

Supporting Information for

Targeted Water Soluble Copper-tetrazolate Complexes : Interactions with Biomolecules and Catecholase like Activities

Manideepa Saha,^a Mriganka Das,^a Rajendar Nasani,^a Indrani Choudhuri,^a Muhammed Yousufuddin,^b Hari Pada Nayek,^c Mobin M Shaikh,^a Biswarup Pathak,^a Suman Mukhopadhyay^{*a}

^aDepartment of Chemistry, School of Basic Sciences, Indian Institute of Technology Indore, IET-DAVV Campus, Khandwa Road, Indore 452017, India.

Tel : +91 731 2438 705 Fax: +91 731 2361 482 E-mail: suman@iiti.ac.in

^bUniversity of North Texas at Dallas, Life and Health Sciences Department, 7400 University Hills Blvd, 300 Founder's Hall, Dallas, TX 75241, USA.

^cDepartment of Applied Chemistry, Indian School of Mines, Dhanbad, 826004, Jharkhand, India.

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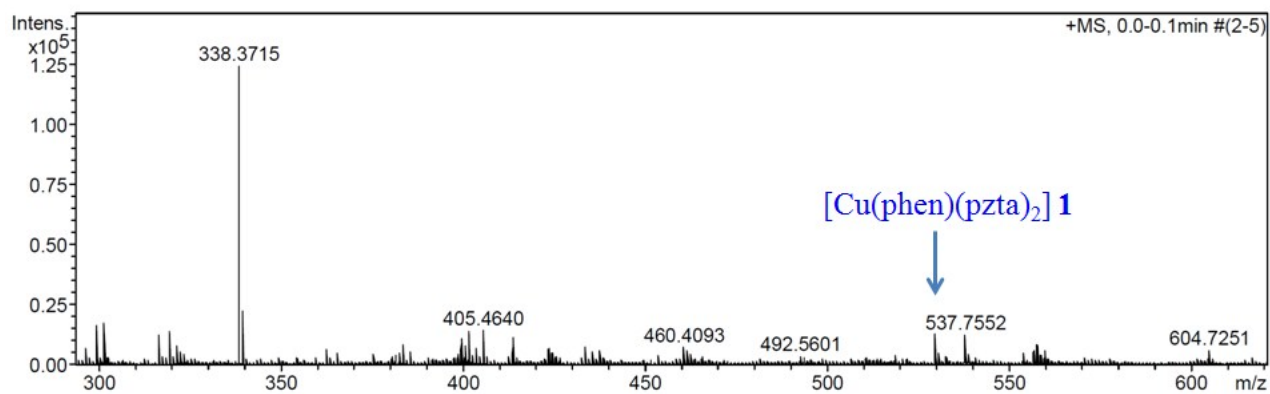


Figure S1. ESI- Mass spectrum of Complex 1.

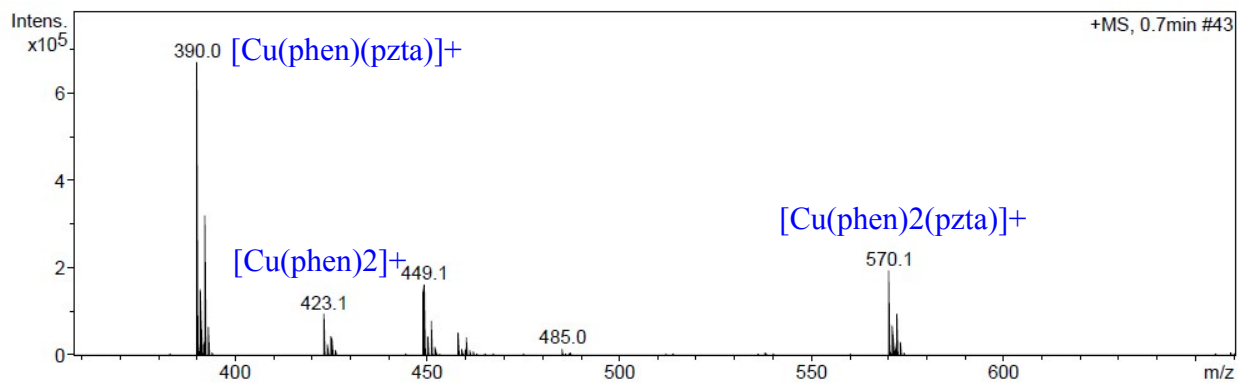


Figure S2. ESI- Mass spectrum of Complex 2.

