Supporting Information

A facile colorimetric method for highly sensitive ascorbic acid detection by using CoOOH nanosheets

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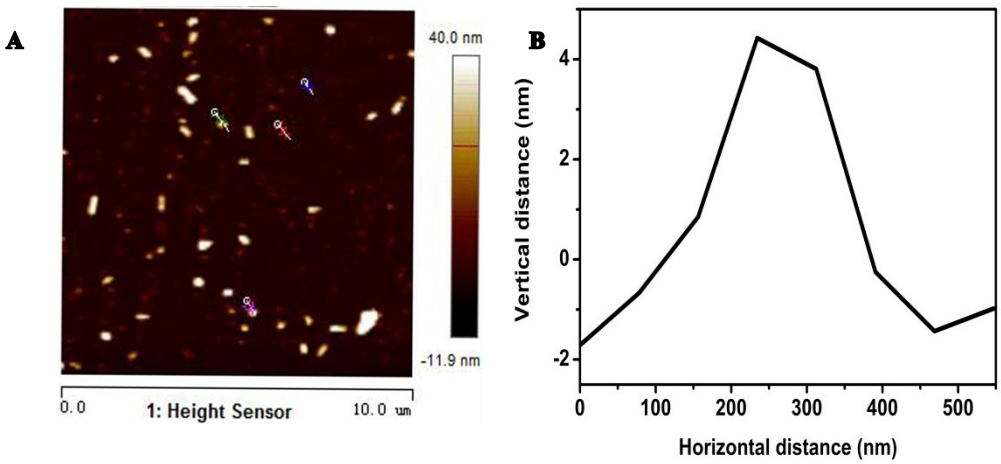

Fig. S1 The AFM characterization of CoOOH nanosheets. (A) The image of CoOOH nanosheets. (B) The thickness of CoOOH nanosheets.

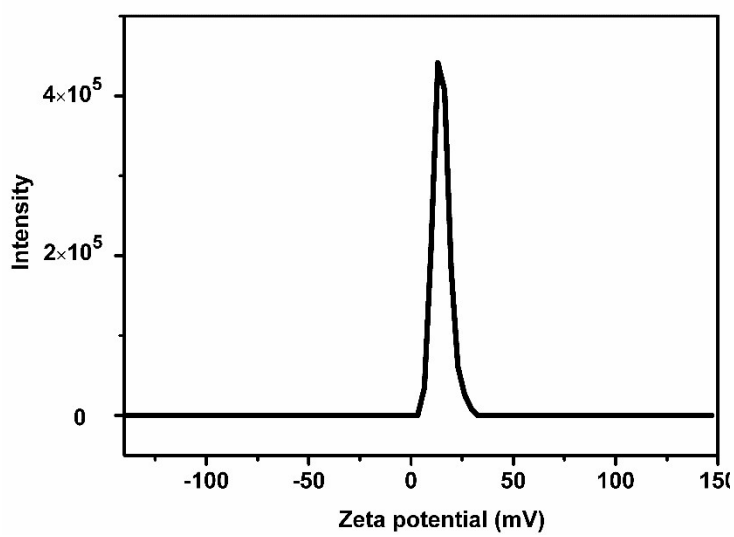

Fig. S2 The Zeta potential of CoOOH nanosheets.

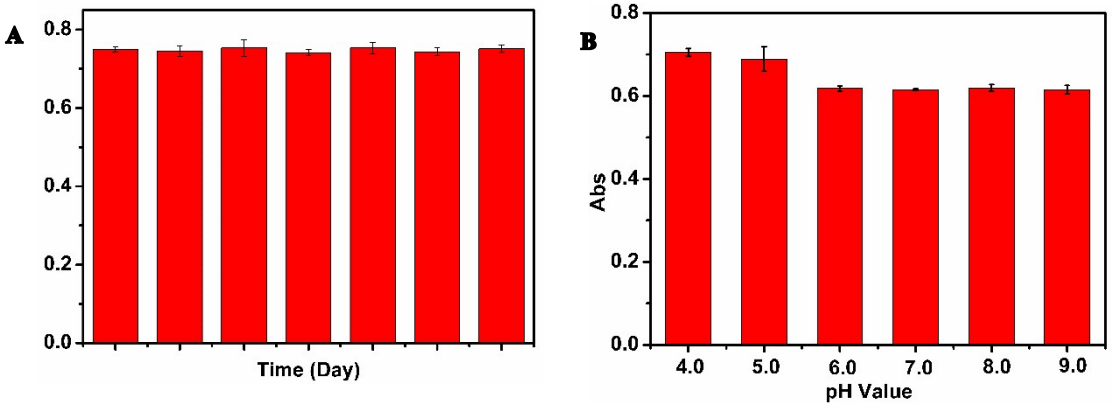

Fig. S3 The stability of CoOOH nanosheets (A) The stability of CoOOH nanosheets at the room temperature lasting one week (B) The CoOOH nanosheets absorbance at different pH value.

