

Electronic supplementary information (ESI)

High cytotoxicity of halogen substituted 8-quinolinolato-lanthanides

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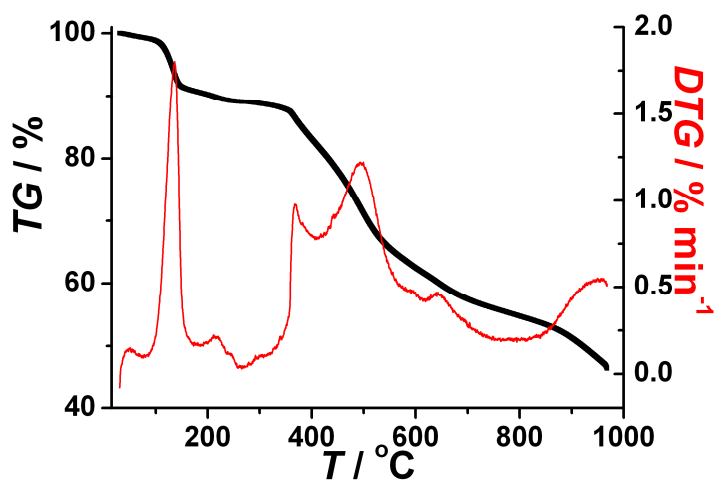
Table S1. Selected bond lengths(Å) and angles (°) for complex **2**

Dy(1)-O(3)	2.312(4)	O(3)-Dy(1)-O(1)	78.64(13)
Dy(1)-O(1)	2.338(4)	O(3)-Dy(1)-O(2)	131.19(13)
Dy(1)-O(2)	2.344(4)	O(1)-Dy(1)-O(2)	124.88(14)
Dy(1)-O(5)	2.366(5)	O(3)-Dy(1)-O(5)	122.49(17)
Dy(1)-O(4)	2.395(4)	O(1)-Dy(1)-O(5)	134.04(15)
Dy(1)-N(2)	2.479(5)	O(2)-Dy(1)-O(5)	74.43(14)
Dy(1)-N(1)	2.525(5)	O(3)-Dy(1)-O(4)	81.20(14)
Dy(1)-N(3)	2.569(5)	O(1)-Dy(1)-O(4)	76.89(14)
O(2)-Dy(1)-O(4)	140.73(13)	O(5)-Dy(1)-O(4)	68.30(15)
O(3)-Dy(1)-N(2)	81.68(14)	O(1)-Dy(1)-N(2)	76.34(14)
O(2)-Dy(1)-N(2)	66.95(14)	O(5)-Dy(1)-N(2)	140.98(15)
O(4)-Dy(1)-N(2)	150.53(14)	O(3)-Dy(1)-N(1)	143.85(14)
O(1)-Dy(1)-N(1)	65.71(14)	O(2)-Dy(1)-N(1)	77.82(14)
O(5)-Dy(1)-N(1)	81.87(18)	O(4)-Dy(1)-N(1)	85.01(15)
N(2)-Dy(1)-N(1)	95.01(16)	O(3)-Dy(1)-N(3)	65.46(14)
O(1)-Dy(1)-N(3)	142.30(14)	O(2)-Dy(1)-N(3)	76.11(14)
O(5)-Dy(1)-N(3)	78.33(17)	O(4)-Dy(1)-N(3)	107.15(15)
N(2)-Dy(1)-N(3)	87.07(15)	N(1)-Dy(1)-N(3)	150.63(15)

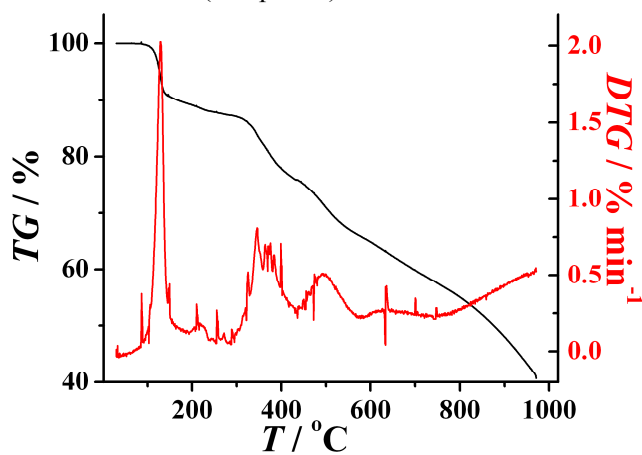
Table S2. Selected bond lengths(Å) and angles (°) for complex **3**

Er(1)-O(2)	2.288(4)	O(2)-Er(1)-O(1)	78.10(16)
Er(1)-O(1)	2.325(4)	O(2)-Er(1)-O(3)	131.95(16)
Er(1)-O(3)	2.333(4)	O(1)-Er(1)-O(3)	125.32(17)
Er(1)-O(5)	2.354(6)	O(2)-Er(1)-O(5)	121.8(2)
Er(1)-O(4)	2.360(5)	O(1)-Er(1)-O(5)	134.50(19)
Er(1)-N(3)	2.453(6)	O(3)-Er(1)-O(5)	74.26(17)
Er(1)-N(1)	2.496(6)	O(2)-Er(1)-O(4)	80.47(17)
Er(1)-N(2)	2.555(6)	O(1)-Er(1)-O(4)	77.04(17)
O(3)-Er(1)-O(4)	140.42(16)	O(5)-Er(1)-O(4)	68.16(17)
O(2)-Er(1)-N(3)	81.26(18)	O(1)-Er(1)-N(3)	76.14(17)
O(3)-Er(1)-N(3)	68.02(17)	O(5)-Er(1)-N(3)	141.69(17)
O(4)-Er(1)-N(3)	150.09(17)	O(2)-Er(1)-N(1)	143.83(17)
O(1)-Er(1)-N(1)	66.39(17)	O(3)-Er(1)-N(1)	77.72(17)
O(5)-Er(1)-N(1)	81.9(2)	O(4)-Er(1)-N(1)	85.01(19)
N(3)-Er(1)-N(1)	96.2(2)	O(2)-Er(1)-N(2)	65.80(17)

