

Effects of Geometrical Topologies and Electron Fermi-level Gradient on the Photocatalytic Efficiency in Semiconductor Nano-particulate Photocatalysis

Baoshun liu, Rui Zhao

State Key Laboratory of Silicate Materials for Architectures Institution: Wuhan
University of Technology, Wuhan City, Hubei province 430070, P. R. China, E-mail:
liubaoshun@126.com

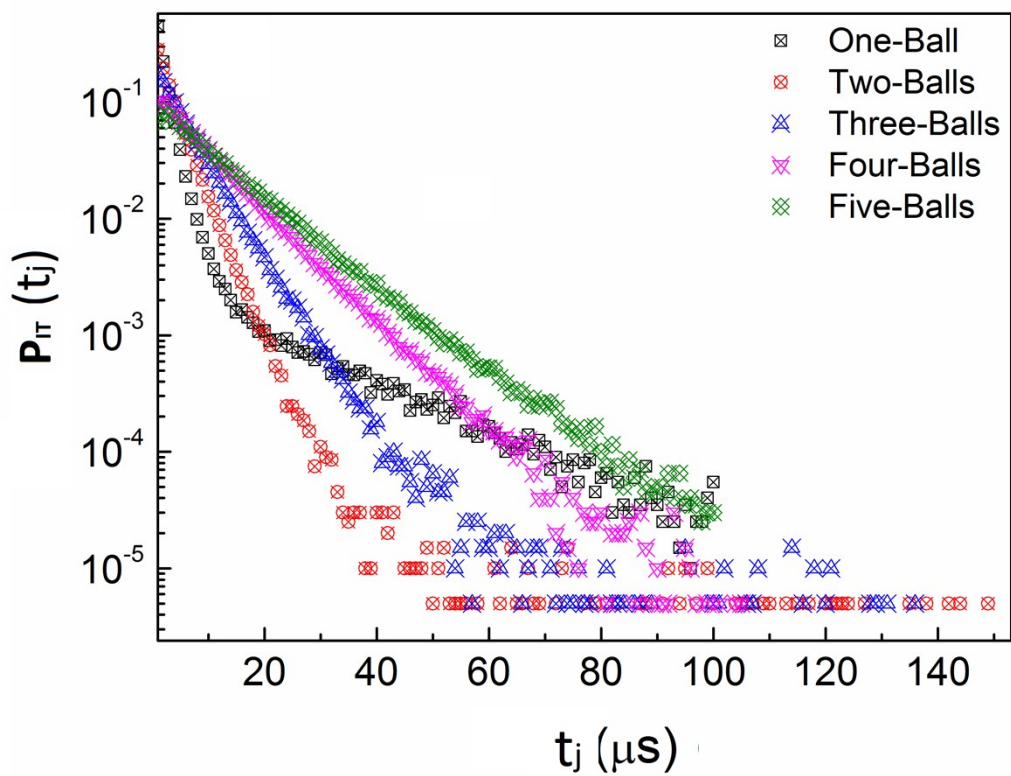


Figure S1 $p_{IT}(t_j)$ of 0-D configuration and 1-D configuration with ball number from 2 to 5 (simulation parameter: $t_1 = 0.2$, $p_{IPT} = 1.0$);

