Electronic Supporting information

Protein protected red emittive copper nanoclusters as a fluorometric probe for highly sensitive biosensing of creatinine
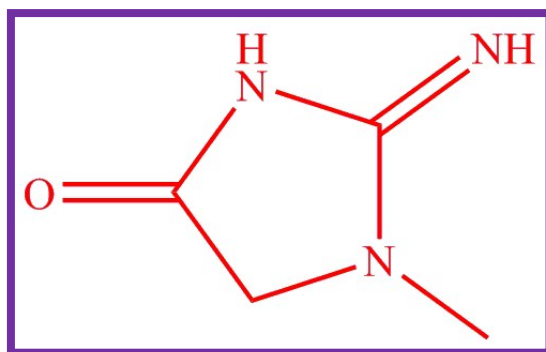
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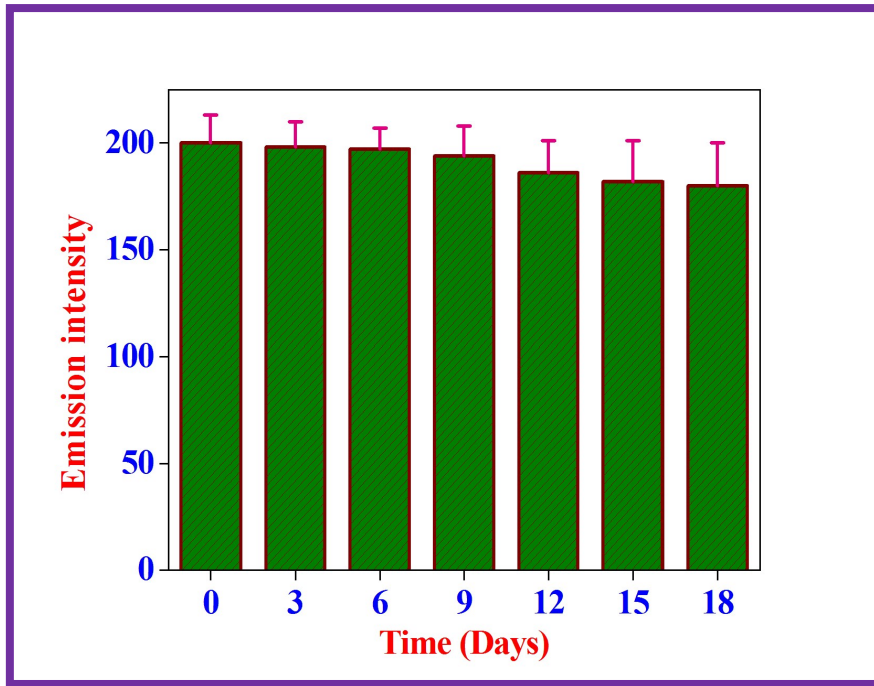
Scheme S1. Chemical structure of creatinine

