Neodymium niobate Nanospheres on Functionalized carbon Nanofibers: A Nanoengineered Approach for Highly Sensitive Vanillin Detection

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Figure S5	plot of the square root of scan rate versus redox peak currents for 100 μmolL^{-1} VAN at NdNbO$_4$/f-CNF/GCE.	S6
Figure S6	(A) CV profile of NdNbO$_4$/f-CNF/GCE performed using different GCEs: (B) corresponding plot of different GCE versus relative current.	S6
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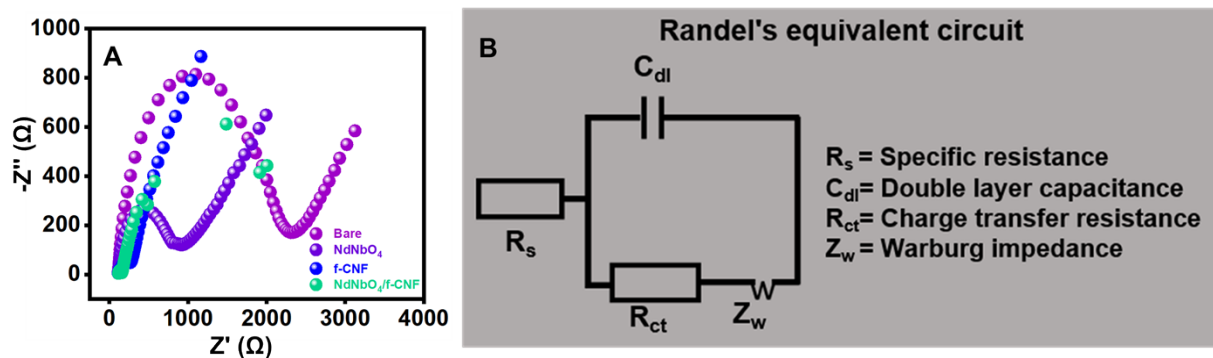
Figure S1: (A) EIS spectra obtained for unmodified GCE, $NdNbO_4$/GCE, f-CNF/GCE, and $NdNbO_4$/f-CNF/GCE; **(B)** corresponding Randel's equivalent circuit for the EIS Spectra. All the above experiments were performed in $[Fe(CN)_6]^{3-/4-}$ in 0.1 M KCl as electrolyte.

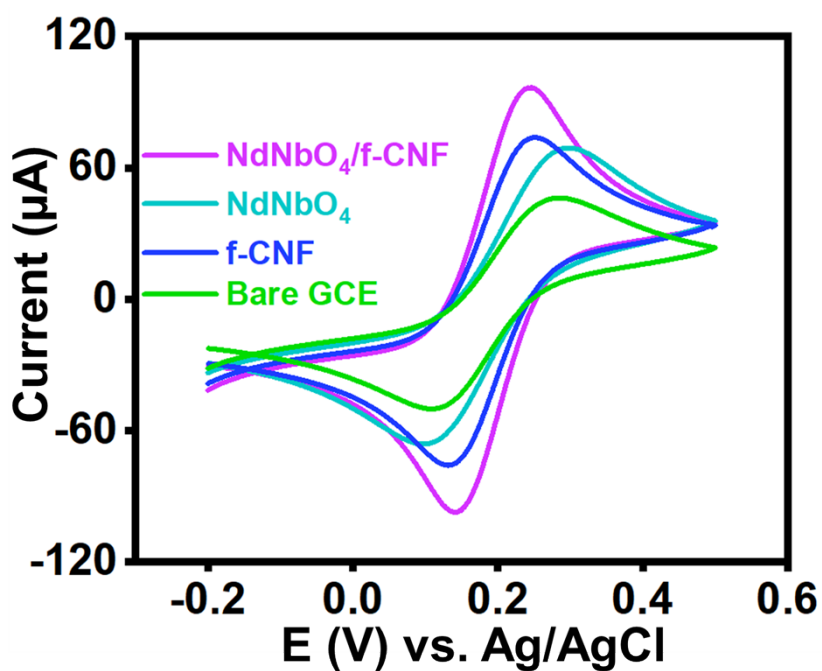**Figure S2:** CV profile obtained for unmodified GCE, $NdNbO_4$/GCE, f-CNF/GCE, and $NdNbO_4$/f-CNF/GCE in $[Fe(CN)_6]^{3-/4-}$ in 0.1 M KCl as electrolyte.

