

Supporting Information

Light-driven Au-ZnO nanorod motors for enhanced photocatalytic degradation of tetracycline

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Supporting Videos

Video S1. Au-ZnO nanomotors under different light intensities. (MP4).

Video S2. Au-ZnO nanomotors under irradiances of $250 \text{ mW}\cdot\text{cm}^{-2}$ UV intensity when TC was added (MP4).

Video S3. Motion behavior of Au-ZnO nanomotors under on/off control. (MP4).

Video S4. Phototaxis behavior of Au-ZnO nanomotors under UV irradiation. (MP4)

Supplementary Figures

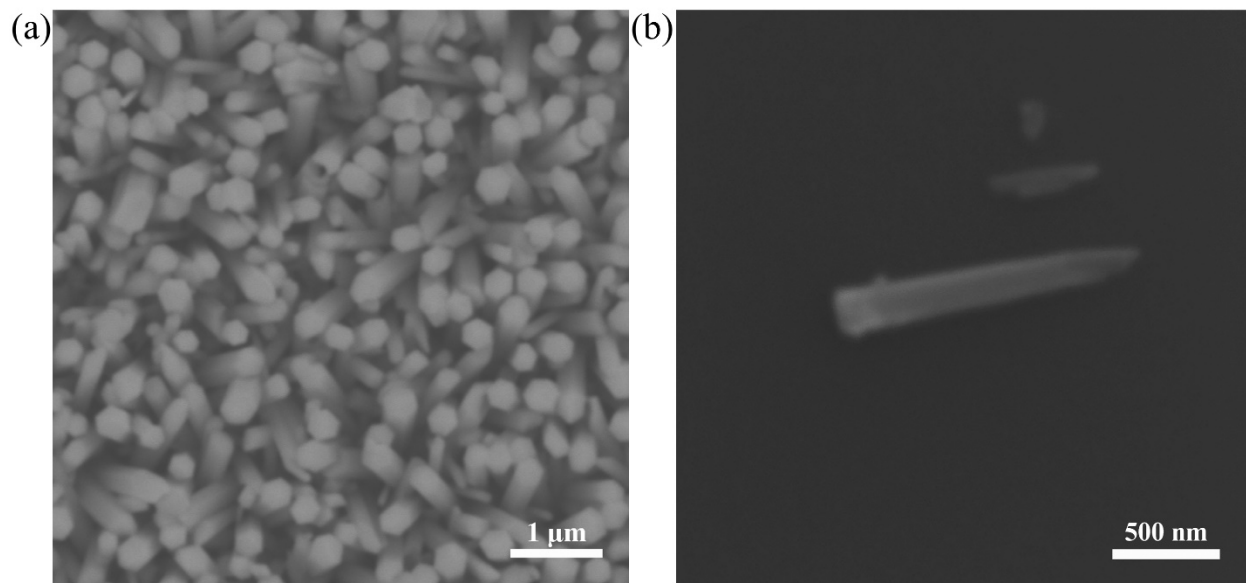


Fig. S1. SEM images of (a) the top-view of ZnO nanorod arrays and (b) single Au-ZnO nanomotor.

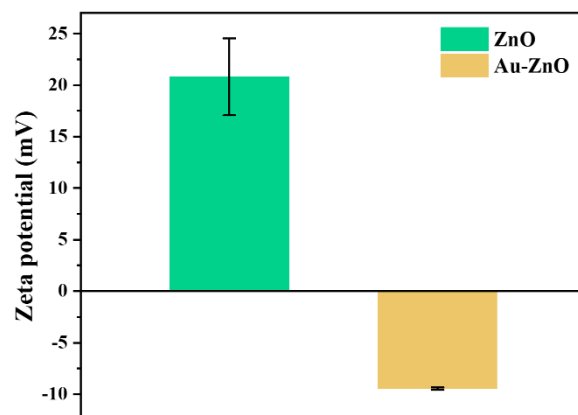


Fig. S2. Zeta potentials of ZnO nanorods and Au-ZnO nanomotors.

