## Siam Physics Congress 2017



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## Geometry-Dependent Faraday Rotation in Strained Graphene

Thursday 25 May 2017 17:45 (15 minutes)

We investigate coherent single photon in the infrared regime traveling in the positive z direction passing through a single layer of strained graphene. The angle of rotation relates to space deformation by the terms of directional dependent fermi velocity. Analytical expressions of full quantum mechanics, by second-quantization approach, are obtained for components of the magneto-optical tensor. The transmission, reflection and faraday angle can be calculated.

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