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# Facile synthesis of perovskite-type $NdNiO_3$ nanoparticles for effective electrochemical non-enzymatic glucose biosensor

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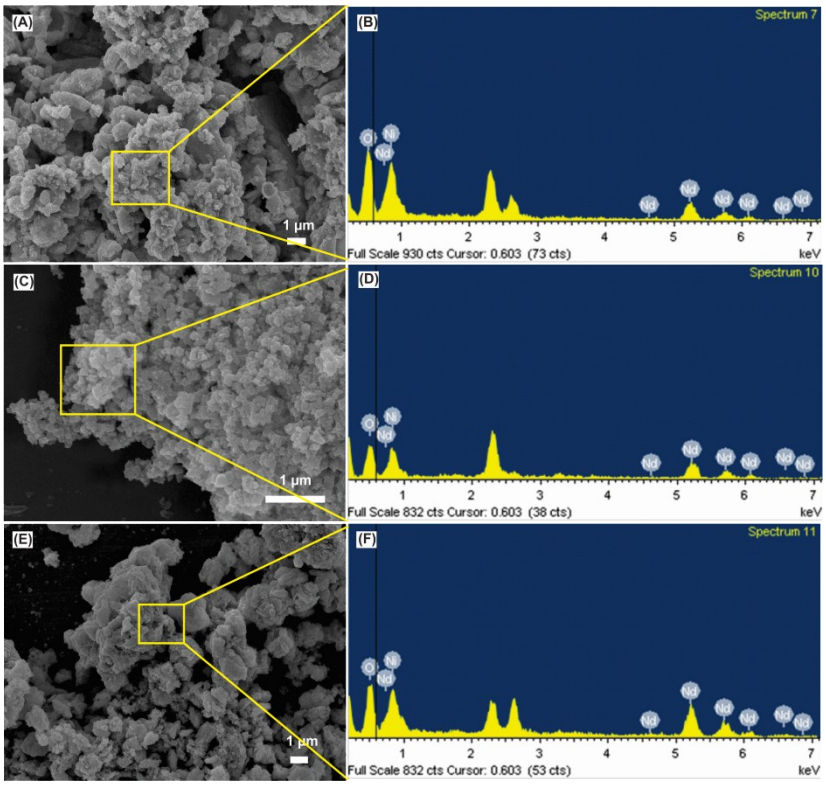


**Figure S1** FE-SEM affiliated EDX spectra for corresponding samples (A, B) $NaNiO_3$-1, (C, D) $NaNiO_3$-2 and (E, F) $NaNiO_3$-3.

