Variable angle spectroscopic ellipsometry investigation of turbostratic CVD-grown bilayer and trilayer graphene

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We report a Variable Angle Spectroscopic Ellipsometry (VASE) characterization of the surface of CVD-grown bilayer and trilayer graphene produced by multiple transfer on SiO_2/Si and polyethylene terephthalate (PET) substrates. The study of the optical properties of single- and few-layer graphene on PET could be useful in the light of novel graphene-based flexible and stretchable electronics applications. The absorption peak due to resonant excitons has been found at 4.4 eV on bilayer graphene on SiO_2/Si. Moreover, an absorption peak at 3 eV for SiO_2/Si samples, which has not been revealed in previous studies, is discussed for the first time.

REFERENCES

[1] Politano G G, Vena C, Desiderio G and Versace C 2020 Variable angle spectroscopic ellipsometry characterization of turbostratic CVD-grown bilayer and trilayer graphene Opt. Mater. (Amst). 107 110165