Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Targeting killing of Tumor Cells Based on Isoelectric Point Suitable Nanoceria-rod with High Oxygen Vacancies

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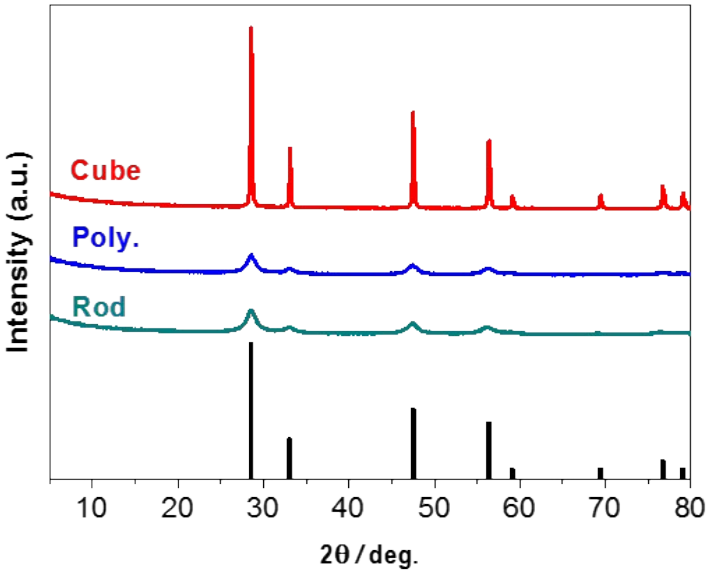

Fig. S1: XRD spectra of the nanoceria-rod, polyhedron and cube.

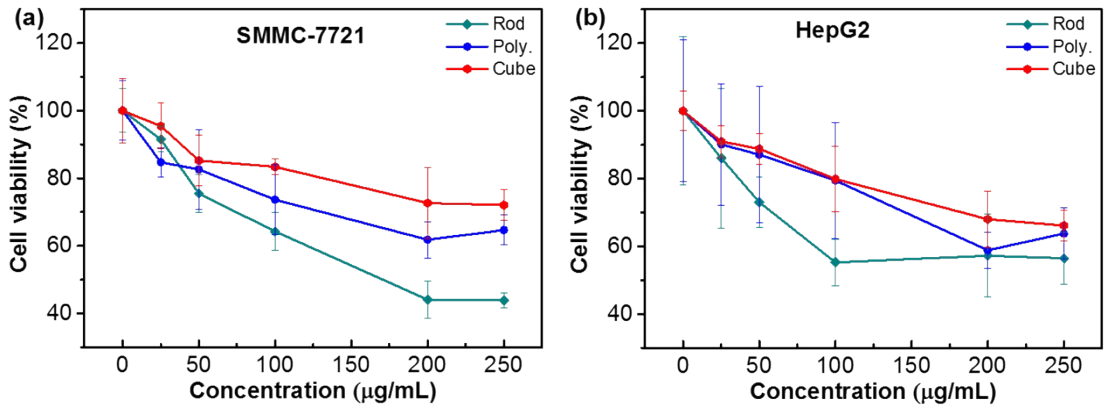

Fig. S2: The cytotoxicity of nanoceria with different morphologies. (a) Cell viability of SMMC-7721 treated with nanoceria for48 h, and (b) Cell viability of HepG2 treated with nanoceria for 48 h.

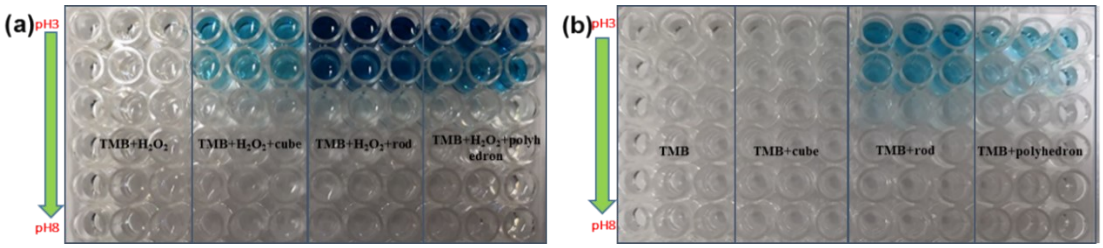

Fig. S3: The pH-dependent enzyme activity of nanoceria. (a) The pH-dependent POD-like activities. (b) The pH-dependent XOD-like activities.

