Abstract Submitted
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Optical thickness determination of hexagonal boron nitride flakes[1] DHEERAJ GOLLA, KANOKPORN CHATTRAKUN, Department of Physics, University of Arizona, Tucson, AZ, KENJI WATANABE, TAKASHI TANIGUCHI, National Institute for Materials Science, Tsukuba, Japan, BRIAN J. LEROY, ARVINDER SANDHU, Department of Physics, University of Arizona, Tucson, AZ — Optical reflectivity contrast provides a simple, fast, and noninvasive method for characterization of few monolayer samples of two-dimensional materials. Here, we apply this technique to measure the thickness of thin flakes of hexagonal Boron Nitride (hBN), which is a material of increasing interest in nanodevice fabrication. The optical contrast shows a strong negative peak at short wavelengths and zero contrast at a thickness dependent wavelength. The optical contrast varies linearly for 1-80 layers of hBN, which permits easy calibration of thickness. We demonstrate the applicability of this quick characterization method by comparing atomic force microscopy and optical contrast results.

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