

Pseudocapacitance and Excellent Cyclability of 2,5-dimethoxy-1,4-benzoquinone on Graphene

Muhammad Boota^a, Chi Chen^{a,b}, Matthieu Bécuwe^{c,d,e}, Ling Miao^b, and Yury Gogotsi^{a*}

^aA. J. Drexel Nanomaterials Institute, and Department of Materials Science and Engineering, Drexel University, Philadelphia, PA 19104, USA, E-mail: gogotsi@drexel.edu

^bSchool of Optical and Electronic Information, Huazhong University of Science and Technology, Wuhan, Hubei 430074, People's Republic of China

^cLaboratoire de Réactivité et Chimie des Solides (LRCS), UMR CNRS 7314, Université de Picardie Jules Verne (UPJV), 33 rue Saint Leu, 80039 Amiens, France

^dInstitut de Chimie de Picardie (ICP), CNRS FR3085, Université de Picardie Jules Verne, 80039 Amiens Cedex, France

^eRéseau sur le Stockage Electrochimique de l'Energie (RS2E), FR CNRS 3459, France

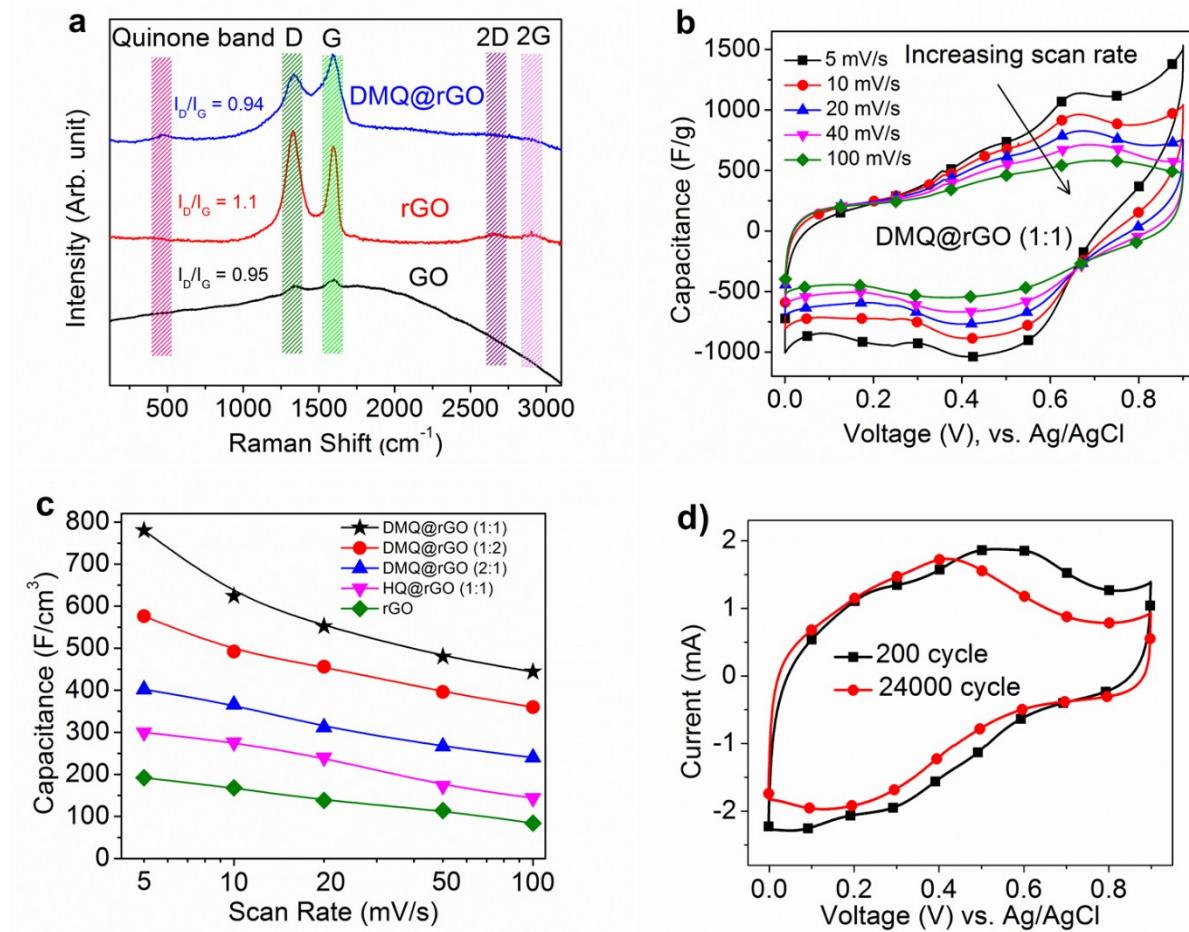


Figure S1: a) Raman spectra of GO, rGO and DMQ@rGO (1:1). b) Cyclic voltammograms of DMQ@rGO (1:1) at various scan rates between 5-100 mV/s. c) Rate performance of tested compositions between 5-100 mV/s, where DMQ@rGO (1:1) exhibited the highest volumetric capacitance and rate handling across all the tested rates. d) CVs of the HQ@rGO (1:1) electrodes at 200th and 24000th cycle.

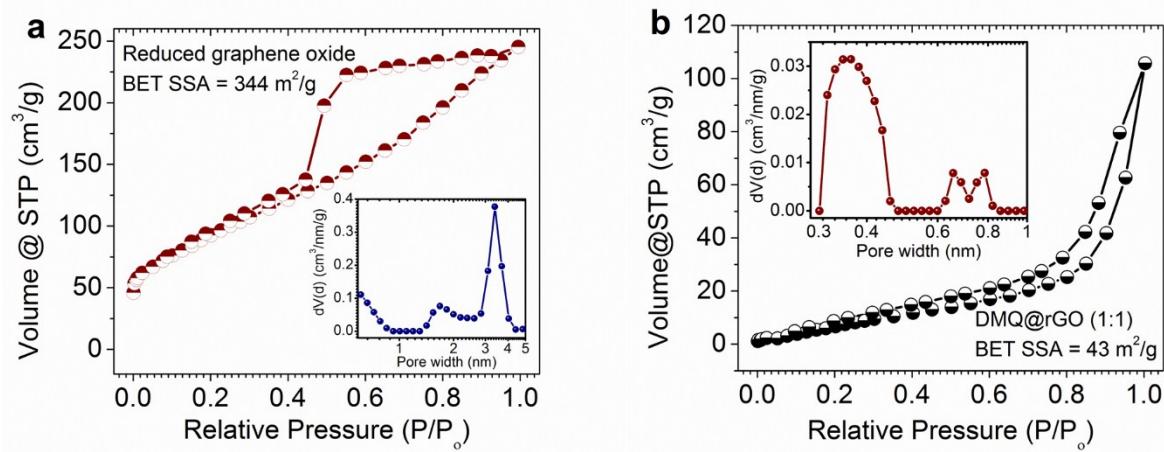


Figure S2: Nitrogen gas sorption isotherms for rGO (a) and DMQ@rGO (1:1) (b). Insets in (a) and (b) show corresponding pore size distributions.