

Supporting Information

ZnO Hollow Pitchfork: Coupled Photo-Piezocatalytic Mechanism for Antibiotic and Pesticide Elimination

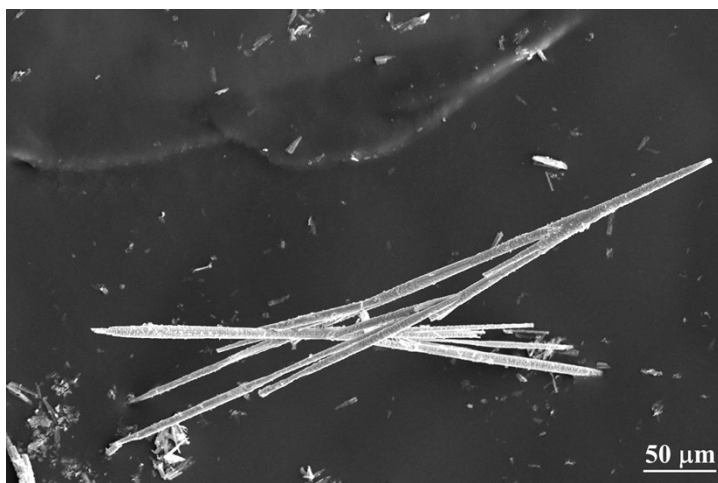
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(a)



(b)