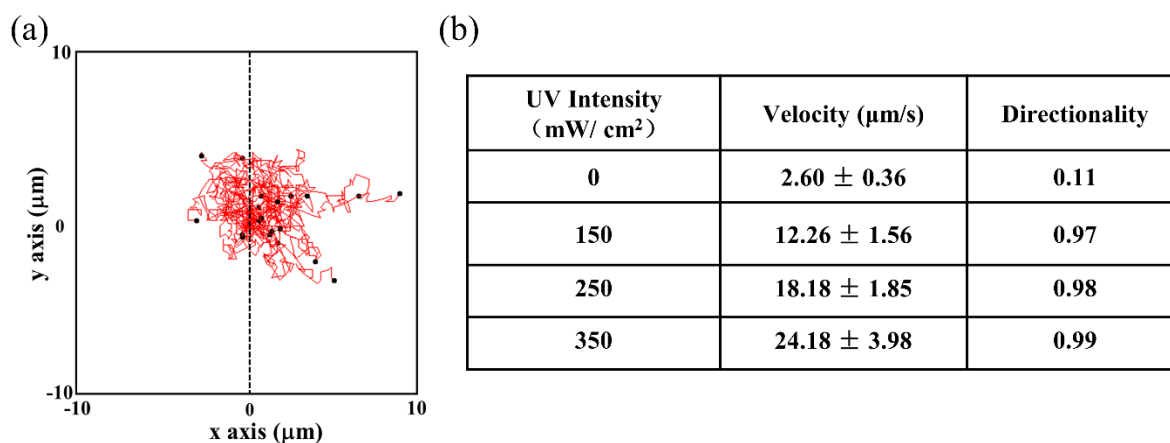


Fig. S3. (a) Tracking trajectories of Au-ZnO nanomotors in DI water without UV light exposure (20 trajectories were analyzed for 10 s). (b) Average velocity and directionality of Au-ZnO nanomotors under different UV light intensities. (20 trajectories were analyzed)

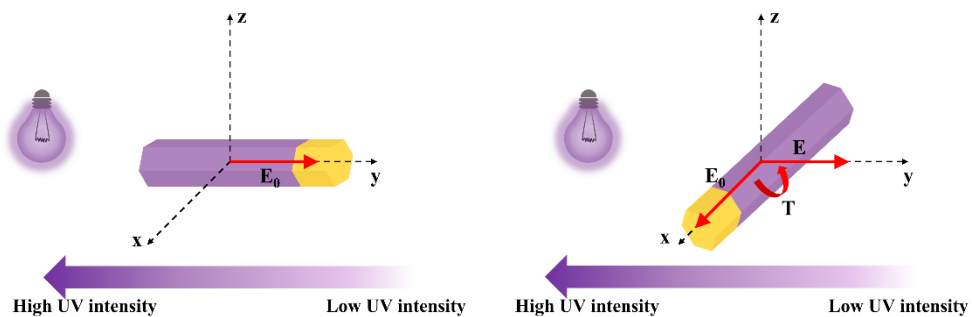


Fig. S4. Proposed mechanism of Au-ZnO nanomotors reorientation under UV light irradiation.

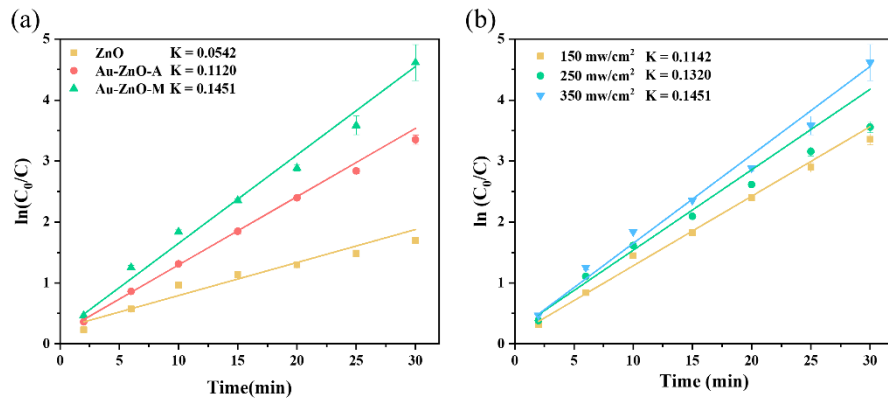


Fig. S5. Apparent rate constants and corresponding pseudo first order kinetics plots of (a) different photocatalysts and (b) Au-ZnO nanomotors under different UV intensities for TC degradation.