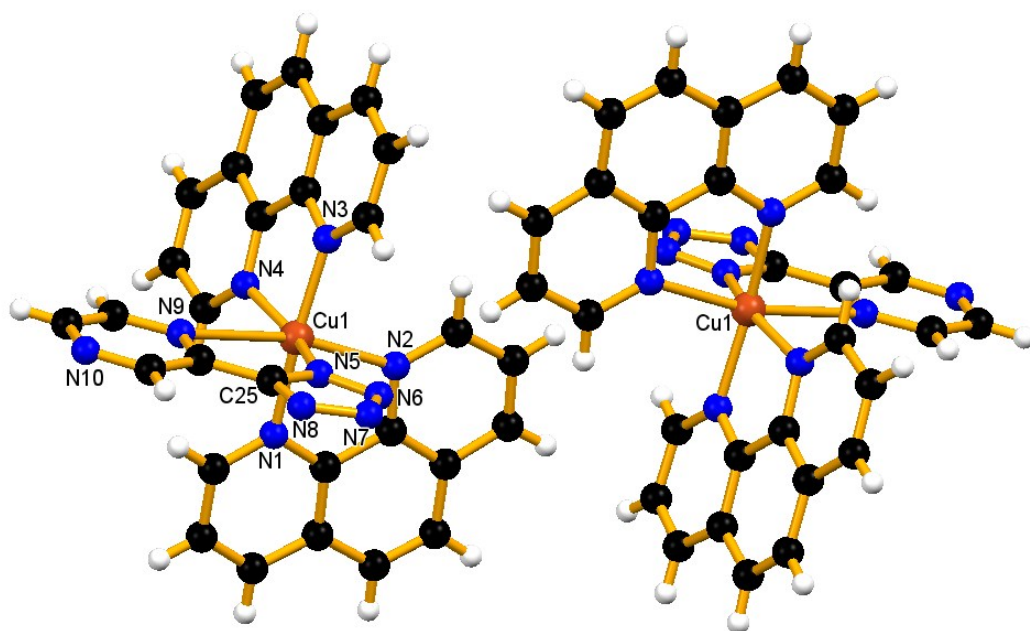


Figure S3: Molecular structure of $[\text{Cu}(\text{phen})_2(\text{pzta})]\cdot 0.5(\text{NO}_3)\cdot 0.5(\text{N}_3)$ **2** with the atomic numbering scheme. The azide and nitrate ions are omitted for clarity.

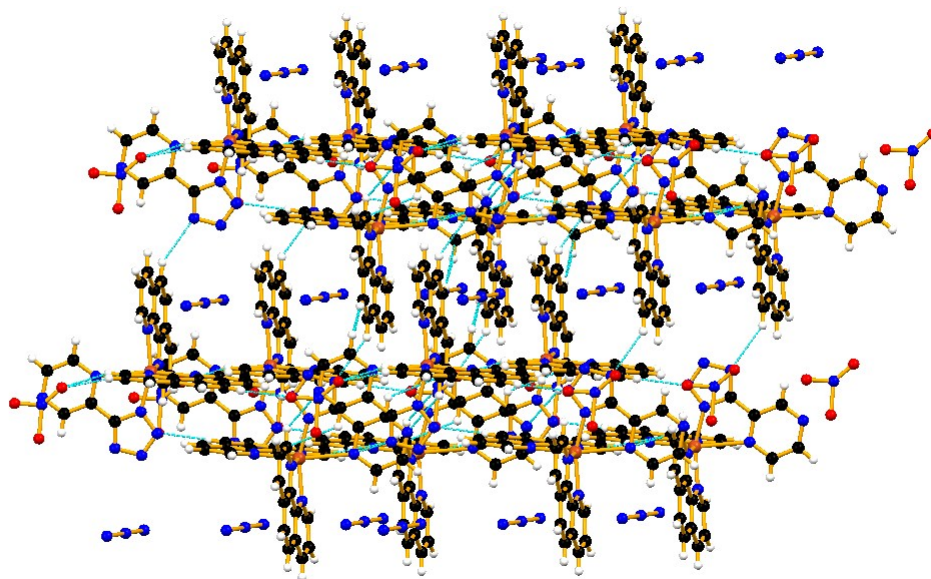


Figure S4. Three dimensional hydrogen bonded network for complex **2**.

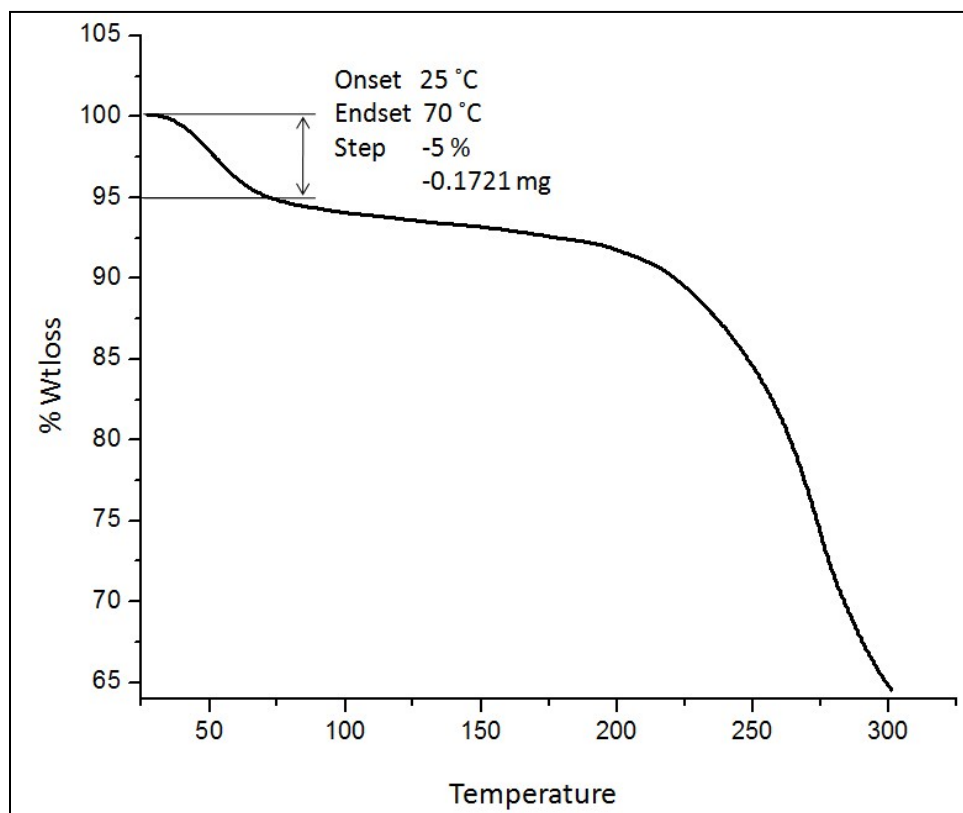


Figure S5: Thermogravimetric curve of compound **2**. Plot of weight loss/ % against temperature/ °C.