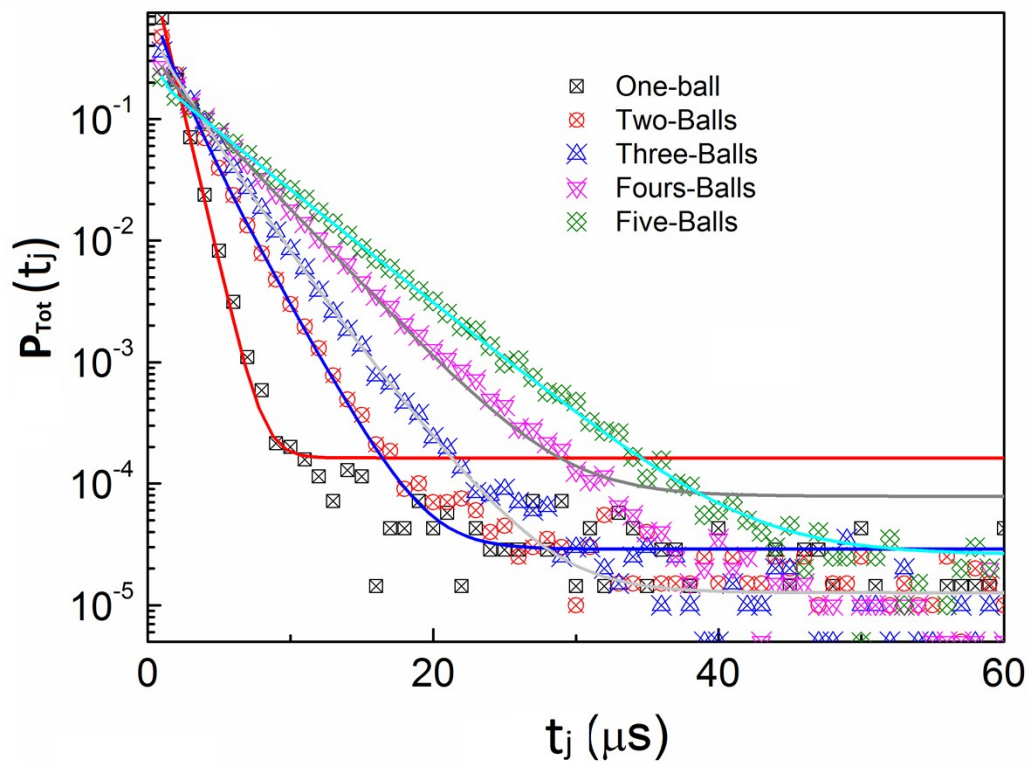


Figure S2 $p_{\text{tot}}(t_j)$ of 0-D configuration and 1-D configuration with ball number from 2

to 5 (simulation parameter: $t_1 = 0.2$, $p_{\text{IPT}} = 1.0$);

