320.
标题: Dynamical polarizability of graphene irradiated by circularly polarized ac electric fields
作者: Busl, M (Busl, Maria); Platero, G (Platero, Gloria); Jauho, AP (Jauho, Antti-Pekka)
来源出版物: PHYSICAL REVIEW B 卷: 85 期: 15 文献号: 155449 DOI: 10.1103/PhysRevB.85.155449 出版年: APR 25 2012
在 Web of Science 中的被引频次: 0
被引频次合计: 0
引用的参考文献数: 41
摘要: We examine the low-energy physics of graphene in the presence of a circularly polarized electric field in the terahertz regime. Specifically, we derive a general expression for the dynamical polarizability of graphene irradiated by an ac electric field. Several approximations are developed that allow one to develop a semianalytical theory for the weak-field regime. The ac field changes qualitatively the single-and many-electron excitations of graphene: Undoped samples may exhibit collective excitations (in contrast to the equilibrium situation), and the properties of the excitations in doped graphene are strongly influenced by the ac field. We also show that the intensity of the external field is the critical control parameter for the stability of these excitations.
入藏号: WOS:000303193400003
语种: English
文献类型: Article
KeyWords Plus: TRANSPORT
地址: [Busl, Maria; Platero, Gloria] CSIC, Inst Ciencia Mat Madrid, Madrid 28049, Spain
[Jauho, Antti-Pekka] Tech Univ Denmark, CNG, Dept Micro & Nanotechnol, DTU Nanotech, DK-2800 Kongens Lyngby, Denmark
通讯作者地址: Busl, M (通讯作者),CSIC, Inst Ciencia Mat Madrid, Madrid 28049, Spain
出版商: AMER PHYSICAL SOC
出版商地址: ONE PHYSICS ELLIPSE, COLLEGE PK, MD 20740-3844 USA
Web of Science 分类: Physics, Condensed Matter
学科类别: Physics
IDS 号: 931CY
ISSN: 1098-0121
29 字符的来源出版物名称缩写: PHYS REV B
ISO 来源出版物缩写: Phys. Rev. B
来源出版物页码计数: 12