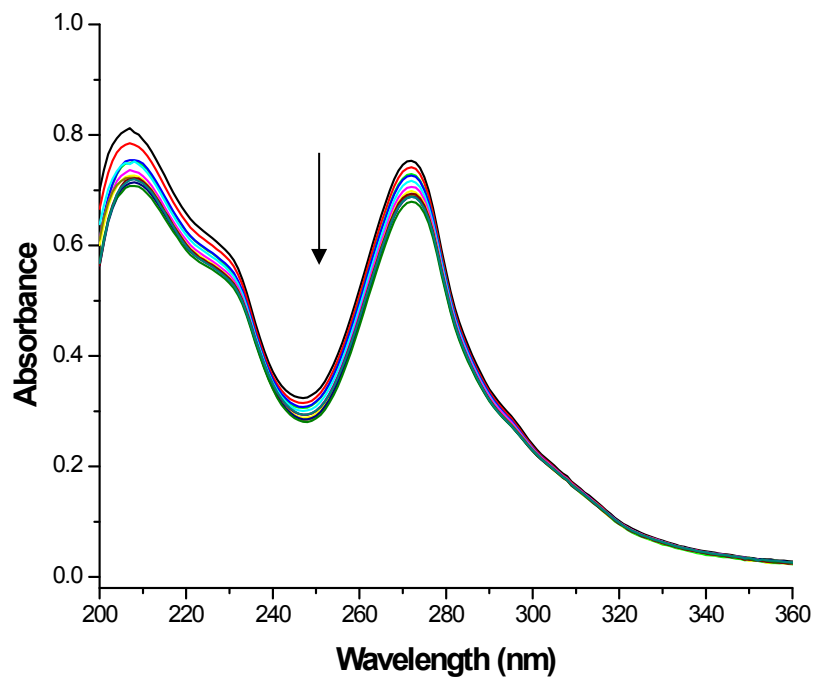


Figure S6. Absorption titration spectra of fixed concentration (12 μM) of complex **1** with increasing concentrations (0–200 μM) of CT-DNA .

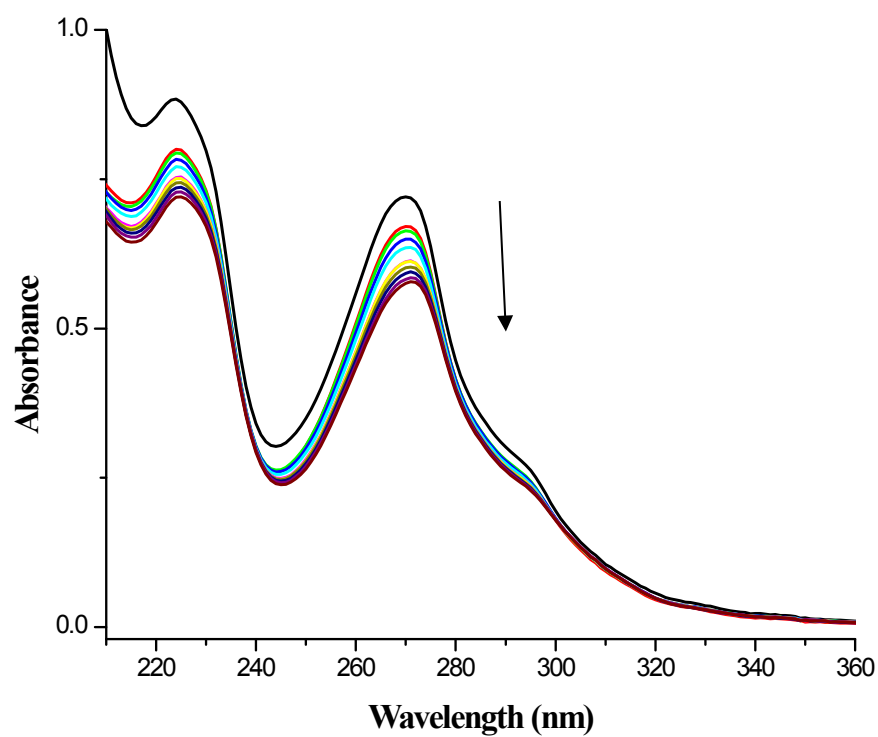


Figure S7. Absorption titration spectra of fixed concentration (10 μM) of complex **2** with increasing concentrations (0–200 μM) of CT-DNA .

