

Cite this: DOI: 10.1039/c0xx00000x

www.rsc.org/xxxxxx

ARTICLE TYPE

Supplementary Information: Crumpled reduced graphene oxide-polyamidoamine dendrimer hybrid nanoparticles for the preparation of electrochemical biosensor

Elena Araque,^a Reynaldo Villalonga,^{*a} María Gamella,^a Paloma Martínez-Ruiz,^b Julio Reviejo,^a José M. Pingarrón^{*a}

Received (in XXX, XXX) Xth XXXXXXXXXX 20XX, Accepted Xth XXXXXXXXXX 20XX

DOI: 10.1039/b000000x

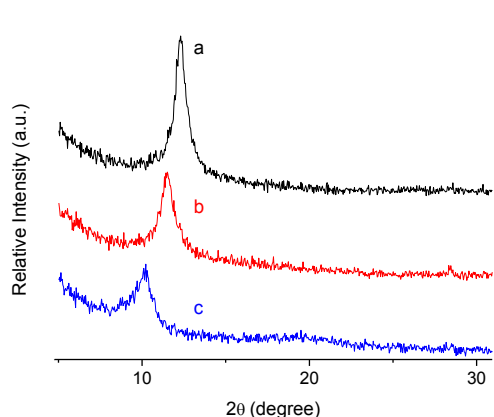


Fig. 1S. X-Ray diffraction of GO (a), Sil-GO (b) and PAMAM-Sil-rGO (c).

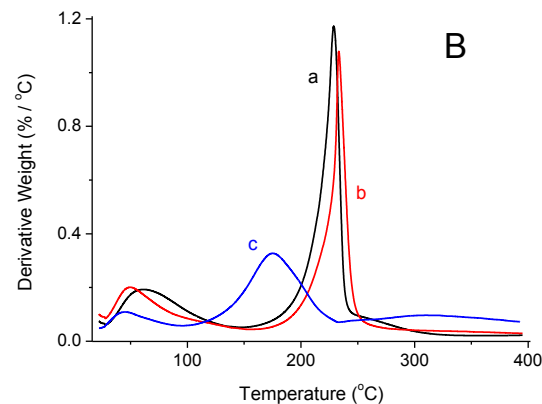
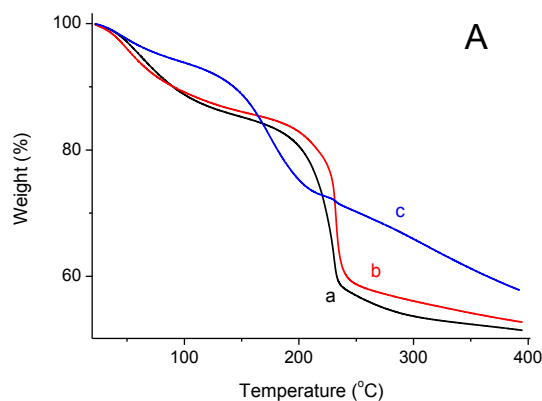


Fig. 3S. TG (A) and DTG (B) analysis for GO (a), Sil-GO (b) and PAMAM-Sil-rGO (c).

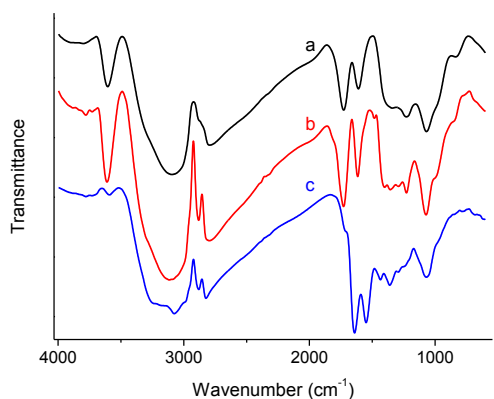


Fig. 2S. FT-IR analysis for GO (a), Sil-GO (b) and PAMAM-Sil-rGO (c).