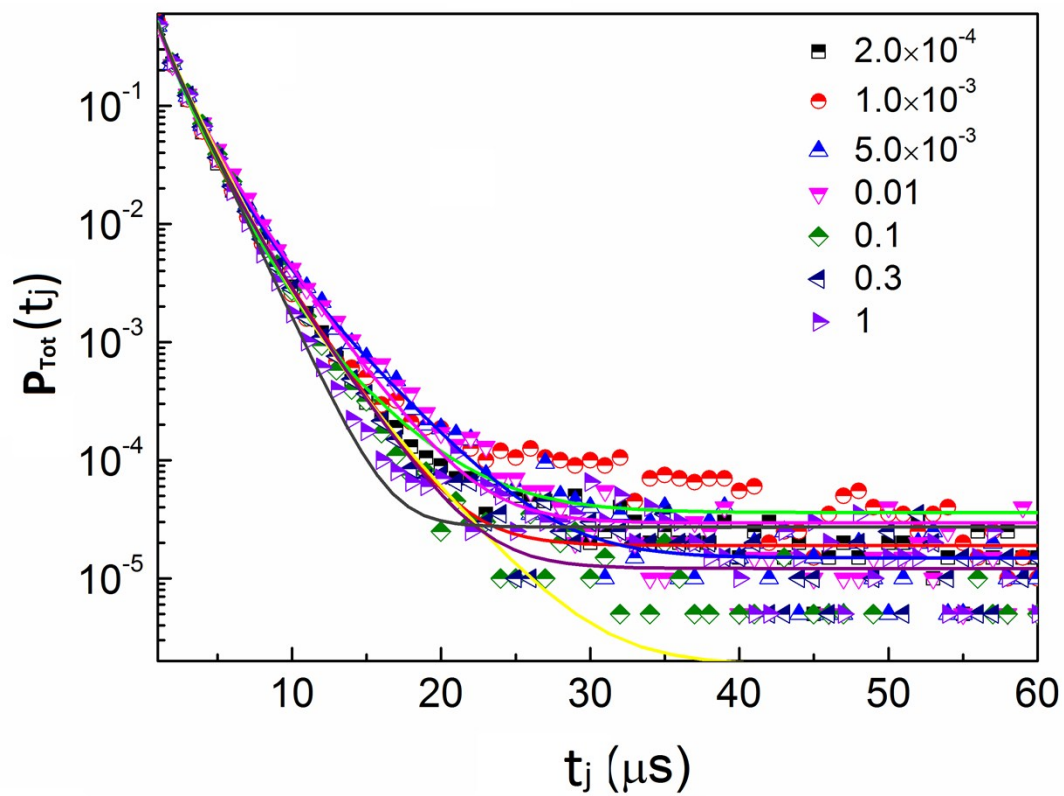


Figure S3 $p_{\text{Tot}}(t_j)$ of two ball 1-D configuration with the various p_{IPT} from 2.0×10^{-4} to 1.0 (simulation parameter: $t_1 = 0.1$);

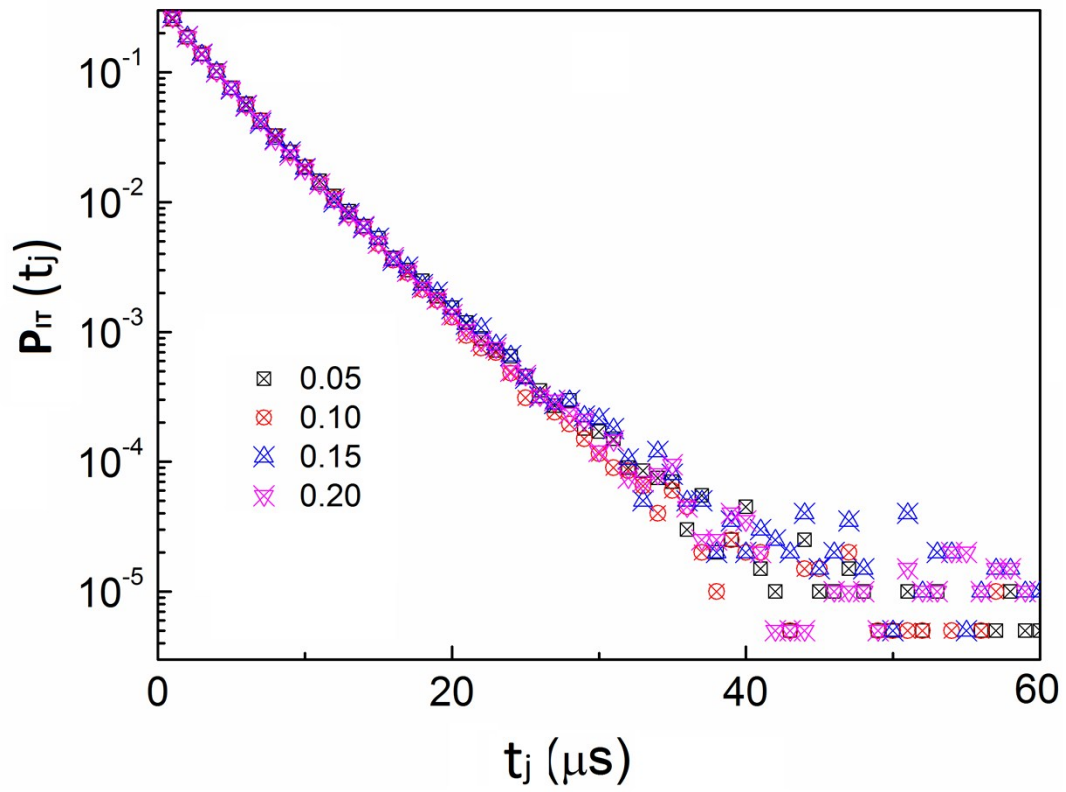


Figure S4 $p_{it}(t_j)$ of two ball 1-D configuration with different interconnection (θ)

(simulation parameter: $\rho_{IPT} = 1.0$);