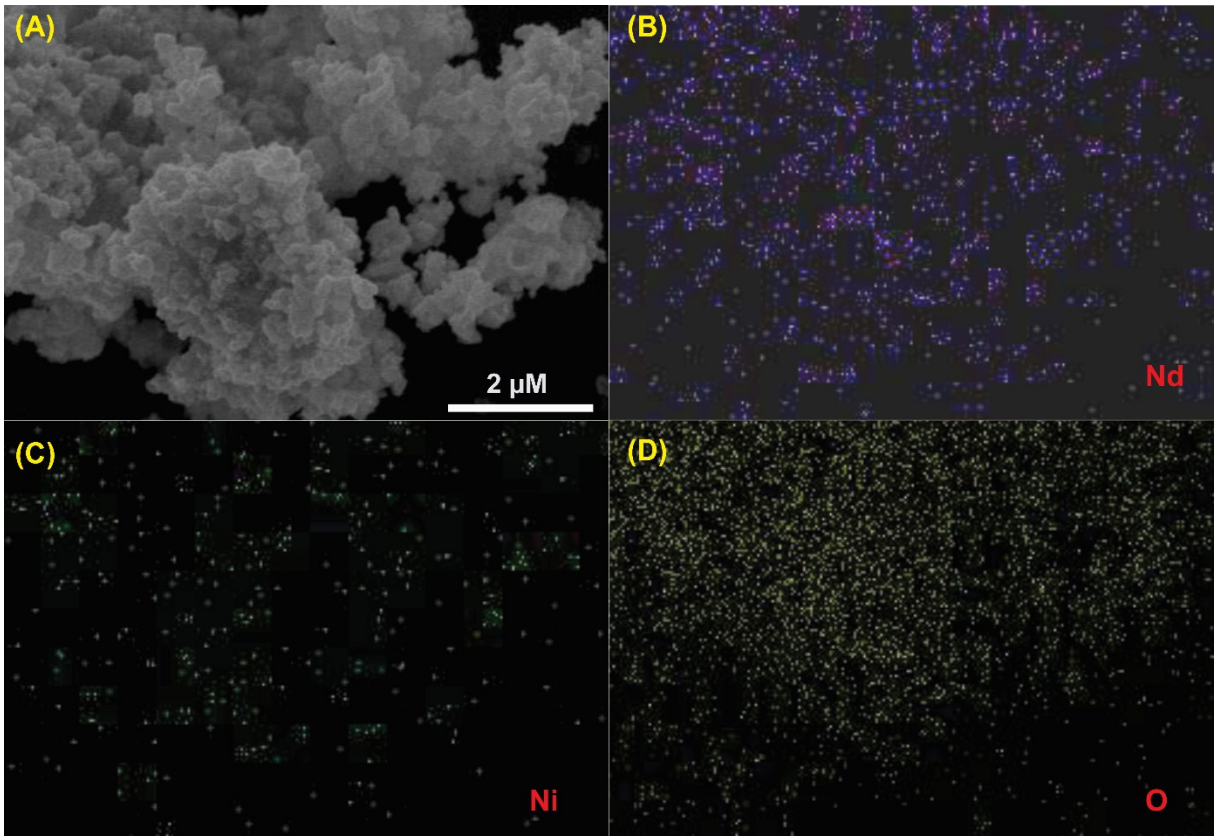


**Figure S2** FE-SEM images of $NdNiO_3$-2 (A), elemental mapping display of the Nd (B), Ni (C) and O (D).

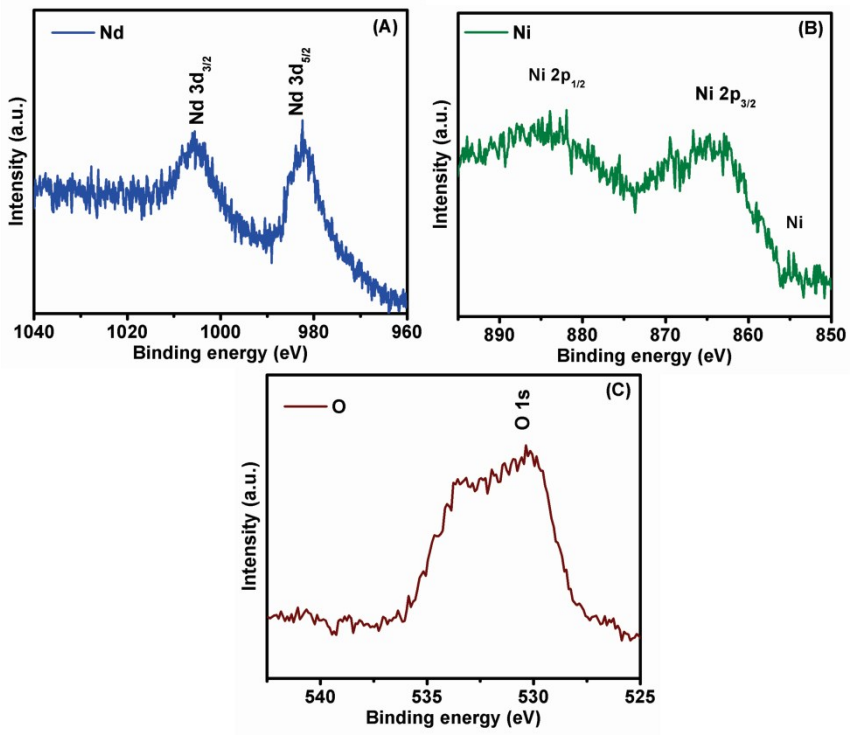


**Figure S3** (A) core-level spectra of Nd state. (B) core-level spectra of the $Ni^{3+}$ state. (C) core-level spectra of O1s state.

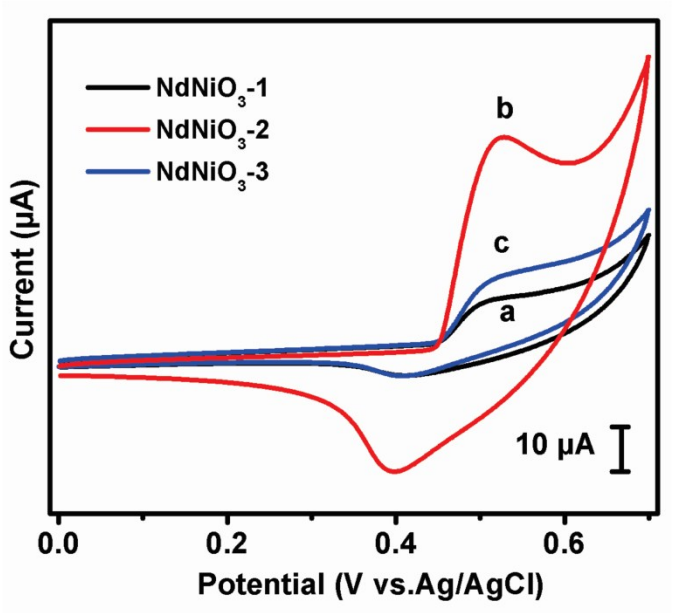


**Figure S4** Capacitive current of $NdNiO_3$-1/GCE (a), $NdNiO_3$-2/GCE (b) and $NdNiO_3$-3/GCE (c) in $N_2$ standard 0.1 M NaOH at a scan rate of 50 $mVs^{-1}$.

