

Visible Light Driven Photocatalytic Properties of Binary MoS₂/ZnS Heterostructured Nanojunctions Synthesized Via One-Step Hydrothermal Route

Mega Joy^a, A. Peer Mohamed^a, K.G.K. Warriar^a and U. S. Hareesh^{a*}

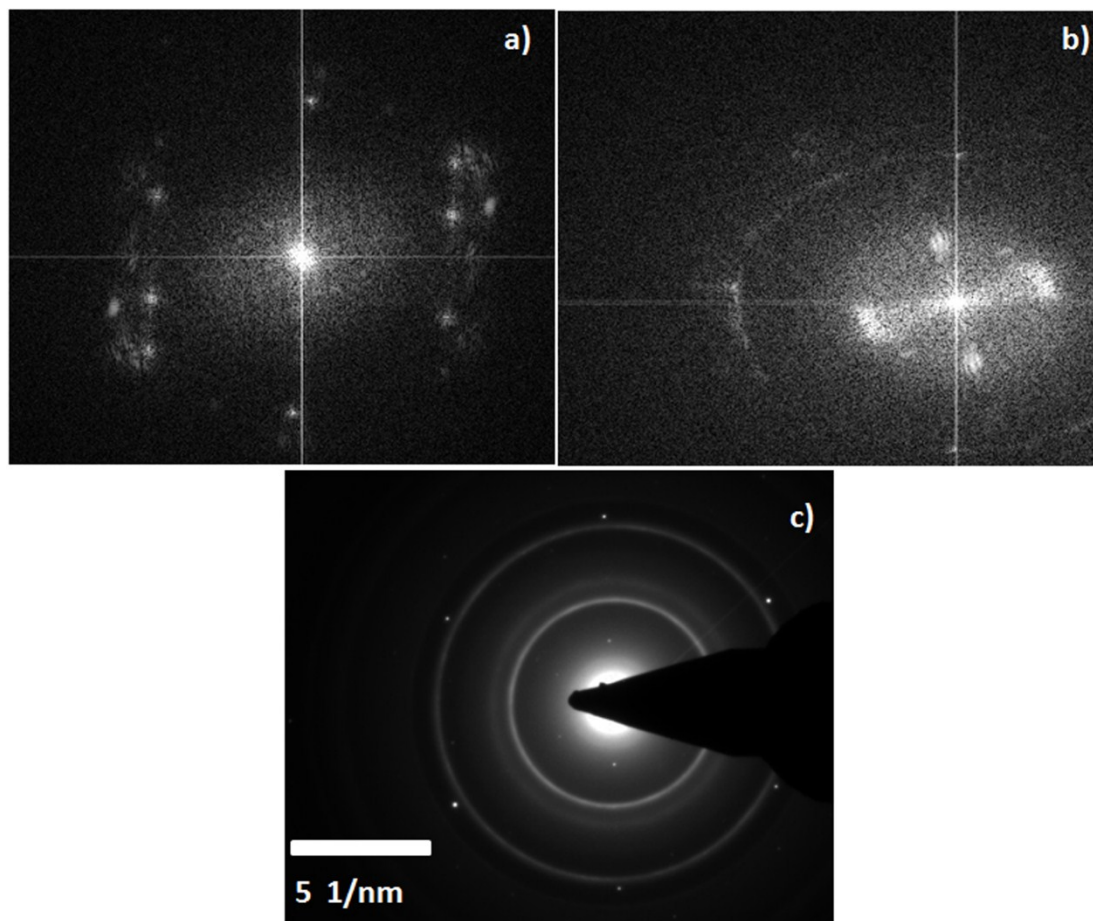


Fig. S1 FTFT of a) ZnS, b) MoS₂ and c) SAED of MoS₂/ZnS nanojunctions

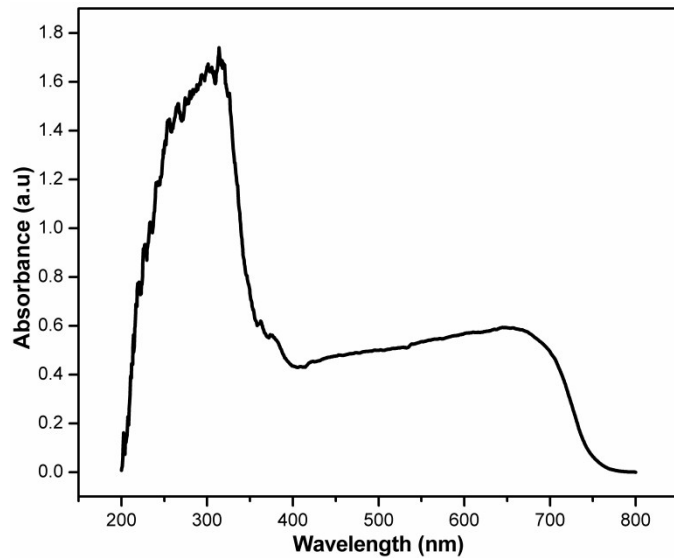


