

Supporting Information

The pH Dependent Reactions of Graphene Oxide with Small Molecule Thiols

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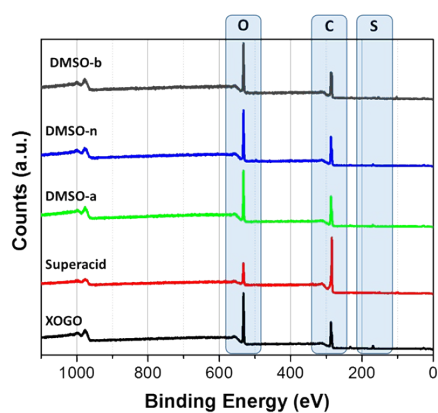


Figure S1. Survey XPS scan of GO, rGO (superacid), fGO (DMSO-b), C-1 (DMSO-a), and C-2 (DMSO-n).

Table S1. Elemental composition and Raman D/G of GO, fGO, rGO, and control samples

Elemental Composition	Graphitic Carbon	O	S (C-S form)	Graphitic C:O	Thiol:Graphitic C	Raman D/G
GO	60.6	39.4	0	1.54:1	0	0.89
rGO	84.3	15.7	0	5.37:1	0	1.13
C-1	63.6	36.4	0	1.75:1	0	0.82
C-2	64	36	0	1.78:1	0	0.84
fGO	61.3	35.4	1.1	1.73:1	1:55	0.99