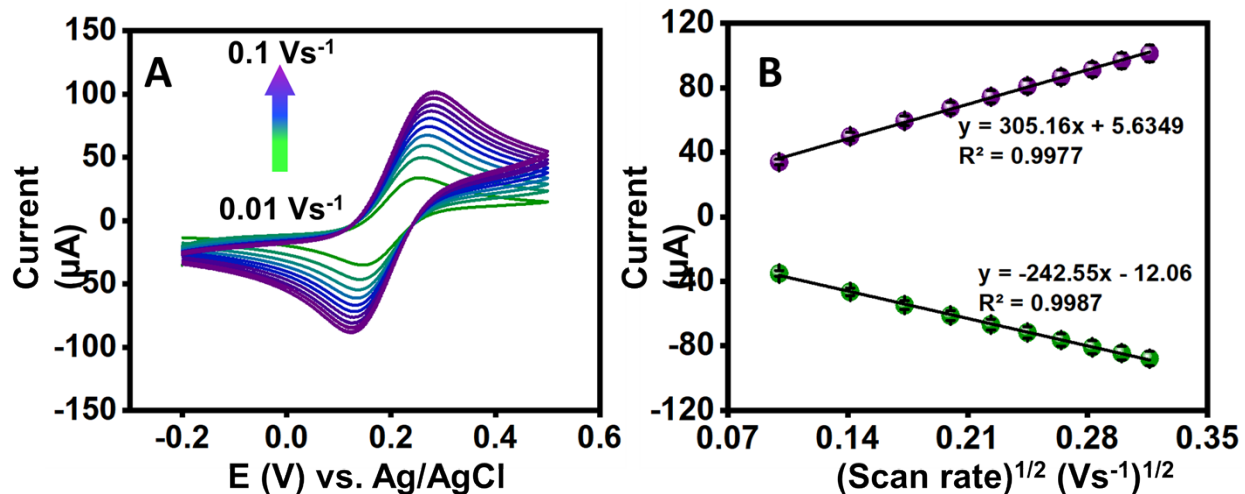**Figure S3: (C)** CV profile obtained by varying scan rates from 0.01-0.1 Vs^{-1} at NdNbO$_4$/f-CNF modified GCE; **(F)** Calibrated plot of the square root of scan rate versus anodic and cathodic peak currents; All the above experiments were performed in $[Fe(CN)_6]^{3-/4-}$ in 0.1 M KCl as electrolyte

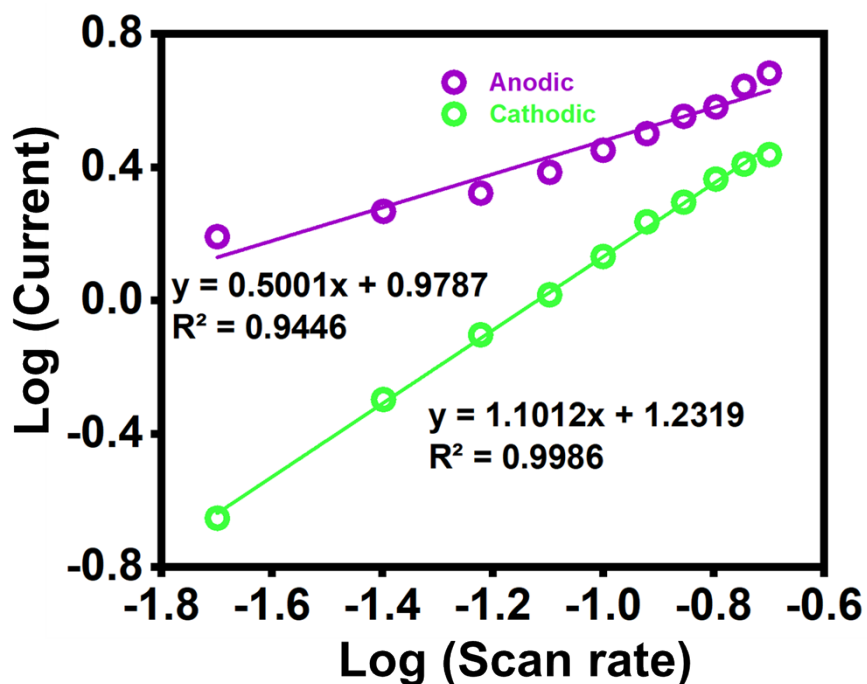**Figure S4: Plot of logarithmic scan rate versus