

Supporting information

Synthesis, characterization, DNA binding, cleavage and cytotoxicity of copper(II) complexes

Mei-Jin Li ^{*a}, Tao-Yu Lan^a, Xiu-Hui Cao^a, Huang-Hao Yang^a, Yupeng Shi^b, Changqing Yi^{*b}, Guo-Nan Chen^a

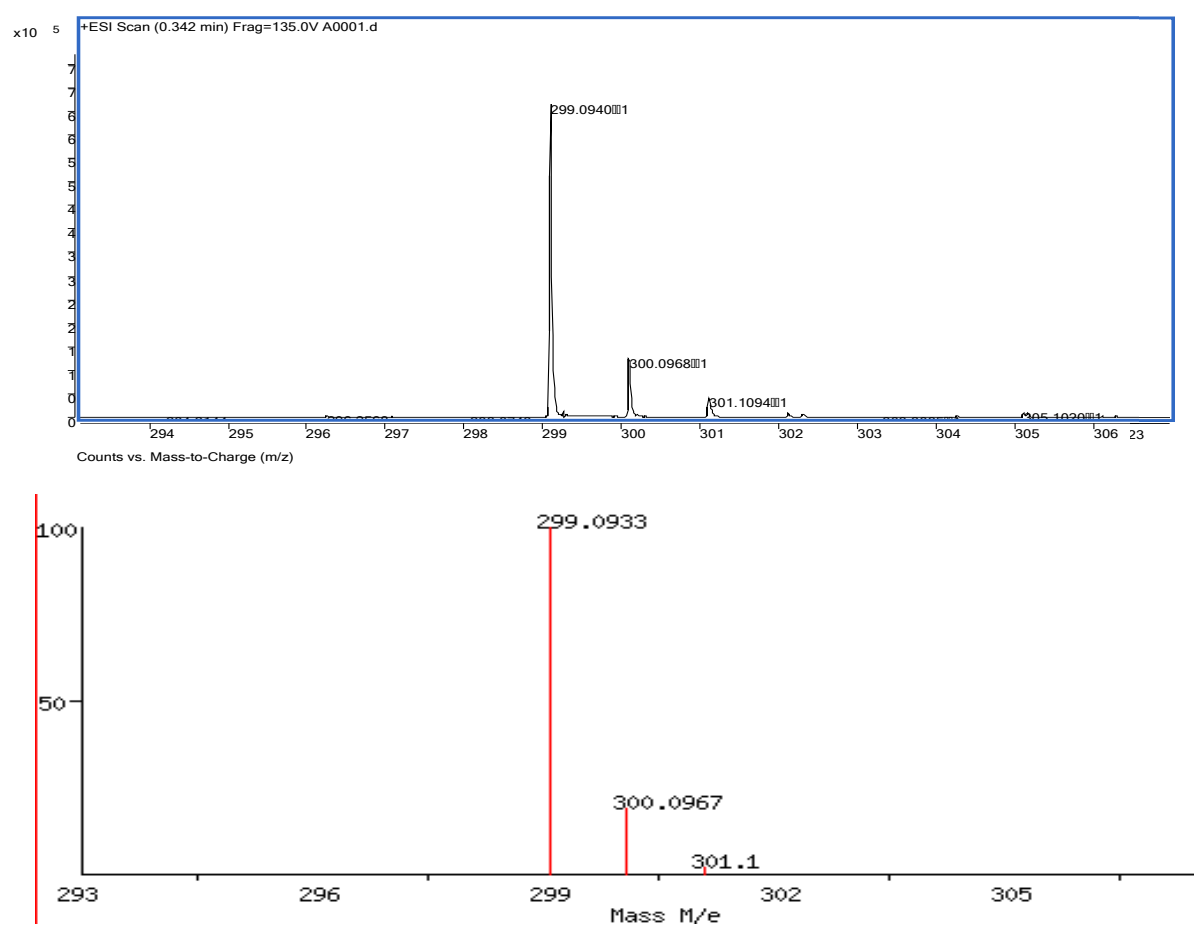


