Electronic supplementary information (ESI):

Self-assembled hollow CuS@AuNRs/PDA nanohybrids with synergistically enhanced photothermal efficiency

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Figure Captions:

Figure S1. Average hydrodynamic diameters of hollow CuS measured using dynamic light scattering.

Figure S2. Digital photographs of HCuS@AuNRs in different media (100 μ g/mL, deionized water on the left and PBS pH 7.4 on the right).

Figure S3. Linear fitting curves of $\ln (M_t/M_\infty)$ versus $\ln t$ of HCuS@AuNRs/PDA (A) at different pH values without laser irradiation, (B) at pH 4.5 upon different laser irradiation (1.6 W/cm² and 0 W/cm²).

Figure S4. (A) Cytotoxicity evaluation to EA.hy926 cells of HCuS@AuNRs/PDA at pH 7.4, (B) Cytotoxicity evaluation (MCF-7 cells) of HCuS@AuNRs/PDA-DOX at pH 7.4 with or without NIR irradiation.

Table S1. TEM-EDS element mass percentage of HCuS@AuNRs/PDA.

Table S2. Parameters k, n and R^2 for the DOX release of HCuS@AuNRs/PDA at different release conditions.

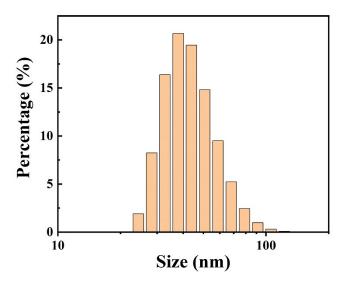


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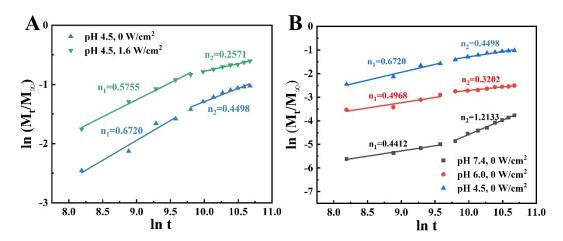


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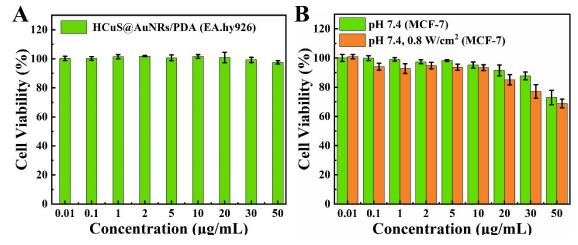


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 $\textbf{Table S1} \ \textbf{TEM-EDS} \ element \ mass \ percentage \ of \ HCuS@AuNRs/PDA.$

| Elements | Cu | S | Au | N | C |
|---------------------|-------|------|------|------|-------|
| Mass percentage (%) | 22.45 | 7.92 | 8.61 | 2.68 | 58.34 |

Table S2 Parameters k, n and R^2 for the DOX release of HCuS@AuNRs/PDA at different release conditions.

| Sample | release conditions | k | n | R^2 |
|----------------|-------------------------------|-------------------------|--------|--------|
| HCuS@AuNRs/PDA | pH 7.4, 0 W/cm ² | 2.7114×10 ⁻⁷ | 1.0613 | 0.9786 |
| HCuS@AuNRs/PDA | pH 6.0, 0 W/cm ² | 0.9011×10 ⁻⁵ | 0.4248 | 0.9642 |
| HCuS@AuNRs/PDA | pH 4.5, 0 W/cm ² | 1.14×10 ⁻³ | 0.5444 | 0.9752 |
| HCuS@AuNRs/PDA | pH 4.5, 1.6 W/cm ² | 9.71×10 ⁻³ | 0.3812 | 0.9601 |