Supporting Information

Real-time monitored photocatalytic activity and electrochemical performance of rGO/Pt nanocomposite synthesized *via* green approach

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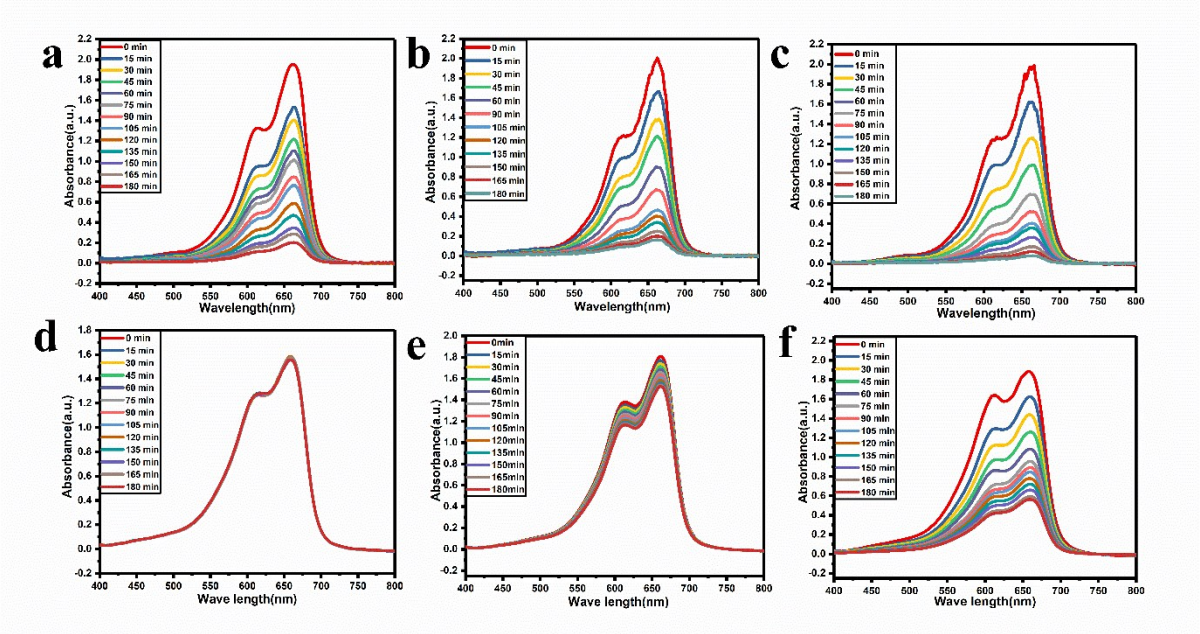

Fig. S1. Photocatalytic degradation of MB in presence of (a) rGO/Pt1, (b) rGO/Pt2, (c) rGO/Pt3 (d) MB without catalyst (e) rGO/Pt4 in dark mode, and (f) rGO catalyst.

Table. S1. Atomic weight percentage of rGO/Pt1, rGO/Pt2, rGO/Pt3 and rGO/Pt4 nanocomposites obtained from XPS.

Samples	Atomic Wt.% of Carbon	Atomic Wt.% of Carbon	Atomic Wt.% of Platinum
rGO/Pt1	80.45	19.94	1.61
rGO/Pt2	78.88	18.96	2.16
rGO/Pt3	77.96	18.06	3.98
rGO/Pt4	77.18	17.09	5.73