Figure S1. Measured (above) and calculated (below) isotope pattern of ligand

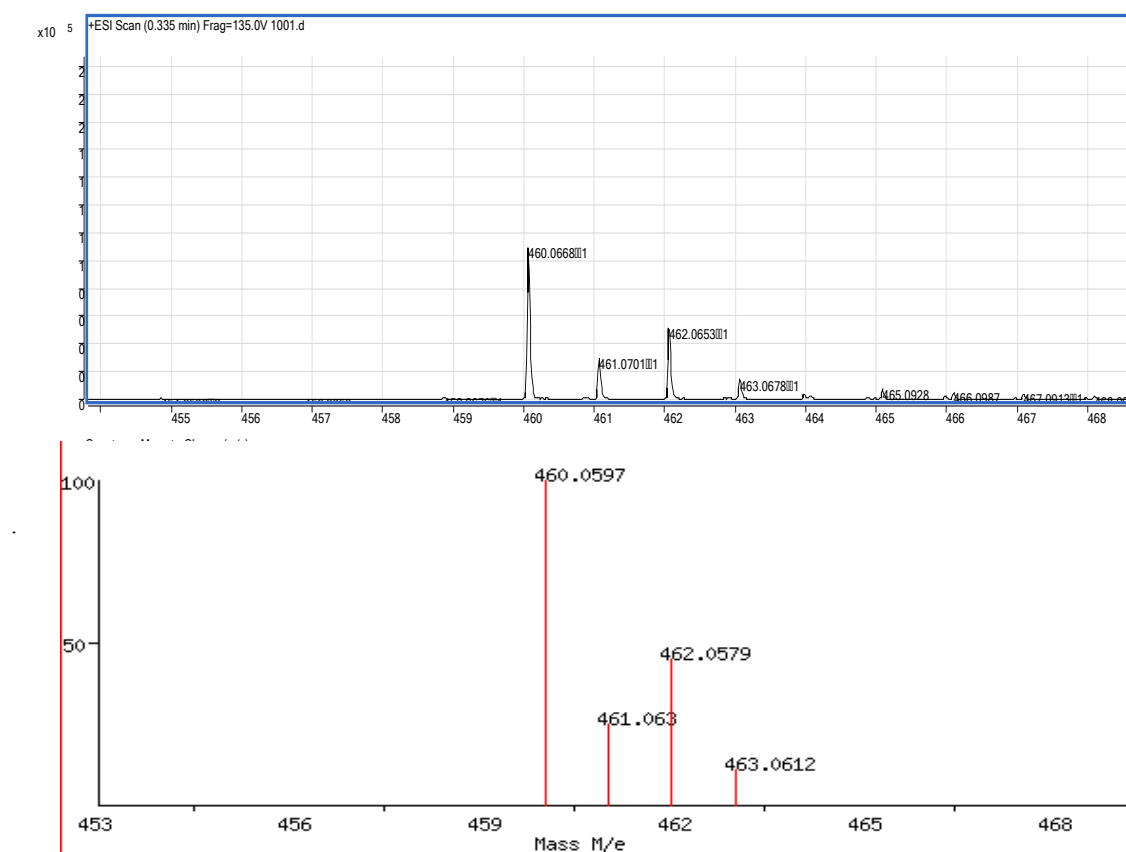


Figure S2. Measured (above) and calculated (below) isotope pattern of complex 1

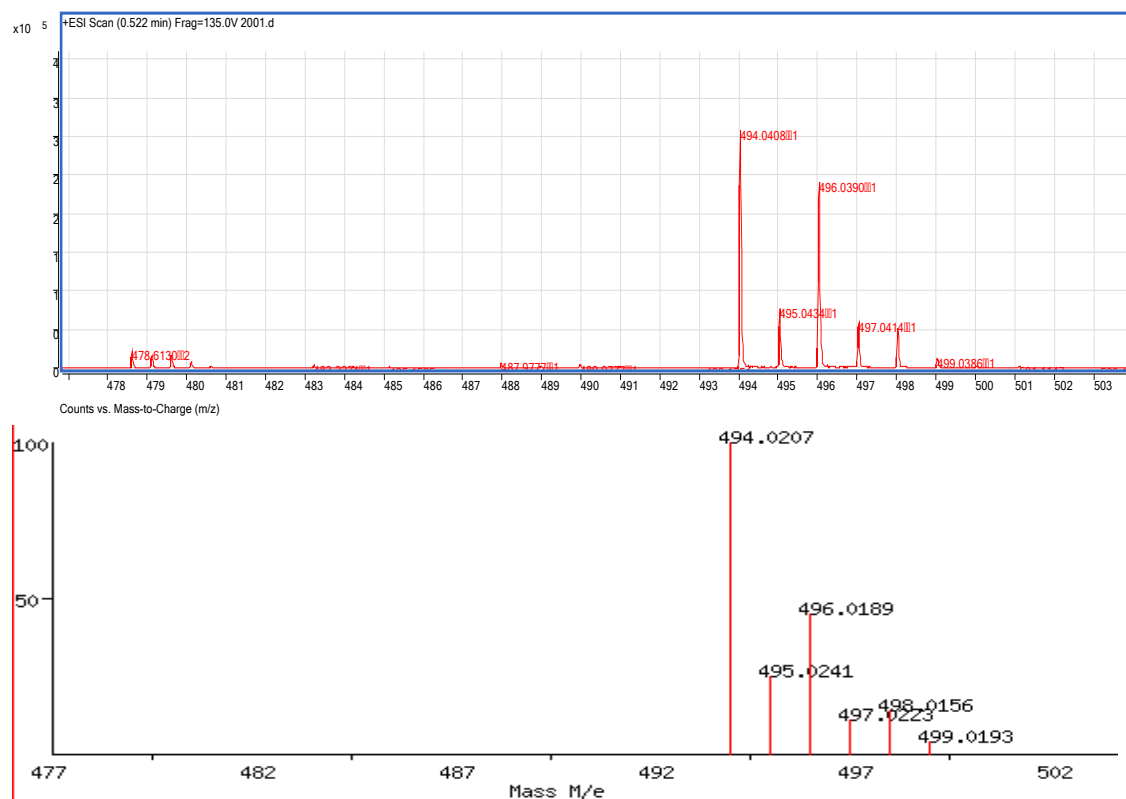


Figure S3. Measured (above) and calculated (below) isotope pattern of complex 2

