Supporting information

Tumor microenvironment responsive poly-prodrug encapsulated semiconducting polymer for phototherapy boosted chemotherapy

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Fig. S1 Synthetic route of TDPP.



Fig. S2 Synthetic route of PEG-TPZ







MW Averages

Peak No	Mp	Mn	Mw	Mz	Mz+1	Mv	PD
1	119372	16187	67184	146875	216375	56255	4.15049

Processed Peaks

Peak No	Name	Start RT (mins)	Max RT (mins)	End RT (mins)	Pk Height (mV)	% Height	Area (mV.secs)	% Area
1		12.83	13.88	17.33	2.24547	0	301.856	100

Fig. S4 GPC of TDPP in trichlorobenzene at 150 °C.



Fig. S5 ¹HNMR of PEG-TPZ in CDCl₃.











Fig. S10 Linear fitting of time versus $-\ln\theta$ curve



Fig. S11 Cellular uptake of TDPP@PEG-TPZ by flow cytometry.



Fig. S12 *In vitro* existing vessels destruction assay in the control and TDPP@PEG-TPZ with irradiation groups.

	Calcein-AM	PI	Merged	DCF	DAPI
Control					
TDPP@DSPE-PEG (Laser-)					
TDPP@DSPE-PEG (Laser+)			de la		
TPZ					
TDPP@PEG-TPZ (Laser-)				an tanga tangan tangan tangan	
TDPP@PEG-TPZ (Laser+)			1		

Fig. S13 Live and dead cells co-staining and ROS detection with DCF-DA as a probe. Scale bar: 10 $\mu m.$



Fig. S14 Tumor pictures of Control, TDPP with/without laser irradiation, TPZ only, TDPP@PEG-TPZ with/without irradiation groups.



Fig. S15 H&E staining pictures of heart, liver, spleen, lung and kidney. Scale bar: 10 μm.



Fig. S16 Blood routine and biochemical indexes, including aspartate aminotransferase, alanine aminotransferase, total protein, albumin in each group, blood urea nitrogen, glucose, alkaline phosphatase, creatinine, white blood cells, lymphocytes (%), red blood cells, platelet parameter of mice in each group.



Fig. S17 Expression of HIF-1a and Ki67 in the tumor of each group, compared with control group. (***p*<0.01).