Supporting Information for

Photoactivated full-API nanodrug (FAND): Harnessing Transition Metal Complexes and MTH1 Inhibitor for Enhanced DNA Damage in Cancer Cells

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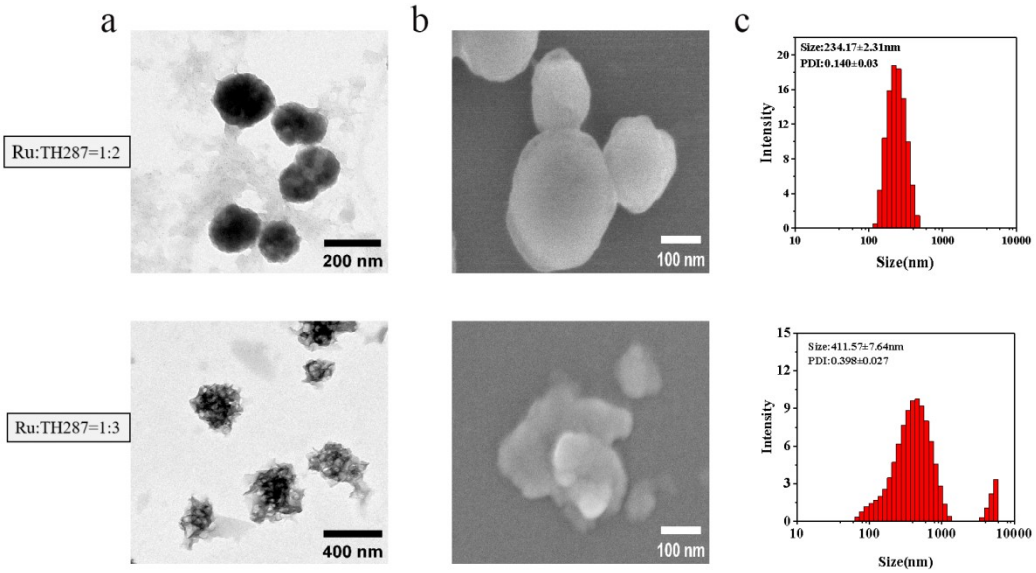

Fig. S1 TEM images (a), SEM images (b) and DLS analysis (c) of Ru-T FANDs with feed ratio 1:2 and 1:3.

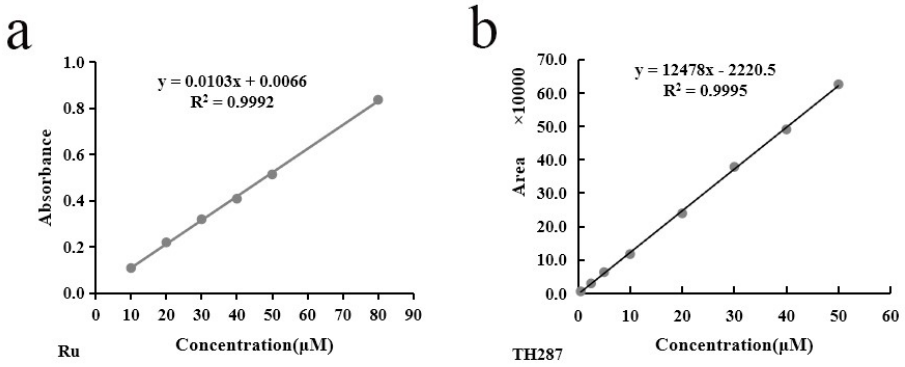

Fig. S2 Standard curve of RuDPB (a) and TH287 (b) by using UV-Vis spectrum and HPLC.

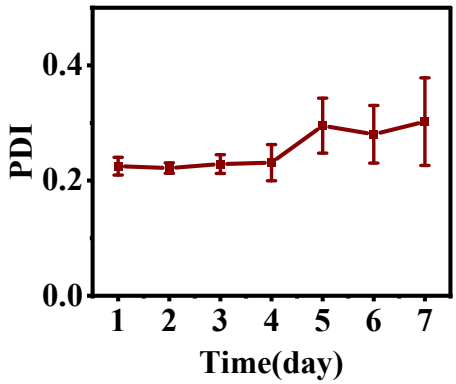

Fig. S3 The PDI changes of Ru-T FANDs in 7 days.