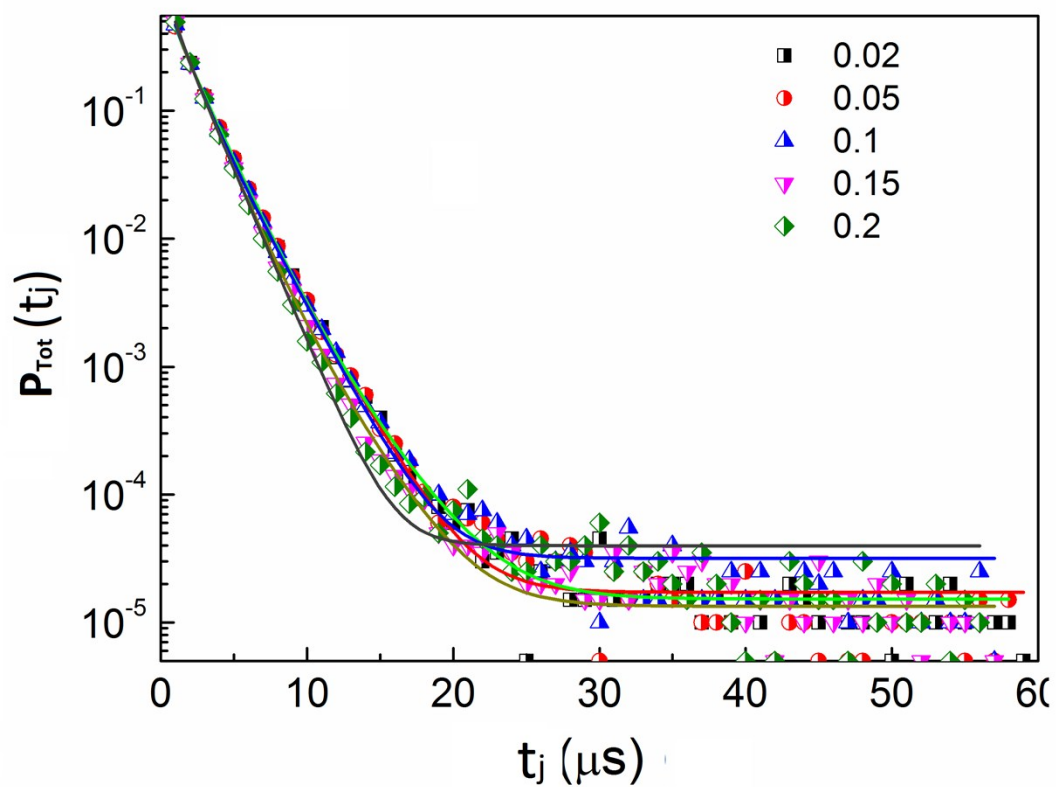


Figure S5 $p_{\text{Tot}}(t_j)$ of two ball 1-D configuration with different interconnection (θ)

(simulation parameter: $p_{\text{IPT}} = 1.0$);

