SUPPLEMENTARY INFORMATION

Selective and Sensitive Non-Enzymatic Glucose Detection by Cu(II)-Ni(II)/SBA-15

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Table S1: Structural and textural parameters of the catalytic system

Systems	BET surface area ($m^2\ g^{-1}$)	Pore volume ($cm^3\ g^{-1}$)	Pore diameter (nm)	d_{100} (nm)	a_0= {2/(3)^0.5}*d_{100} (nm)	Wall thickness (nm)
SBA-15	529	0.753	5.63	9.07	10.47	9.71
30Cu-20Ni/ SBA-15	144	0.305	8.52	8.91	10.28	1.76

Table S2: Comparison of the performance of the 30Cu-20Ni/ SBA-15 modified glassy carbon electrode with other reported glucose sensors.

	Electrode based on	**Applied Potential (V)**	**Linear range**	**Detection limit (µM)**	**Reference**
1	PCFCuNP	+0.35	6.6-1300 µM	2.2	10
2	CuO/MWCNTs	+0.40	0.4µM-1.2mM	0.2	17
3	CNT–Ni nanocomposite	+0.50	5 µM-2 mM	2	18
4	Ni-Cu/CNT/GCE	+0.50	0.025-800 mM	0.025	19
5	NiCFP	+0.60	0.002-2.5 mM	1	20
6	Cu/Cu_2O/CuO HSs/GCE	+0.55	0.5 µM-30 mM	0.39	21
7	CuO/GO/GCE	+0.70	2.79 µM-2.03mM	0.69	23
8	Hierarchical NiO superstructures/foam Ni	+0.55	18-1200µM	6.15	24
9	Cu-Ni NTNW	+0.70	up to 1.2 mM	1.2	25
10	Cu-SBA-15	+0.60	10 µM to 20mM	10	26
11	Cu/Ni/graphene	+0.61	0.005-0.24 µM 0.24 -2.33µM 2.33-2174µM	0.0027	27
12	Cu–Ag/NF	+0.55	0.005-3.5 mM	0.08	28

13	CuNi/fMWCNTs/GCE	+0.45	0.1-5000 µM	2.5*	29
14	Cu-Ni/NF	+0.70	1-600 µM	2	32
15	$Ni(OH)_2$/RGO/Cu_2O@Cu	+0.65	0.5 µM-7.67mM	0.35	39
16	Nafion/SBA-15-Cu(II)/GCE	+0.50	0.5mM-2 mM	0.076	45
17	30Cu-20Ni/SBA-15/Triton/GCE	+0.50	10-900 µM	1.19	THIS WORK

*nM

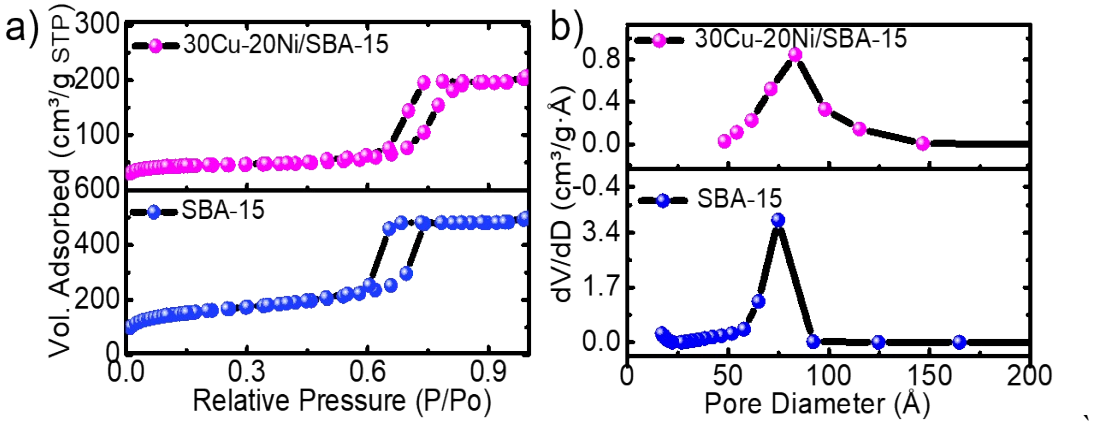

Figure S1:BET analysis a) Adsorption isotherm and b) pore volume distribution comparison of SBA-15 and 30Cu-20Ni/SBA-15.

