

Supporting Information for

DNA INTERACTION, PHOTOCLEAVAGE AND THEORETICAL CALCULATIONS OF A RUTHENIUM(II) COMPLEX WITH HYDROXYQUINOLINE DERIVATIVE

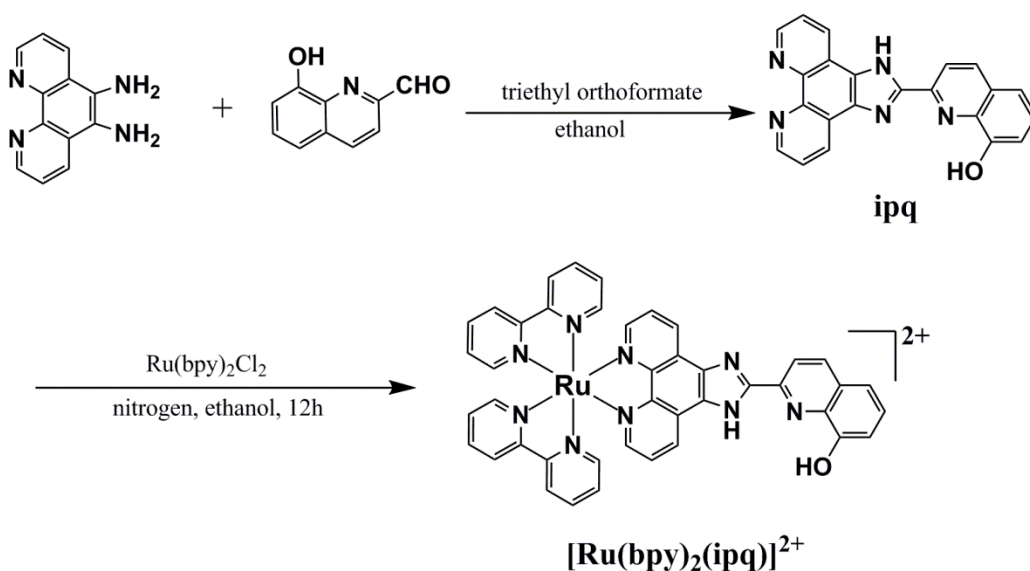
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Scheme S1. The synthetic route to [Ru(bpy)₂(ipq)](ClO₄)₂.

The characterization of the complex [Ru(bpy)₂(ipq)](ClO₄)₂: ¹H NMR (δ_{H} , ppm, 400 MHz, DMSO-*d*₆): 14.50 (s, 1H, N–H), 9.85 (s, 1H, O–H), 9.05–9.10 (d–d, $J = 7.2$ Hz, 2H, H_c), 8.85–8.91 (d–d, $J = 8.0$ Hz, 4H, H_{3, 3'}), 8.61 (d, $J = 8.2$ Hz, 1H, H_e), 8.53 (d, $J = 8.2$ Hz, 1H, H_d), 8.22–8.26 (m, 2H, H_{4'}), 8.11–8.15 (m, 4H, H_{4, a}), 7.89–7.99 (m, 2H, H_b), 7.86 (d, $J = 5.6$ Hz, 2H, H_{6'}), 7.54–7.66 (m, 6H, H_{6, 5', f, g}), 7.36–7.40 (m, 2H, H₅), 7.26–7.28 (d–d, $J = 6.0$ Hz, 1H, H_h). ¹³C NMR (125 MHz, DMSO-*d*₆, δ , ppm): 157.24, 157.02, 153.43, 152.49, 152.00, 151.84, 145.50, 138.46, 138.32, 137.85, 130.97, 129.16, 128.35, 124.93, 119.30, 118.42, and 112.01.

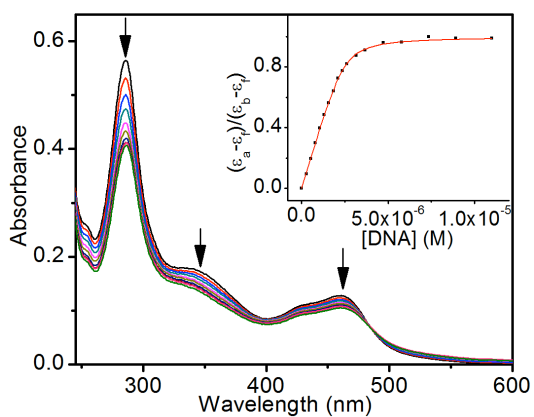


Fig. S1 – Changes in absorption spectra of ruthenium complex (5.43 μM) upon successive additions of the DNA in Tris-HCl buffer with NaCl concentration of 0.025 M.

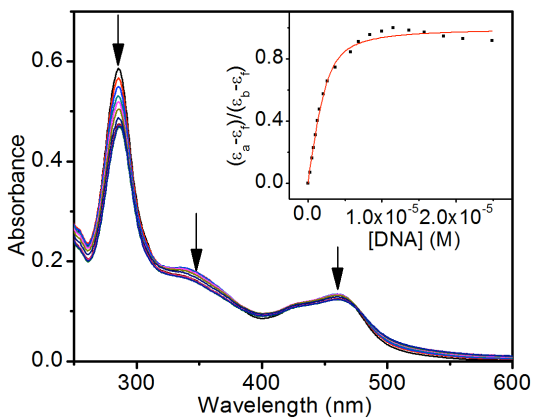


Fig. S2 – Changes in absorption spectra of ruthenium complex (5.43 μM) upon successive additions of the DNA in Tris-HCl buffer with NaCl concentration of 0.075 M.

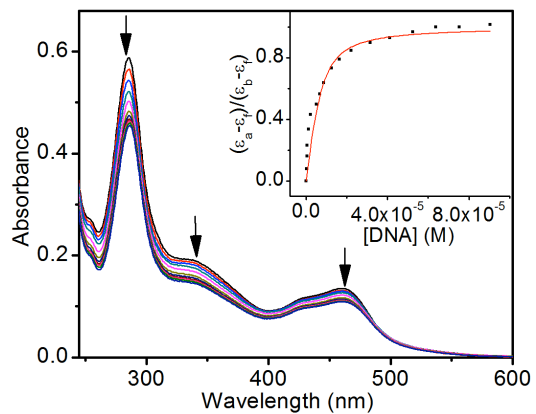


Fig. S3 – Changes in absorption spectra of ruthenium complex (5.43 μM) upon successive additions of the DNA in Tris-HCl buffer with NaCl concentration of 0.100 M.