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Graphite oxide as a nanoscale dielectric BRIAN STANDLEY, ANTHONY MENDEZ, California Institute of Technology, EMMA SCHMIDGALL, Imperial College London, MARC BOCKRATH, California Institute of Technology
— Graphite oxide's ease of deposition and graphene-like properties when chemically reduced make it a promising electronic material. To complement this effort, we are studying graphite oxide as a potential dielectric for nanoscale devices. While unreduced graphite oxide is known to have a sheet resistance in the GΩ range, its out-of-plane conductivity has yet to be measured. We have fabricated ultrathin capacitors from graphite oxide sheets, and will present our efforts to measure its leakage current and breakdown electric field, thus providing an assessment of its potential as a gate insulator.

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