Electronic Supplementary Information

Non-enzymatic glucose sensor based on mesoporous carbon sphere immobilized Co-MOF-74 nanocomposite

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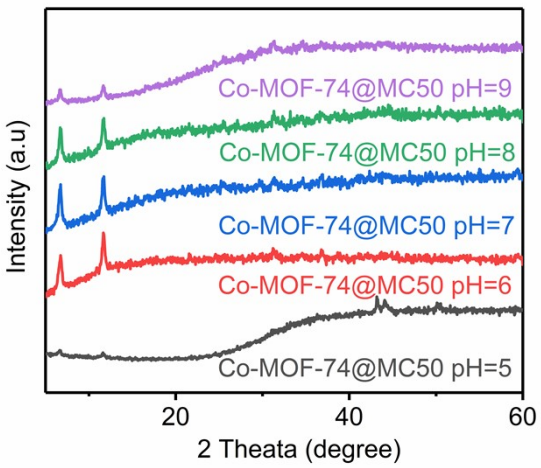

Fig. S1 Chemical stability of Co-MOF-74/MC-50 nanocomposite in aqueous solution at different pH.

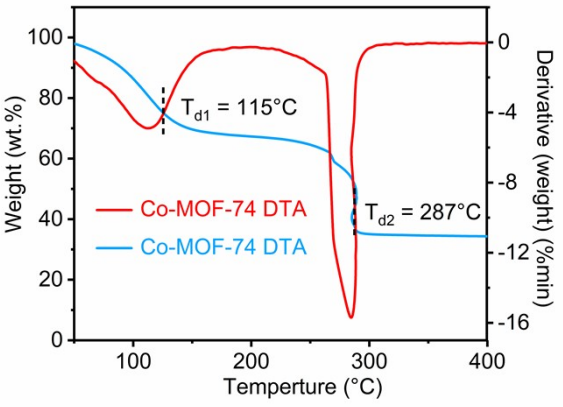

Fig. S2 Thermal stability of Co-MOF-74 characterized by thermogravimetric-differential thermal analysis (TG-DTA).

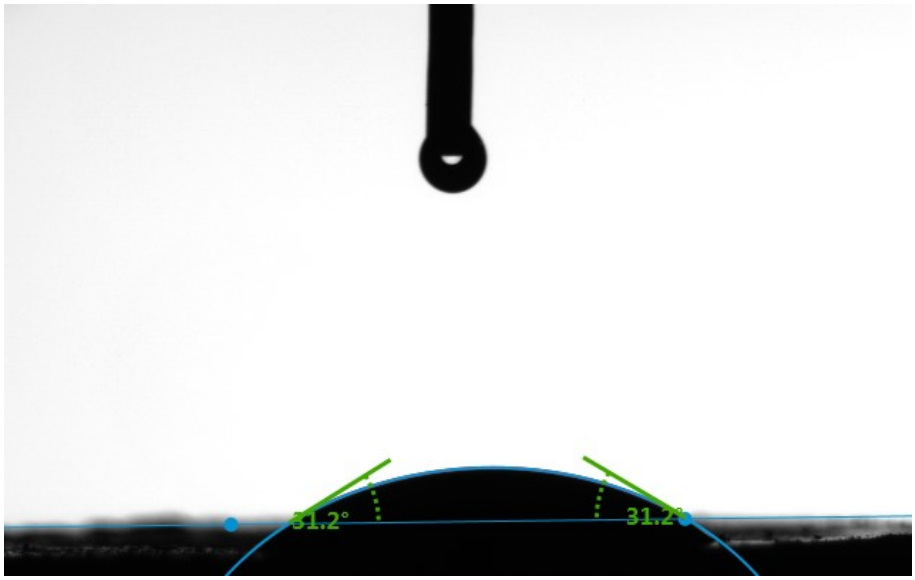

Fig. S3 Contact angle of pure Co-MOF-74 crystals.