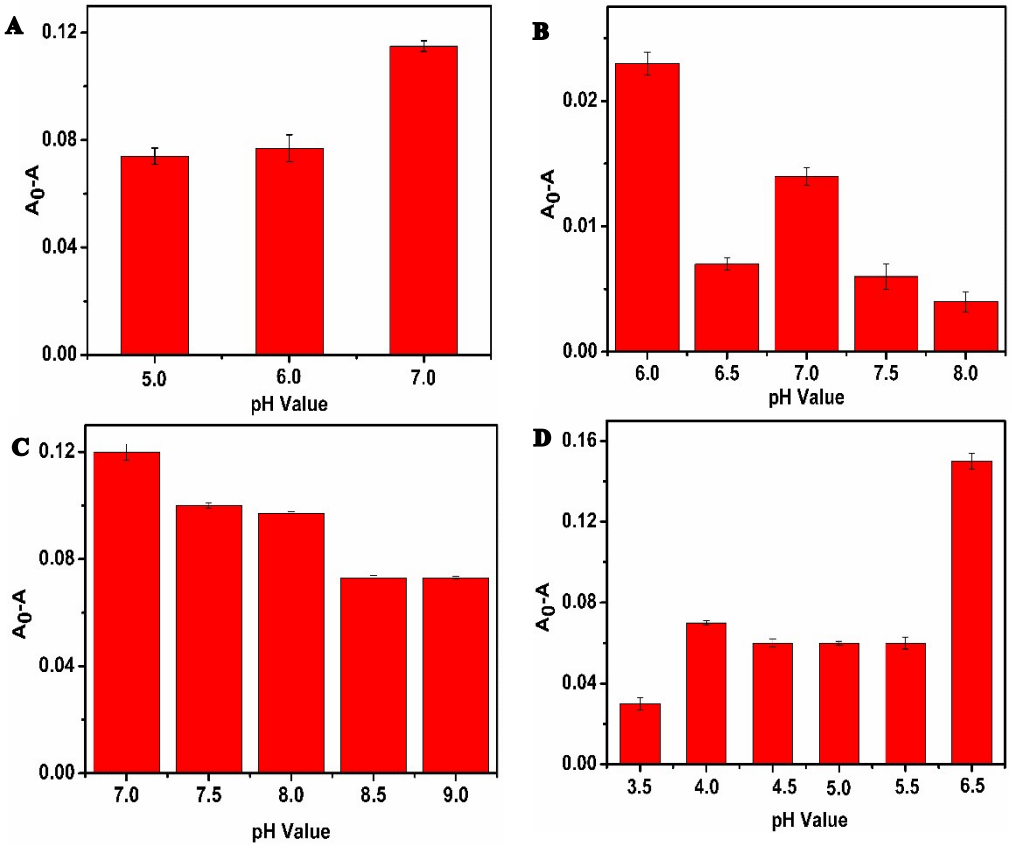

Fig. S4 Effect of pH, reaction buffer in the presence of AA solution and CoOOH nanosheets. The reaction taking place in 30 ℃ and lasting for 15 min. A0 represents the absorbance of CoOOH nanosheets solution at 430 nm without AA, and A represents the absorbance of CoOOH nanosheets solution at 430 nm with 10 μM AA concentration. (A) 2-(N-morpholino) ethanesulfonic acid (B) phosphate buffer saline (C) Tris-HCl (D) NaAc-HAc Buffer

Table S1 Different methods for AA detection

Method	Linear range	LOD	Assay time	Reference
3D GH-AuNPs/GCE [a]	1-700 μM	0.028 μM	Not given	[1]
Mn-SnO_2 modified GCE	1-900 μM	0.056 μM	Not given	[2]
Cu-ZnCdS QDs [b] and MnO_2	5-402 μM	31.63 μM	3 min	[3]
UCNPs [c] and CoOOH	7.5 -100 μM	3.32 μM	5 min	[4]
PDA[d] and CoOOH	0-500 μM	4.8 μM	60 min	[5]
MoS_2 quantum dots-MnO_2 nanosheets	0.33-5 μM	0.039 μM	5 min	[6]
Cu-Ag/ reduced graphene oxide	5-30 μM	3.6 μM	Not given	[7]
$NiCo_2O_4$ nanowire/flexible graphene fibers	200-750 μM	50 μM	Not given	[8]
CoOOH nanosheets	0.25μM-70 μM	0.057 μM	15 min	This work

[a] 3D graphene hydrogel and gold nanoparticles nanocomposite/ glassy carbon electrode;

[b] quantum dots

[c] upconversion fluorescent nanoprobe

[d] Polydopamine

Reference

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