Fig. S1- SEM images of ZnO pitchforks

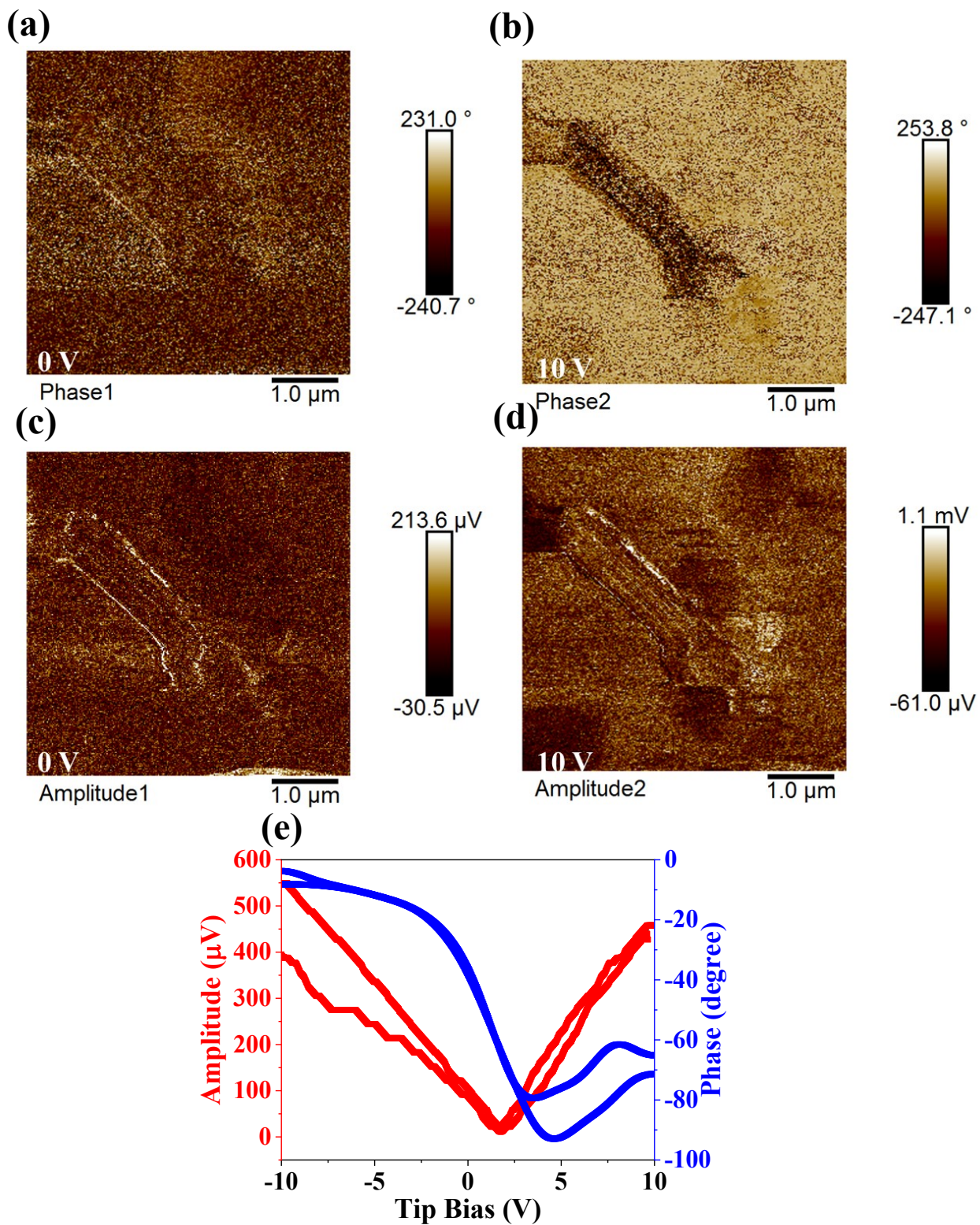
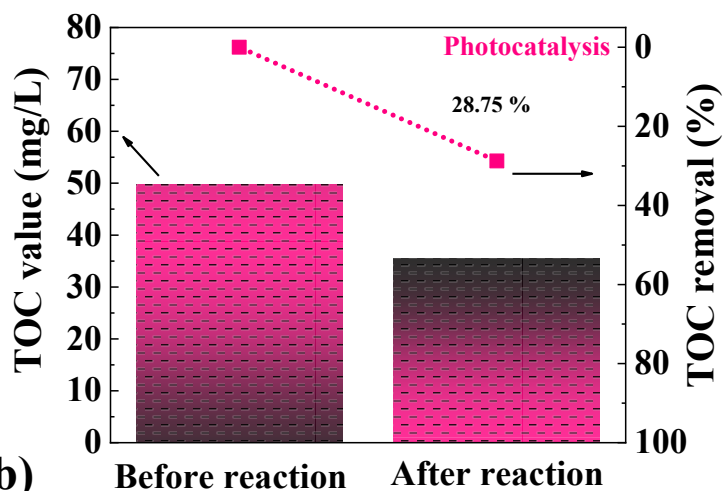
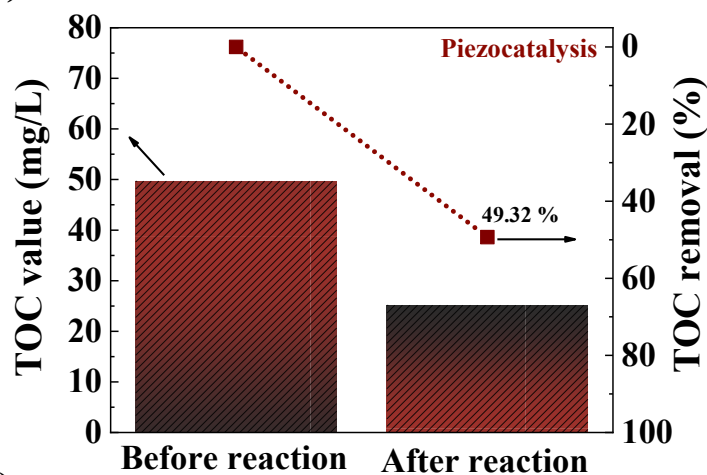


Fig. S2- PFM analysis (a) phase and (c) amplitude at voltage = 0V. (b) phase and (d) amplitude at voltage = 10V. (e) Amplitude and phase variation with an applied voltage.