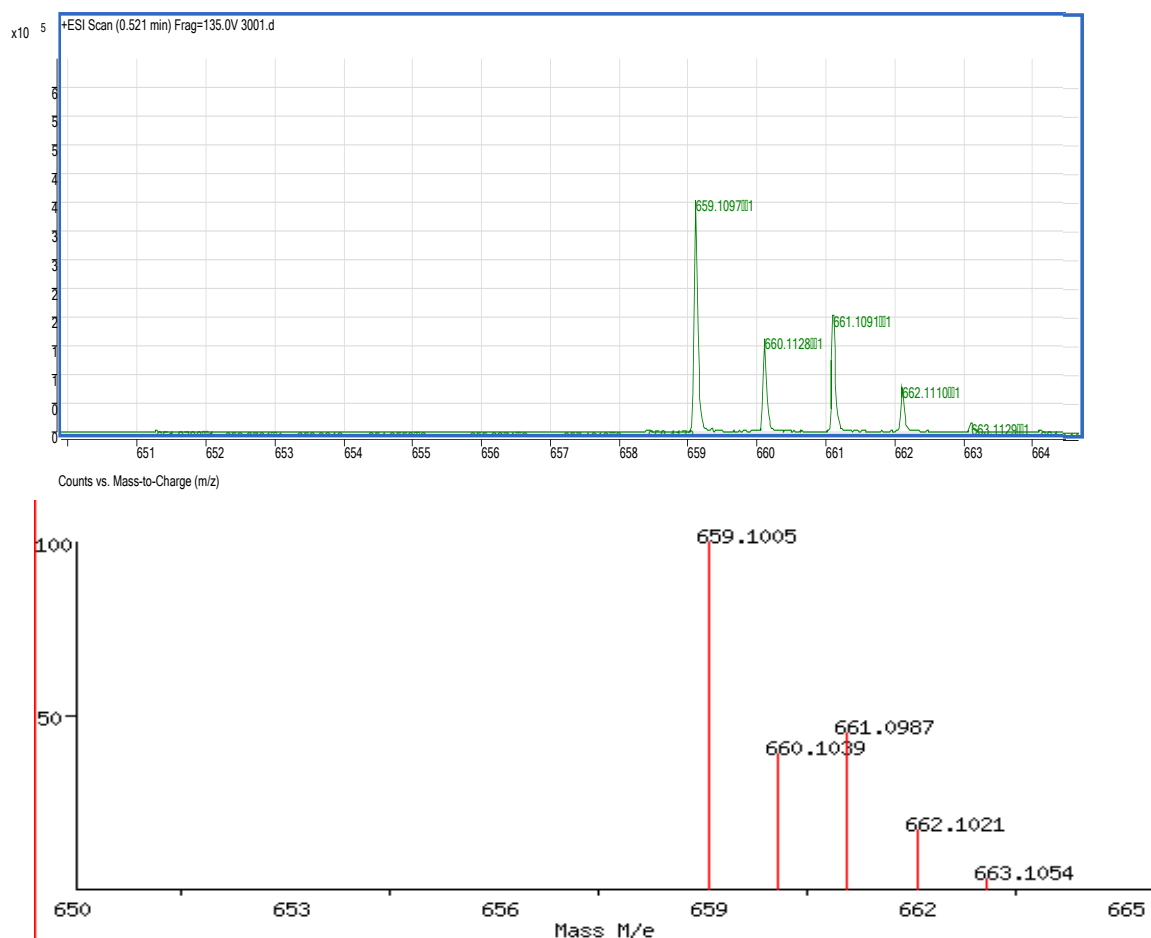


Figure S4. Measured (above) and calculated (below) isotope pattern of complex 4

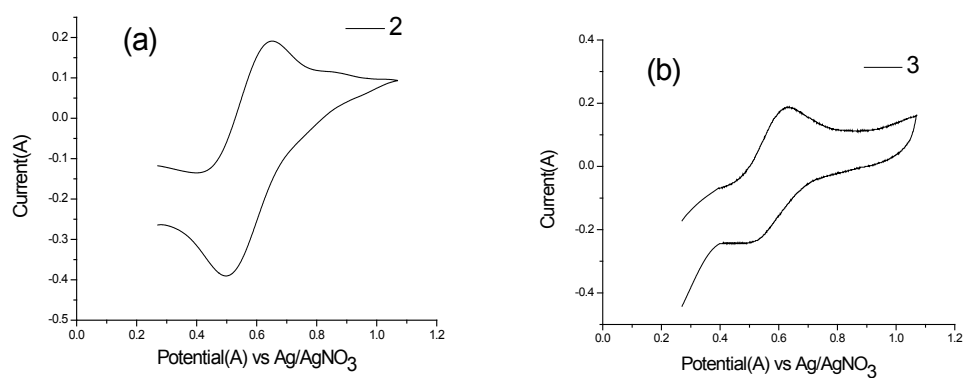


Figure S5. Cyclic voltammograms of the complexes 2 (a) and 3 (b) in DMF (0.1 M $n\text{Bu}_4\text{N PF}_6$) on a GC working electrode. Scan rate: 0.1 Vs^{-1}