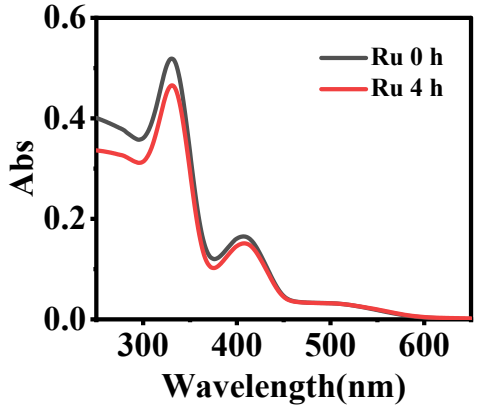

Fig. S4 Absorption spectrum changes of RuDPB (10 μM) in water after standing in the dark for 4 h at room temperature.

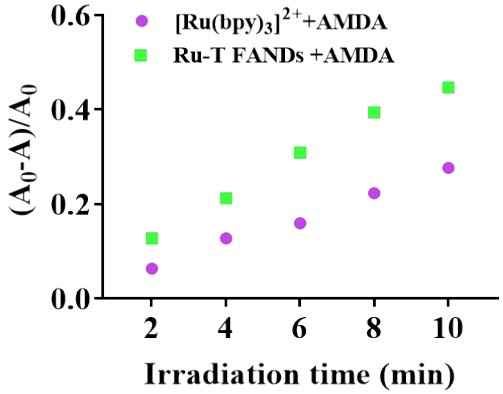

Fig. S5 AMDA bleaching (at 399 nm) in the presence of Ru-T FANDs or $[Ru(bpy)_3]^{2+}$ in water upon irradiation at 410 nm.

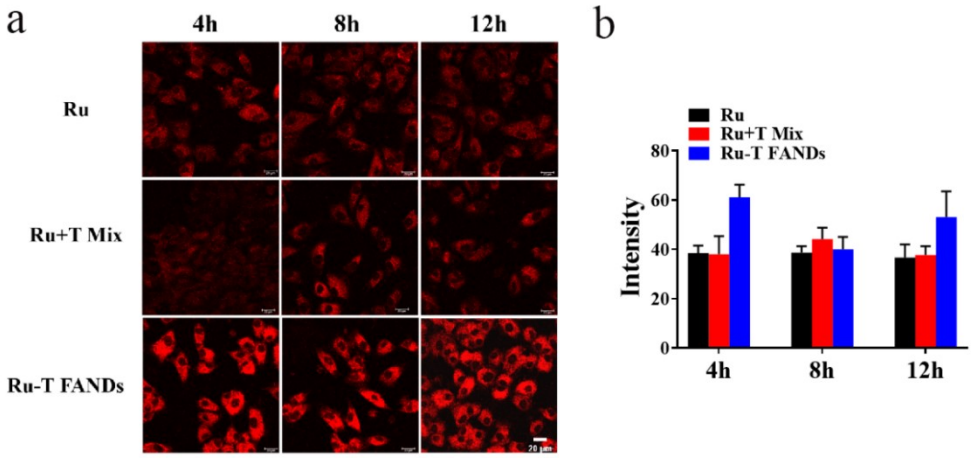

Fig. S6 CLSM images of A549 cells treated with RuDPB, Ru+T mix, or Ru-T FANDs after irradiation at different time. Red fluorescence signals were from the uncaged DPB. (b) The cellular internalization efficiencies were quantified at different time using CLSM images.