(a)



(b)



(c)

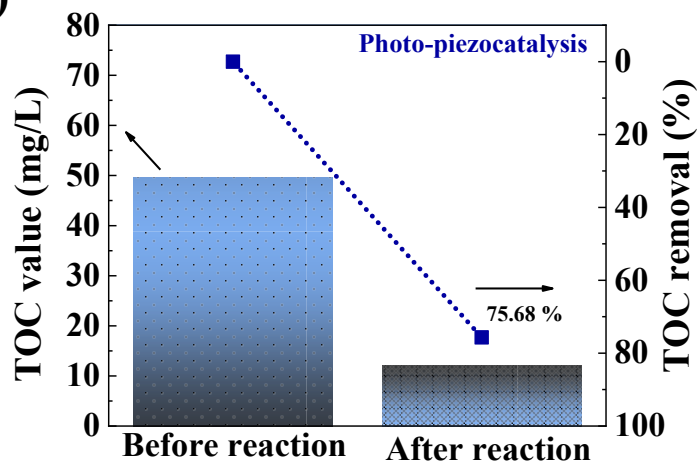
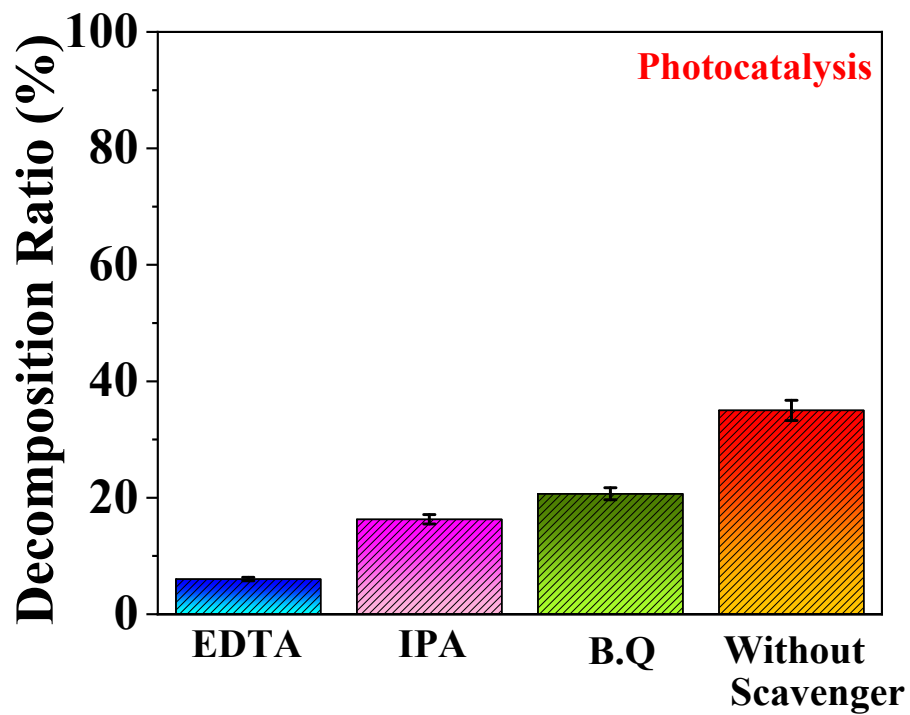


Fig. S3- TOC analysis for rhodamine b with different treatments

(a)



(b)

