Nitrogen-doped Carbon Quantum Dots for Biosensing applications: The Effect of The Thermal Treatments on Electrochemical and Optical Properties

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Table S1 – Fitting parameters, intercept (E_i) and slope, of the peak potentials versus pH of N-CQDs-160-8.

| pH range	$E_{i(ox)}$/V	Slope/mV	$E_{i(red)}$/V	Slope/mV
1-3	0.43	-55	0.02	-61
5-12	0.17	25	0.2	-126
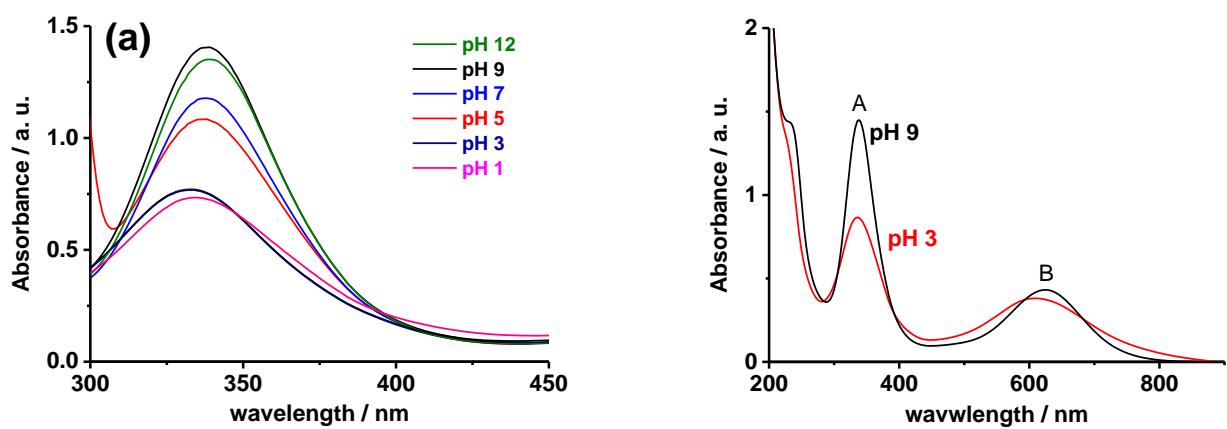
Figure S1 – (a) UV-vis spectra of 0.5 mg ml^{-1} N-CQDs-160-8 solutions in different pH buffers. (b) UV-vis spectrum of 0.5 mg ml^{-1} N-CQDs-160-8 solutions at the pH range 3 (red line) and 9 (black line).