15

20

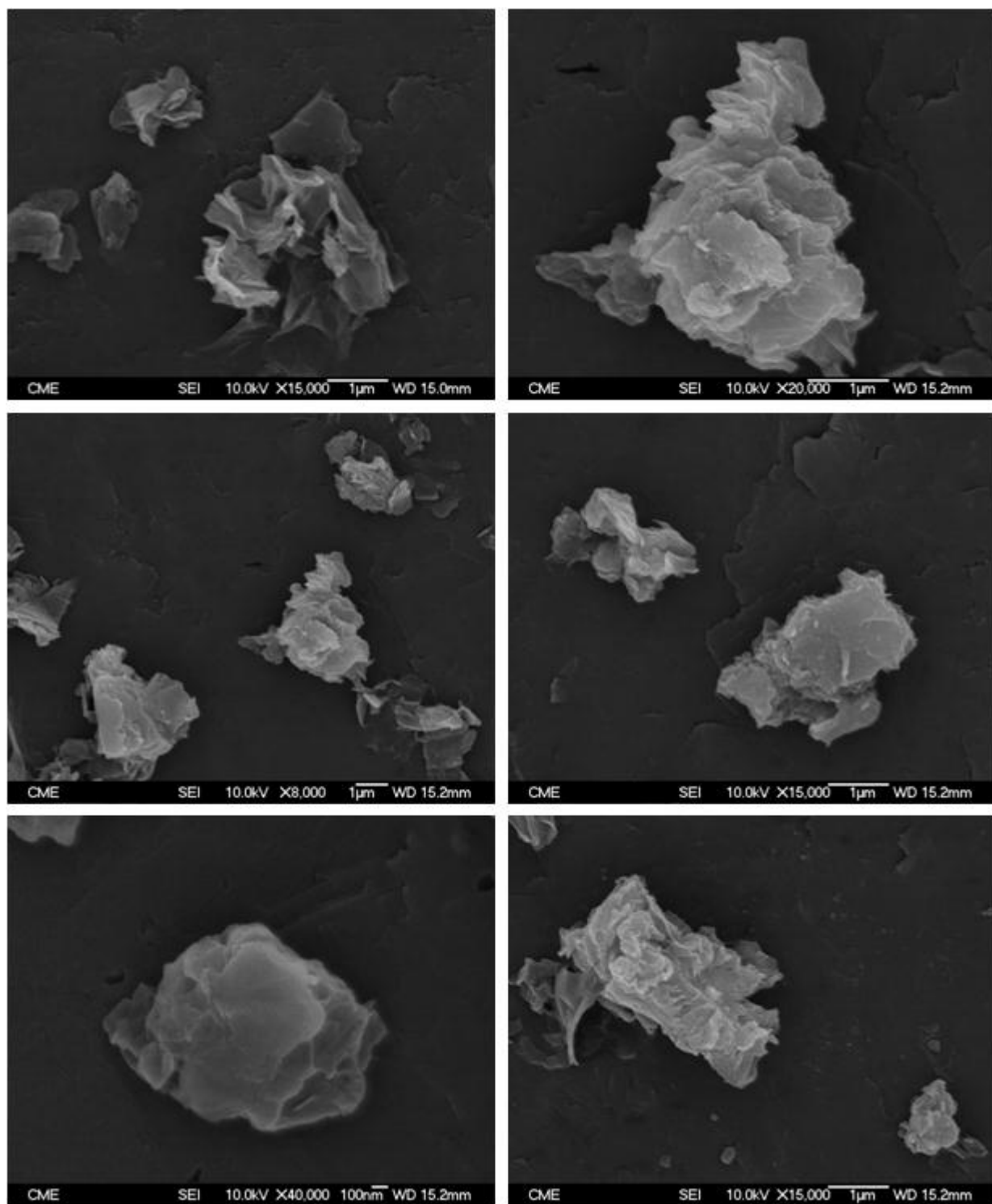


Fig. 4S. FE-SEM images of PAMAM-Sil-rGO crumpled nanostructures.