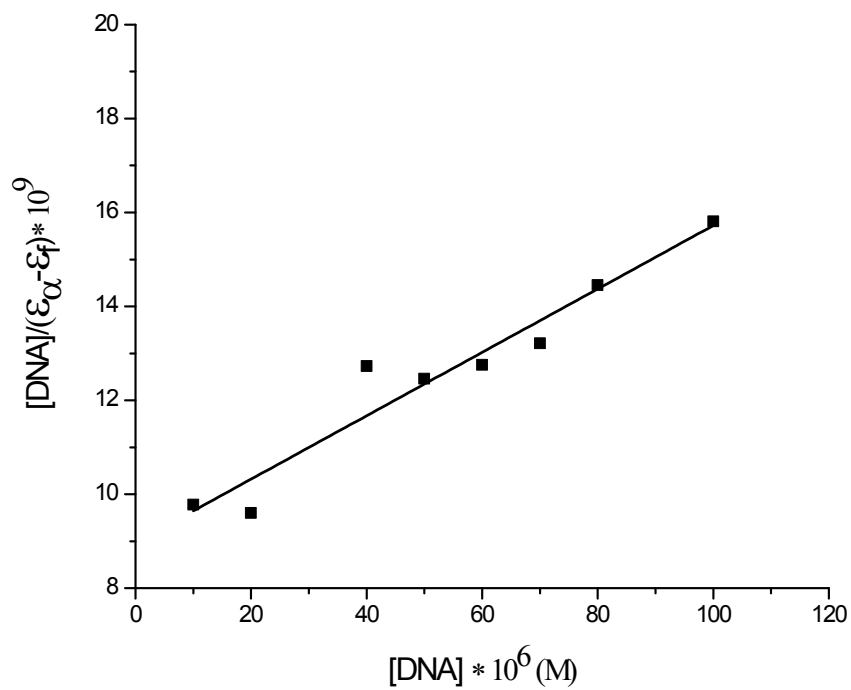


Figure S8. Plot of $[DNA]/(\epsilon_{\alpha}-\epsilon_f)$ vs. $[DNA]$ for complex **1**.

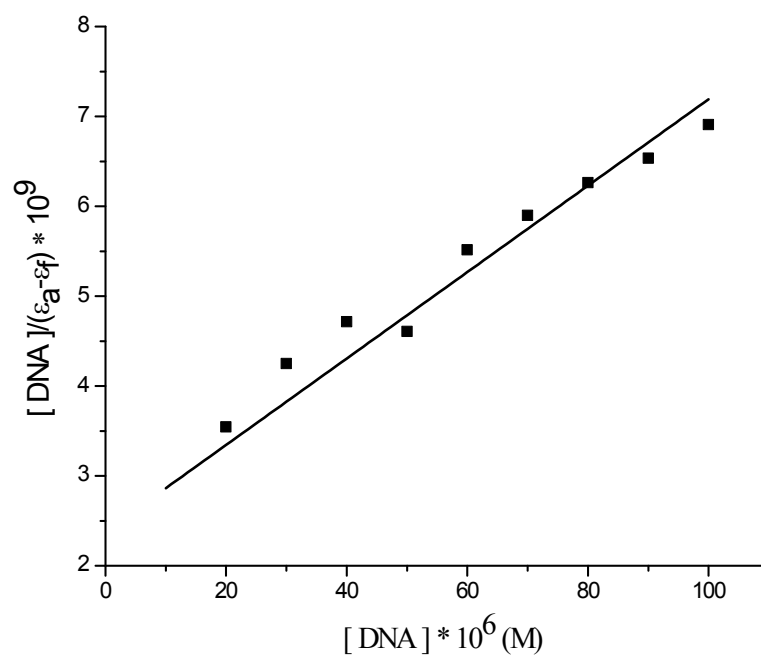


Figure S9. Plot of $[\text{DNA}]/(\epsilon_{\alpha}-\epsilon_f)$ vs. $[\text{DNA}]$ for complex **2**.

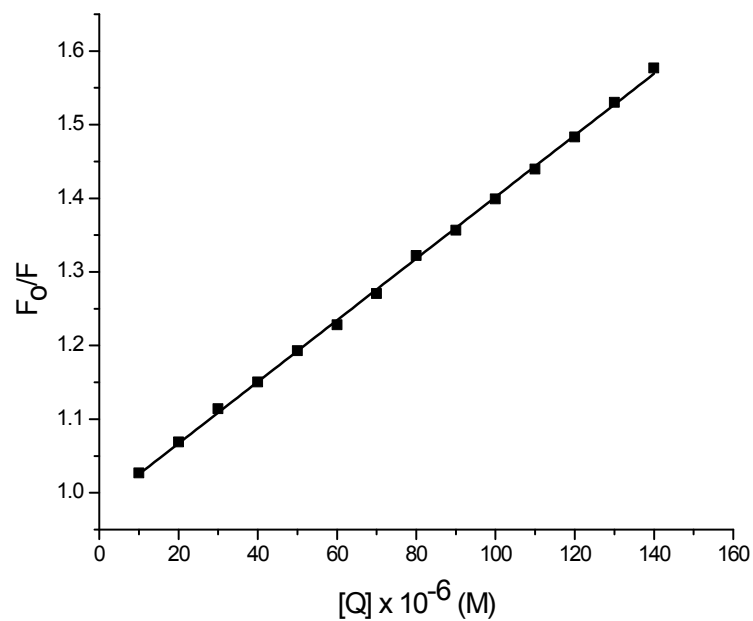


Figure S10. Stern-Volmer plot for complex **1**.