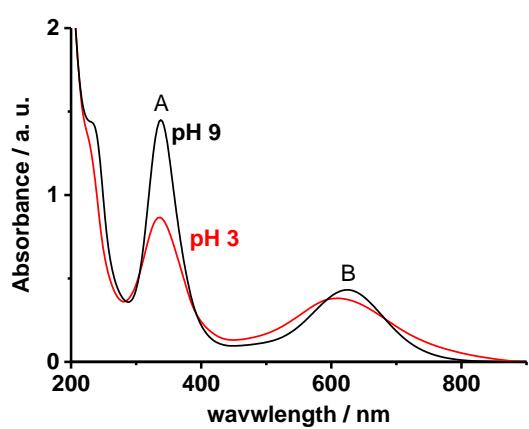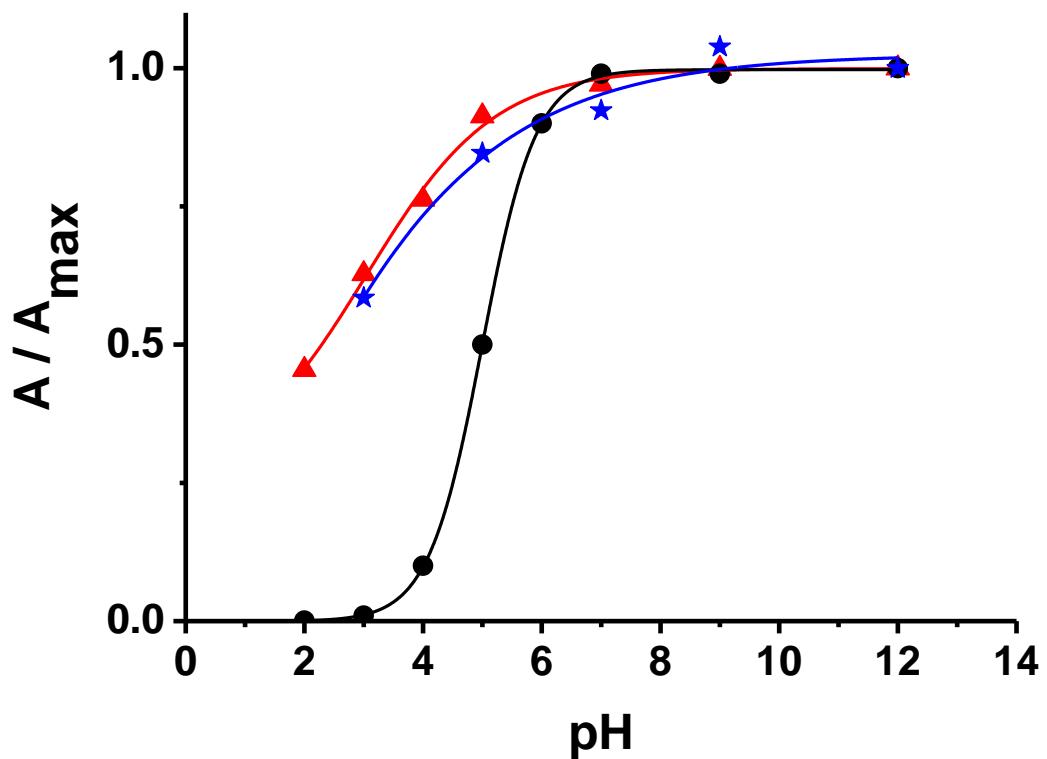
Figure S2 – Dependence vs pH of the un-protonated pyridine N-atom ($\frac{A}{A_{max}}$) of samples N-CQDs-160-1 (red line, triangles), N-CQDs-160-8 (blue line, stars) and theoretical curve (black line, dots).
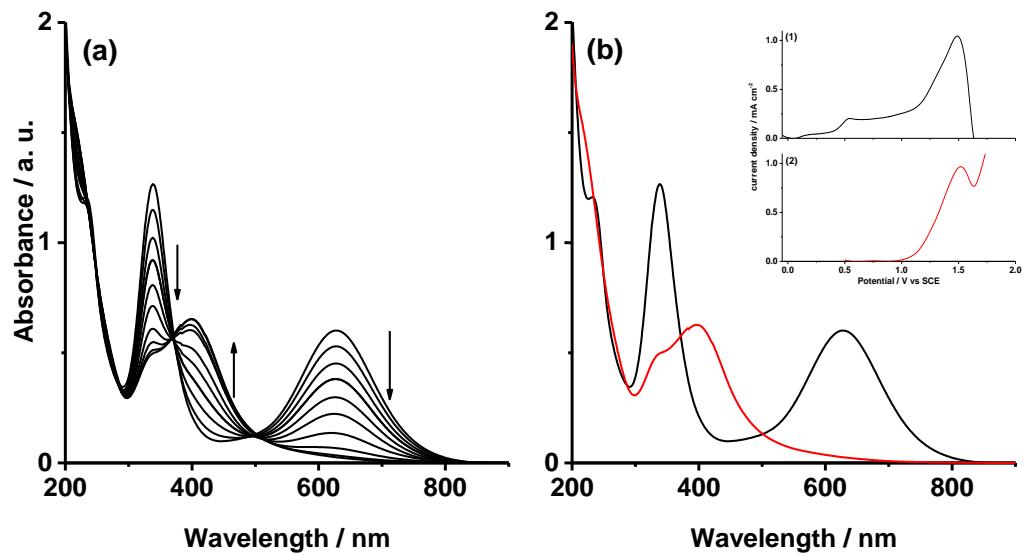
Figure S3 – a) UV-vis spectra of 0.5 mg ml^{-1} N-CQDs-160-8 solution at increasing charge. Applied potential 0.8 V vs SCE. Electrolytic medium 0.1 M NaClO4/pH 9 buffer. b) UV-vis spectrum of N-CQDs-160-8 (black line) and of NO-CQDs-160-8 (red line). Inset: single sweep cyclic voltammograms of N-CQDs-160-8 (1) and NO-CQDs-160-8 (2).