Cite this: DOI: 10.1039/c0xx00000x

www.rsc.org/xxxxxx

ARTICLE TYPE

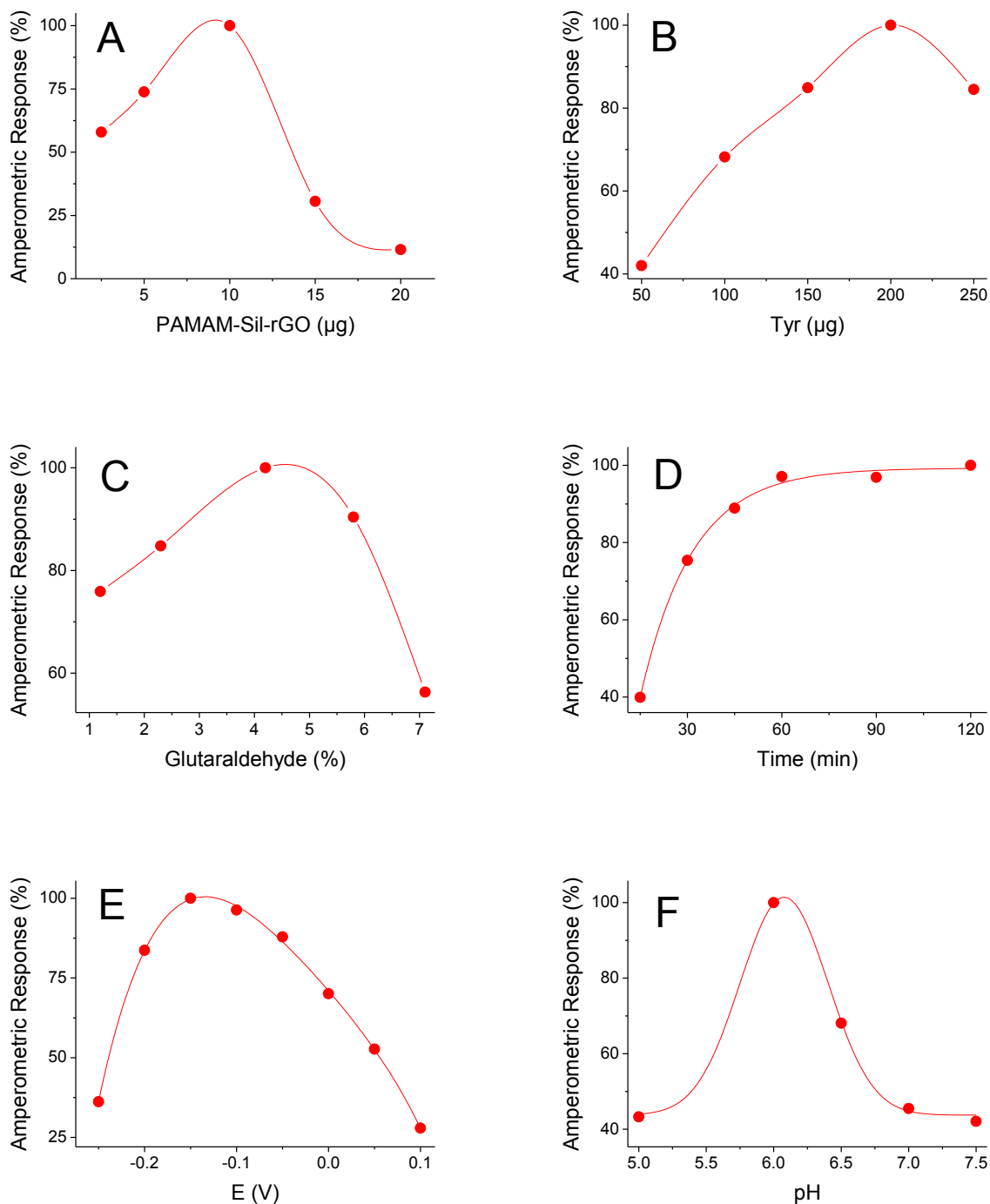
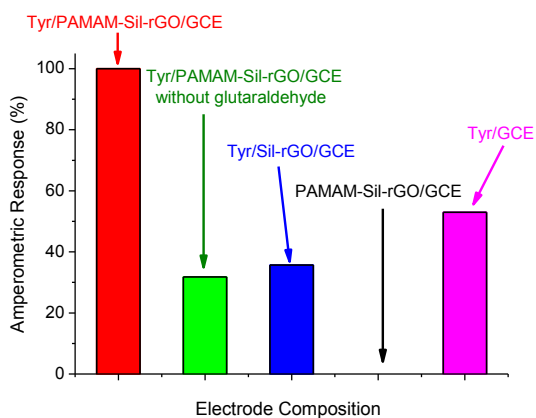
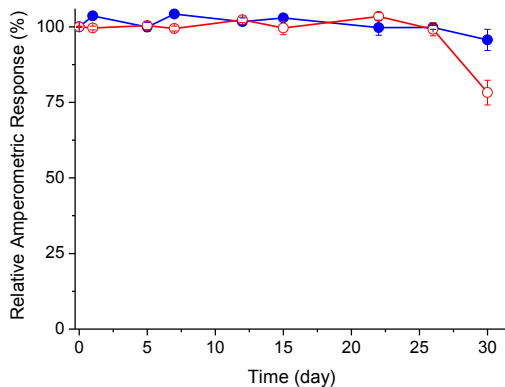


Fig. 5S. Influence of the amount of PAMAM-Sil-rGO (A), enzyme (B), glutaraldehyde (C), time of incubation (D), applied potential (E) and pH (F) on the amperometric response of the electrode toward catechol (100-500 nM).



5 **Fig. 6S.** Influence of the electrode composition on the amperometric response toward catechol (100-500 nM).



10 **Fig. 7S.** Amperometric responses measured with a single Tyr/PAMAM-Sil-rGO/GCE biosensor for 2.0 μ M catechol as a function of the storage time at 4°C under dry (●) and wet, 50 mM sodium phosphate buffer, pH 7.0, (○) conditions.

15 ^aDepartment of Analytical Chemistry & ^bDepartment of Organic Chemistry I, Faculty of Chemistry, Complutense University of Madrid, 28040-Madrid Spain. Fax: +34 913944329; Tel: +34 913944315; E-mail: pingarro@quim.ucm.es, rvillalonga@quim.ucm.es