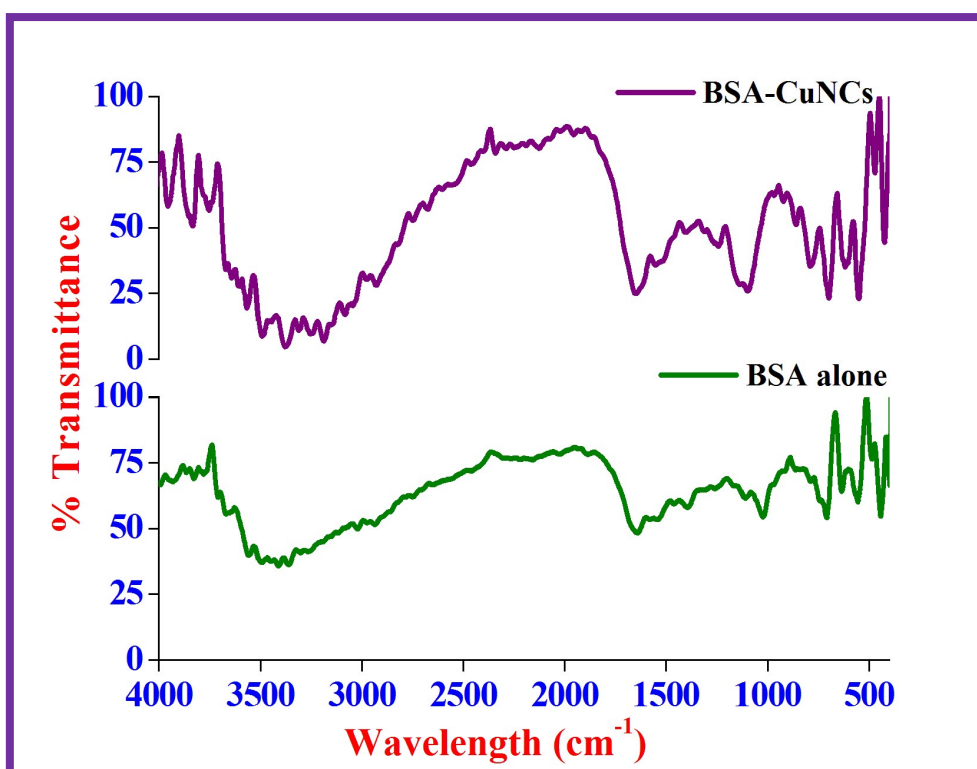**Fig. S1**. Emission intensity value of BSA-CuNCs in different time (1-18 days) intervals
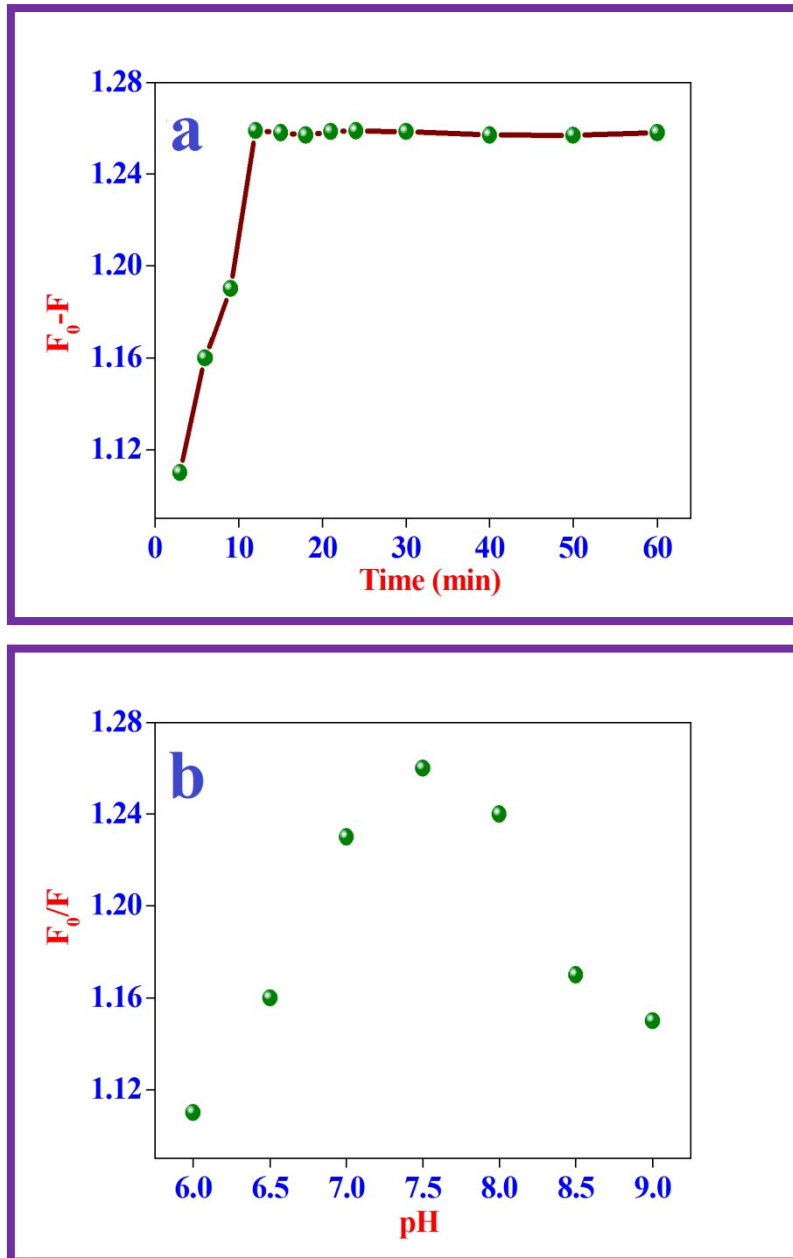
Fig. S2. FT-IR spectra of BSA alone and BSA-CuNCs