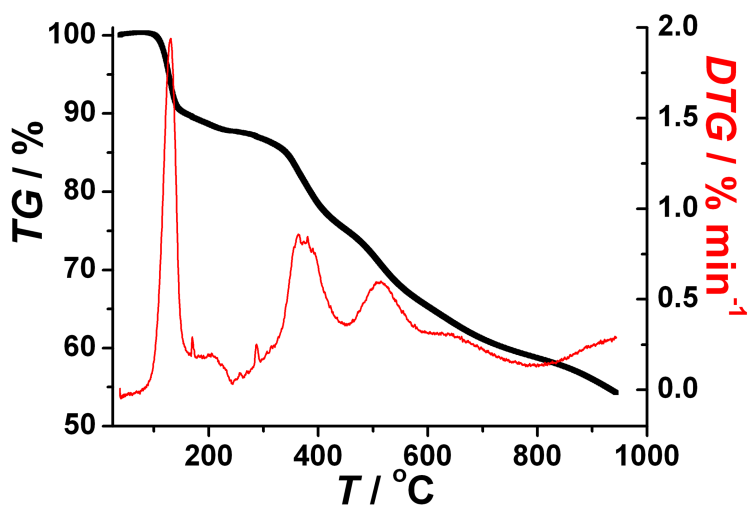
O(1)-Er(1)-N(2)	142.04(17)	O(3)-Er(1)-N(2)	76.12(17)
O(5)-Er(1)-N(2)	77.8(2)	O(4)-Er(1)-N(2)	106.80(19)
N(3)-Er(1)-N(2)	86.80(19)	N(1)-Er(1)-N(2)	150.36(17)



(complex 1)



(complex 2)



(complex 3)

Figure S1. TGA drawing of complexes 1-3.

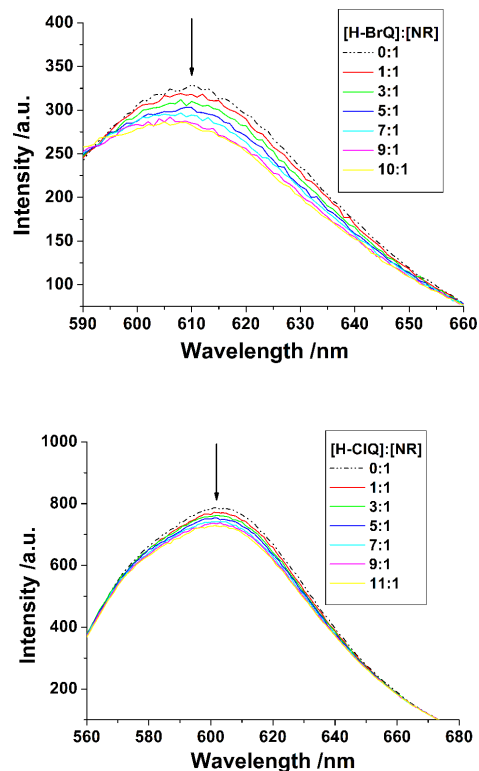
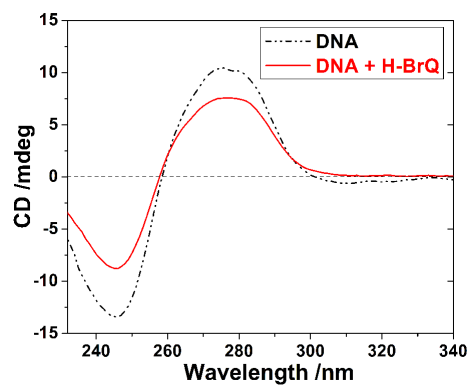


Figure S2. Emission spectra of DNA–NR system ($[DNA] = 1.0 \times 10^{-4}$ M, $[NR] = 1.0 \times 10^{-5}$ M) in the absence (----) and presence (—) of H-BrQ and H-CIQ with increasing concentrations range from 1.0×10^{-5} M to 1.1×10^{-4} M



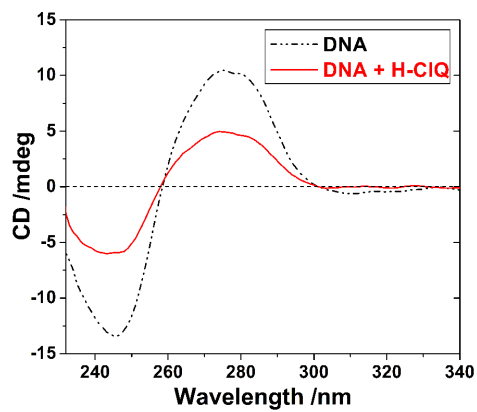


Figure S3. Circular dichroism spectra of H-BrQ and H-ClQ bound with ct-DNA