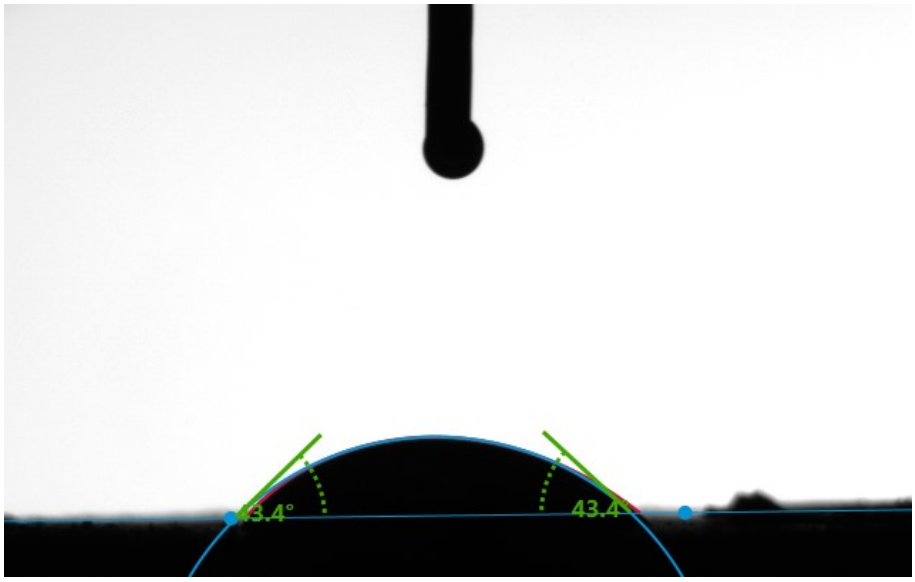

Fig. S4 Contact angle of Co-MOF-74/MC-50 nanocomposite.

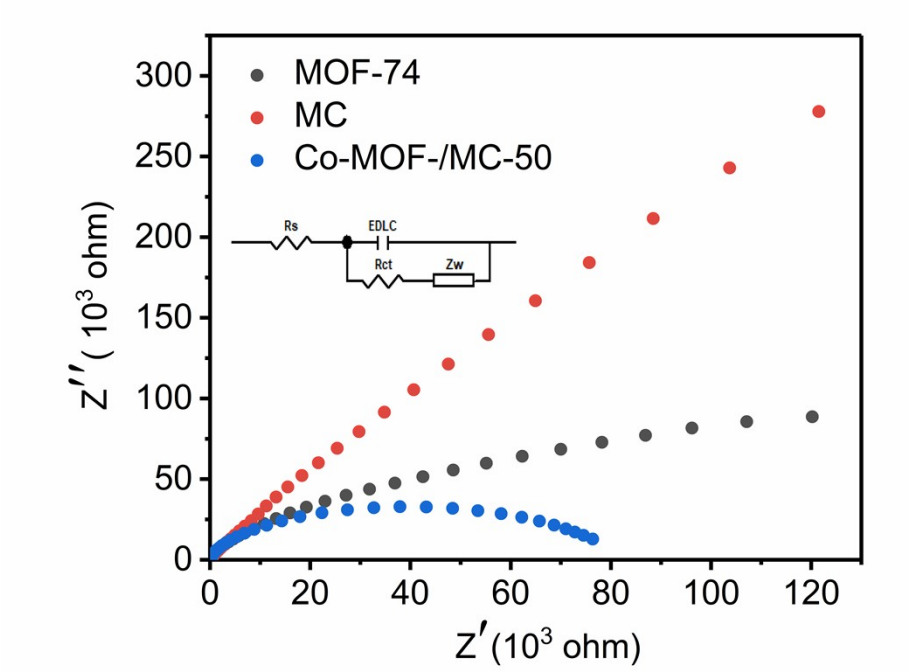

Fig. S5 EIS spectra of the corresponding MC, MOF-74, and Co-MOF-74/MC-50 modified GCE electrodes, inset: fitted equivalent circuit diagram obtained by Z-view software fitting (Rs is the electrolyte resistance, Rct is the charge transfer resistance, and Zw is the Warburg impedance).