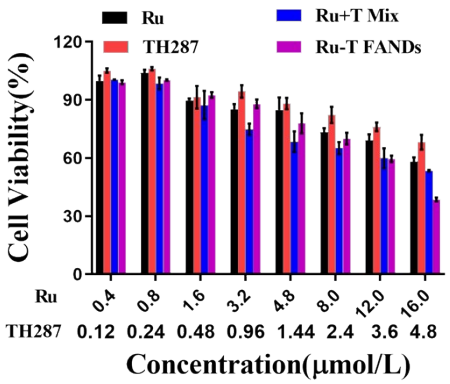

Fig. S7 Cell viability of A549 cells incubated with gradient concentrations of RuDPB, TH287, Ru+T mix, or Ru-T FANDs in the dark.

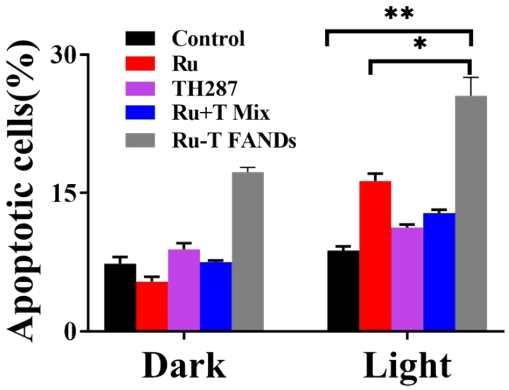

Fig. S8 Flow cytometry quantification of the apoptotic percentage of A549 cells with different treatments.

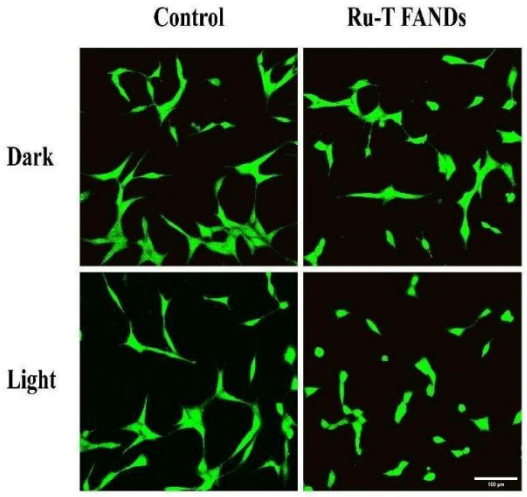

Fig. S9 Live/dead cell staining analysis of Movas cells after treatment with Ru-T FANDs.

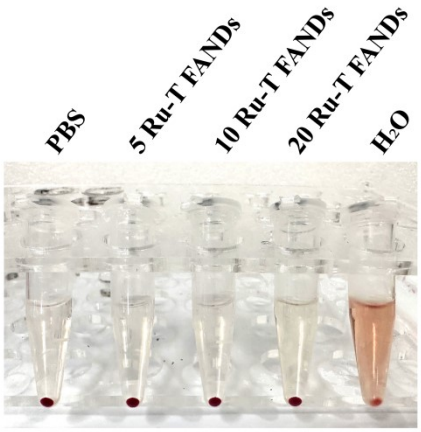

Fig. S10 The results of hemolysis experiment on Ru-T FANDs with different concentrations (5, 10, and 20 μM).

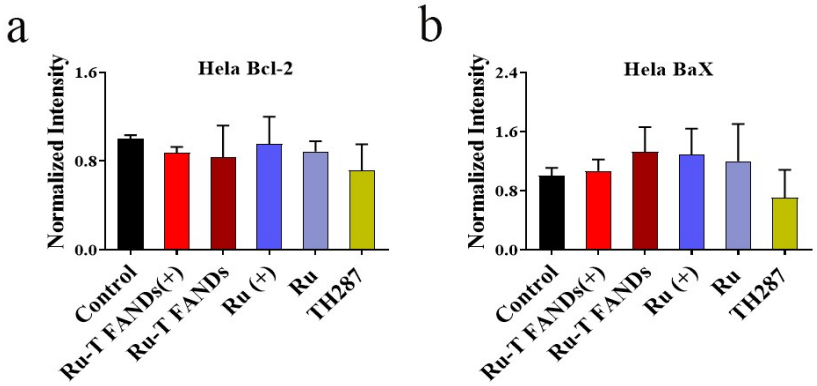

Fig. S11 The quantification for expressions of (a) Bcl-2 and (b) BAX in Hela cells after different treatments.

