Supporting Information

For

Excitation-independent emission carbon nanoribbons polymer as a ratiometric photoluminescent probe for highly selective and sensitive detection of quercetin

Zhong-Xia Wang,[a,b] Yuan-Fei Gao,[a] Xing Jin,[a] Xian-He Yu,[a] Xi Tao,[a] Fen-Ying Kong,[a] Da-He Fan*[a] and Wei Wang**[a]

[a]*School of Chemistry and Chemical Engineering, Yancheng Institute of Technology, Yancheng 224051, P. R. China.*

[b]*Key Laboratory for Advanced Technology in Environmental Protection of Jiangsu Province, Yancheng Institute of Technology, Yancheng 224051, P. R. China.*

Corresponding author

**E-mail: fandahe@ycit.cn; wangw@ycit.edu.cn*

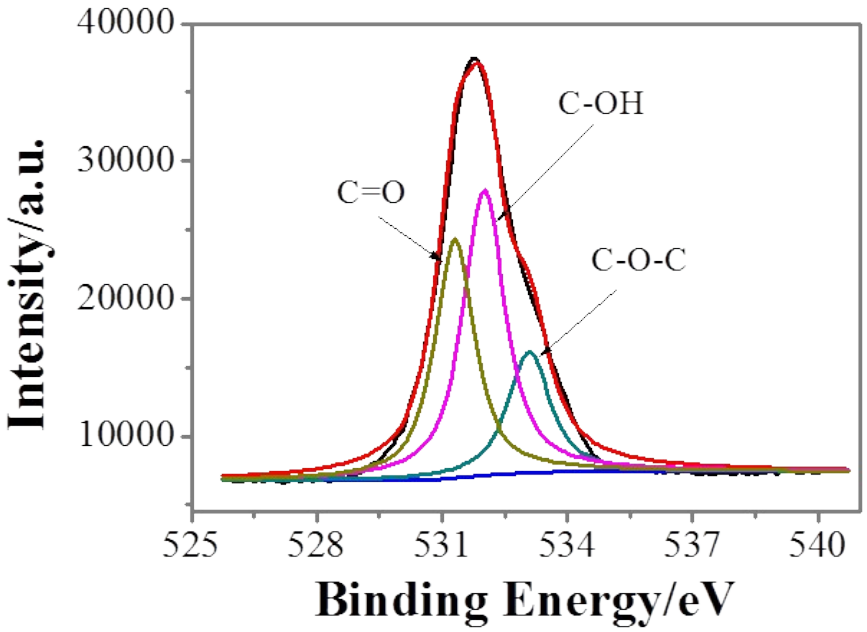

Figure S1 O1s spectra of the as-obtained SNCNRs**.**

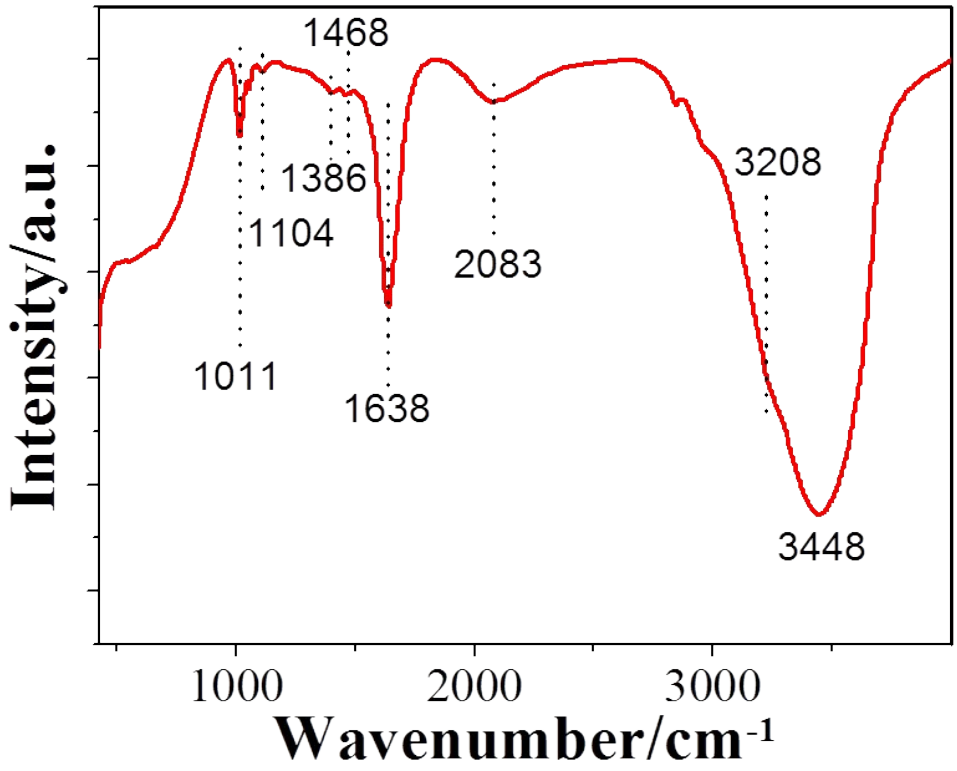

Figure S2 FT-IR spectrum of the fluorescent SNCNRs.

