

pH-responsive carbon dots with red emission for real-time and visual detection of amines

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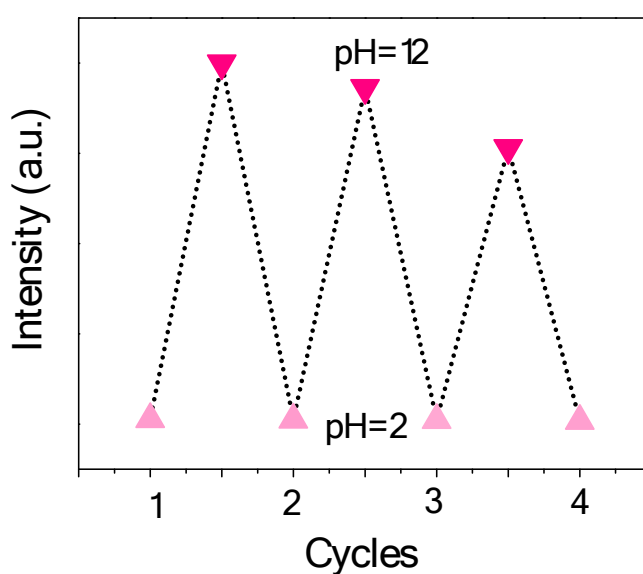


Figure S1. Reversibility study of PL emission of R-CDs between pH 2 and 12.

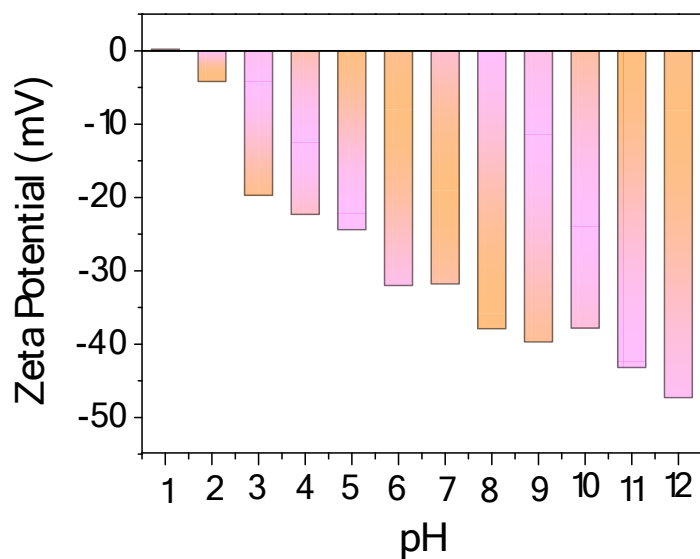


Figure S2. The zeta potential of the R-CDs with varying the pH value from 1 to 12.

