

**Ferric ion immobilized on three-dimensional nanoporous gold films modified
with self-assembled monolayers for electrochemical detection of hydrogen
peroxide**

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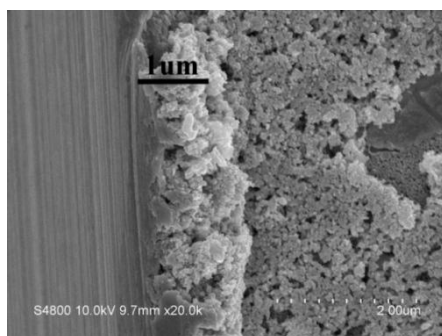


Fig. S1 SEM image of 3D-Au

Table 1. Electrochemical methods for determination of hydrogen peroxide.

Electrode	Modifier	pH	Linear range (μM)	Limit of detection (μM)	References
Au	Fe(III)/MPBA/3D	7.0	0.9 ~ 500	0.001	this work
glassy carbon	heme/ZrO ₂ /chitosan	6.0	10~1500	4.0	1
Au	Hb/MPA	7.0	100~16000	73	2
Au	Hb/MPPA	7.0	0.078 ~0.91	0.025	3
Au	HRP-GSH	6.5	1.0~1200	0.4	4
Au	HRP/DNA/cysteamine	6.9	10~9700	0.5	5
Au	HRP/Au-NPs/poly(DVB-co-AA) nanospheres	7.0	1.0~ 8000	0.5	6
Au	HRP/Au-NPs	7.0	5.0~10000	2.0	7
Au	HRP/glutaraldehyde/cysteamine	7.0	1.0~1000	0.5	8
glassy carbon	Hb/laponite/CHT	6.0	6.2~2550	6.2	9
ITO	Hb/GNSs/APTES	7.0	5.0~1000	3.4	10
ITO	HRP-free/3DOM GTD	7.4	0.5~1400	0.2	11
ITO	cyt. c/nanoporous Au	7.2	10~12000	6.3	12

Abbreviations: Hb: hemoglobin; MPA: 3-Mercaptopropanoic acid; MPPA: 3-Mercaptopropylphosphonic acid; HRP: horseradish peroxidase; GSH: L-glutathione; DVB-co-AA: poly(divinylbenzene-co-acrylic acid); CHT: Chitosan; GNSs: Gold

nanoshells; APTES: 3-aminopropyltrimethoxysilane; ITO: indium tin oxide electrode;
NPs: nanoparticles; 3DOM GTD: three-dimensionally ordered macroporous
goldnanoparticle-doped titanium dioxide; cyt. c: cytochrome c.

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