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光子科学・リーディング大学院・東京大学統合物質科学リーダー養成プログラム

“Absorption of the microwave and THz radiation in ultrathin carbon films”

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日時：平成27年2月26日(木) 13:00-14:30

場所：東京大学理学部1号館2階 201A 号室

Abstract

Experimental results on the intraband absorption in graphene and nanometrically thin pyrolytic carbon films are presented. It is shown that films with thickness much less than skin depth are capable to absorb up to 50% of the incident radiation. This opens avenues towards development of novel ultralight coatings with enhanced shielding efficiency in the microwave spectral range. The properties of the graphene/dielectric sandwich like structures in the THz range are discussed. The transmission/reflection/absorption of these structures in the THz range can be changed by varying chemical potential of the graphene, while absorbance can be also tuned by changing the thickness dielectric substrate.

紹介教員: 五神真教授 (物理学専攻)