Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information for:

Impact of chelation on anticancer activities of organometallic ruthenium(II) complexes containing 2,5-di(1*H*-pyrazol-1-yl)-1,4-benzoquinone: Synthesis, structure, DNA/protein binding, antioxidant activity and cytotoxicity

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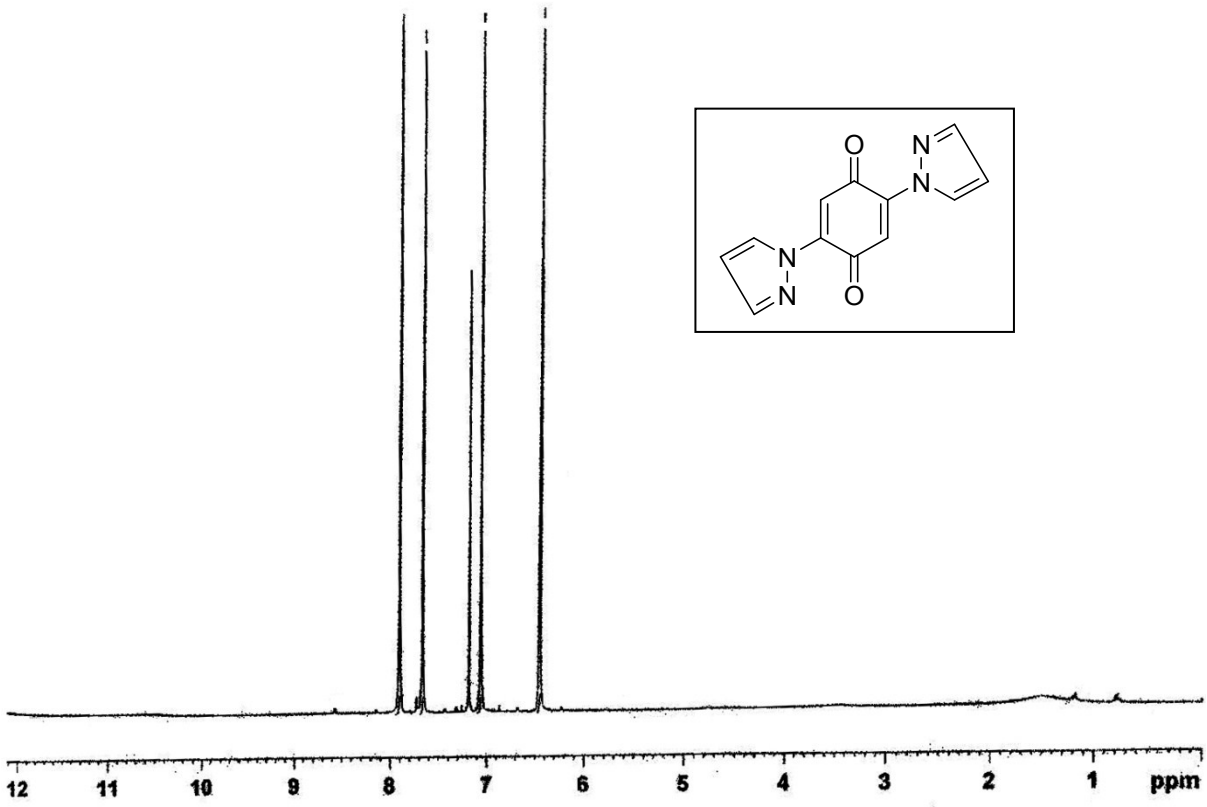
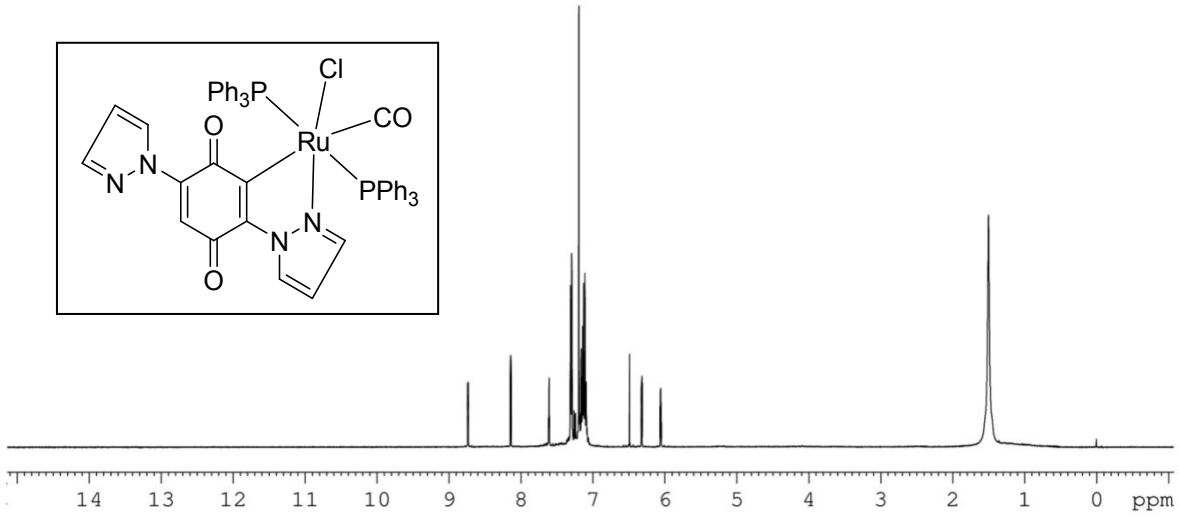
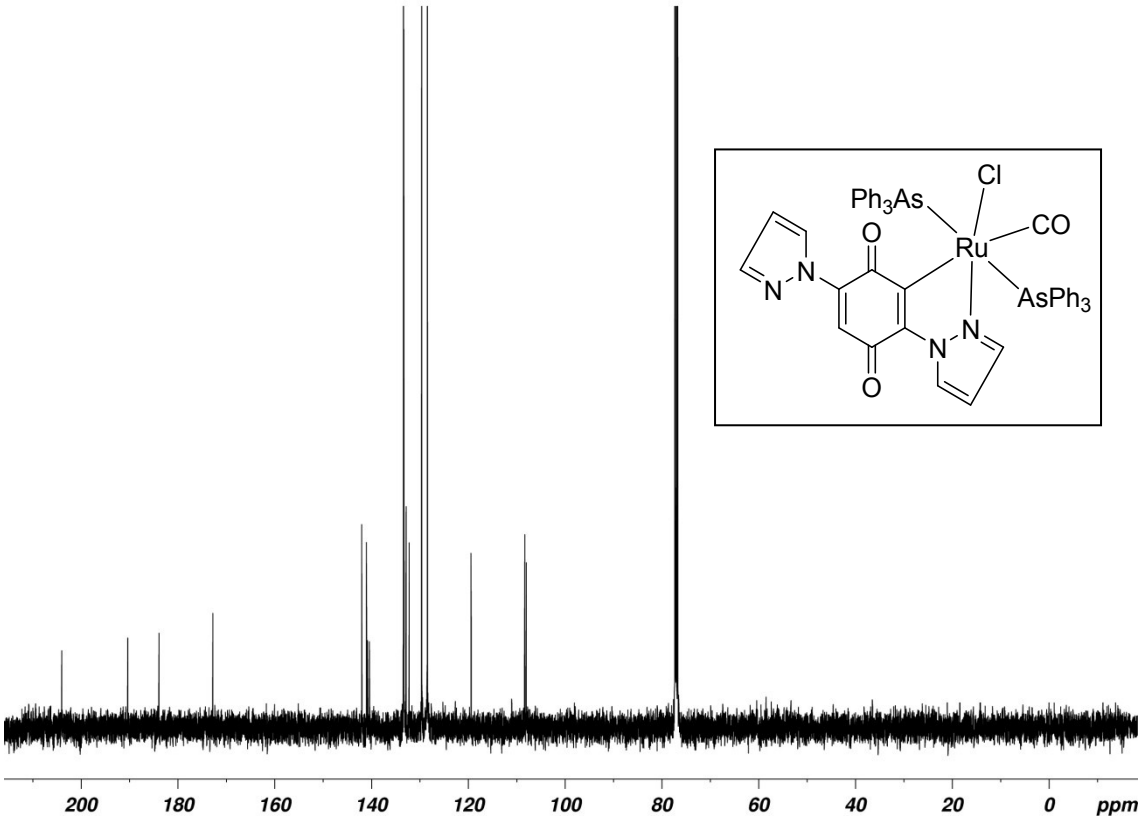
(1) **Fig. S1** ^{1}H-NMR spectrum of ligand **LH**, 2,5-di(1H-pyrazol-1-yl)-1,4-benzoquinone



