Electronic Supplementary Material (ESI) for RSC Advances.

Electronic Supplementary Material

Synthesis of PVP-functionalized ultra-small MoS_2 nanoparticles with intrinsic peroxidase-like activity for H_2O_2 and glucose detection

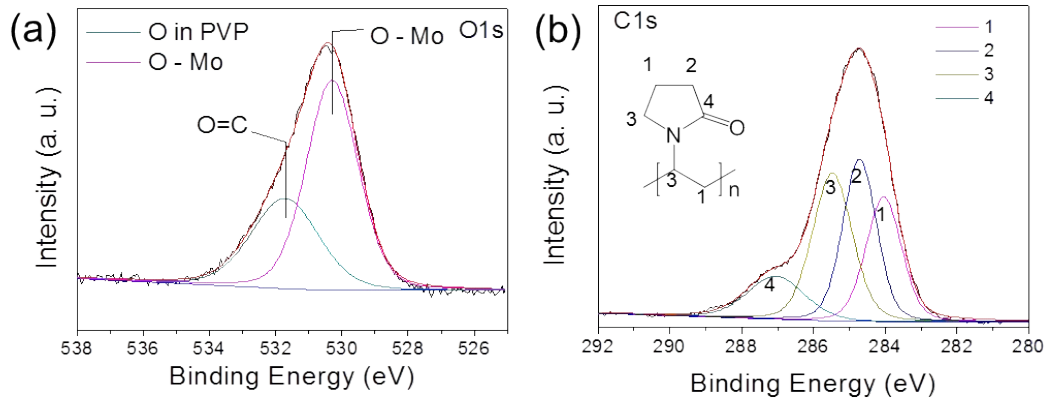

Figure S1. High-resolution XPS spectra of (a) O1s and (b) C1s of the PVP-MoS_2 NPs[1].

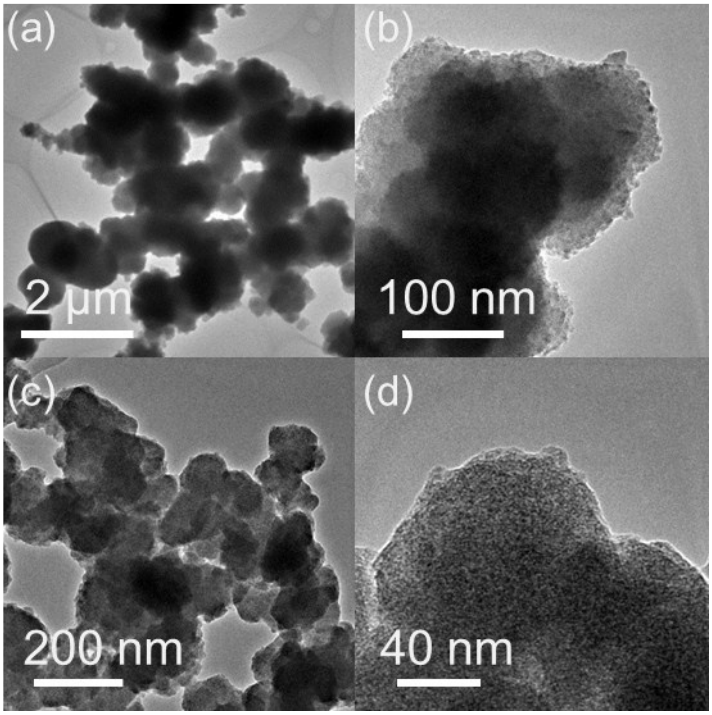

Figure S2. (a-b) TEM images of MoS_2 product synthesized without adding PVP; (c-d) TEM images of MoS_2 product synthesized after adding 0.1g PVP.

Table S1. Comparison of various methods for glucose detection.

Nanomaterial	Detection Method	Linear Range (mmol L^{-1})	Ref.
hollow Pt/MWCNTs	electrochemistry	0.0012–8.4	2
PVP-Ag nanowires	electrochemistry	2–20	3
Cu_2O nanocubes/graphene	electrochemistry	0.3–3.3	4
Au nanoclusters	fluorimetry	0.01 - 0.5	5
B-doped carbon quantum dot	fluorimetry	0.008-0.08	6
QDs-ConA-β-CDs-AuNP	fluorimetry	0.0001-0.05	7
Graphene oxide	colorimetry	0.001-0.02	8
carbon nanodots	colorimetry	0.0010-0.50	9
$ZnFe_2O_4$ nanoparticles	colorimetry	0.00125-0.01875	10
PVP-MoS_2 nanoparticles	colorimetry	1-10	This work

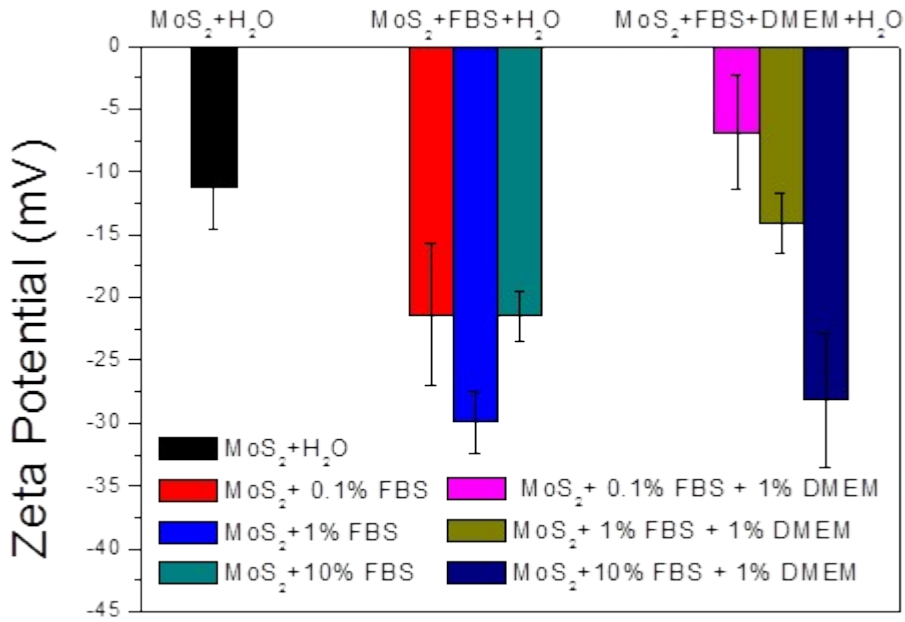

Figure S3. Zeta potential of PVP-MoS_2 NPs dispersed in distilled water, FBS+H_2O, and FBS+DMEM+H_2O solutions, respectively.

Reference

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