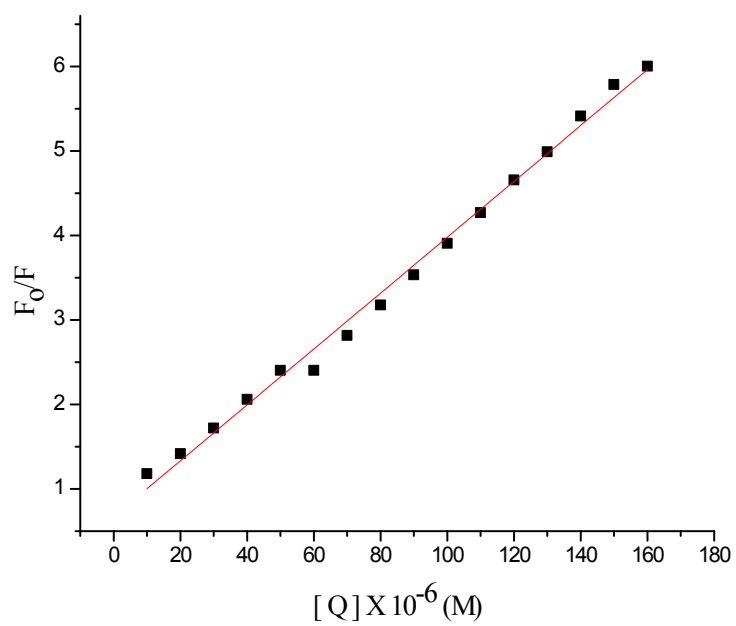


Figure S11. Stern-Volmer plot for complex 2.

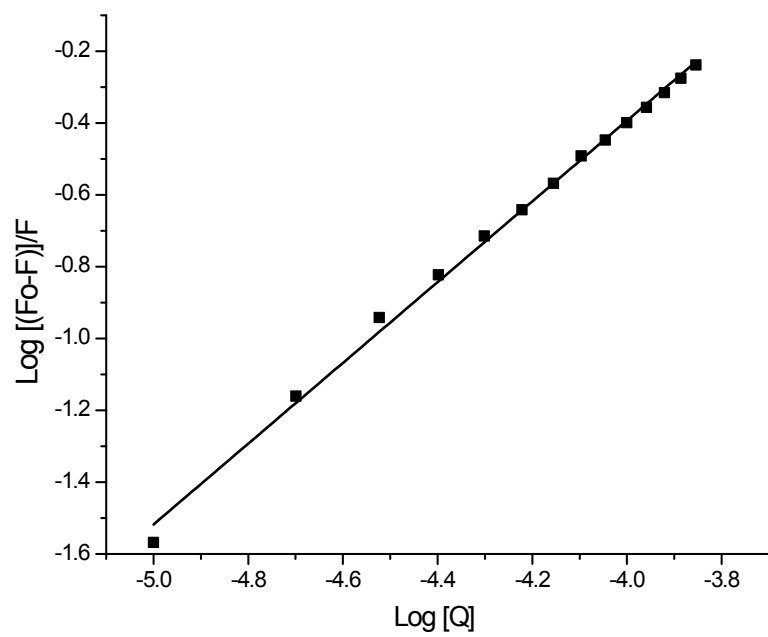


Figure S12. Scatchard plot for the complex 1.

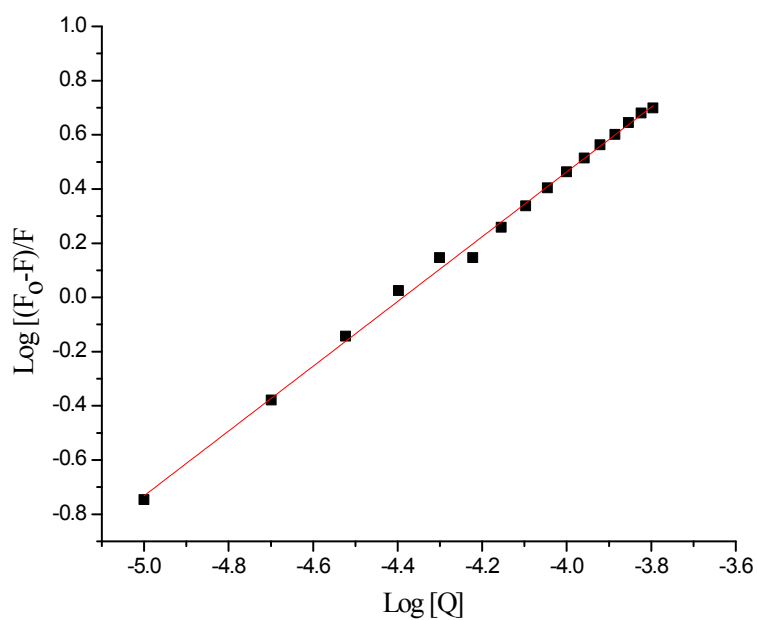


Figure S13. Scatchard plot for the complex **2**.

