TABLE

Table S1 Detection performance of IL-1β by different analytical methods.

Sensing platform	Method	Linear range (pg/mL)	LOD (pg/mL)	Ref.
BP1/Au-Ag@MoS_2/rGO/Au	SWV	94-250	40.78	42
BSA/Ab/CS/IrO_X/$Ti_3C_2T_X$/SPE	DPV	100-10^5	14	43
MIP/PEI/PDA/SS and Flu-Ab	Fluorescent	25-400	10.2	44
BSA/Ab/SA/NHS-Biotin/APTES/GTF	Fluorescent	3-400	1.12	45
BSA/Ab/HOOC-Phe- DWCNTs/SPCE	Amperometry	0.5-100	0.38	46
BSA/Ab/EDC-NHS/PHA/ITO	EIS	0.025-3	0.0075	47
BSA/Ab/EDC-NHS/P3-TMA/ITO	EIS	0.01-3	0.003	48
BSA/Ab/GA/AuNPs@NH_2-VMSF/PDA/GCE	DPV	1-10^5	0.48	This work

BP1: the peptide synthesized using the YVHHYSTGQMFNGGGSC sequence; Au-Ag@MoS_2/rGO: gold and silver nanoparticles immobilized on MoS_2/rGO nanosheets; rGO: reduced graphene oxide nanosheets; Au: gold electrode; SWV: square wave voltammetry; CS: chitosan; IrO_x: iridium oxide nanotubes; $Ti_3C_2T_x$: titanium carbide nanosheets; SPE: screen printed electrode; DPV: differential pulse voltammetry; MIP: molecularly imprinted polymer; PEI: poly(ethyleneimine); SS: stainless steel; Flu-Ab: Fluorescence labelled Ab; SA: Streptavidin; NHS-Biotin: the sulfosuccinimidyl-2-[biotinamido]ethyl-1,3-dithiopropionate; APTES: aminopropyltriethoxysilane; GTF: glass telecommunication fiber; HOOC-Phe-DWCNTs: 4-carboxyphenyl- functionalized double-walled carbon nanotubes; SPCE: screen-printed carbon electrode; EDC: N-(3-Dimethylaminopropyl)-N'-ethyl carbodiimide; PHA: 6-phosphohexanoic acid; ITO: indium tin oxide; EIS: electrochemical impedance spectroscopy; P3-TMA: poly(2-thiophen-3-yl-malonic acid).