logarithmic redox currents for 100 μmolL^{-1} VAN at NdNbO$_4$/f-CNF/GCE;**
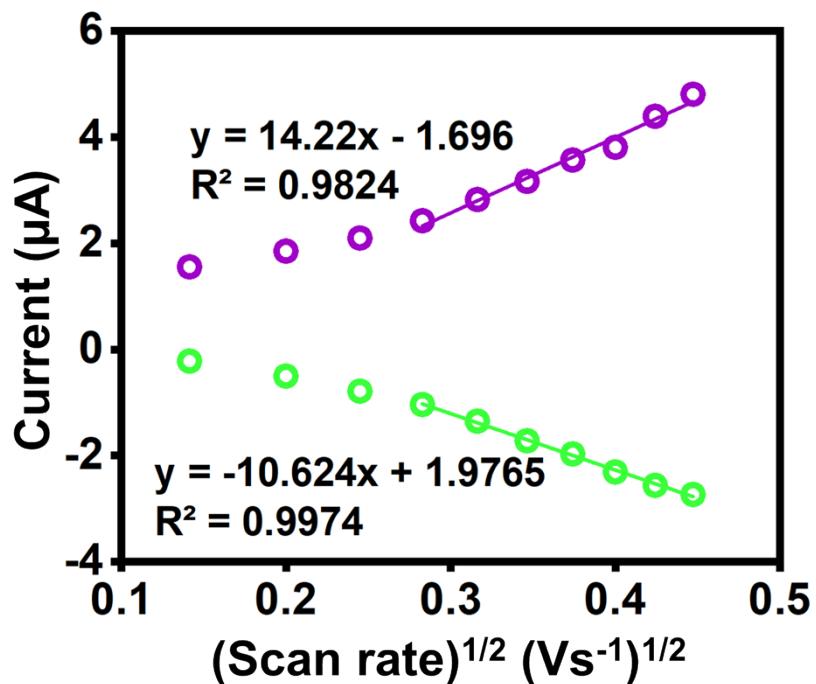
Figure S5: plot of the square root of scan rate versus redox peak currents for 100 $\mu mol L^{-1}$ VAN at NdNbO$_4$/f-CNF/GCE.
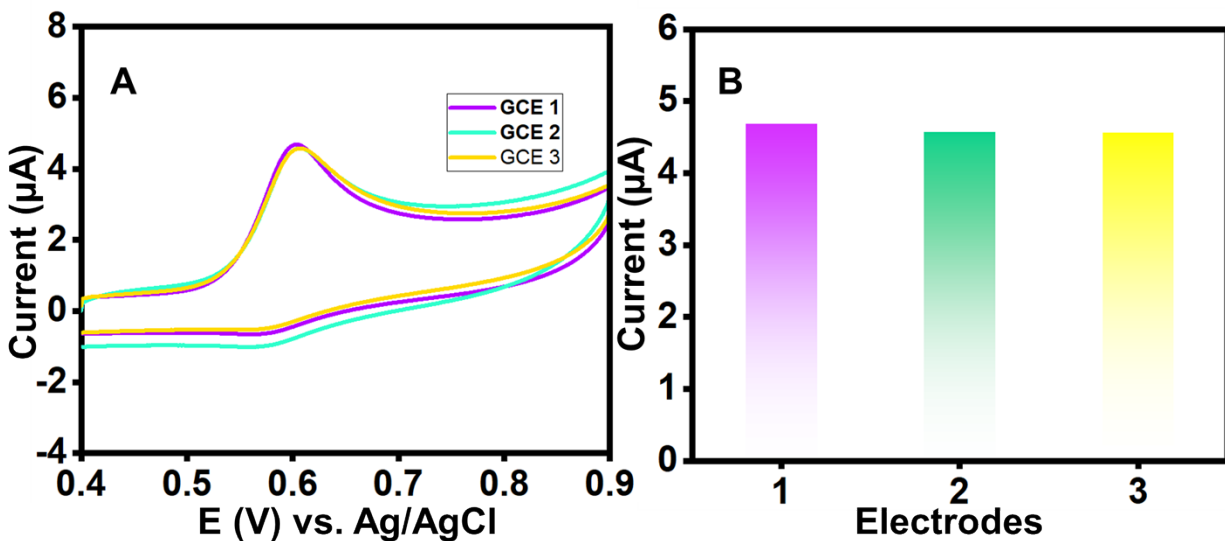

Figure S6: (A) CV profile of NdNbO$_4$/f-CNF/GCE performed using different GCEs: (B) corresponding plot of different GCE versus relative current.