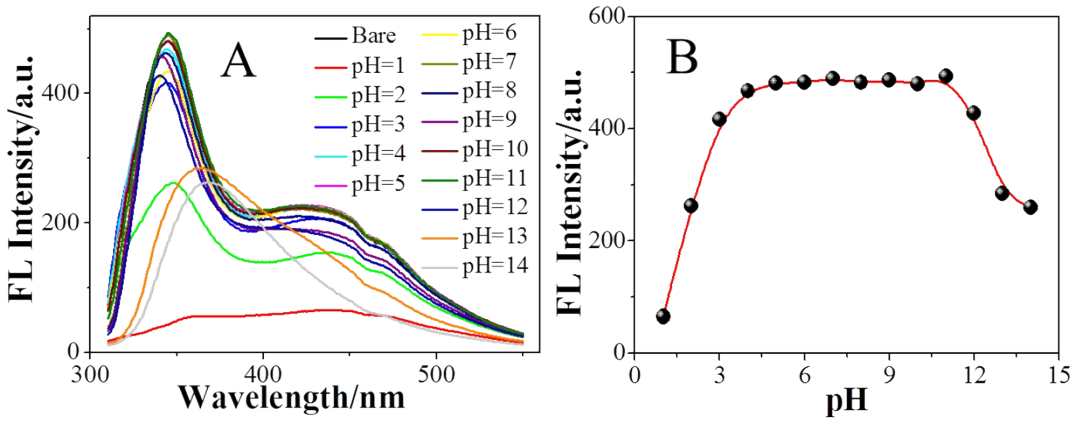

Figure S3 FL intensity at 345 nm (excitation at 300 nm) of the SNCNRs as a function of solution pH value. Both the excitation and emission slit widths were 5 nm.

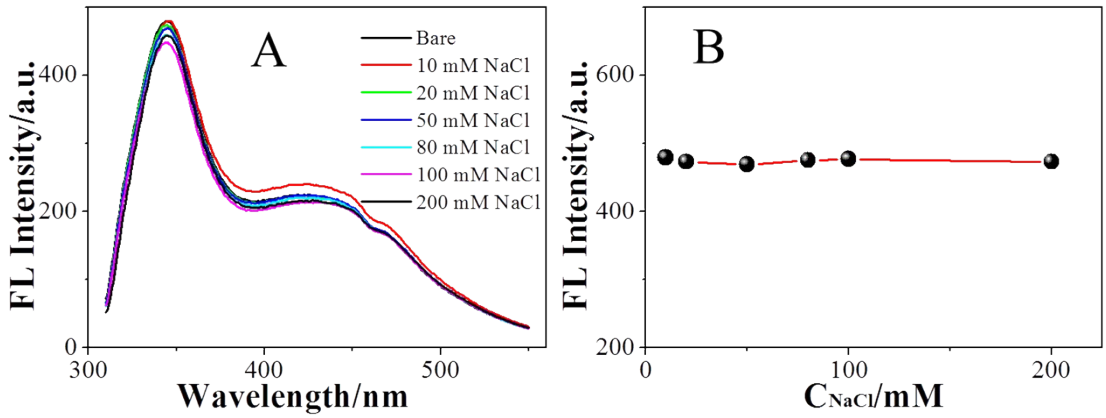

Figure S4 FL intensity at 345 nm (excitation at 300 nm) of the SNCNRs as a function of NaCl concentration. Both the excitation and emission slit widths were 5 nm.

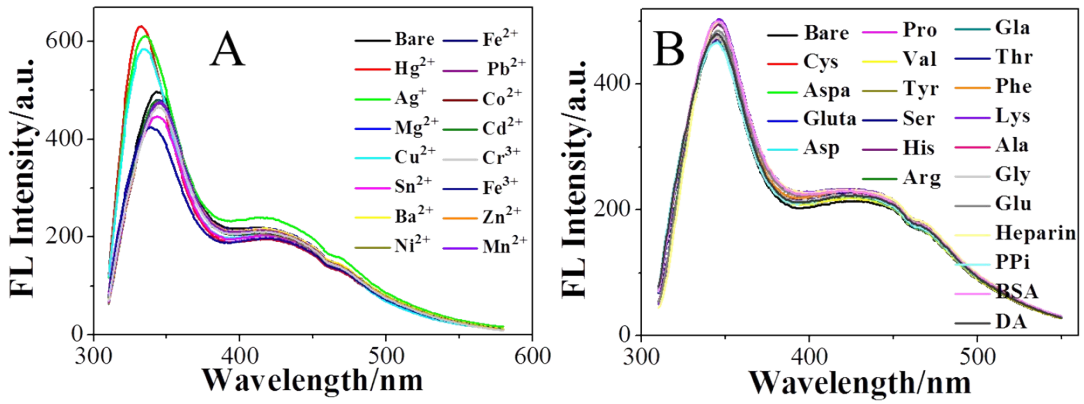

Figure S5 Selectivity research of the prepared SNCNRs for detection metal ions (A), amino acids and biomolecules (B) system, the concentration of metal ions, amino acids and biomolecules is 100 μM, respectively.

