Supporting Information

Polymer Nanoparticles with High Photothermal Conversion Efficiency as Robust Photoacoustic and Thermal Theranostics

Liang Guo,[a,b] Weimin Liu,[a,b] Guangle Niu,[a,b] Panpan Zhang,[a,b] Xiuli Zheng,[a,b] Qingyan Jia,[a,b] Hongyan Zhang,[a,b] Jiechao Ge,[a,b] *and Pengfei Wang[a,b]

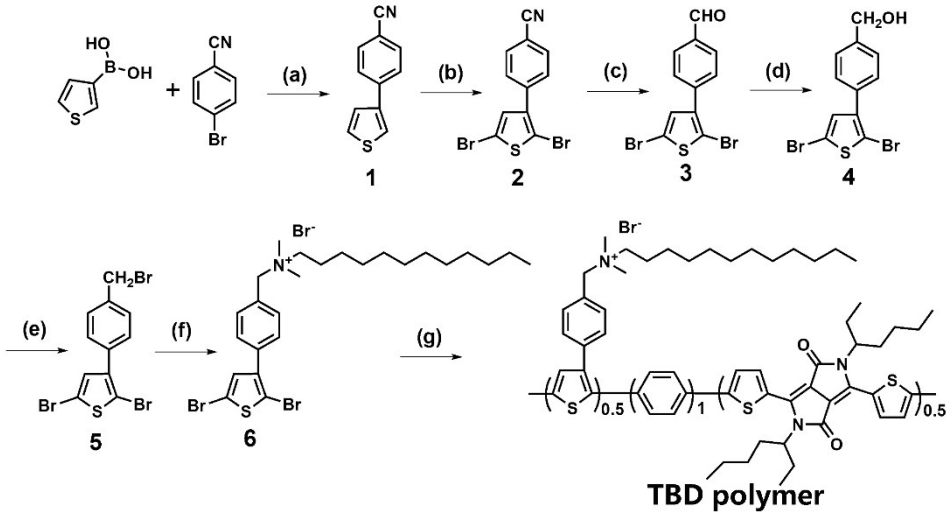
[a]Key Laboratory of Photochemical Conversion and Optoelectronic Materials and CityU-CAS Joint Laboratory of Functional Materials and Devices, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing, 100190, China,

[b]School of Future Technology, University of Chinese Academy of Sciences, Beijing, 100049, China.

Table of Contents

1. Experimental Section

Synthesis



Conditions: (a) Na_2CO_3, $Pd(PPh_3)_4$, EtOH, 90 °C, 8 h; (b) NBS, DMF, rt, 24 h; (c) DIBAL, CH_2Cl_2, reflux, 6 h; (d) $NaBH_4$, THF, rt, 24 h; (e) NBS, PPh_3, THF, rt, 1 h; (f) *N*,*N*-Dimethyldodecylamine, AcOEt, rt, 2 h; (g) 3,6-bis(5-bromothiophen-2-yl)-2,5-di(heptan-3-yl)pyrrolo[3,4-c]pyrrole-1,4(2H,5H)-dione, 1,4-Phenylenediboronic Acid, Na_2CO_3, $Pd(PPh_3)_4$, Toluene, 96 °C, 72 h.

Scheme S1. The synthetic route of TBD-based polymer.

2. ζ-potential of TBDPNPs in water, PBS and DMEM.

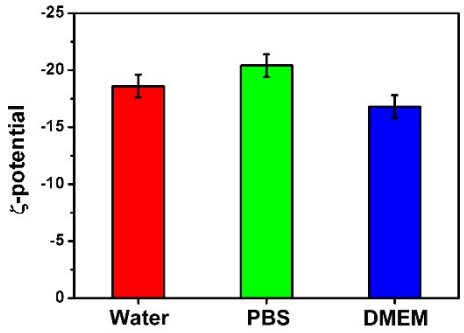


Figure S1. ζ-potential of TBDPNPs in water, PBS and DMEM.

3. Comparision of thermal stability between GNRs and TBDPNPs.

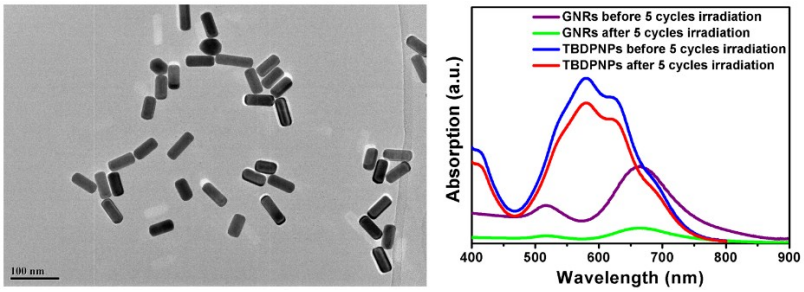


Figure S2. The TEM image of GNRs (left) and the comparision of thermal stability between GNRs and TBDPNPs (right).

4. AM/PI-stained HeLa cells with TBDPNPs incubation only and laser irradiation only.

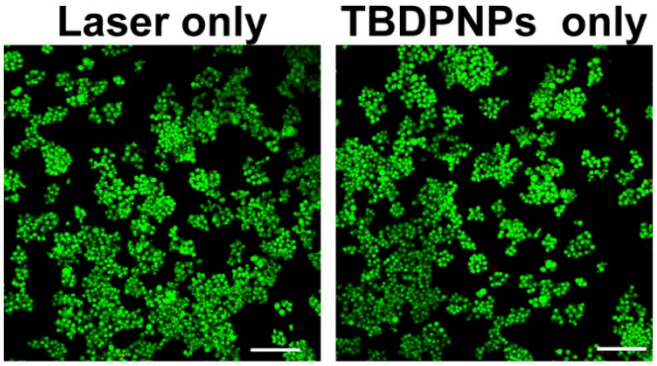


Figure S3. Confocal images of calcein AM/PI-stained HeLa cells with laser only (left) and TBDPNPs incubation only after10 minutes. Scale bars: 100 μm.

5. H&E stained tumor slices collected from different groups of mice on second day post treatments.

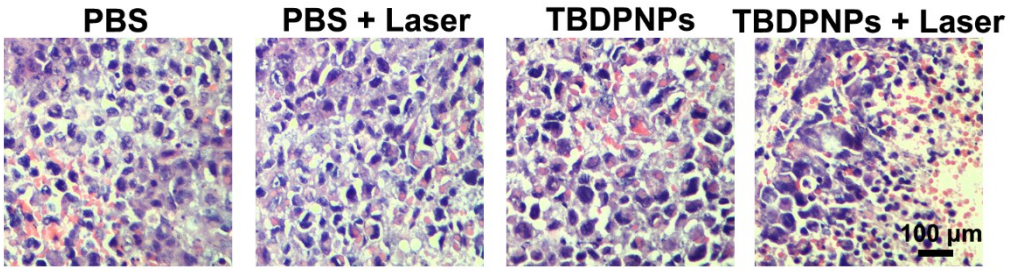


Figure S4. H&E stained tumor slices collected from different groups of mice on second day post treatments. Scale bar: 100 μm.