Fig. S2 DRS of MoS₂

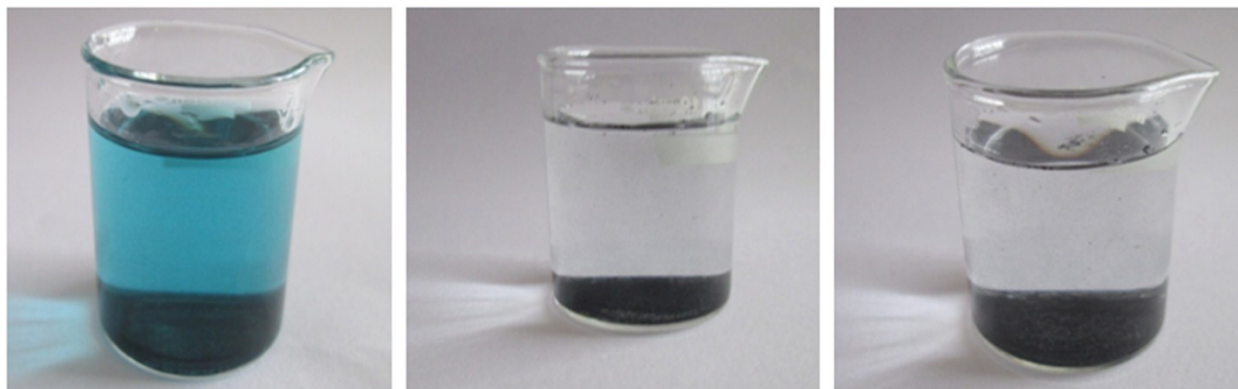


Fig. S3 a) photographs a) initial MG solution, b) completely degraded solution and c) residue obtained after the reaction desorbed with ethanol.

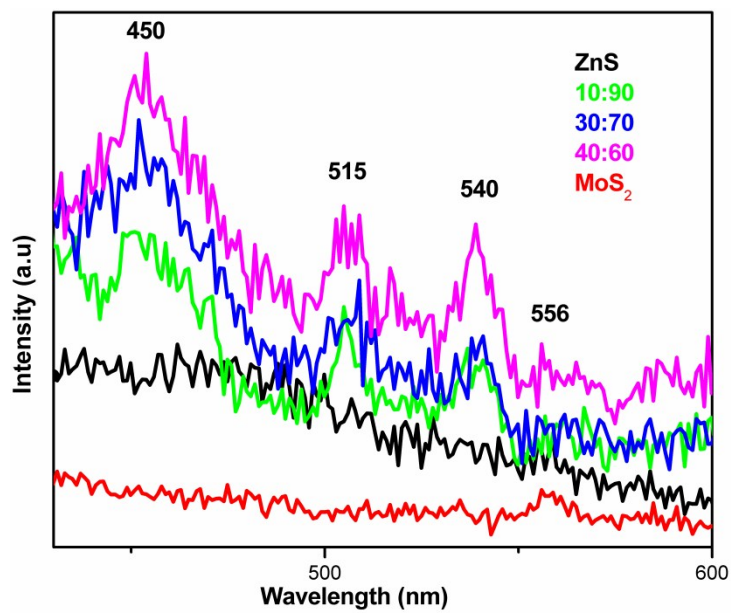


Fig. S4 Mass normalized photoluminescence emission spectra of ZnS, MoS₂ and MoS₂/ZnS heterostructures at room temperature.

