A sensitive non-enzymatic immunosensor composed of silver nanoflowers for Squamous cell carcinoma antigen

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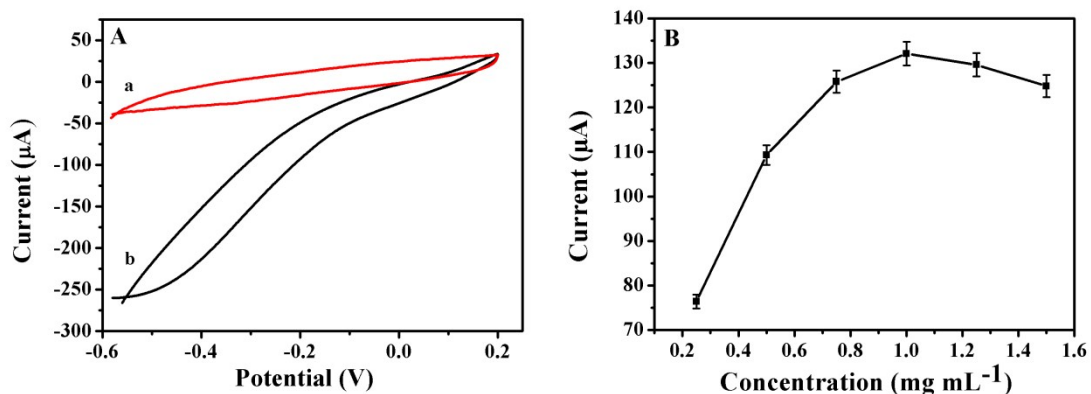
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Fig. S1 (A) CVs of the immunosensor: using SNFs-NH$_2$-MoS$_2$/MWCNTSs as label in PBS at pH=7.4 before (curve a) and after (curve b) the addition of 5 mmol·L^{-1} H$_2$O$_2$; (B) the choice of concentration of SNFs-NH$_2$-MoS$_2$/MWCNTSs
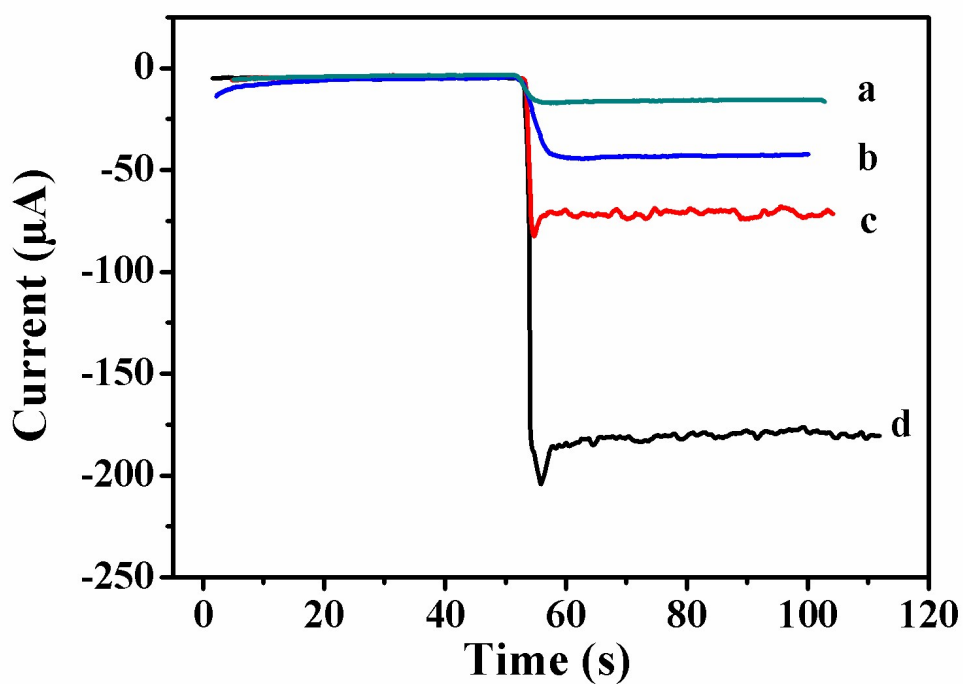

Fig. S2 Ameperometic response of the immunosensor with different labels: (a)MWCNTs, (b) MoS$_2$, (c) MoS$_2$/MWCNT, and (d) SNFs-NH$_2$-MoS$_2$/MWCNT;
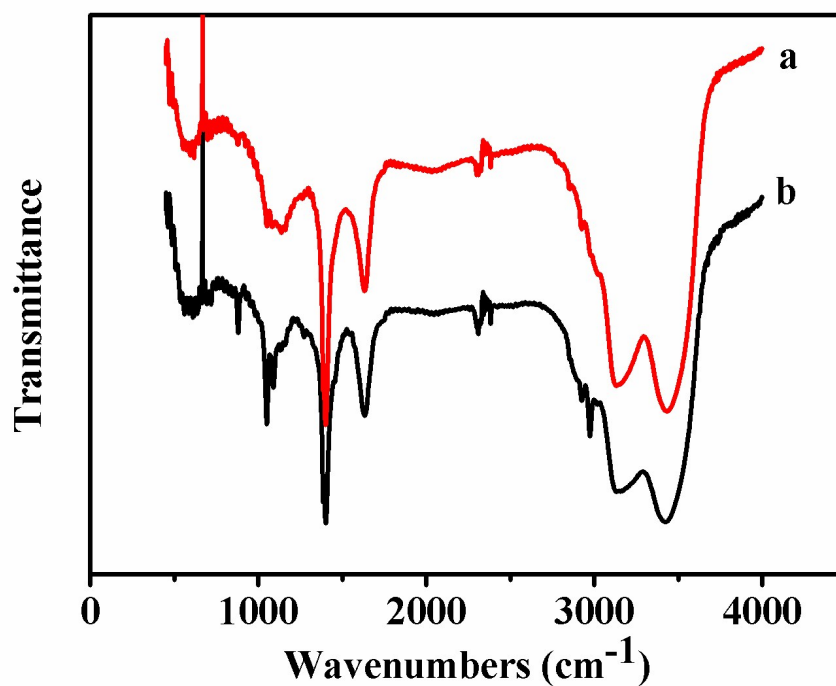
Fig. S3 FT-IR characterization of (a) SNFs-NH_2-MoS_2/MWCNTs, (b) Au NPs/ NH_2-GNRs

Table S1. Comparing different methods of detecting SCCA

Methods	Linear range (ng mL^{-1})	Limit of detection (pg mL^{-1})	References
Pt-Fe_3O_4-Ab_2	0.05-18	15.3	[1]
Au/Ag/Au NPs- Ab_2	0.0005-40	0.18	[2]
Pd-Au/C-Ab_2	0.005-2	1.7	[3]
SNFs-NH_2-MoS_2/MWCNTSs - Ab_2	0.0001-30	0.03	This work

Table S2. Application of the immunosensor to real samples.

Content of SCCA in serum (ng·mL^{-1})	Addition content (ng·mL^{-1})	Detection content (ng·mL^{-1})	RSD (%, n=5)	Recovery (%)
0.25	0.50	0.71, 0.78, 0.73, 0.69, 0.74	6.78	96
	1.00	1.19, 1.23, 1.29, 1.28, 1.23	4.10	99.4
	5.00	5.34, 5.29, 5.18, 5.23, 5.22	1.26	100.04

Reference

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2.   Y. Wang, Y. Zhang, Y. Su, F. Li, H. Ma, H. Li, B. Du and Q. Wei, *Talanta*, 2014, 124, 60-66.

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