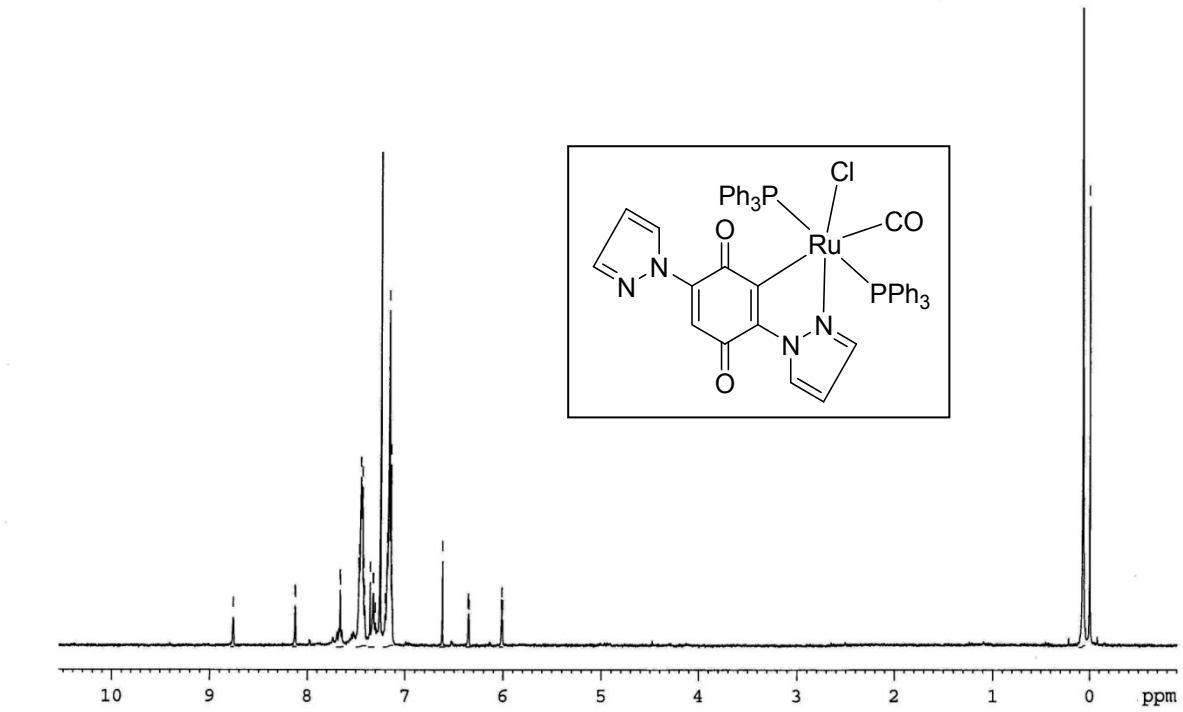
(2) **Fig. S2** ^{1}H-NMR spectrum of the complex **3**



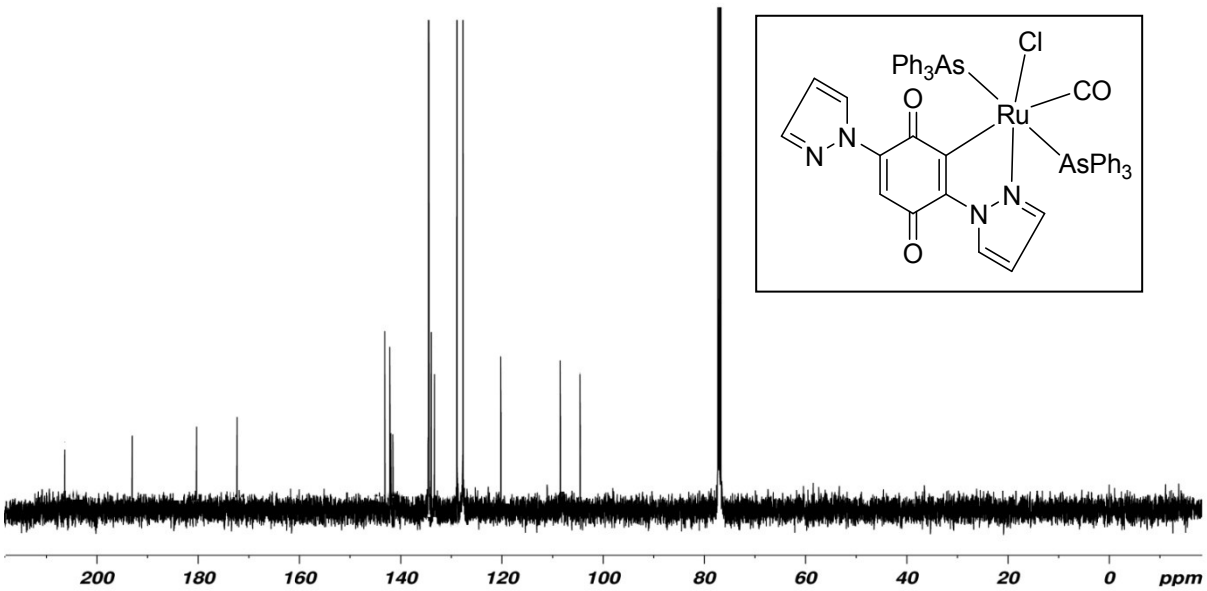
(3) **Fig. S3** ^{1}H-NMR spectrum of the complex **4**