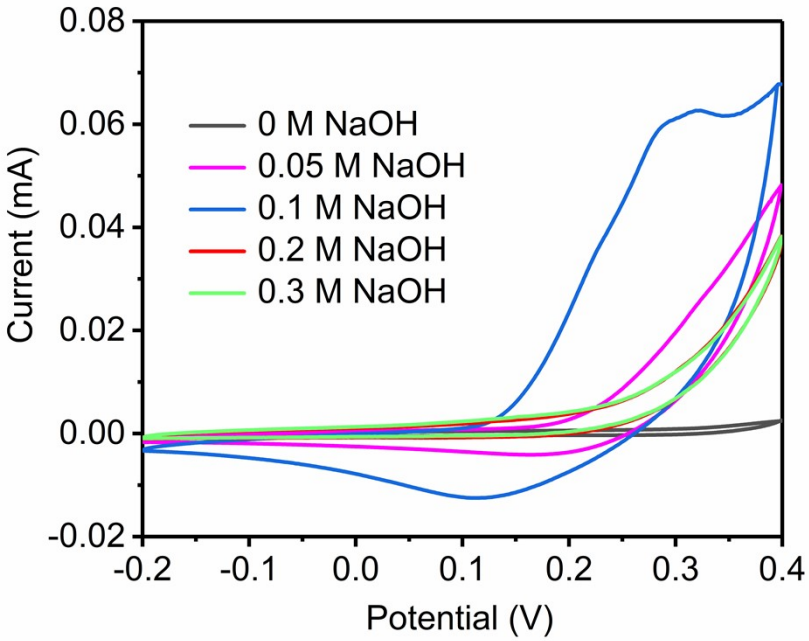

Fig. S6 CV curves of Co-MOF-74/MC-50 modified GCE electrode recorded in NaOH solution with different concentrations containing 10 mM glucose.

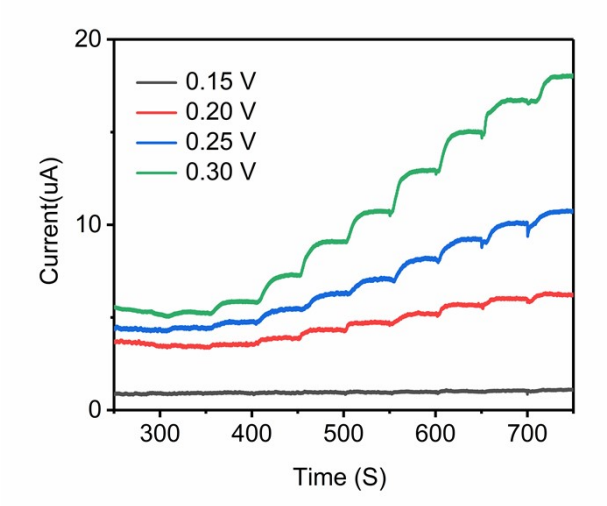

Fig. S7 I-T curves of Co-MOF-74/MC-50 modified GCE electrode towards glucose at different operating potentials (0.15-0.30 V).

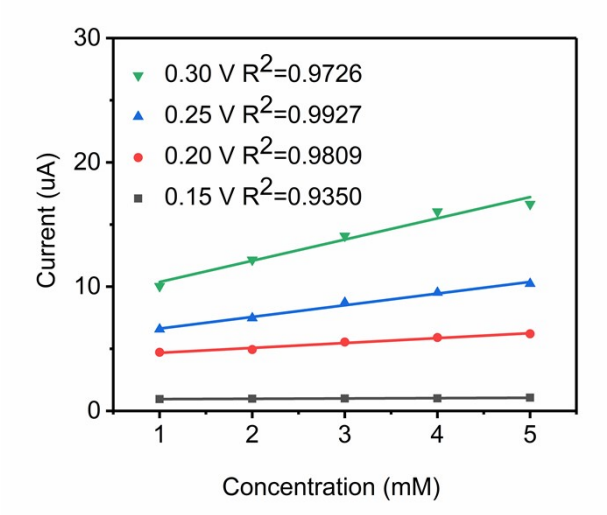

Fig. S8 The calibration curves of glucose conscentration versus current signals.