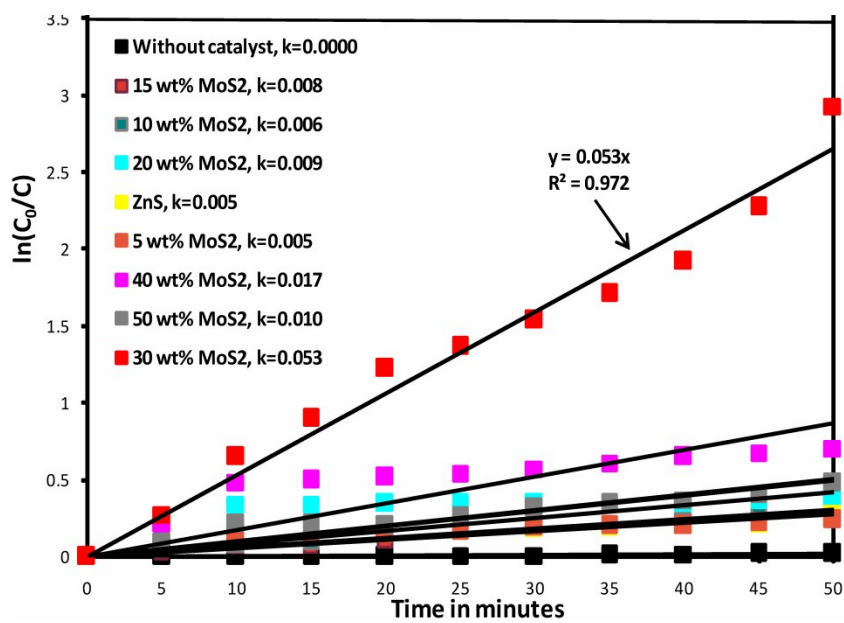


Fig. S5 Rate of photocatalytic degradation of MG over the synthesized ZnS and MoS₂/ZnS heterostructures.

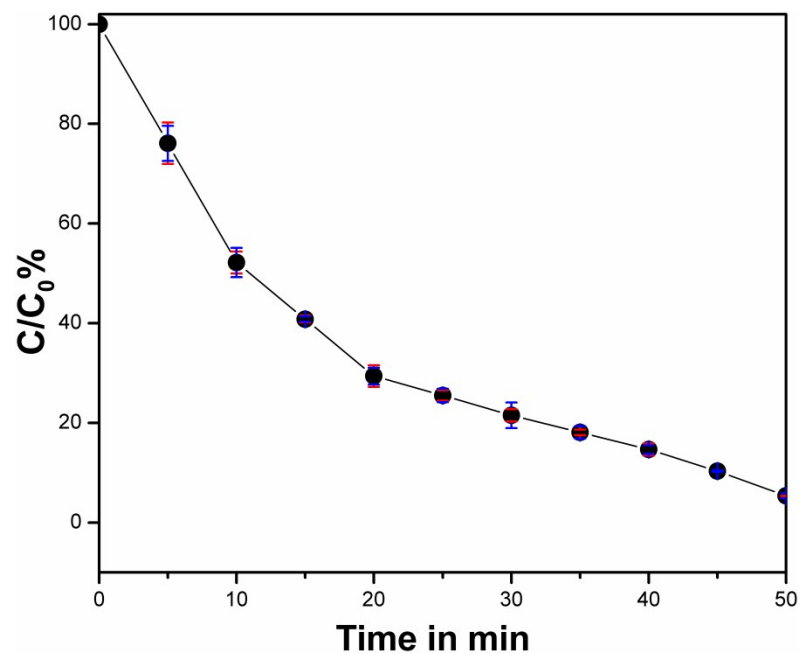


Fig. S6 Repeated malachite green degradation kinetics with 30 –wt% MoS₂/ZnS photocatalyst.

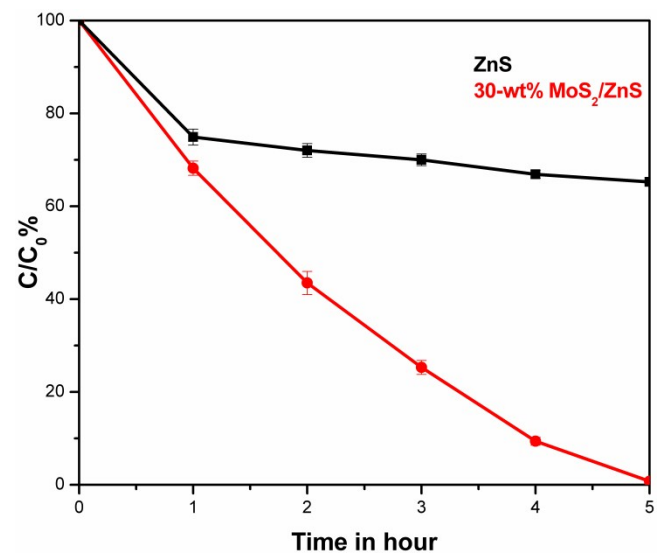


Fig. S7 Photocatalytic degradation of para nitro phenol with ZnS and 30-wt% MoS₂/ZnS.