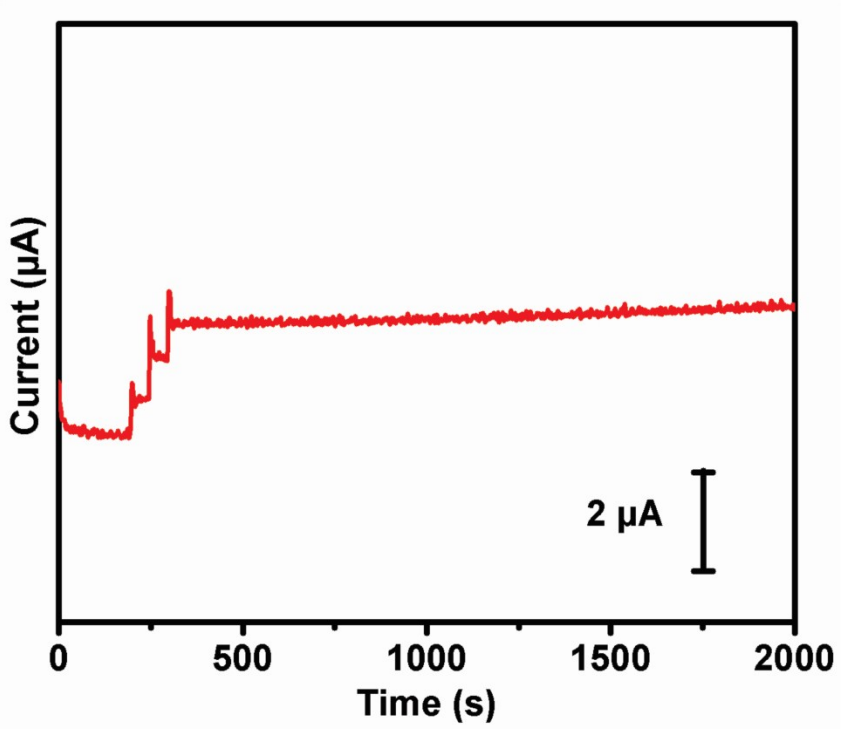


**Figure S5** Amperometry profiles of stability tested in the presences of glucose. Electrolyte: 0.1 M NaOH aqueous solution; rpm: 1200; applied potential: +0.54 V.|

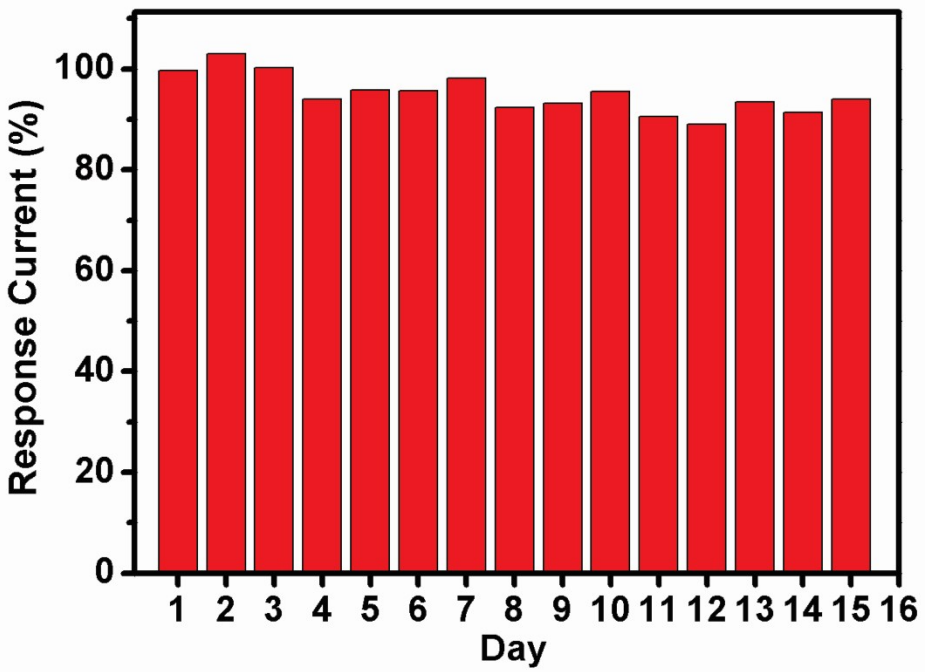


**Figure S6** The storage stability studies of 15 days for the CV curve to the corresponding response current (%) *vs*. days.

**Table S1.** Determination of glucose in serum sample using Amperometric.

| Real samples | Analyte | Added (µM) | Found (µM) | Recovery (%) |
|---|---|---|---|---|
| **Human serum** | Glucose | 10 | - | - |
| | | 100 | 101.37 | 101.37 |
| | | 30 | - | - |
| | | 200 | 203.48 | 101.74 |
| | | 50 | - | - |
| | | 300 | 306.05 | 102.02 |