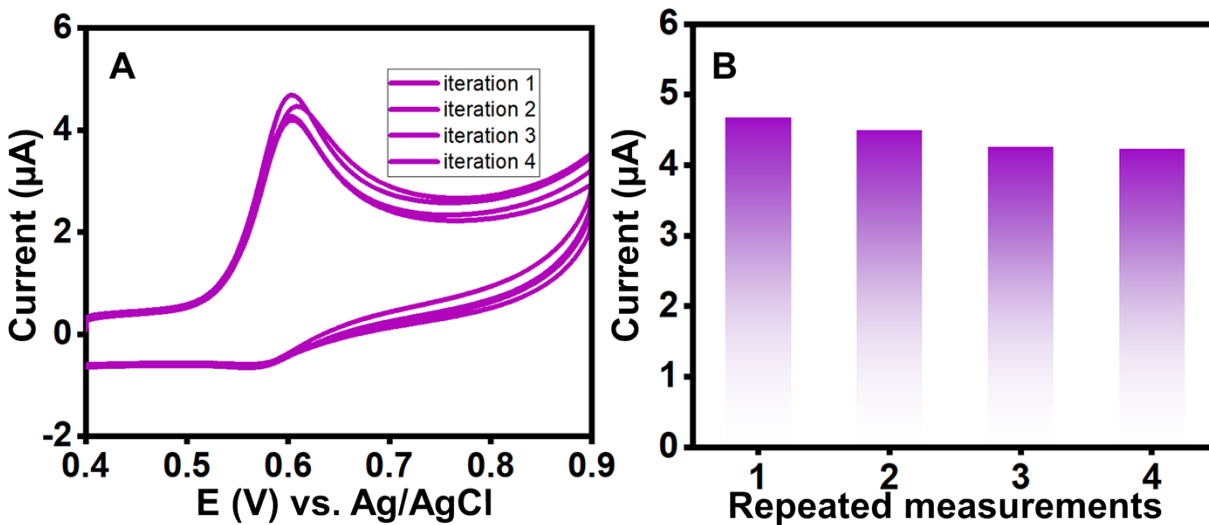
Figure S7: (A) CV profile of repeated measurements over NdNbO$_4$/f-CNF/GCE; (B) corresponding plot of repetitive measurements versus observed current.