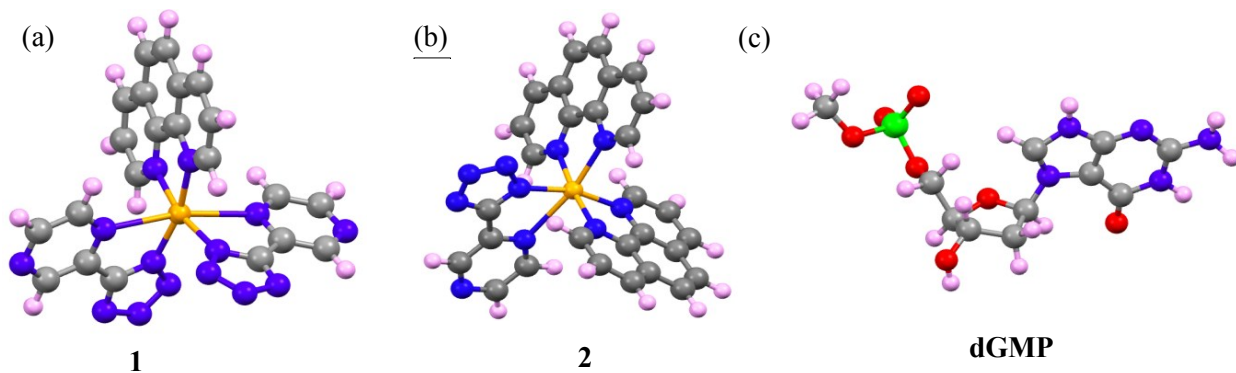


Figure S14: Optimized structure of Cu-complexes (**1-2**) and dGMP fragment. Here orange, grey, blue, red, green and pink colour ball denotes the copper, carbon, nitrogen, oxygen, phosphorous and hydrogen atom respectively.

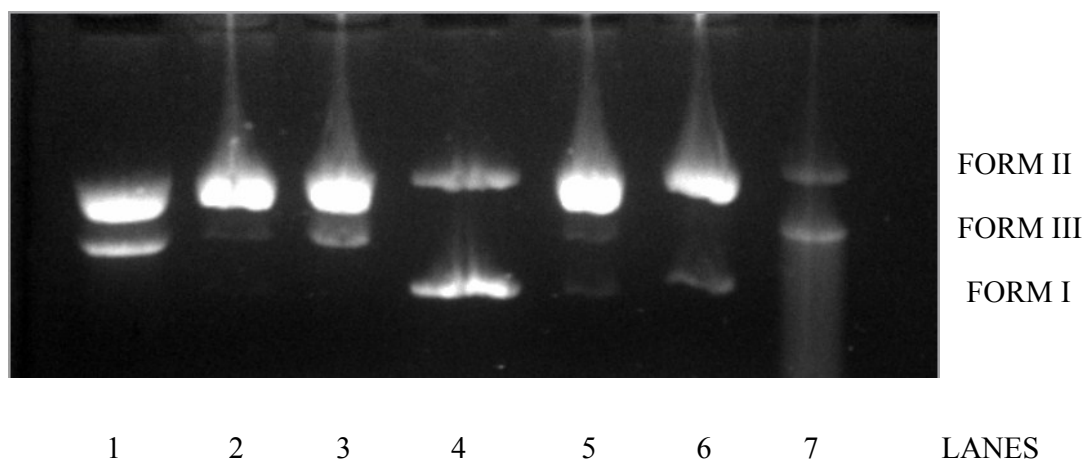


Figure S15. Agarose gel electrophoresis cleavage showing cleavage of pBR322 supercoiled DNA by complex **2** after 1 hr of incubation at different concentration; Lane 1: **2** + DNA; Lane 2: **2** + DMSO + DNA; Lane 3: **2** + EtOH + DNA; Lane 4: **2** + NaN_3 + DNA; Lane 5: **2** + SOD+ DNA; Lane 6: **2** + DAPI + DNA; Lane 7: **2** + methyl green + DNA.

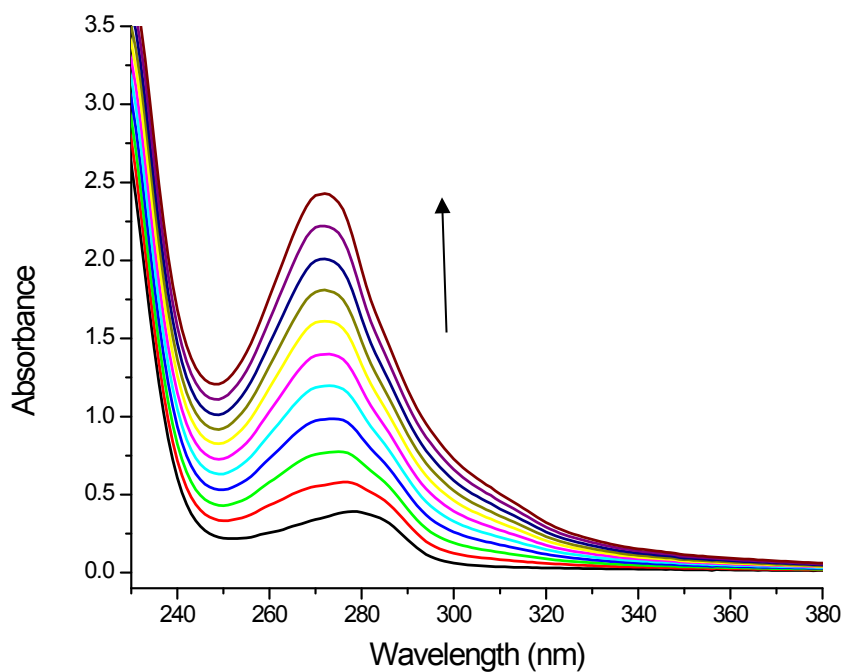


Figure S16. UV-VIS Absorption titration of BSA (10 μM) by successive addition of Complex **1**.

