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Supporting Information

for

Interaction of graphene oxide with tannic acid: computational modeling and toxicity mitigation in *C. elegans*

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Supplementary material

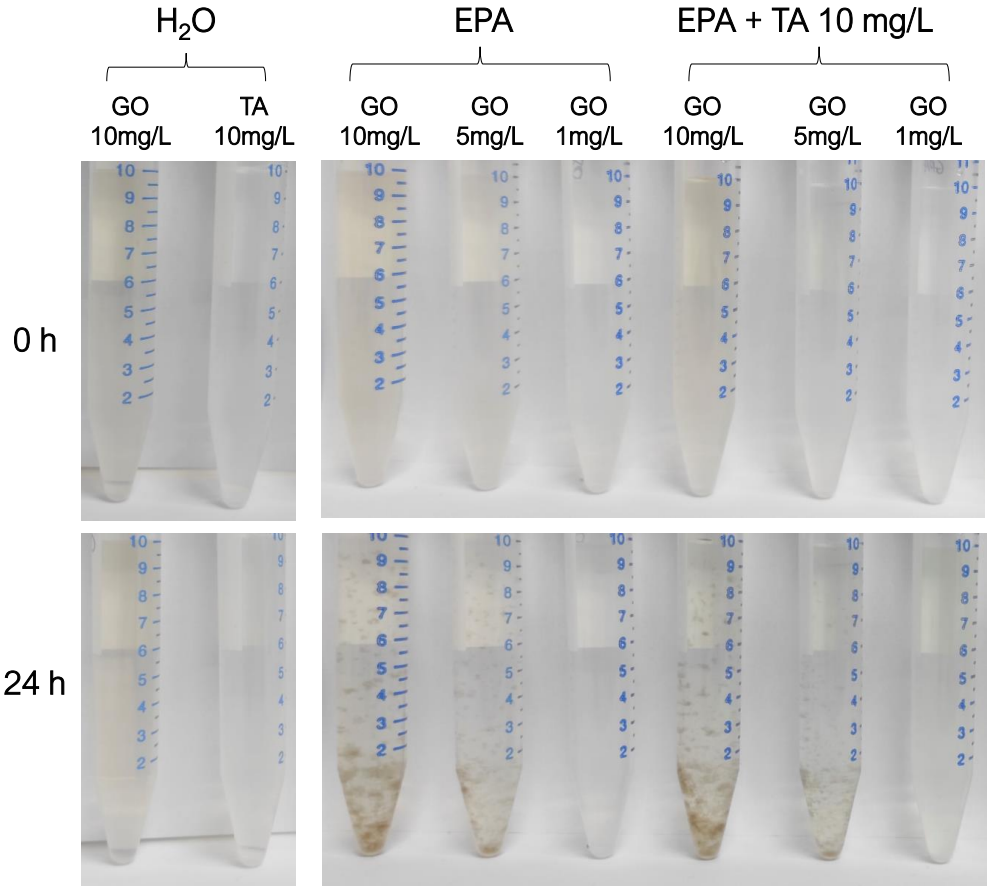

Figure S1: Colloidal stability assay of 1.0, 5.0 and 10 mg·L^{-1} GO suspensions in EPA medium with and without the presence of 10 mg·L^{-1} of tannic acid. The GO suspension of 10 mg·L^{-1} in ultrapure water is used as a stable control. Also, a 10 mg·L^{-1} TA solution was monitored for precipitation or change of color.

Table S1: Monitoring of colloidal stability by DLS of 10 mg·L^{-1} GO suspensions in EPA medium with and without the presence of 10 mg·L^{-1} or 20 mg·L^{-1} of tannic acid. HD: hydrodynamic diameter, PDI: polydispersivity index, TA10: 10 mg·L^{-1} of tannic acid, TA20: 20 mg·L^{-1} of tannic acid.

