Electric Double Layer Charging on Graphene\textsuperscript{1} FENG CHEN, BING LV, YUYI XUE, C.W. CHU\textsuperscript{2}, Dept. of Physics and Texas Center for Superconductivity, University of Houston, Houston, TX 77204-5002, HOWARD WANG, Dept. of Mechanical Engineering, Binghamton University, Binghamton, NY 13902-6000 — Electric Double Layer (EDL) charging as a new charging method has attracted wide interests recently. We have employed this method to graphene and obtained an estimated surface charge density of $4 \times 10^{15}$ electrons/cm$^2$. The resistance dropped significantly upon charging and the physical properties under various charging conditions were studied. We will present these along with results of the EDL charging on other superconducting candidates.

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\textsuperscript{2}Also at: Lawrence Berkeley National Laboratory