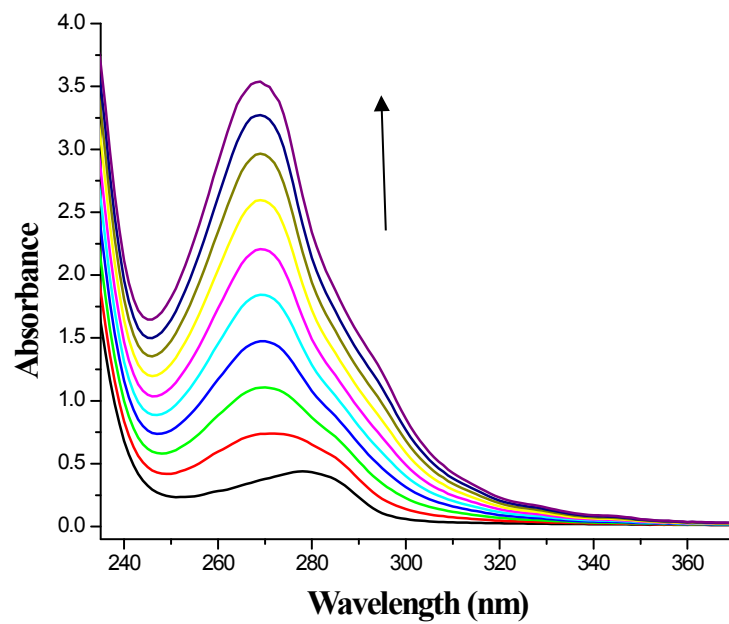


Figure S17. UV-VIS Absorption titration of BSA (10 μ M) by successive addition of Complex 2.

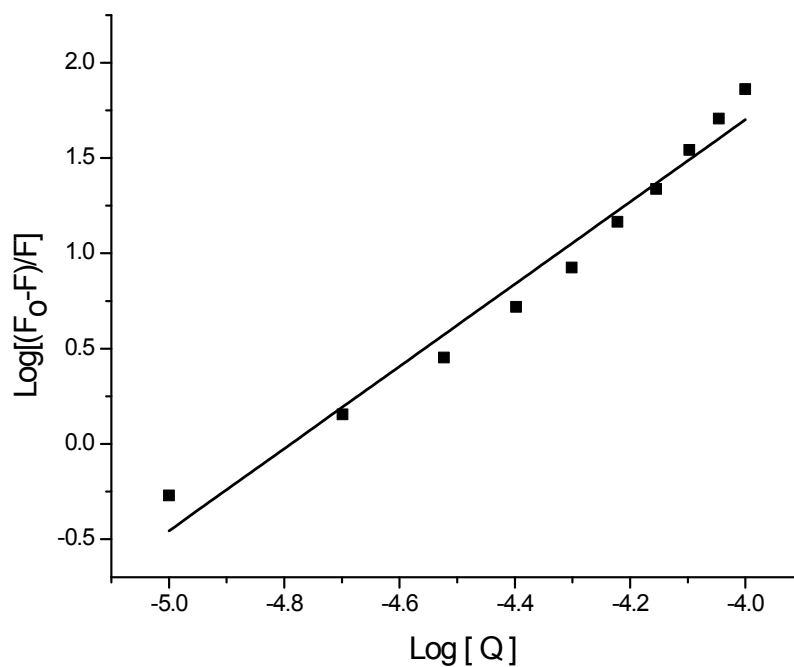


Figure S18. Scatchard plot for Complex 1.

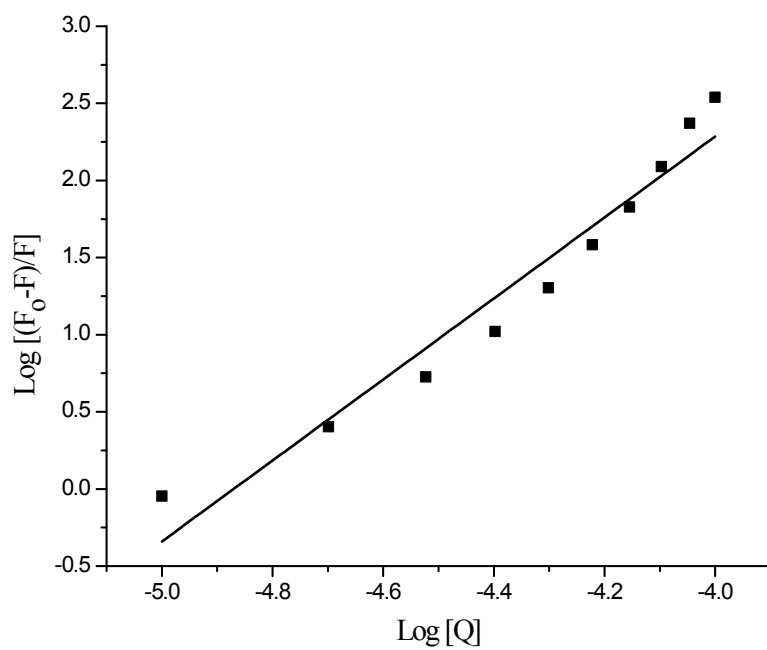


Figure S19. Scatchard plot for Complex 2.