Fig. S3. Effect of time (**a**) and pH (**b**) on the BSA-CuNCs in the presence (10×10^{-6} mol dm^{-3}) of creatinine.
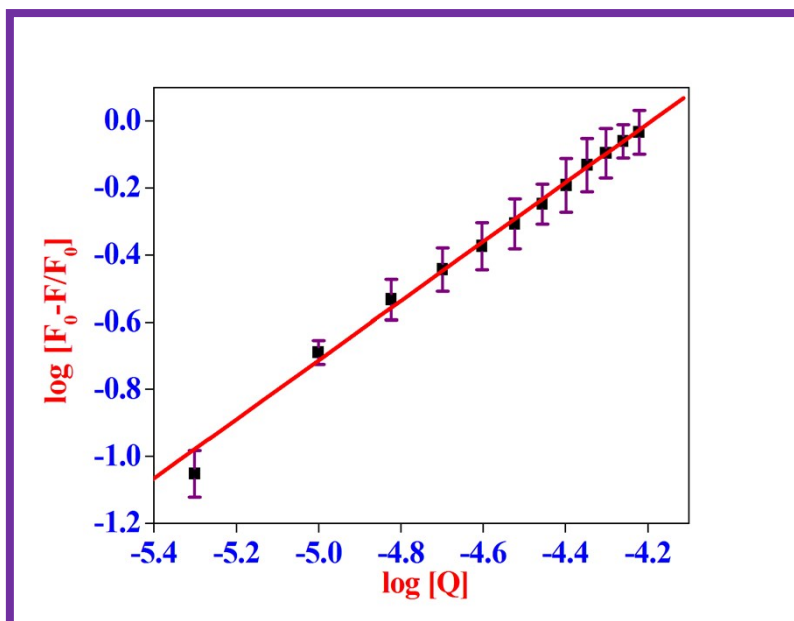
Fig. S4. Double logarithmic plot for BSA-CuNCs in the presence of various concentrations of creatinine
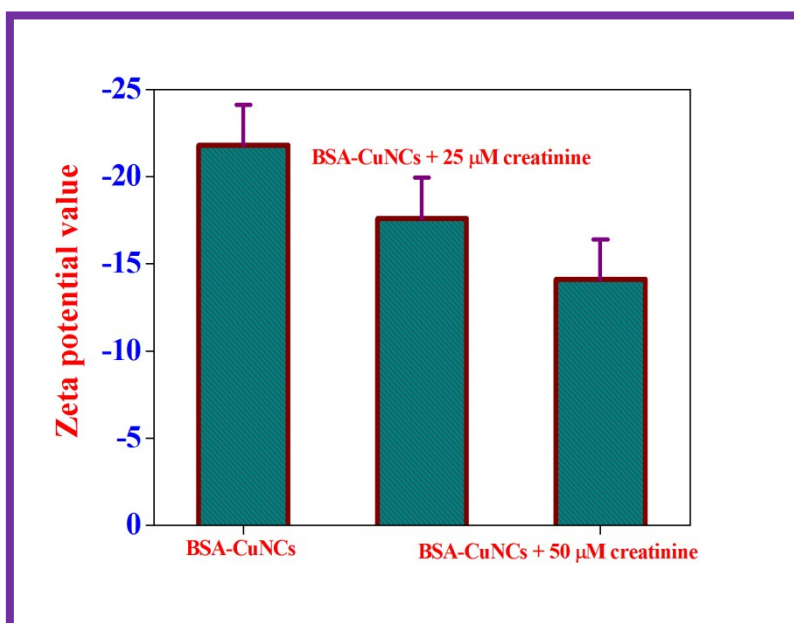

Fig. S5. Zeta potential data of BSA-CuNCs in the presence of various amounts of creatinine
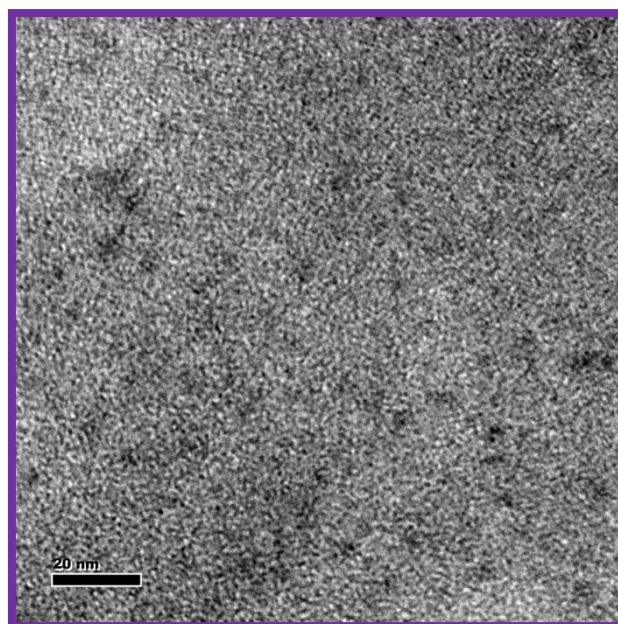
Fig. S6. HR-TEM images of BSA-CuNCs after the addition (50×10^{-6} mol dm^{-3}) of creatinine

Table S1. Comparison of present fluorimetric methodology with other analytical approaches for creatinine biosensor

Method	Linear range	Detection limit	References
Jaffe's based method	0-6 mM	0.72 mM	57
Surface enhanced Raman spectroscopy	---	0.88 mM	58
Capillary zone electrophoresis	---	0.05 mM	59
Chemiluminescence	0.1-30 μM	0.072 μM	60
Amperometric	1-150 μM	0.3 μM	61
Electroanalytical method	1-80 μM	380 nM	62
Colorimetry	10-1000 μM	1.21 μM	63
Colorimetry	0.1-20 mM	80 μM	64
Colorimetry	0.01-1 μM	8.4 nM	65
Fluorimetric	20-520 μM	2 nM	66
Fluorimetric	**5-60 μM**	**50 nM**	**This work**

mM- Milli molar
μM-Micro molar
nM-Nano molar