A visible-light-active $CuInSe_2$: Zn/g-C_3N_4/TiO_2 nanowires for photoelectrocatalytic bactericidal effects

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Supporting Information (SI):

The inactivation rate constant k of the Click model was used to evaluate the results of this method and other published approaches; one of the most commonly used models for TiO_2 inactivation kinetics of microbes[1, 2]. The model is expressed by the following equation:

$$In\frac{N_t}{N_0}=-kt+b \quad (1)$$

where Nt is the remaining concentration at time t (cfu/mL); N_0 is the initial concentration; k is the photokilling constant (min^{-1}); b is a constant. Compared with the other methods, it shows a significant photoelectrocatalytic bactericidal effect (Table S1).

Table S1. Comparison of the corresponding kinetic constants and regression coefficients

photoelectrode	k (min^{-1})	R^2	Ref.
$CuInSe_2$: Zn/g-C_3N_4/TiO_2 NWs	0.095	0.998	This work
CdS/Pt–TiO_2 NTs	0.0446	0.998	3
100% {1 1 1} faceted rutile TiO_2 photoanode	0.0543	0.994	4
Ag-CNT/TiO_2	0.0610	0.945	5

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