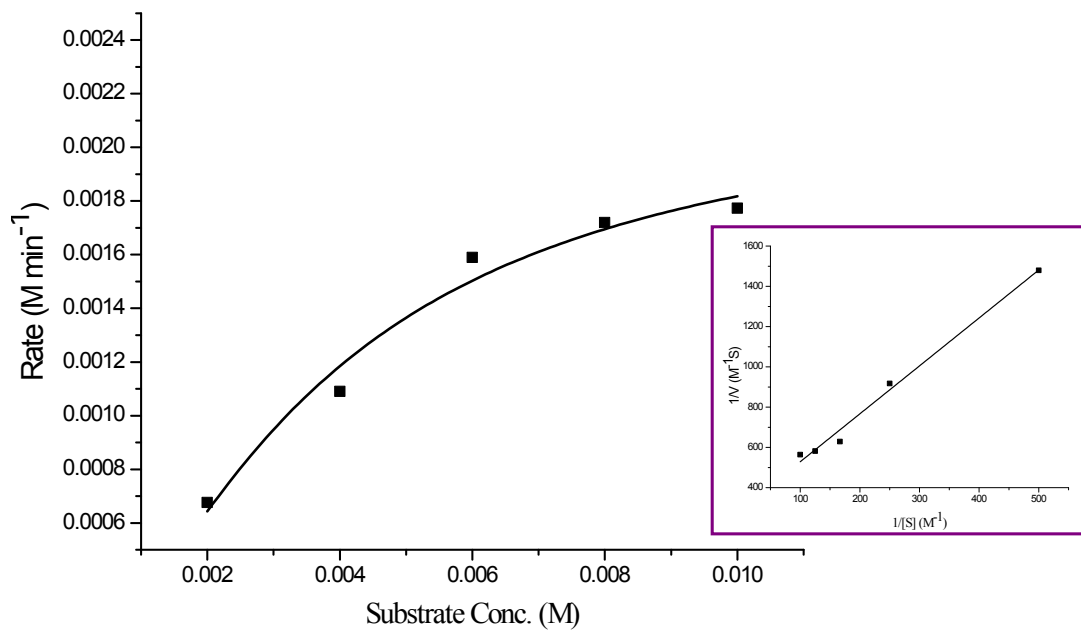


Figure S20. Michael-menten plot for complex **2** . Inset- lineweaver burk plot.

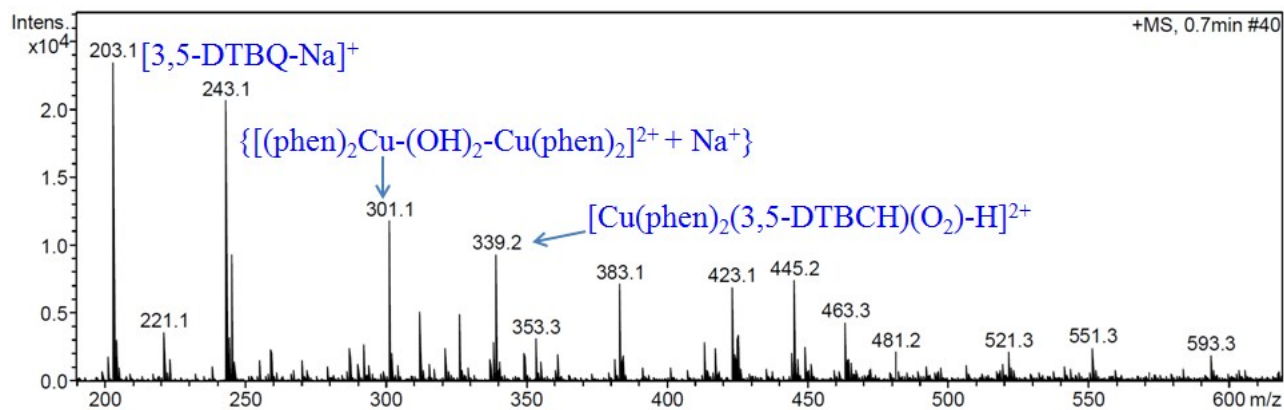


Figure S21. Electrospray mass spectrum (ESI-MS positive) of a 1:100 **2**/3,5-DTBC mixture in methanol, recorded within 10 min of mixing.

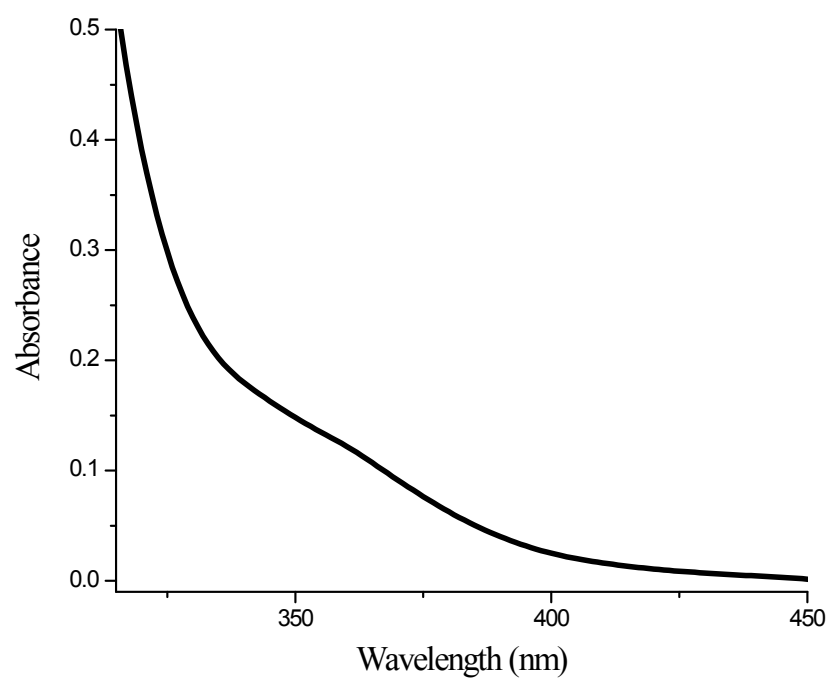


Figure S22 . Characterized peak for I_3^- for qualitative detection of H_2O_2 during catalytic oxidation process.