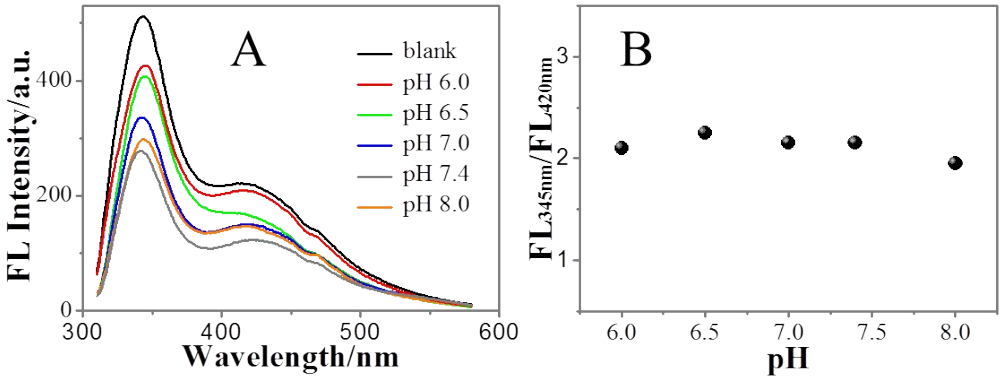

Figure S6 A) FL emission spectra (excitation at 300 nm) of the SNCNRs in different pH values of PBS buffer solution in the absence (blank) or presence of Que (100 μM); B) the ratiometric fluorescence intensity (FL_{345nm}/FL_{420nm}) in different pH values. Both the excitation and emission slit widths were 5 nm.

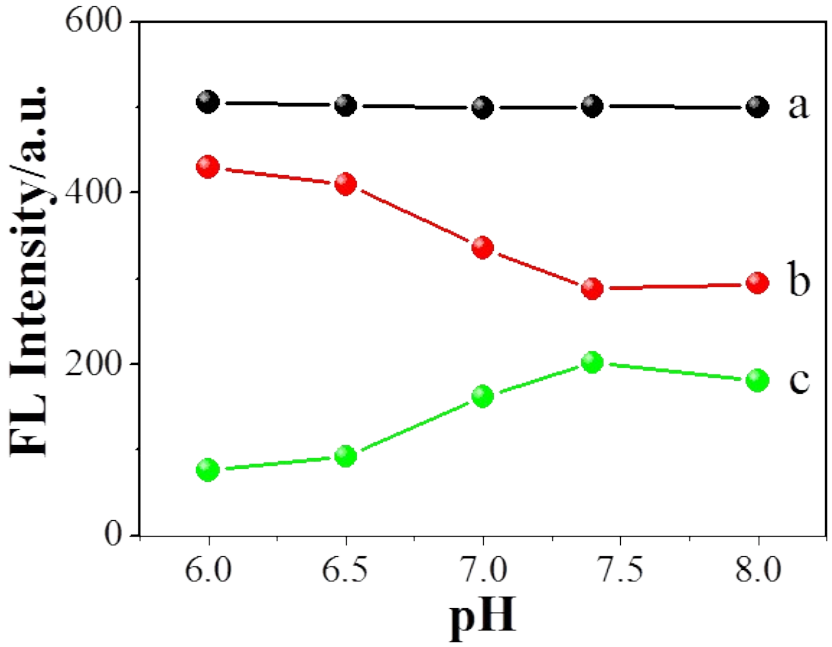

Figure S7 The FL intensity at 345 nm of the SNCNRs (36 μg mL^{-1}) in different pH values of PBS buffer solution in the absence (FL_0, curve a) or presence of Que (FL, 100 μM, curve b), and the relative fluorescence intensity ($\Delta FL=FL_0-FL$) in different pH values (curve c).

Table1 Detection of quercetin in samples with different methods.

Analyte	Methods	Linear range	LOD	Ref.
Quercetin	Electrochemistry	5.0 nM-7.0 μM	6.4 nM	1
Quercetin	Fluorescence	10-1000 ng mL^{-1}	2.5 ng mL^{-1}	2
Quercetin	D-μ-SPE and HPLC-UV	0.6-5500 μg L^{-1}	0.113-0.117 μg L^{-1}	3
Quercetin	This method	50 nM-200 μM	21.13 nM	Our method

Table S2 Determination results of Que in Beverages samples (n = 3)

Beverages	Detected (μM)[a]	Added (μM)[a]	Found (μM)[a]	Recovery (%)	RSD (%)
Green grape	0.16	3.0	3.27	103.48	3.42
	0.21	5.0	4.86	93.28	3.09
Tea π juice	Not detected	3.0	2.89	96.33	2.47
		5.0	4.83	96.60	3.68
Black tea	0.15	3.0	3.41	108.25	4.21
	0.18	5.0	5.53	106.76	3.95

[a] The data was obtained from three parallel samples.

References

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3. A. Asfaram, M. Arabi, A. Ostovan, H. Sadeghi, M. Ghaedi, New J. Chem., 2018, 42, 16144-16153.