

Table S1. Comparisons of other reported techniques for H₂O₂ and glucose detection.

Nanostructure	Detection limit	Linear range	Reference
AgVO₃	5 μM (H₂O₂)	0.075-0.5mM(H₂O₂)	[1]
Magnetic carbon nitride	0.3 μM (H₂O₂) 0.25 μM (Glucose)	-	[2]
Hemin-functionalized WS₂ nanosheets	1.0 μM (H₂O₂) 1.5 μM (Glucose)	5.0 - 140μM (H₂O₂) 5.0-200 μM (Glucose)	[3]
Molybdenum disulfide (MoS₂)	5.0 μM (H₂O₂) 1.2 μM (Glucose)	5.0-100.0 μM (H₂O₂) 5.0-100.0 μM (Glucose)	[4]
Ce-doped Fe₃O₄	0.6 μM (H₂O₂) 1.2 μM (Glucose)	4.0-40.0 μM (H₂O₂) 10.0-150.0 μM (Glucose)	This work

[1] Zhenbo Xiang & Yi Wang & Peng Ju & Dun Zhang *Microchim Acta* (2016) 183:457–463

[2] Jia Chen & Qiao Chen & Junying Chen & Hongdeng Qiu *Microchim Acta* (2016) 183:3191–3199

[3] Qiao Chen, Jia Chen, Cunji Gao, Mingliang Zhang, Junying Chen and Hongdeng Qiu *Analyst* (2015) **140**: 2857-2863

[4] Tianran Lin, Liangshuang Zhong, Liangqia Guo,* Fengfu Fu and Guonan Chen *Nanoscale*, (2014) 6: 11856

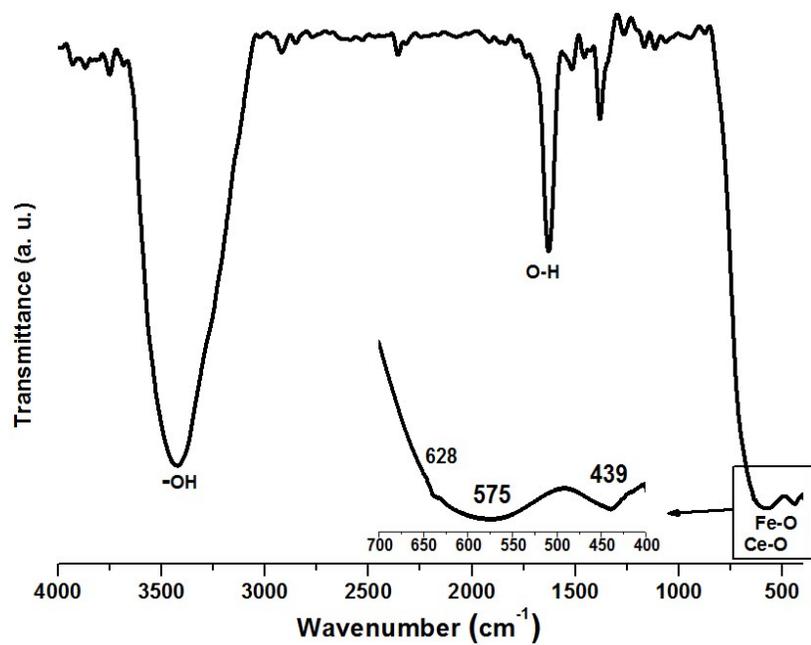


Fig. S1. IR spectrum of the electro synthesized Ce doped magnetite nanoparticles