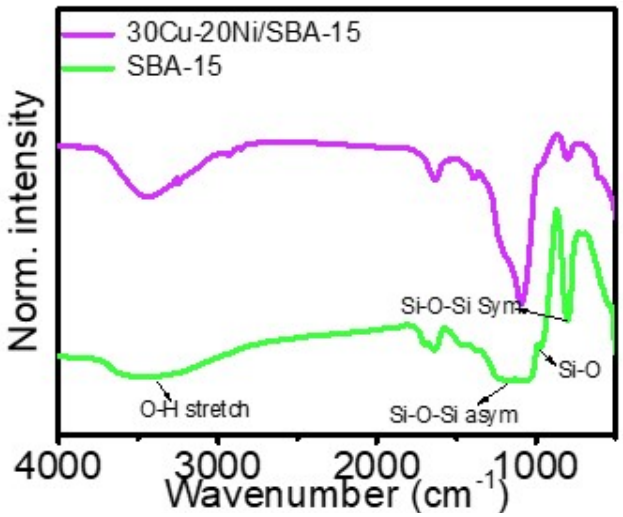

Figure S2:FT-IR spectrum of SBA-15 and 30Cu-20Ni/SBA-15.

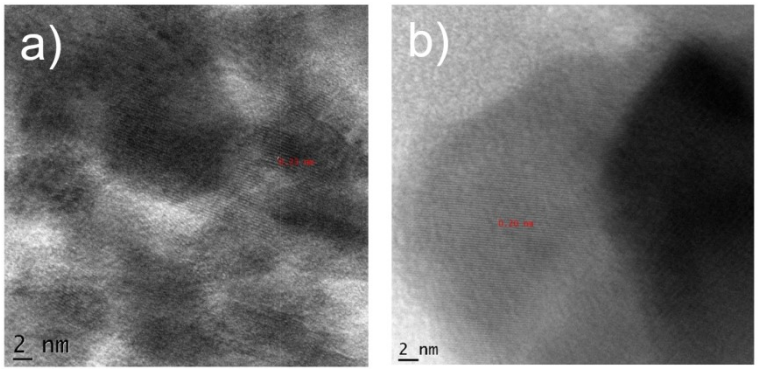

Figure S3: HR-TEM images of 30Cu-20Ni/SBA-15, showcasing crystal facets of a) 0.23 for CuO and b) 0.20 nm for NiO

