Supporting Information for

Two novel BODIPY-Ru(II) arene dyads enabling effective photo-inactivation
against cancer cells

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Figure S1. Hydrodynamic diameter distributions of 1, 2, 3, py-BODIPY and py-l-BODIPY (5 μM) in PBS (pH = 7.4, 5 mM)/DMSO (8:1) solutions at room temperature.

Figure S2. EPR signals obtained upon irradiation of air-saturated CH₃CN solutions of TEMP (1 mM) alone (background) and in the presence of 1 or py-BODIPY (10 μM) with 532 nm pulsed laser.

Figure S3. EPR signals of air-saturated CH₃CN solutions of TEMP (1 mM) alone (background) and in the presence of 2 or 3 (10 μM) in the dark.
**Figure S4.** Agarose gel electrophoresis pattern of supercoiled pUC19 plasmid DNA (40 μg/mL) in air-saturated PBS (pH = 7.4, 5 mM)/DMSO (8:1) under different conditions. Lane 1, DNA + 2; Lane 2, DNA + 2 + hv; Lane 3, DNA + 3; Lane 4, DNA + 3 + hv; Lane 5, DNA alone; Lane 6, DNA + py-BODIPY; Lane 7, DNA + py-BODIPY + hv; Lane 8, DNA alone + hv. hv denotes an irradiation (> 470 nm) for 15 min. SC and NC and represent supercoiled circular and nicked circular forms, respectively. The concentrations of 2, 3 and py-BODIPY are 10 μM.

**Figure S5.** Agarose gel electrophoresis pattern of supercoiled pUC19 plasmid DNA (40 μg/mL) in air-saturated PBS (pH = 7.4, 5 mM)/DMSO (8:1) in the dark (top panel) or upon irradiation (> 470 nm) for 15 min (bottom panel) in the presence of varied concentrations of 1. Lane 1 and 8, DNA alone; Lane 2-7, the concentrations of 1 are 1, 5, 10, 25, 50, 100 μM, respectively.

**Figure S6.** Agarose gel electrophoresis pattern of supercoiled pUC19 plasmid DNA (40 μg/mL) in air-saturated PBS (pH = 7.4, 5 mM)/DMSO (8:1) upon irradiation (> 470 nm) for 15 min in the presence of varied concentrations of 2 (10 μM) and different additives. Lane 1, DNA alone; Lane 2, DNA + 2; Lane 3, DNA + 2 + NaN₃ (50 mM); Lane 4, DNA + 2 + DMSO (50 mM); Lane 5, DNA + 2 + catalase (1000 U mL⁻¹). SC and NC represent supercoiled circular and nicked circular forms, respectively.

**Figure S7.** Agarose gel electrophoresis pattern of supercoiled pUC19 plasmid DNA (40 μg/mL) in air-saturated PBS (pH = 7.4, 5 mM)/DMSO (8:1) in the dark and in the presence of varied concentrations of 3. Lane 4 and 8, DNA alone; Lane 1-3 and 5-7, the concentrations of 3 are 1, 5, 10, 25, 50, and 100 μM, respectively.
Figure S8. Double stain fluorescence images of SKOV3 cells incubated with 2 (0.5 μM) in DMEM for 25 min and then with DAPI, Mito-Tracker, or ER-Tracker (1 μM) in DMEM for 15 min. The cells were rinsed three times with PBS (pH = 7.4, 5 mM) before confocal analysis.

Figure S9. Double stain fluorescence images of SKOV3 cells incubated with 3 (0.5 μM) in DMEM for 25 min and then with DAPI, Mito-Tracker, or ER-Tracker (1 μM) in DMEM for 15 min. The cells were rinsed three times with PBS (pH = 7.4, 5 mM) before confocal analysis.