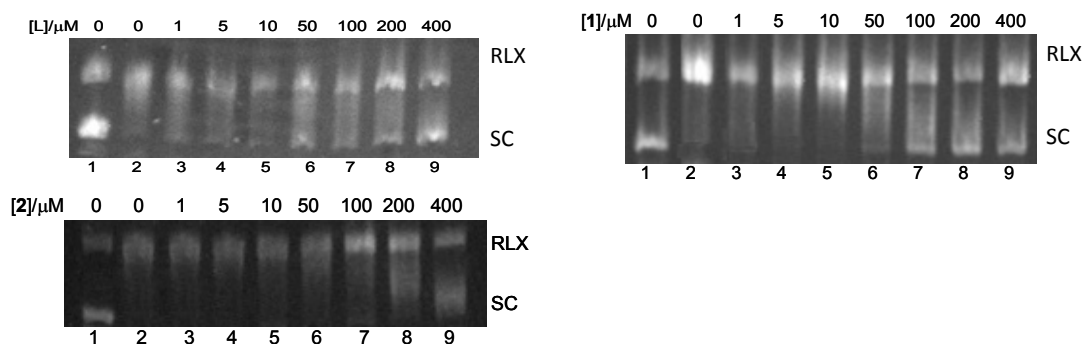


Figure S6. L, complexes **1** and **2** intercalated into supercoiled plasmid DNA. Lane 1, SC plasmid DNA without any treatment; lanes 2-9, SC plasmid DNA incubated with increasing concentration of L, **1** or **2** (from 0 to 400 μM).

