

Abstract Submitted  
for the NES15 Meeting of  
The American Physical Society

**Ionic transport across porous graphene membranes** LAUREN CANTLEY, SCOTT BUNCH, Boston Univ — Graphene is an attractive material for applications in single molecule sensing and molecular sieving, in part due to its atomic thinness, strength and barrier properties. In this study, we examine ionic transport across a suspended single-layer graphene membrane separating two reservoirs of aqueous ionic solution. Molecularly sized, sub-nm pore(s) are introduced by chemical etching, which allow for only proton transport across the graphene membrane. The pore is further opened and ionic conductance measurements are carried out to further investigate and characterize ionic transport across sub-nm and nm-scale pores.

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Date submitted: 08 Apr 2015

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