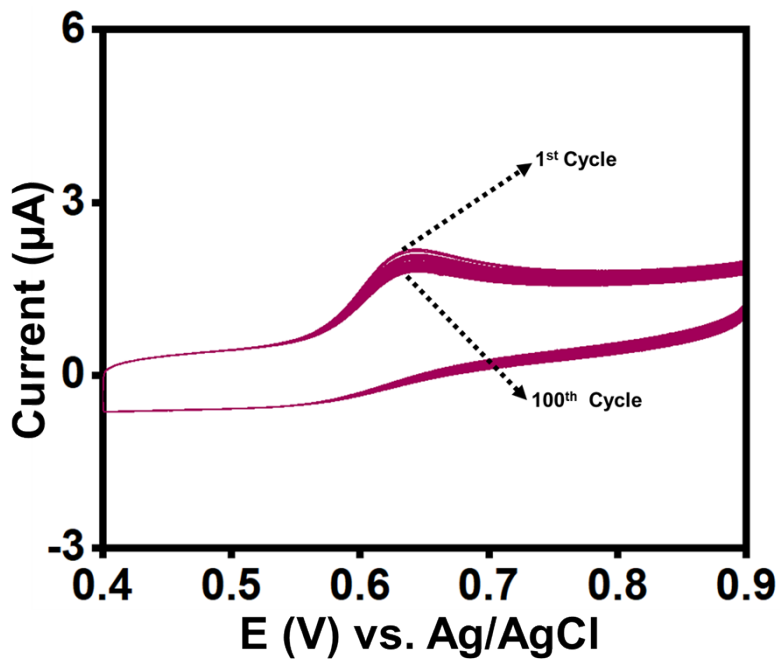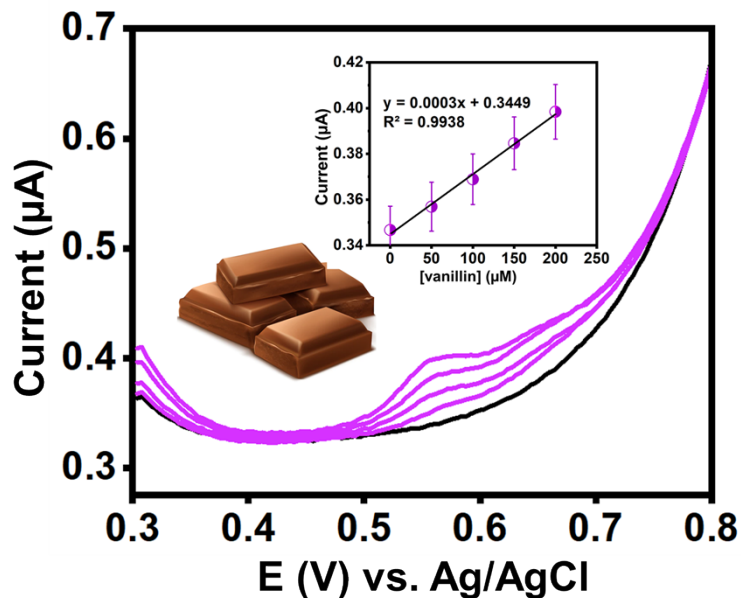**Figure S8:** (A) CV profile of 100 repeated cycles over NdNbO$_4$/f-CNF/GCE for 100 μmolL^{-1} of VAN

Figure S9: (A) DPV profile of NdNbO$_4$/f-CNF/GCE performed in the Milk chocolate matrix. (inset) Corresponding linear dependence plot for the concentration of VAN (μmolL^{-1}) vs. current (μA).

Figure S10: (A) DPV profile of NdNbO$_4$/f-CNF/GCE performed in the Milk Shake matrix. (inset) Corresponding linear dependence plot fo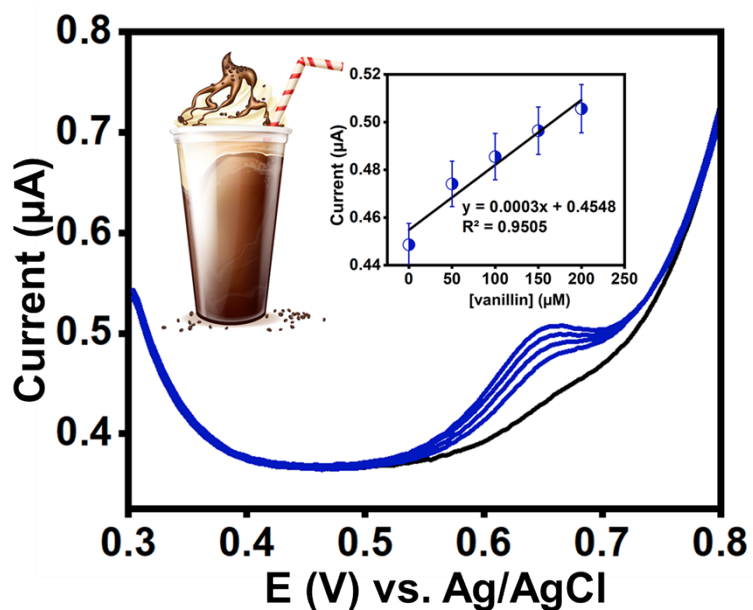r the concentration of VAN (μmolL^{-1}) vs. current (μA).