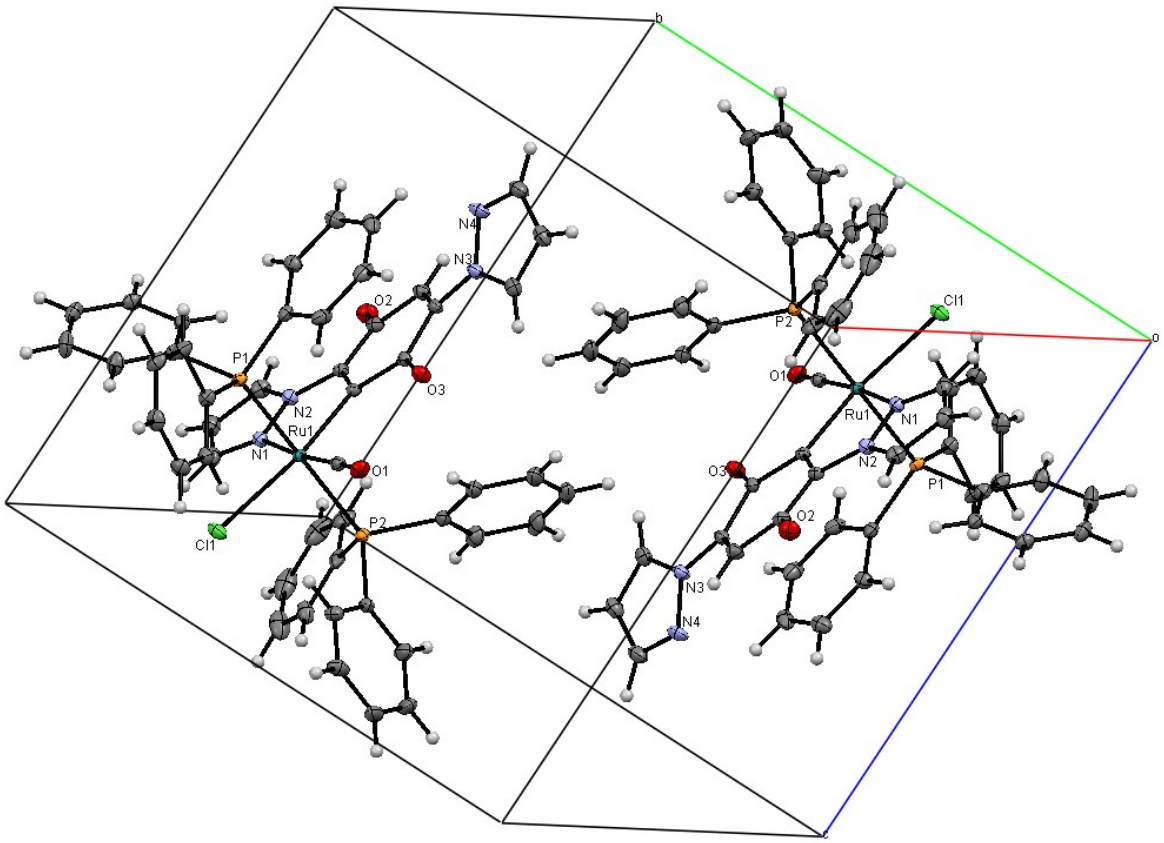
(4) **Fig. S4** ^{13}C-NMR spectrum of the complex **3**