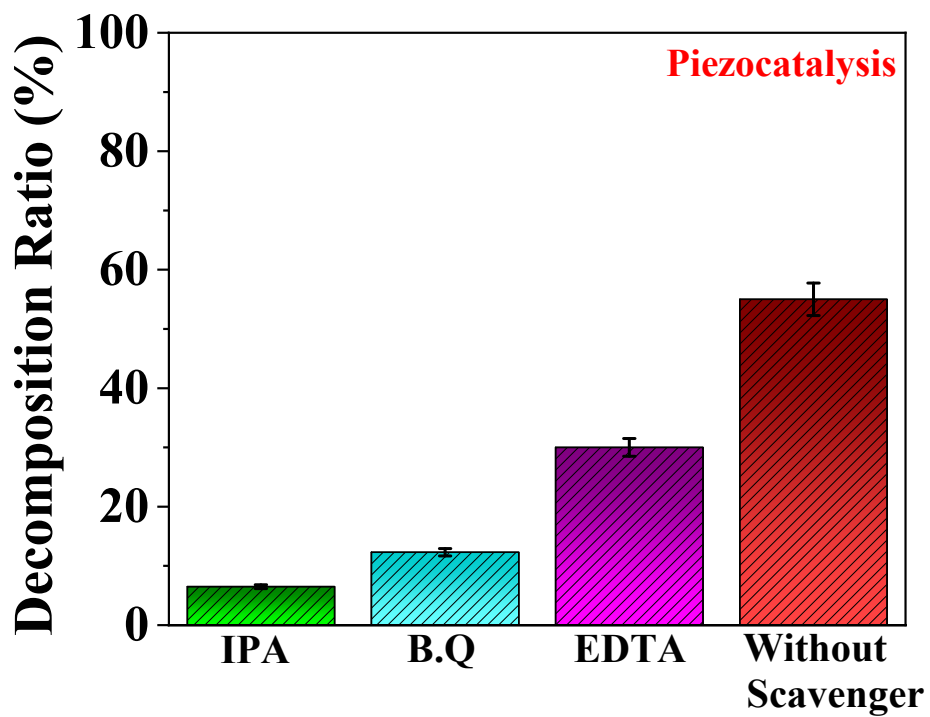


Fig. S4- The impact of various scavengers in (a) Photocatalysis and (b) Piezocatalysis

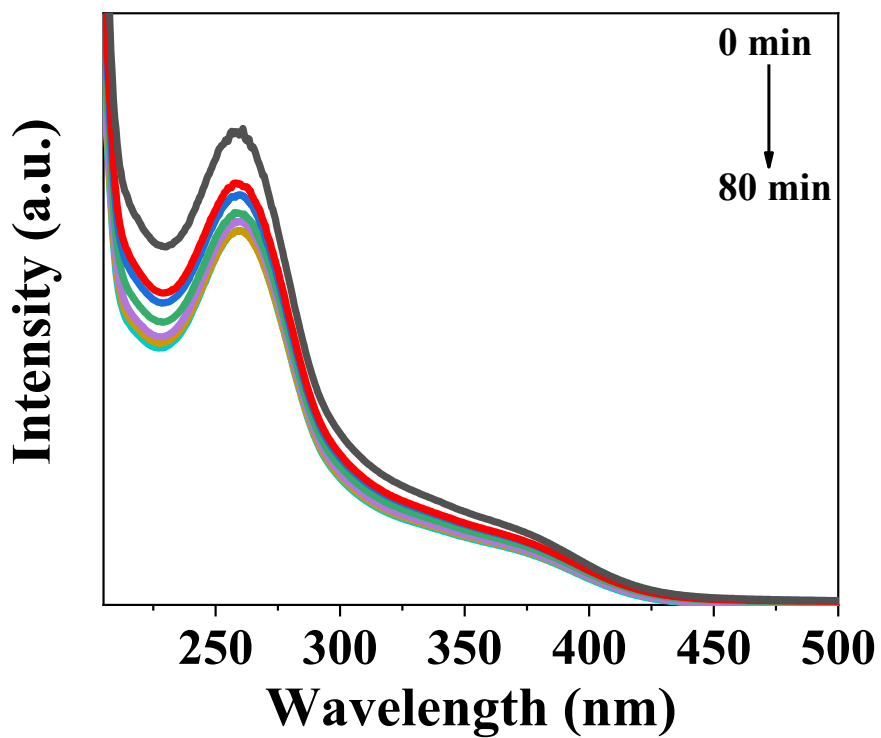


Fig. S5- Degradation of nitroblue tetrazolium (NBT) under the photo-piezocatalytic effect to confirm the generation of super oxide radical ($\bullet\text{O}_2^-$)