

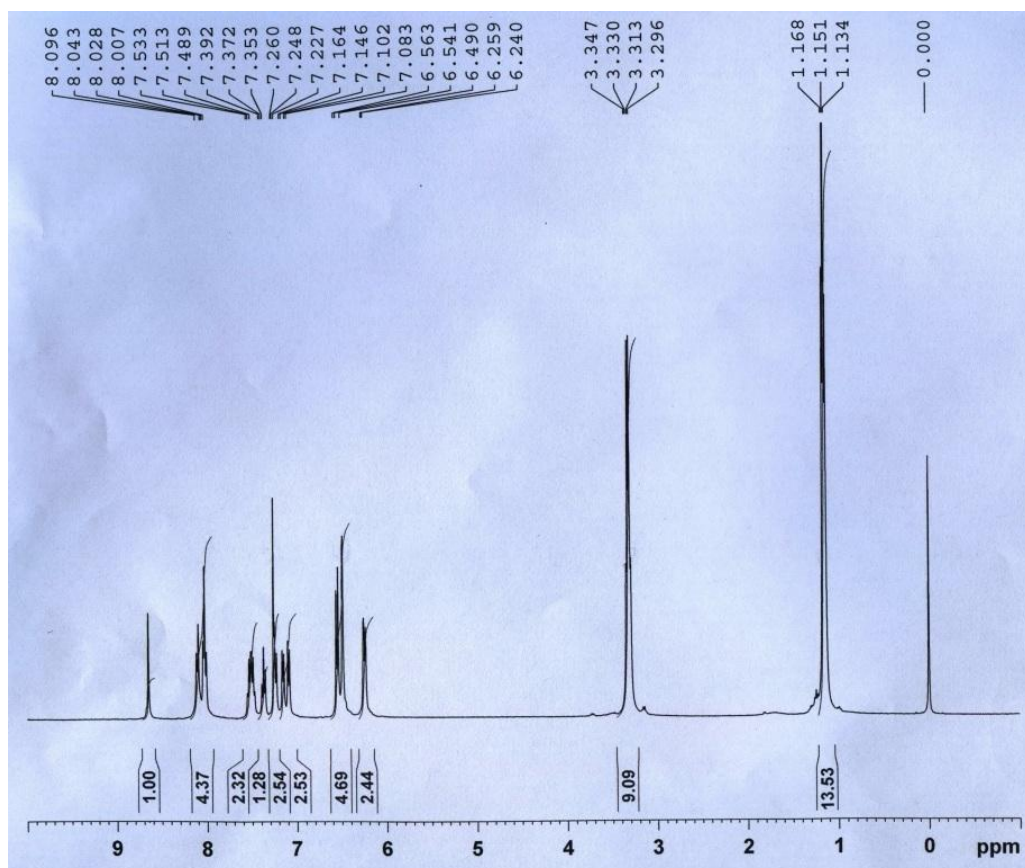
Supplementary Information:

Colorimetric and “turn-on” fluorescent determination of Cu²⁺ ion based on rhodamine-quinoline derivative

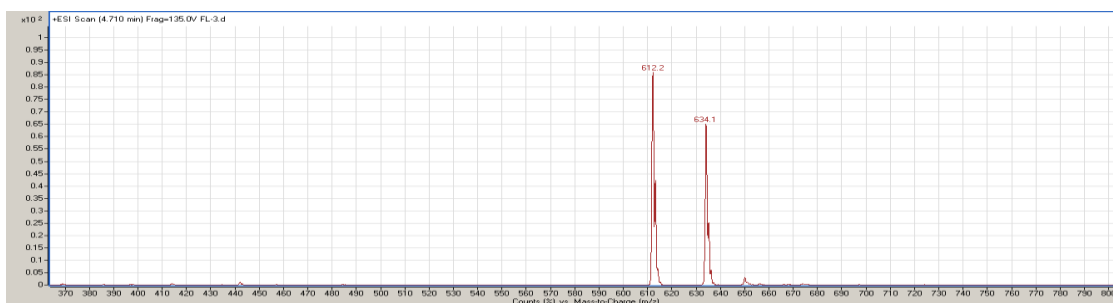
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(a)



(b)



(c)