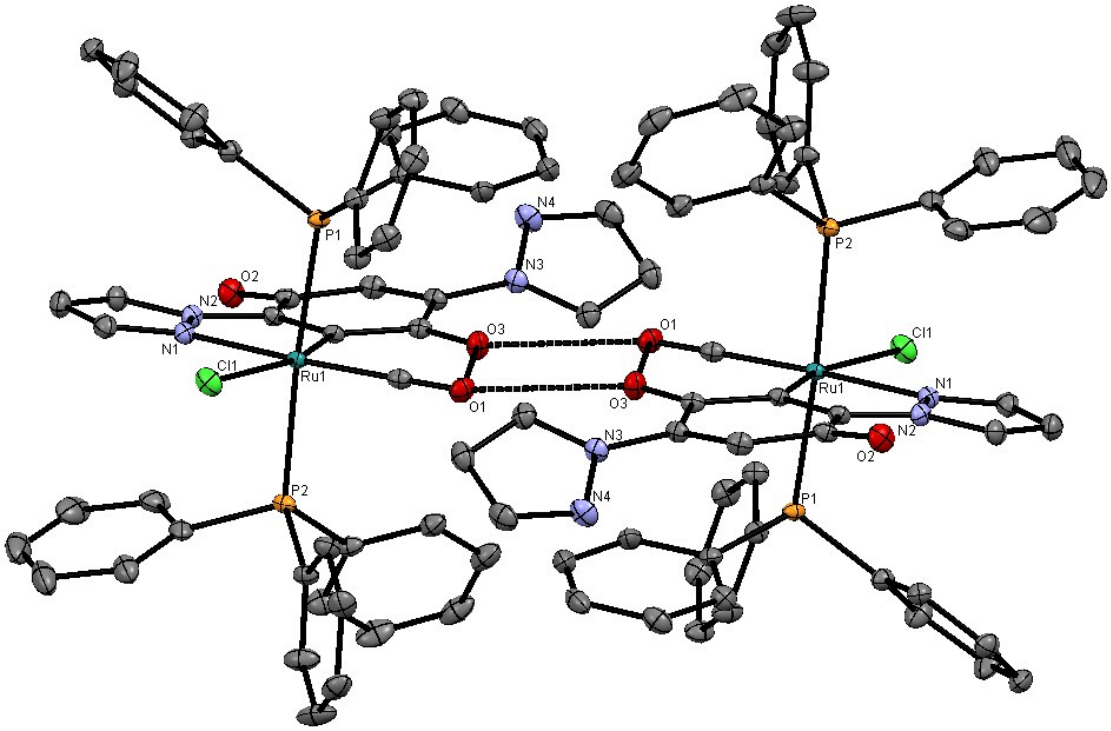


(5) **Fig. S5** ^{13}C-NMR spectrum of the complex **4**

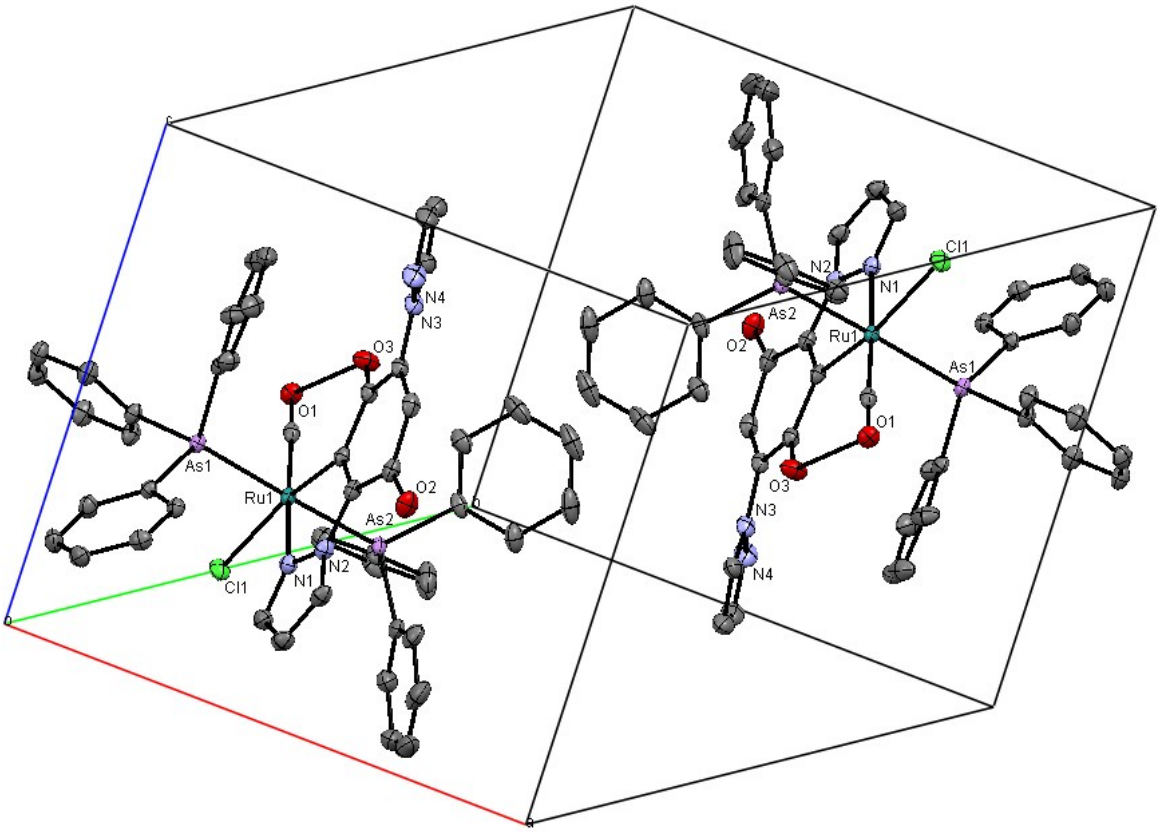