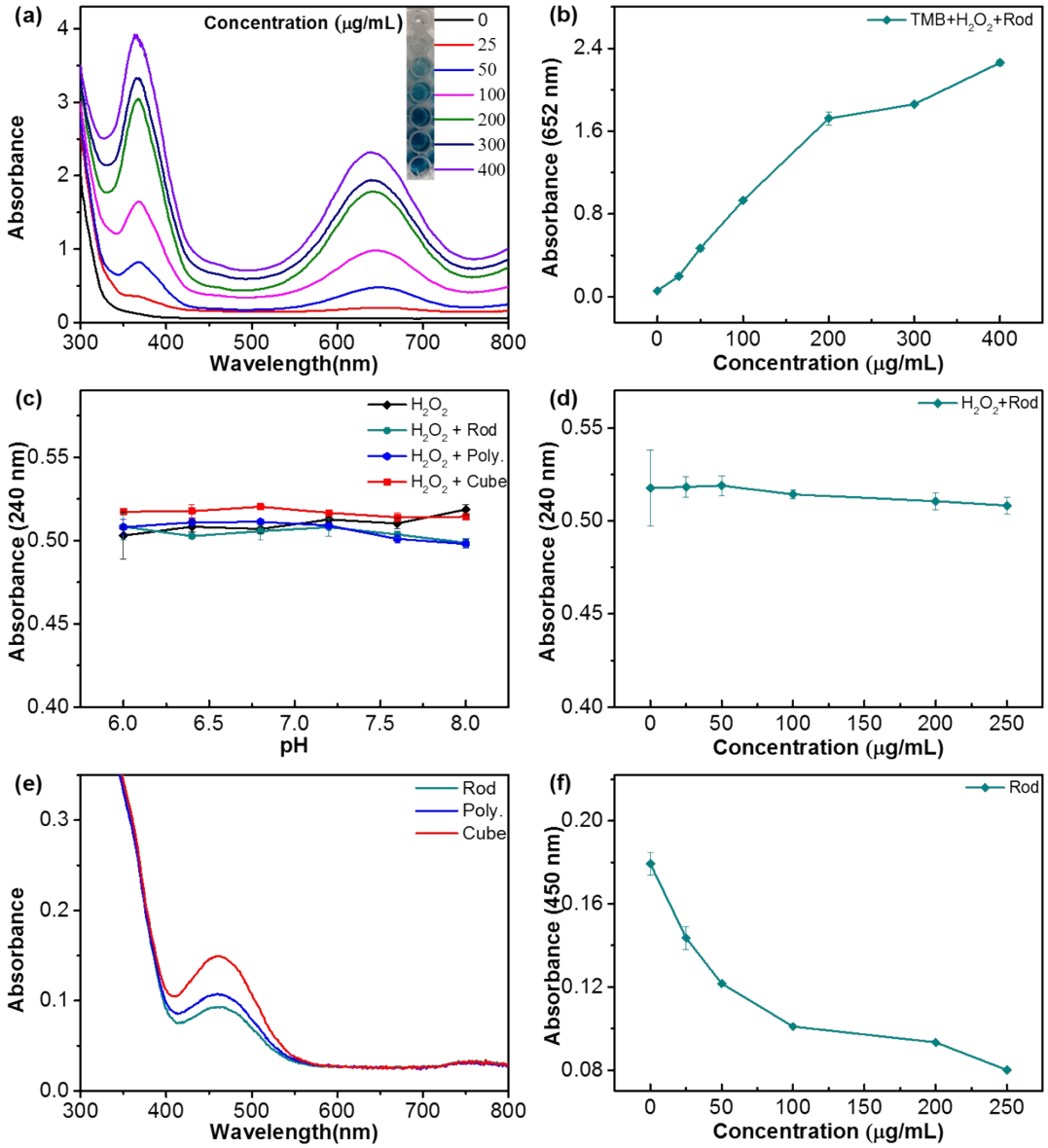

Fig. S4: Enzyme activity of nanoceria. (a) and (b) The POD-like activities of the nanoceria-rod. (c) and (d) The pH-dependent CAT-like activities of nanoceria. (e) and (f) SOD-like activities of nanoceria.