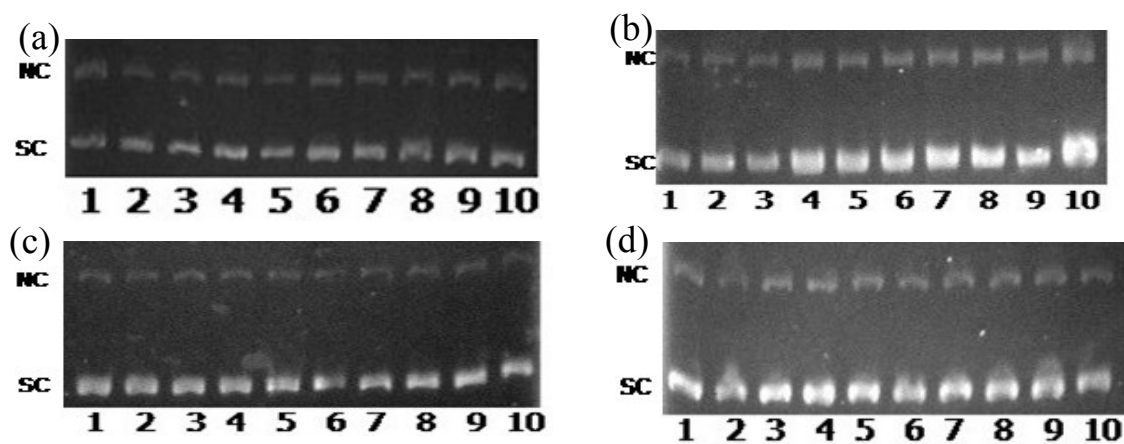


Figure S7. (a) Ethidium bromide stained agarose gel (1.0%) of pBR322 plasmid DNA (100 ng/ μL) in the presence of complex L after 30 minutes of incubation: lane 1, DNA control; lane 2, DNA + L (5 μM); lane 3, DNA + L (10 μM); lane 4, DNA + L (15 μM); lane 5, DNA + L (20 μM); lane 6, DNA + L (25 μM); lane 7, DNA + L (30 μM); lane 8, DNA + L (35 μM); lane 9, DNA + L (40 μM); lane 10, DNA + L (45 μM).

(b) Ethidium bromide stained agarose gel (1.0%) of pBR322 plasmid DNA (100 ng/ μL) in the presence of complex **1** after 30 minutes of incubation: lane 1, DNA control; lane 2, DNA + **1** (1 μM); lane 3, DNA + **1** (2.5 μM); lane 4, DNA + **1** (5 μM); lane 5, DNA + **1** (7.5 μM); lane 6, DNA + **1** (10 μM); lane 7, DNA + **1** (12.5 μM); lane 8, DNA + **1** (15 μM); lane 9, DNA + **1** (17.5 μM); lane 10, DNA + **1** (20 μM).

(c) Ethidium bromide stained agarose gel (1.0%) of pBR322 plasmid DNA (100 ng/ μL) in the presence of complex **2** after 30 minutes of incubation: lane 1, DNA control; lane 2, DNA + **2** (5 μM); lane 3, DNA + **2** (10 μM); lane 4, DNA + **2** (15 μM); lane 5, DNA + **2** (20 μM); lane 6, DNA + **2** (25 μM); lane 7, DNA + **2** (30 μM); lane 8, DNA + **2** (35 μM); lane 9, DNA + **2** (40 μM); lane 10, DNA + **2** (45 μM).

(d) Ethidium bromide stained agarose gel (1.0%) of pBR322 plasmid DNA (100 ng/ μL) in the presence of complex **3** after 30 minutes of incubation: lane 1, DNA control; lane 2, DNA + **3** (1 μM); lane 3, DNA + **3** (2.5 μM); lane 4, DNA + **3** (5 μM); lane 5, DNA + **3** (7.5 μM); lane 6, DNA + **3** (10 μM); lane 7, DNA + **3** (12.5 μM); lane 8, DNA + **3** (15 μM); lane 9, DNA + **3** (17.5 μM); lane 10, DNA + **3** (20 μM).