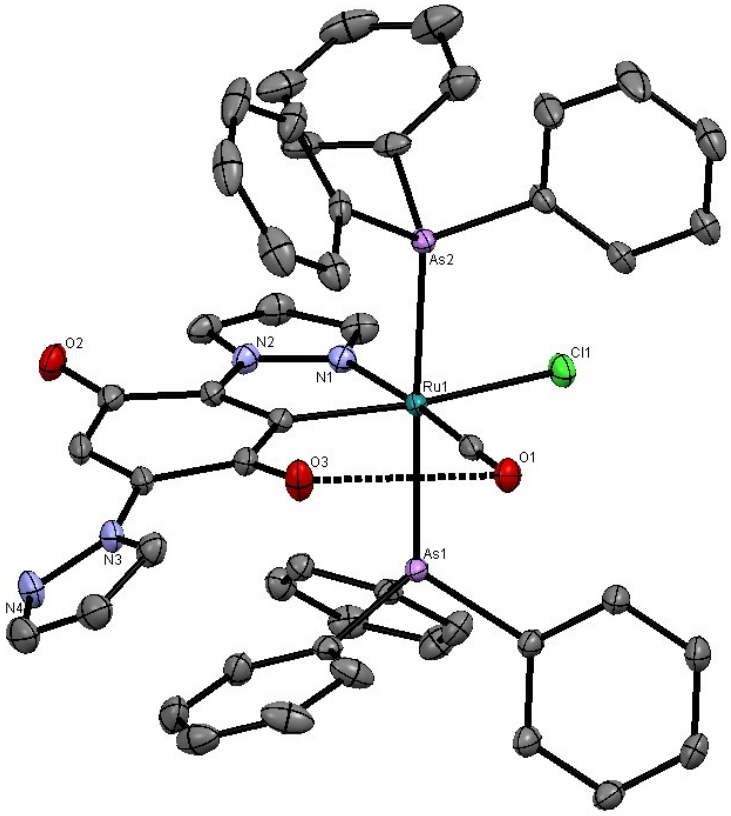
(6) **Fig. S6** Packing diagram of the unit cell and intermolecular interactions for complex **3**