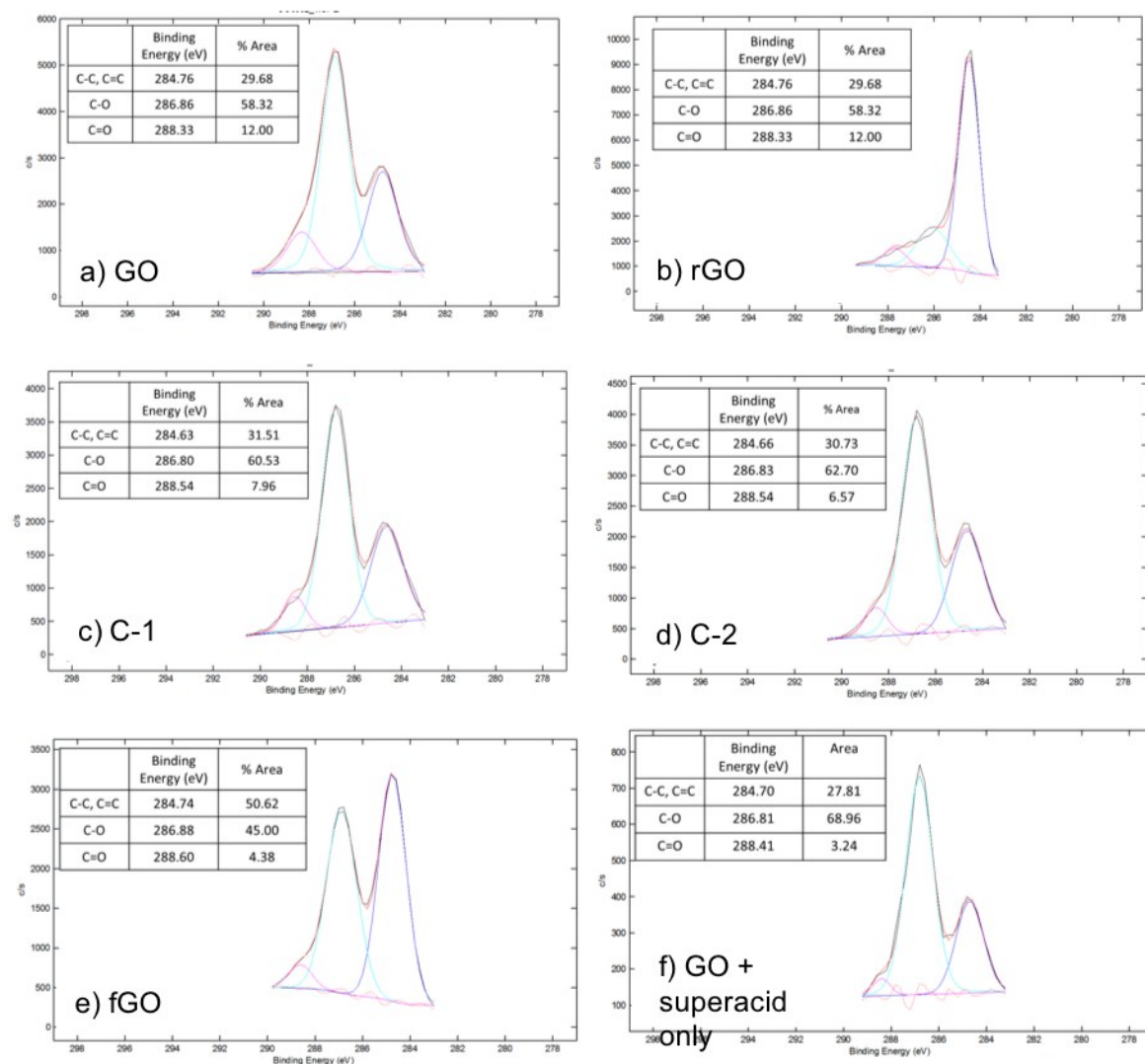


Figure S2. Deconvoluted high resolution carbon scan of: a) GO; b) rGO; c) C-1; d) C-2; e) fGO; and f) GO in superacid (i.e. no ethanethiol added).

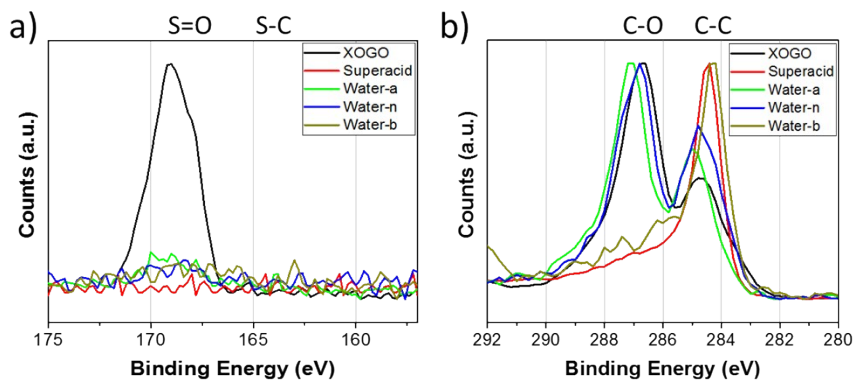


Figure S3. High resolution (a) S 2p_{3/2} and (b) C 1s XPS scan of reaction products of GO treated with thiol in protic solvent (water) with different pH.

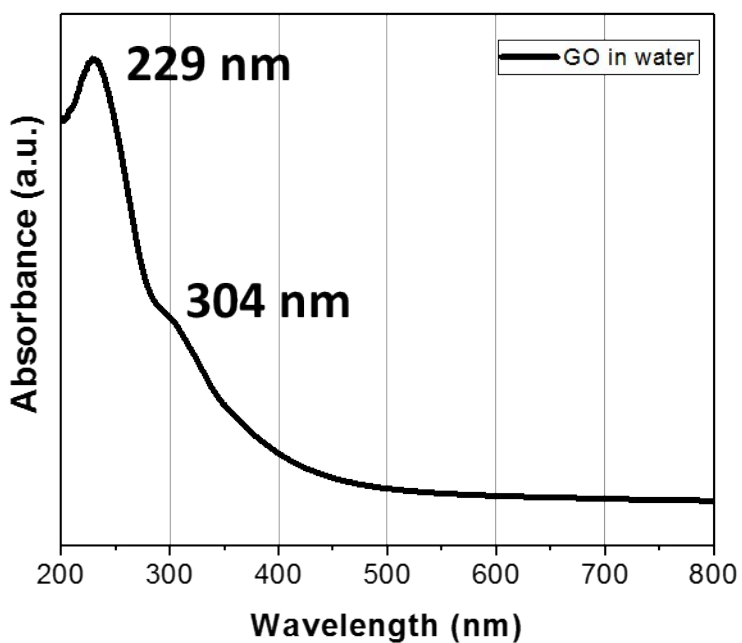


Figure S4. UV-Vis spectrum of GO dispersed in water