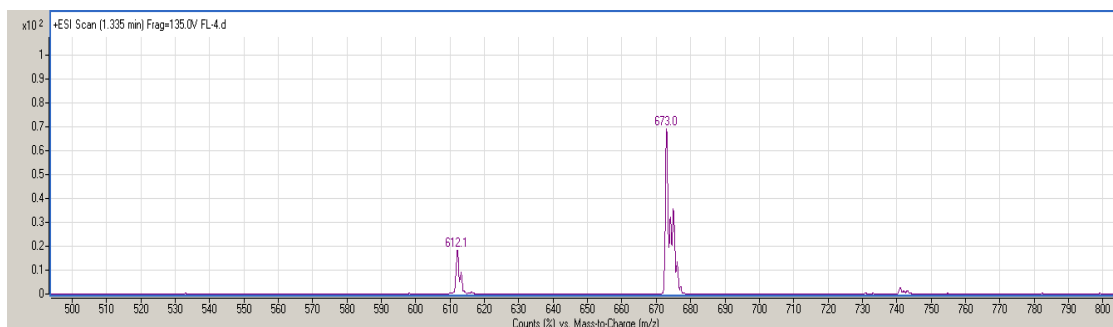


Figure S1. ^1H NMR spectra of rhodamine-quinoline derivative **1**; b) ESI-MS spectrum of rhodamine-quinoline derivative **1**; c) ESI-MS spectrum of rhodamine-quinoline derivative **1**- Cu^{2+} complex.

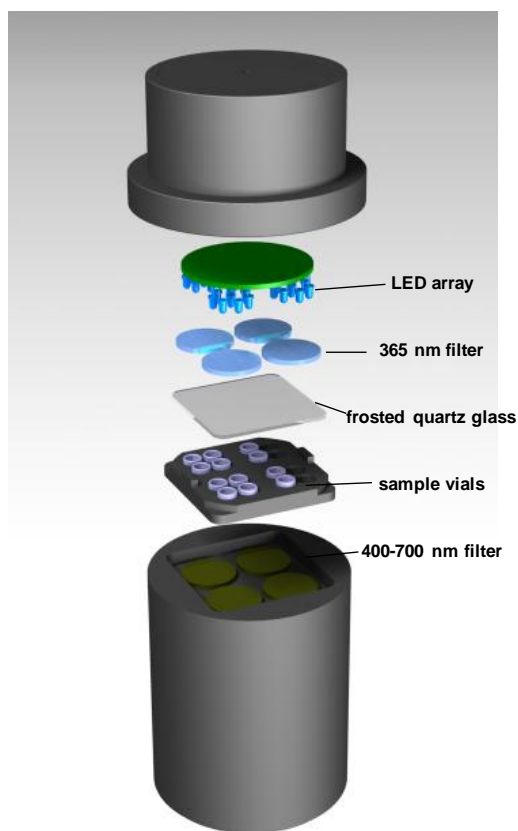


Figure S2. The schematic graph of the experimental set-up.

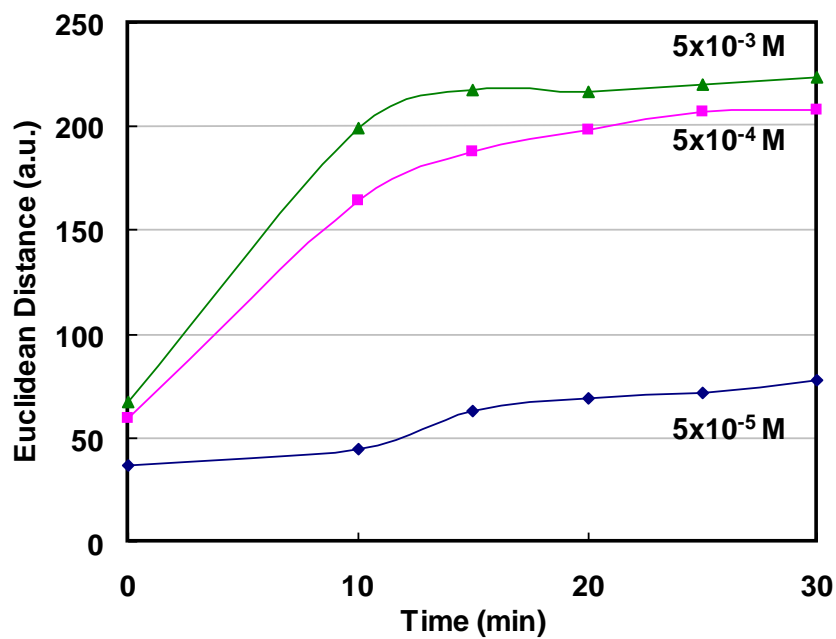


Figure S3. The reaction dynamic curves for colorimetric responses of Cu^{2+} at different concentrations.

