Electronic Supplementary Material (ESI) for Dalton Transactions.

Supporting information for

Boosting the Peroxidase-like Activity of Pt Nanozyme by Synergistical Effect of Ti_3C_2 Nanosheets for Dual Mechanism Detection

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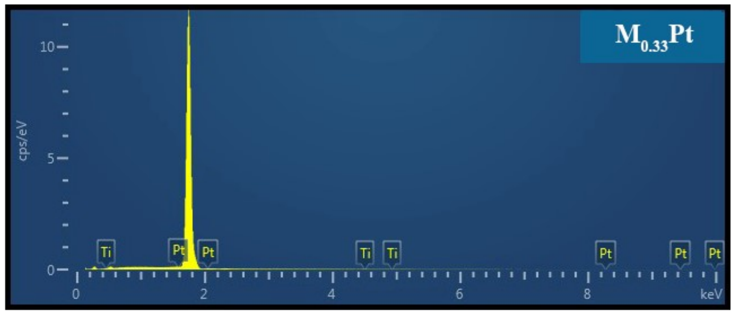
Notes

The authors declare no competing financial interest.

a



b

Element	M_3Pt wt%	M_1Pt wt%	$M_{0.33}Pt$ wt%
Ti	73.83	45.05	15.35
Pt	26.17	54.95	84.65

Fig. S1: (a) EDS spectrum of $M_{0.33}Pt$ hybrid nanosheets, (b) The calculated mass ratio of element Ti and Pt in MXene/Pt by EDS analysis.

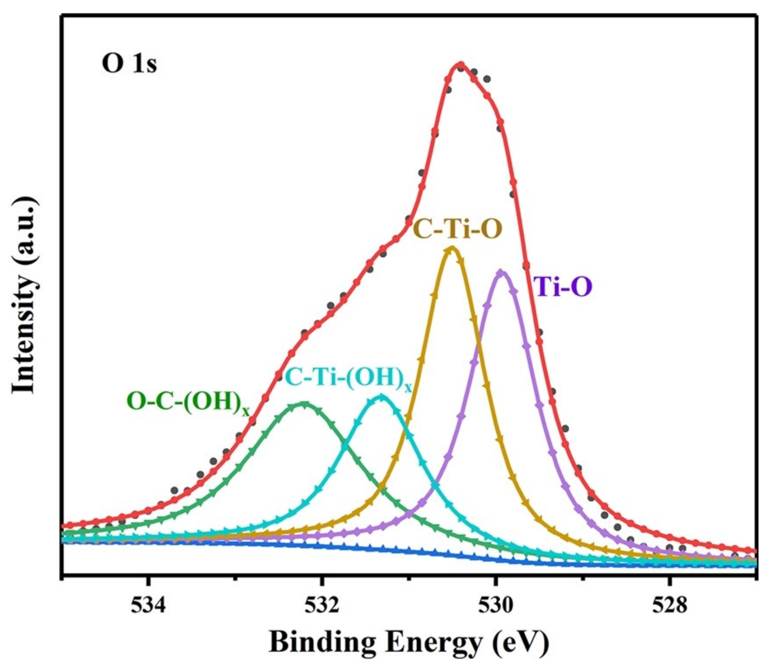


Fig. S2: XPS spectra of O 1s of $M_{0.33}Pt$.

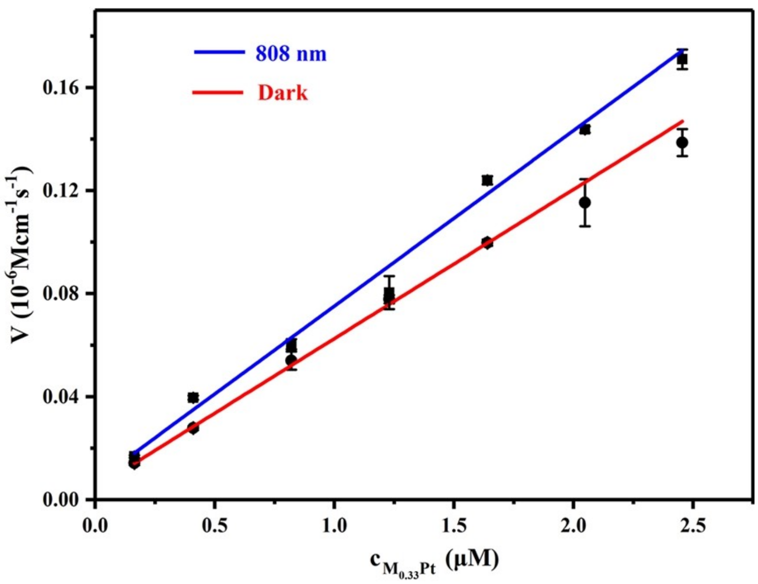


Fig. S3: The dependence of TMB oxidation rate on the concentration of $M_{0.33}Pt$ under dark and light condition.

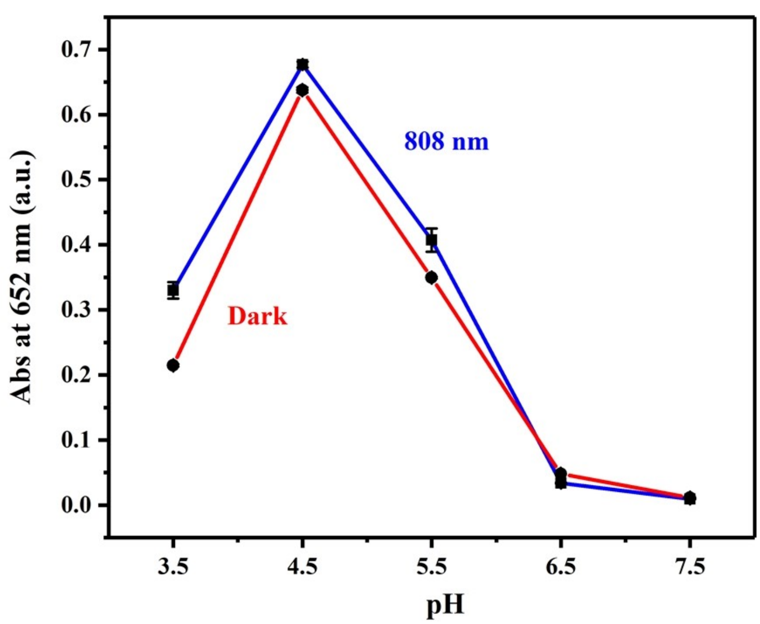


Fig. S4: POD activity of M0.33Pt nanoparticles under different pH conditions

Table S1

Comparison of different biosensor for the detection of glucose.

Catalyst	Linear Range [μM]	LOD [μM]	Reference
Pt/EMT	80-280	13.2	1
Pt_{10}-LP	2.5-1000	1.89	2
BSA-Pt	10-120	2	3
Pt/cube-CeO_2	5-100	4.1	4
Pt/Uio-66-66%	16.75-837.5	5.58	5
Au@Pt	45-400	45	6
$M_{0.33}Pt$	40-500	0.85	This work

Table S2

Comparison of different biosensor for the detection of GSH

Catalyst	Linear Range [μM]	LOD [μM]	Reference
PtNPs@MnO_2	0.2-11	0.05	7
Pt_{10}-LP NCs	4-140	0.37	2
MoS_2@$CoFe_2O_4$	0.5-35	0.21	8
h-Fe_3O_4@ppy	0.5-80	0.15	9
PtNP/GO	0.02-20	0.004	10
MXene@NiFe-LDH	0.9-30	0.084	11
$M_{0.33}Pt$	0.4-7	0.0089	This work

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