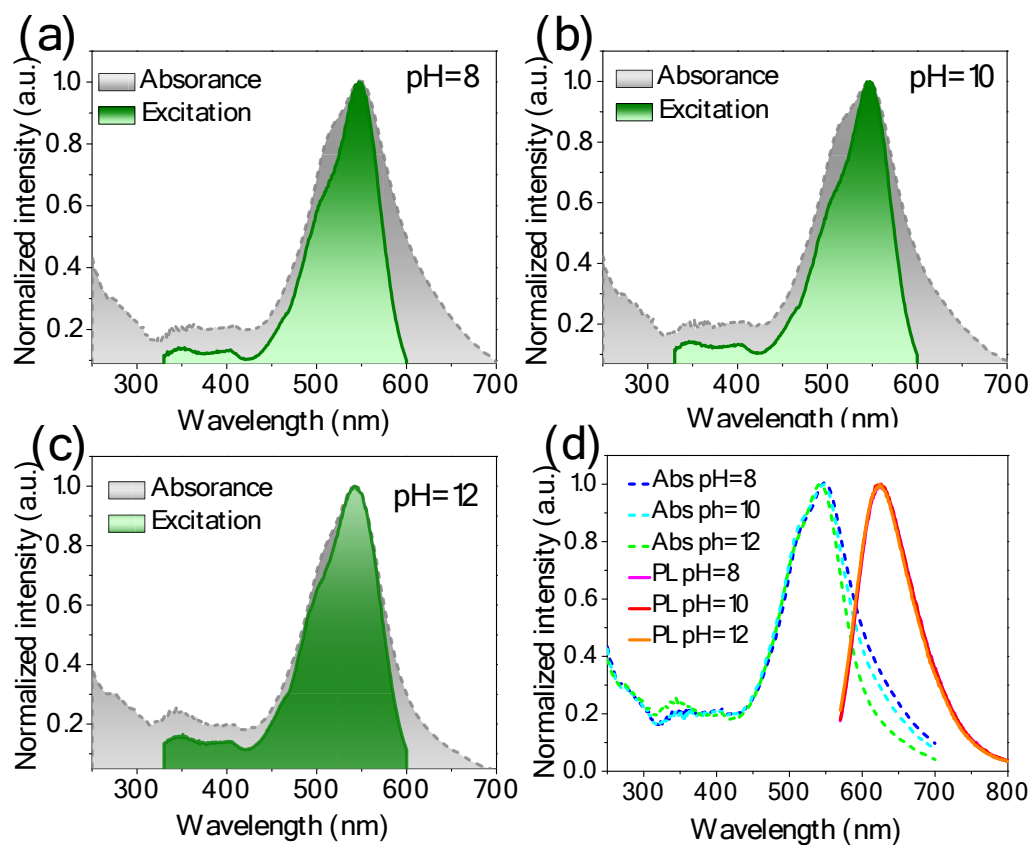


Figure S3. (a) UV-vis absorption, PL excitation (620 nm emission) of R-CDs at pH 8. (b) UV-vis absorption, PL excitation (620 nm emission) of R-CDs at pH 10. (c) UV-vis absorption, PL excitation (620 nm emission) of R-CDs at pH 12. (d) UV-vis absorption spectra and PL spectra (550 nm excitation) of R-CDs at pH 8, 10 and 12.

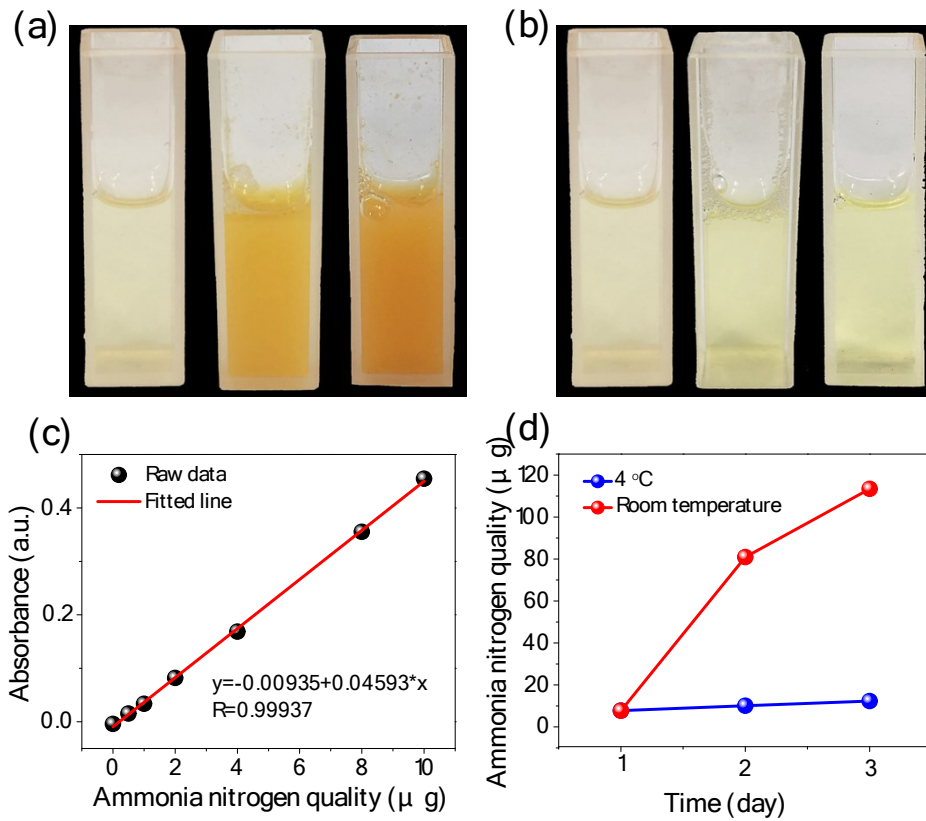


Figure S4. Monitoring of the ammonia nitrogen contents in shrimps meat infusion with Nessler reagent. (a) Images of Nessler reagent for monitoring the ammonia nitrogen contents in shrimps stored at room temperature. (b) Images of Nessler reagent for monitoring the ammonia nitrogen contents in shrimps stored at 4 °C. (c) Standard curve of ammonia nitrogen quality. (d) The quality of ammonia nitrogen produced by 5 g shrimp placed at 4 °C and room temperature for different days.