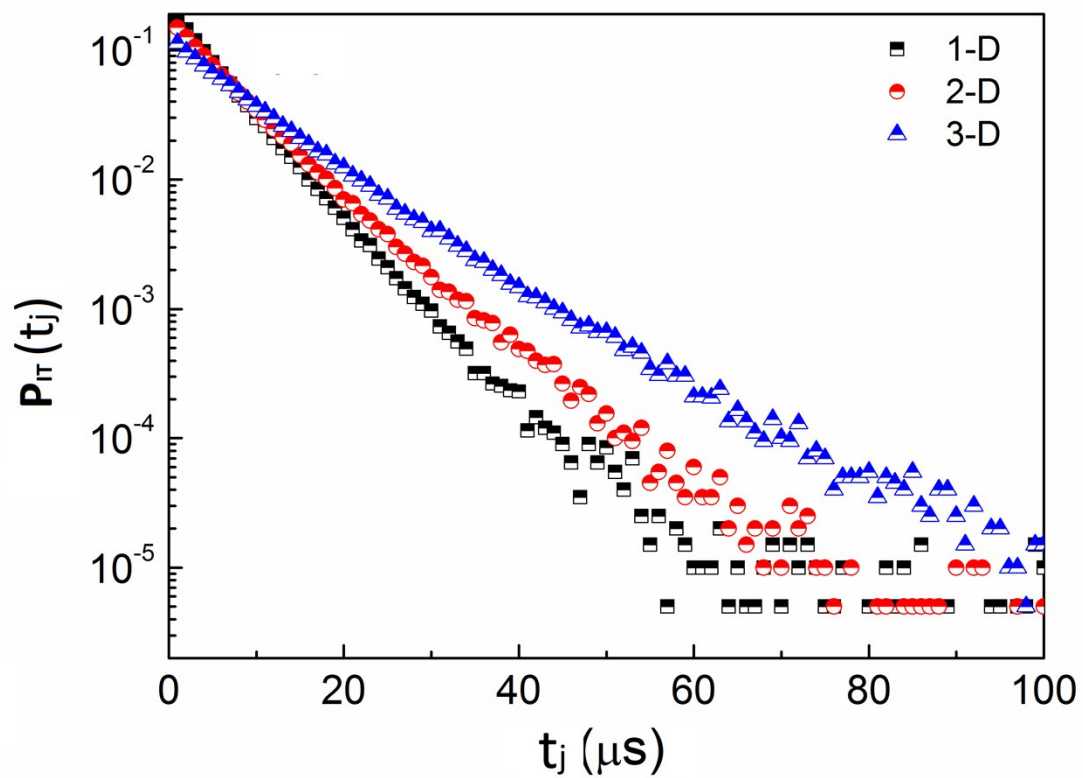


Figure S6 $P_{IR}(t_j)$ of 0-D, 1-D, 2-D configurations shown in Fig. 2 (simulation

parameter: $\theta = 0.2$, $p_{IPT} = 1.0$)

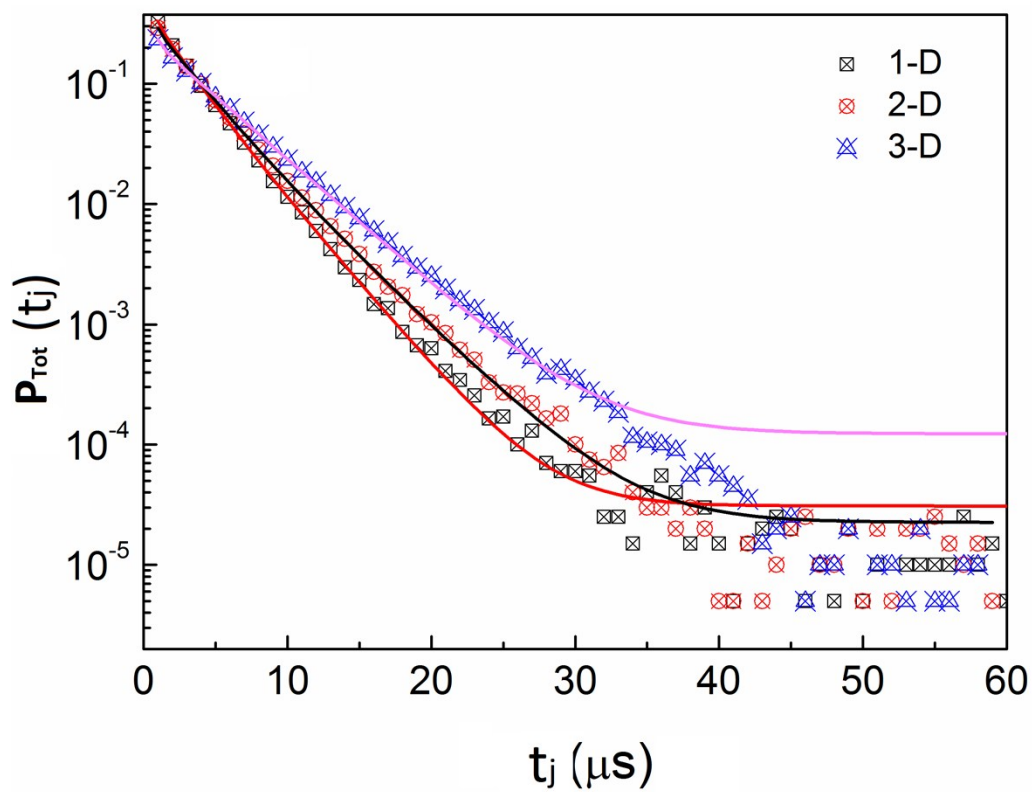


Figure S7 $P_{\text{Tot}}(t_j)$ of 0-D, 1-D, 2-D configurations shown in Fig. 2 (simulation

parameter: $\theta = 0.2$, $p_{\text{IPT}} = 1.0$)