

Abstract Submitted  
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**Electrolyte gating of graphene protected by boron nitride** KEVIN THARRATT, PATRICK GALLAGHER, MENYOUNG LEE, Department of Physics, Stanford University, Stanford, California 94305, USA, KENJI WATANABE, TAKASHI TANIGUCHI, Advanced Materials Laboratory, National Institute for Materials Science, 1-1 Namiki, Tsukuba, 305-0044, Japan, DAVID GOLDHABER-GORDON, Department of Physics, Stanford University, Stanford, California 94305, USA — Electrolyte gating is a technique used to induce a high carrier density at a sample surface. We have recently shown that for strontium titanate surfaces protected by boron nitride, electrolyte gating can induce high carrier densities while maintaining high electron mobility and limiting electrochemical reactions at the sample. In this talk, we describe electrolyte-gating experiments on single-layer graphene sheets encapsulated by various thicknesses of boron nitride. We discuss the implications of our work for future electrolyte gating studies of materials protected by boron nitride.

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