FIGURE

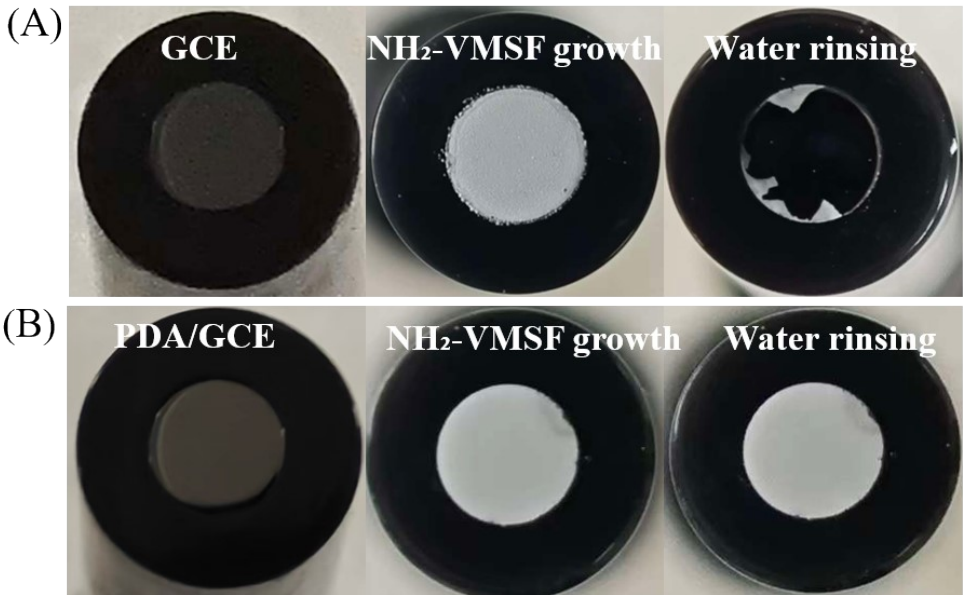

Figure S1 Digital images of GCE (A) or PAD/GCE (B) before (left), after (middle) NH_2-VMSF growth following rinsing with ultrapure water (right).

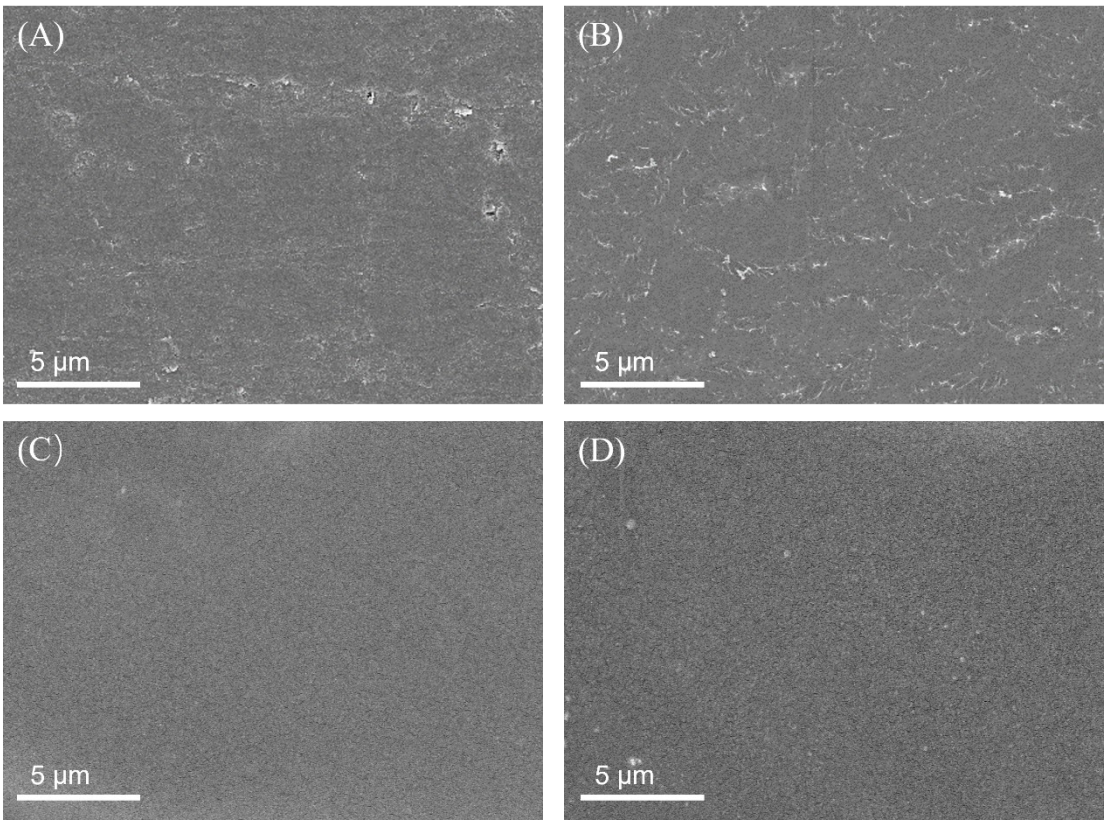

Figure S2 SEM image of GCE (A), PDA/GCE (B), NH_2-VMSF/PDA/GCE (C) and Au NPs/NH_2-VMSF/PDA/GCE (D).