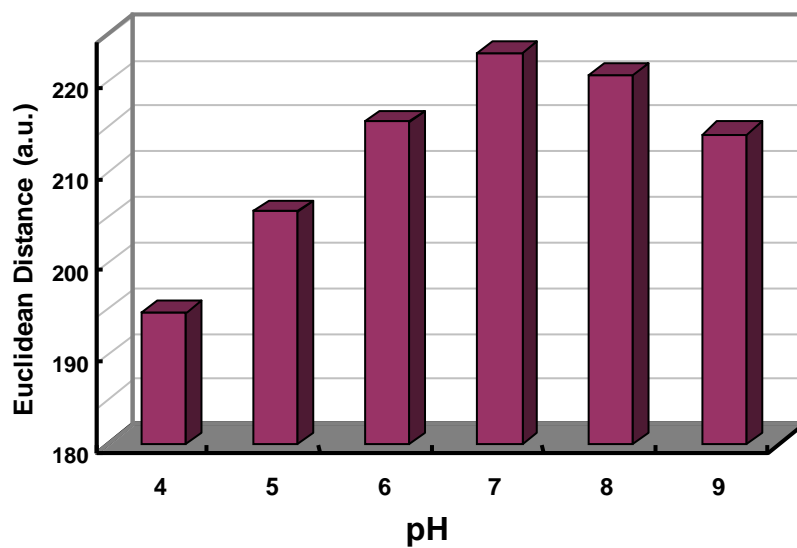


Figure S4. pH effect to the colorimetric responses of Cu^{2+} .

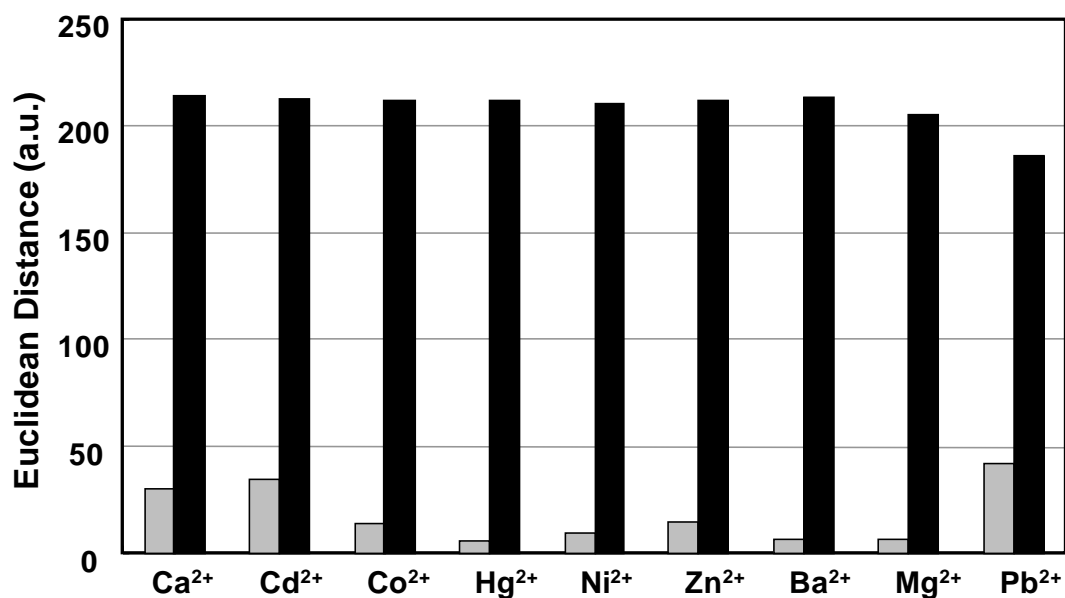


Figure S5. The colorimetric response of rhodamine-quinoline derivative. a) Black columns: rhodamine-quinoline derivative-Cu²⁺ complex compound with the coexistence of nine different interferent ions; b) Grey columns: nine individual interferent ions without Cu²⁺.

Table S1. Summary of the parameters of ESI-MS.

	GA ₁	ABA	JA	GA ₃	p-HCA
Parameters	Polarity				
	Negative				
of ion source	Capillary voltage (kV)		4		
	Nebulizer (psi)		35		
	Nozzle voltage (V)		500		
	Sheath gas flow (Lmin ⁻¹)		12		
	Sheath gas temperature (°C)		325		
	Gas flow (Lmin ⁻¹)		10		
	Gas heater (°C)		250		