Supporting Information

N-doped carbon nanorods as the ultrasensitive electrochemical sensors for the determination of dopamine

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1. Preparations of PANI nanorods and carbon nanorods

The PANI nanorods were prepared by a simple chemical oxidation using CTAB as the soft template and $FeCl_3 \cdot 6H_2O$ as the oxidant. Typically, 50 mL of H_2SO_4 solution (8 wt %) and 0.91 g of CTAB were added to a beaker. After stirring for half an hour till CTAB dissolved completely, 1.00 g of aniline was added to the above solution and stirred for 1 h to form a white precipitate. Then, 20 mL of 0.25 mol L^{-1} $FeCl_3 \cdot 6H_2O$ aqueous solution was added to the above suspended mixture drop by drop and stirred for 24 h, the green product was filtrated and washed with deionized water till the filtrate became neutral, and finally dried at 60 ^{o}C for 24 h under vacuum to get PANI nanorods. The as-synthesized PANI was carbonized under high-pure nitrogen atmosphere from 600 ^{o}C for 2 h to form N-doped carbon nanorods.

2. The specific surface area and the pore parameters of N-CNRs

Table S1 The specific surface area and the pore parameters of N-CNRs

Samples	S_{BET} (m^2g^{-1})	Average Pore size (nm)	V_{total} (cm^3g^{-1})	V_{meso} (cm^3g^{-1})	V_{micro} (cm^3g^{-1})
N-CNRs	362	18.72	0.24	0.10	0.14