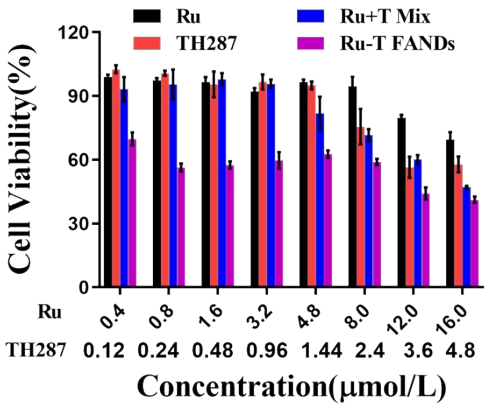

Fig. S12 Cell viability of Hela cells incubated with gradient concentrations of RuDPB, TH287, Ru+T mix, or Ru-T FANDs in the dark.

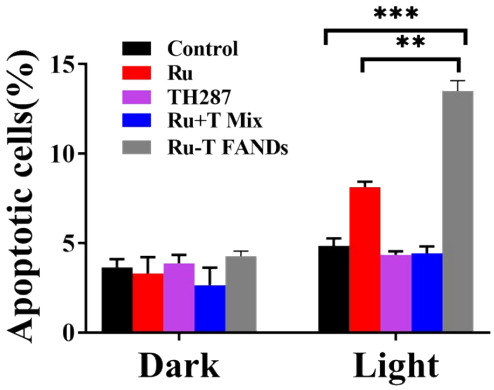

Fig. S13 Flow cytometry quantification of the apoptotic percentage of Hela cells with different treatments.

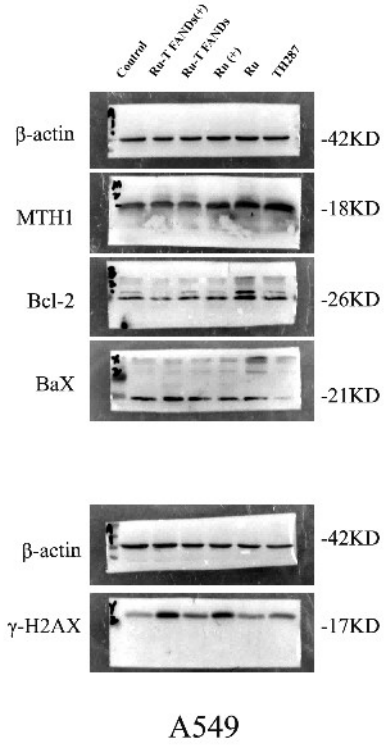

Fig. S14 The image of the full gel and blot for Fig 4d.

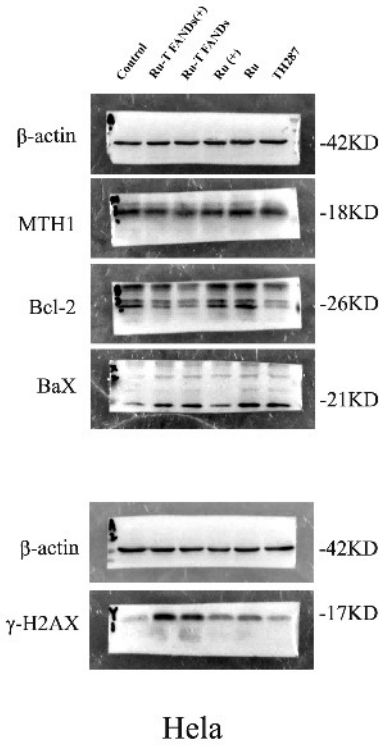

Fig. S15 The image of the full gel and blot for Fig 6c.