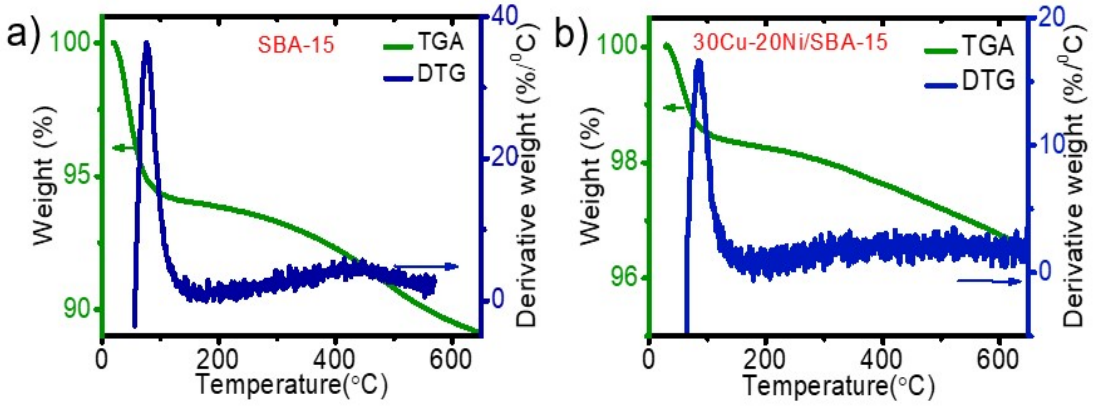

Figure S4: TG-DTG comparison of a) SBA-15 and b) 30Cu-20Ni/SBA-15

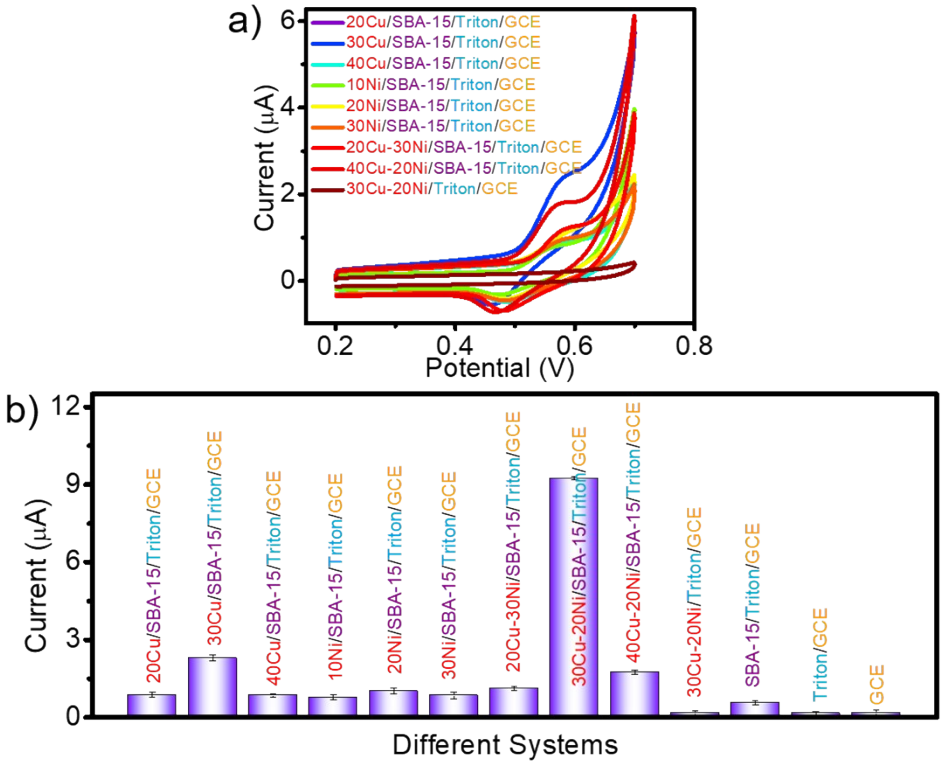

Figure S5. a) CV response of diverse composition-modified GCE towards the oxidation of 0.8 mM glucose in a 0.1 M NaOH solution, at a scan rate of 100 mV/s and b) corresponding bar diagram representations showing peak current from CV data

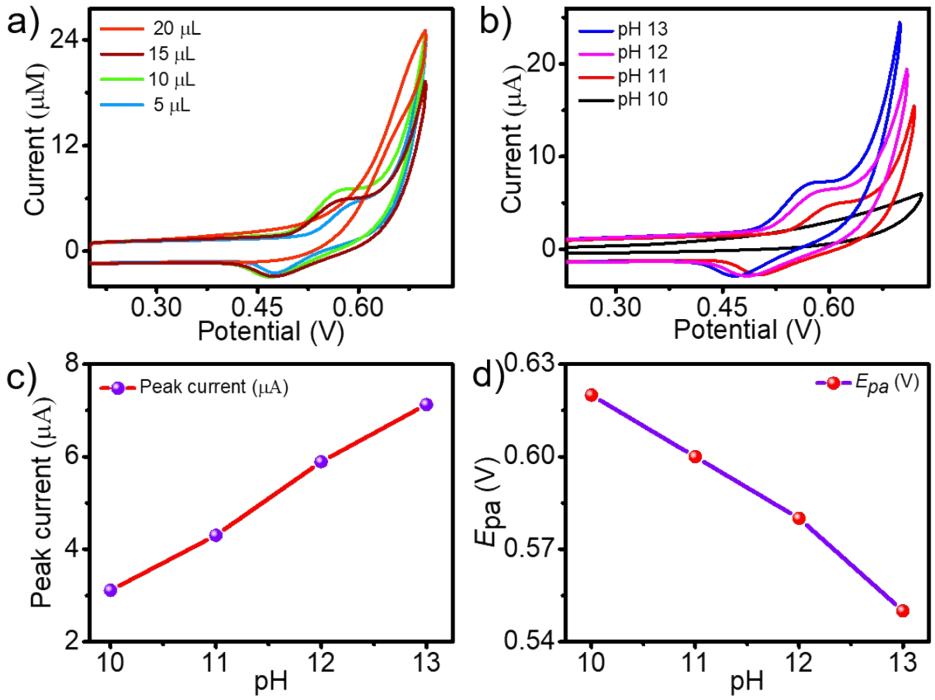

Figure S6:CV plot of a) different coating amount in 30Cu-20Ni/SBA-15 modified Glassy Carbon Electrode for the detection of 0.2 mM glucose in 0.1 M NaOH at 0.55 V and b) influence of varying pH values on electrochemical oxidation of 0.5 mM glucosein 0.1 M NaOH at 0.55 V, c) Peak current vs. pH, and d) peak potential vs. pH.