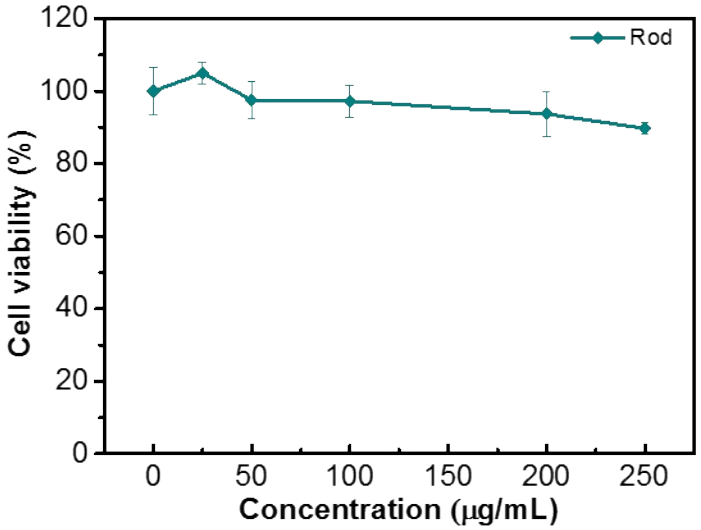

Fig. S5: Cell viability of L02 treated with different concentration of nanoceria-rod for 48 h.

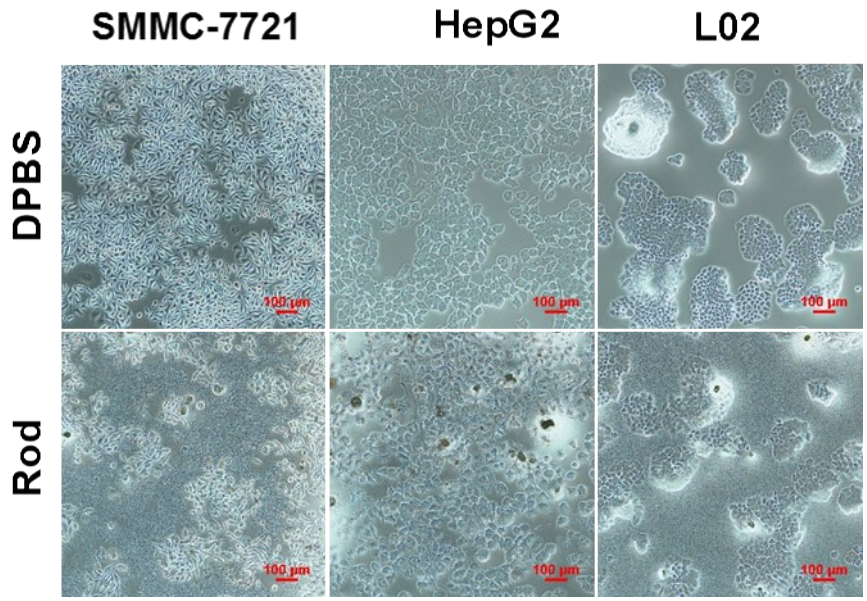

Fig. S6: The bright fields of cells treated with 200 μg/mL nanoceria-rod for 48 h.

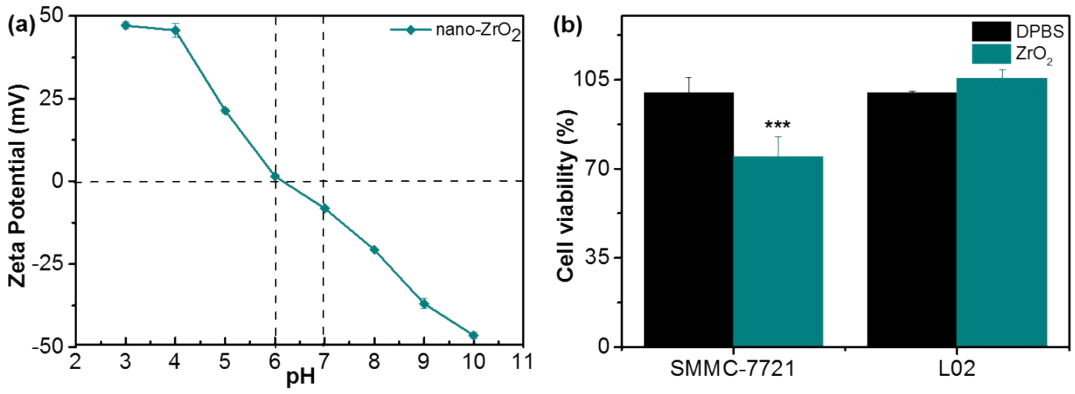

Fig. S7: Targeted therapy of tumor cells based on nano-ZrO_2 with suitable isoelectric point. (a)The zeta potential of nano-ZrO_2, (b) Cell viability treated with nano-ZrO_2, statistical significance is assessed by Student's t-test compared to the control group (DPBS), ***$p < 0.001$.