	0 hours		**3 hours**		**24 hours**	
Sample	**HD (nm)**	**PDI**	**HD (nm)**	**PDI**	**HD (nm)**	**PDI**
GO+H2O	86.4 ± 3.7	0.245	84.7 ± 3.8	0.252	85.3 ± 2.3	0.251
GO+EPA	182 ± 15.6	0.314	2313.2 ± 248.7	0.954	3811.2 ± 1064	1.429
GO+TA10+EPA	115.3 ± 20.3	0.284	1675.4 ± 208.8	0.812	3421.2 ± 733.0	1.403
GO+TA20+EPA	149.9 ± 35.4	0.338	552.1 ± 196.2	0.585	2574.7 ± 681.5	1.190

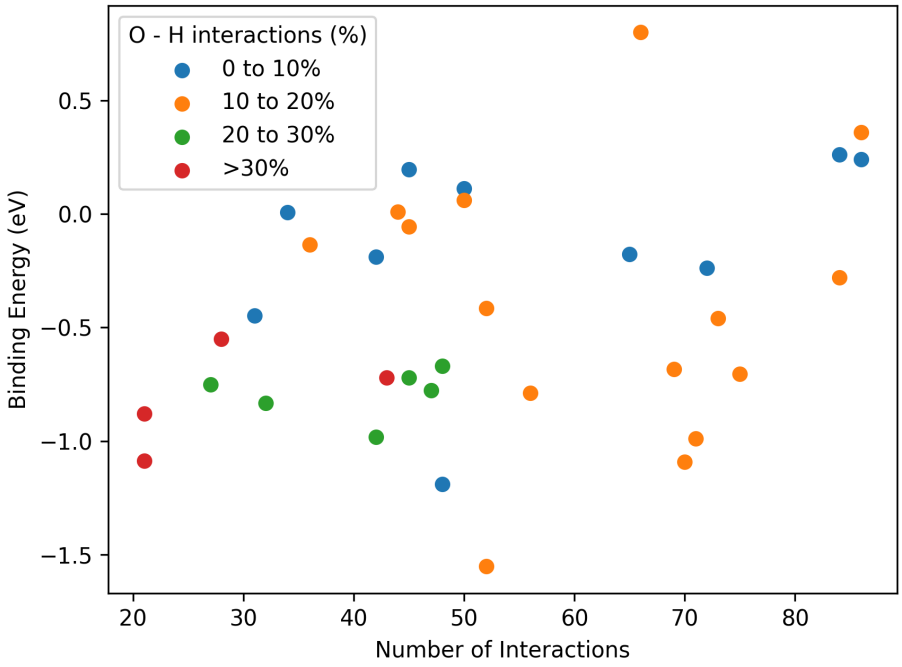

Figure S2: Relation between binding energy and the number of interacting atoms in the interface of GO and TA. The colors represent the percentage of interactions that occur between O and H atoms.

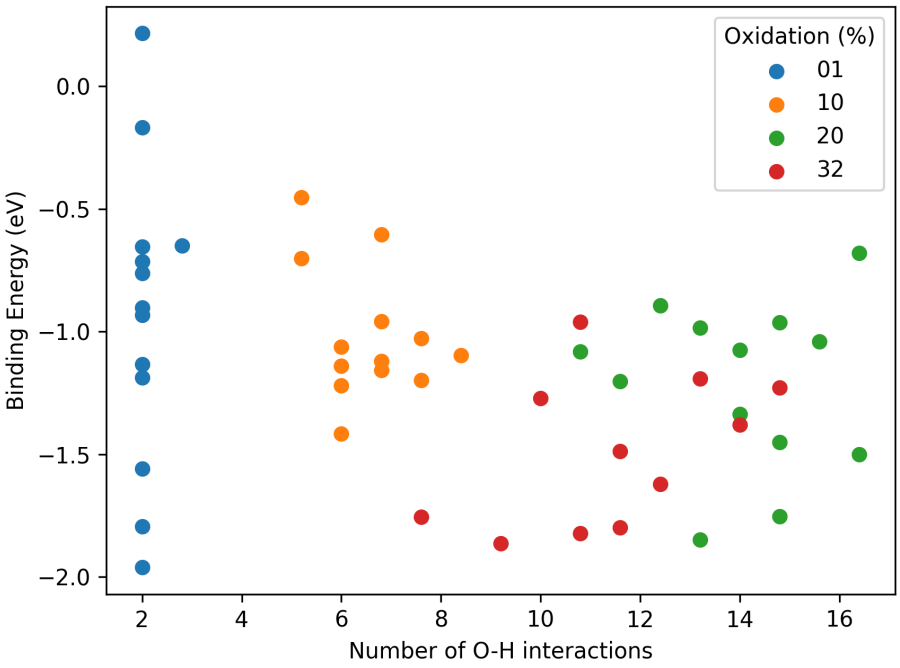

Figure S3: Relation between binding energy and the number of O-H interacting atoms in the interface of GO and TA. The colors represent GO's surface oxidation.