia San Sebastian 20018, Spain

[Orlita, M.] Charles Univ Prague, Fac Math & Phys, CR-12116 Prague 2, Czech Republic

[Chen, J.] Ctr Fis Mat CSIC UPV EHU, Donostia San Sebastian 20018, Spain

[Walter, A. L.] EO Lawrence Berkeley Lab, Berkeley, CA 94720 USA

[Walter, A. L.] Max Planck Gesell, Fritz Haber Inst, Dept Mol Phys, D-14195 Berlin, Germany

[Chen, J.] DIPC, Donostia San Sebastian 20018, Spain

通讯作者地址: Crassee, I (通讯作者), Univ Geneva, Dept Phys Mat Condensee, 24 Quai E Ansermet, CH-1211 Geneva, Switzerland

电子邮件地址: Iris.Crassee@unige.ch

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