Electronic Supplementary Information

Experimental section

Materials: $NiCl_2 \cdot 6H_2O$, $NiSO_4 \cdot 6H_2O$, lactose, fructose and ascorbic acid were purchased from East China Reagent Factory (Tianjin, China), $CoCl_2 \cdot 6H_2O$, $CoSO_4 \cdot 7H_2O$, urea, uric acid and dopamine were purchased from Xilong Chemical Co. Ltd. (Guangdong, China). Thiourea ($CS(NH_2)_2$) was purchased from Beijing Chemical Corp. NaOH and NaCl were purchased from The Regent Chemicals Co. Ltd. (Tianjin, China). Titanium mesh (TM) was purchased from Phychemi Hong Kong Company Limited. All chemicals were used as received without further purification. deionized water (DI) water (18.2 MΩ cm) used throughout all experiments was purified through a Millipore system.

Electrochemical Co-deposition of nickel cobalt sulfide nanosheets film: Before electrodeposition, TM was firstly washed with HCl, ethanol, and water several times to remove the surface impurities. The electrodeposition solution contains 5 mM $CoCl_2.6H_2O$, 7.5 mM $NiCl_2.6H_2O$ and 0.75 M thiourea ($CS(NH_2)_2$). The electrodynamic deposition was carried out in a three-electrode cell configuration by a CHI 660E electrochemical analyzer (CH Instruments, Inc. Shanghai), using cleaned TM (1 cm × 2 cm) as the working electrode, graphite plate as counter electrode, and Ag/AgCl as reference electrode by cyclic voltammetry at a scan rate of 5 mV s^{-1} for 10, 15, and 20 cycles within a voltage range from -1.2 to 0.2 V vs. Ag/AgCl. The electrodeposited TM was cleaned by rinsing with a large amount of DI water, followed by drying in air for 12

h. Co-S/TM, Ni-S/TM, Ni/TM, Co/TM and Ni-Co/TM were also prepared according to the previous reports.[1,2]

Characterizations: X-ray diffraction data were collected on a RigakuD/MAX 2550 diffractometer with Cu Kα radiation (λ=1.5418 Å). Scanning electron microscopy measurements were carried out on a HITACHI S-4800 field emission scanning electron microscope at an accelerating voltage of 20 kV. Transmission electron microscopy measurements were carried out on a Zeiss Libra 200FE transmission electron microscope operated at 200 kV. X-ray photoelectron spectroscopy measurements were performed on an ESCALABMK II X-ray photoelectron spectrometer using Mg as the exciting source.

Electrochemical measurements: Electrochemical measurements were performed with a CHI 660E electrochemical analyzer in a standard three-electrode system containing 0.1 M NaOH solution at room temperature, using Ni-Co-S/TM as the working electrode, platinum wire as the counter electrode and Hg/HgO as the reference electrode. All the potentials reported in this work were vs. Hg/HgO, and the equivalent relative to reversible hydrogen electrode (RHE) according to E (RHE) = E (Hg/HgO) + 0.866.

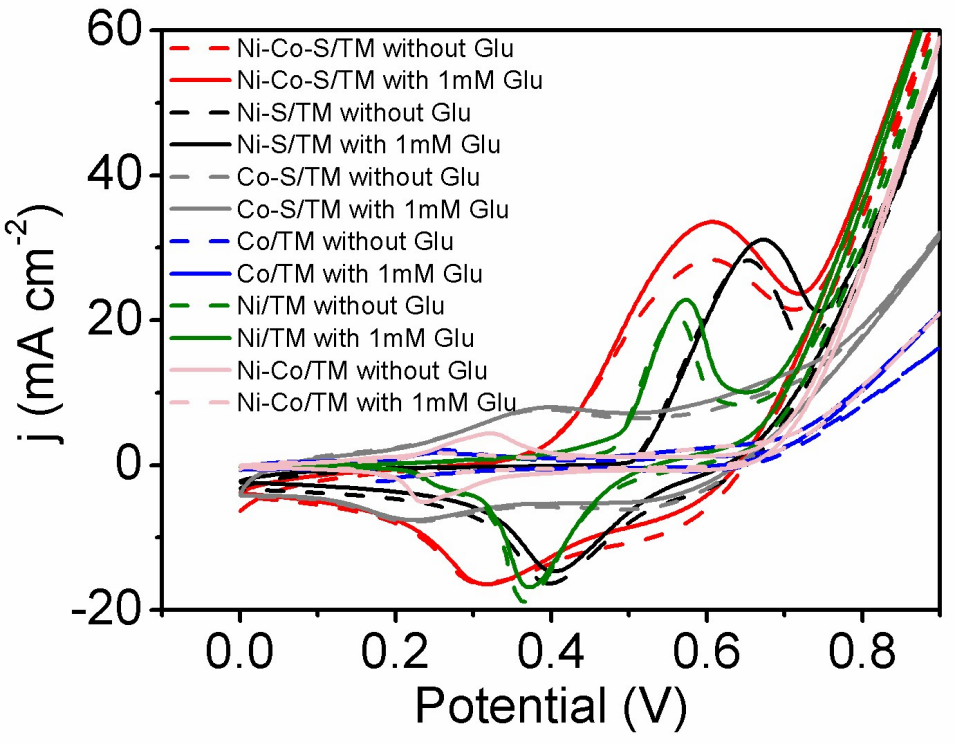

Fig. S1. CVs of Ni-Co-S/TM, Ni-S/TM, Co-S/TM, Co/TM, Ni/TM, and Ni-Co/TM electrodes in 0.1 M NaOH with and without 1 mM glucose at a scan rate of 30 mV s^{-1}.

Table S1. Sensing performance comparison of Ni-Co-S/TM with other nonenzymatic glucose sensors.

Electrodes	Sensitivity ($\mu A\ mM^{-1}\ cm^{-2}$)	Linear range (mM)	LOD (μM)	Ref.
Ni-Co-S/TM	3291.5	0.001-3	0.12	This work
CoS@C	697	0.01-0.96	2	3
Ni_3S_2 NA	6148.0	0.05-3.0	1.2	4
$NiCoO_2$@CNT	1424.41	0.01-1.55	1.14	5
$NiCo_2O_4$ HR	1685.1	0.0003-1	0.16	6
Co_3O_4 NFs	1440	0.005-12	0.08	7
Co_3O_4-HND	708.4	0.002-6.06	0.58	8
Co_3O_4/PbO_2 NR	460.3	0.005-1.2	0.31	9
CNFS/$Co(OH)_2$	68000	0.01-0.12	5	10
NiO-HMS/GCE	2390	0.00167-6.87	0.53	11
Hierarchical NiO/NF	395	0.018-1.2	6.15	12
$Ni(OH)_2$/C NC	1004.6	0.001-15	0.14	13
$Ni(OH)_2$/3DGF	2650	0.001-1.17	0.34	14
$Ni(OH)_2$/Ni	1130	0.002-004	1	15
RGO-$Ni(OH)_2$/GCE	11.43	0.002-3.1	0.6	16
$Ni(OH)_2$ NF	8500	0.01-0.8	1.2	17
$Ni(OH)_2$-NND	3200	0.02-1	1.2	18
	1410	1-9		
Ni NF	2370	0.01-0.7	5	19
Ni CFP	420.4	0.002-2.5	1	20
CNT–Ni nanocomposite	1384.1	0.005-2	2	21
Ni NP/SMWNTs	1438	0.001-1	0.5	22

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