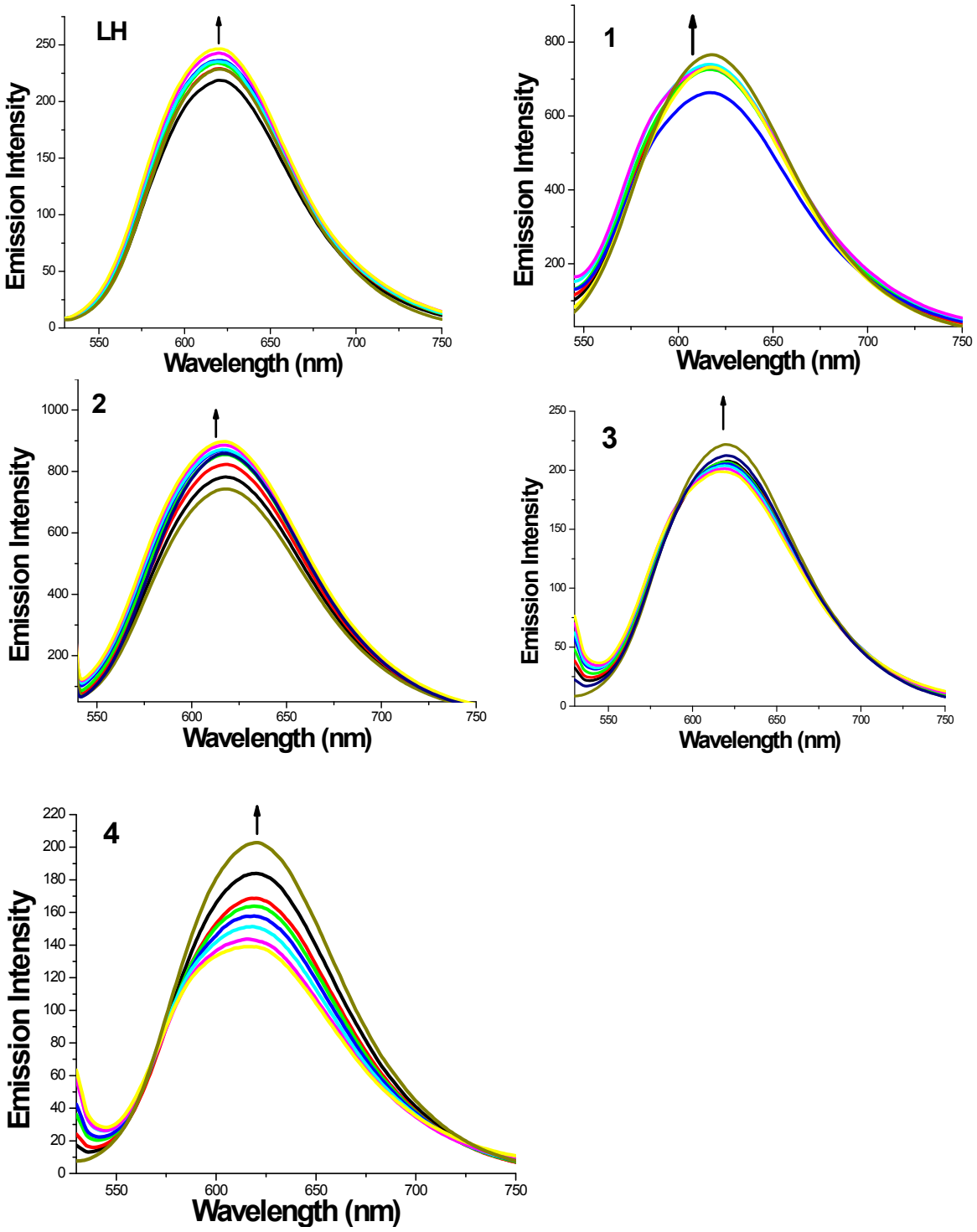


(7) **Fig. S7** Packing diagram of the unit cell and intermolecular interactions for complex **4**





(8) **Figure S8** The emission spectra of the DNA–EB system (λ_{exc} = 515 nm, λ_{em} = 530–750 nm), in the presence of the ligand **H^2L** and complexes **1-4**. [DNA] = 10 μM, [Complex] = 0–50 μM, [EB] = 10 μM. The arrow shows the emission intensity changes upon increasing complex concentration.



(9) **Fig. S9** Synchronous spectra of BSA (1 μM) in the presence of increasing amounts of the ligand **LH** and complexes **1-4** for a wavelength difference of Δλ = 15 nm. The arrow shows the emission intensity changes upon increasing concentration of compound