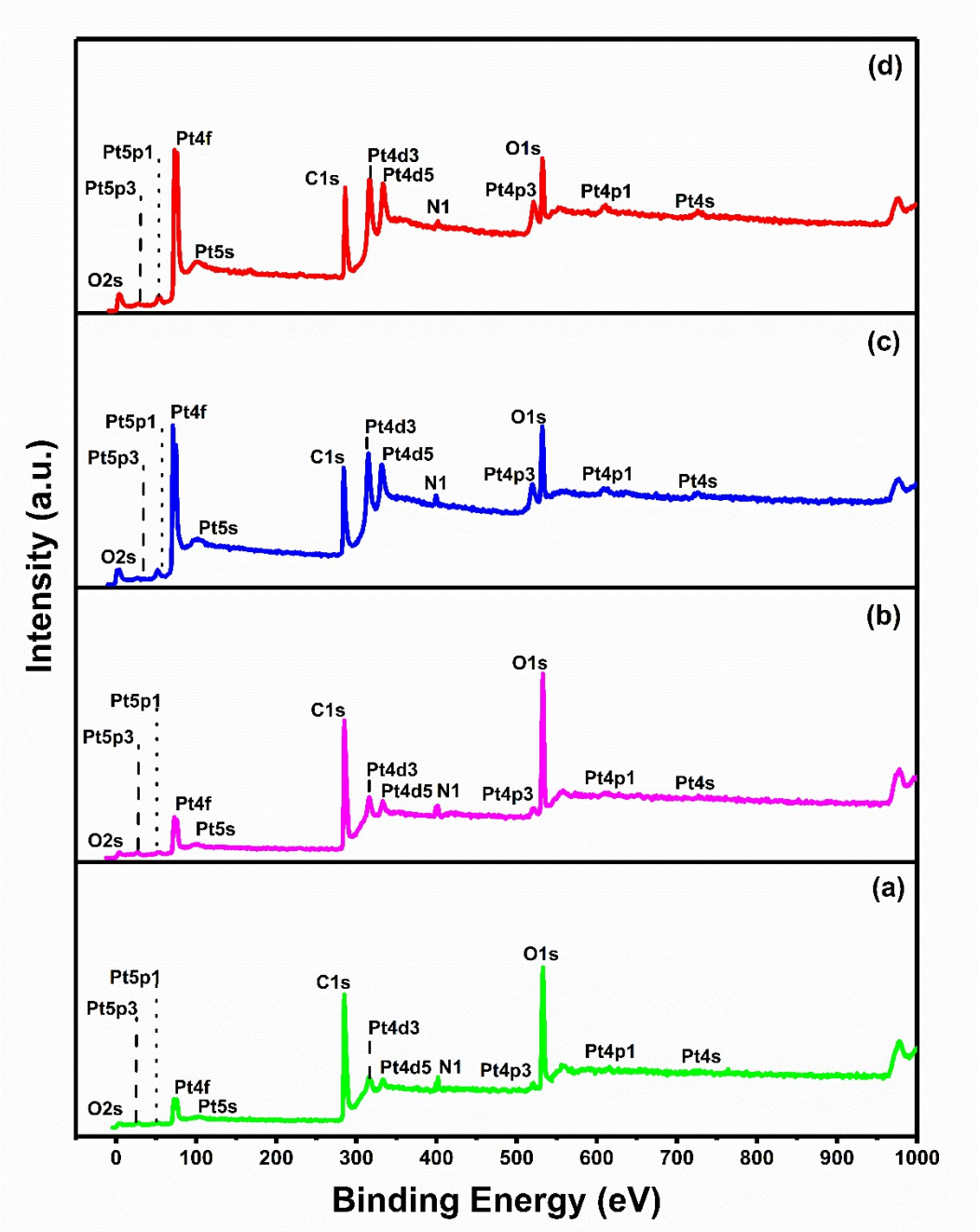

Fig. S2. XPS survey scans of (a) rGO/Pt1, (b) rGO/Pt2, (c) rGO/Pt3 and (d) rGO/Pt4 nanocomposites.

Table. S2. BET Textural analysis of (a) rGO/Pt1, (b) rGO/Pt2, (c) rGO/Pt3 and (d) rGO/Pt4 nanocomposites.

Samples	**S_{BET}/m^2g^{-1} (specific surface area)**	**S_{BET}/m^2g^{-1} (specific surface area)**	**V_{meso}/cm^3g^{-1} (mesopore volume)**	**v_{total}/cm^3g^{-1} (total pore volume)**	**psd /nm (pore size distribution)**
rGO/Pt1	13	0.003	0.033	0.036	3.9
rGO/Pt2	13.4	0.005	0.035	0.04	3.5
rGO/Pt3	25	0.006	0.05	0.056	3.7
rGO/Pt4	33.6	0.006	0.066	0.072	4.4