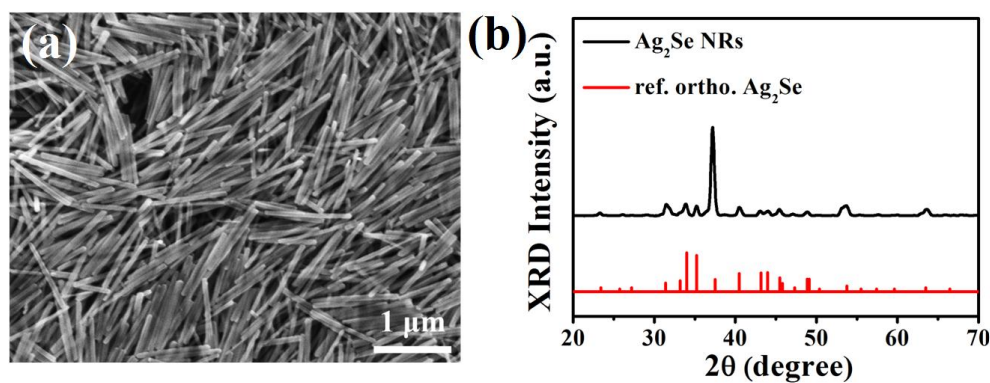


# Type-II Nanorod Heterostructure Formation through One-Step Cation Exchange

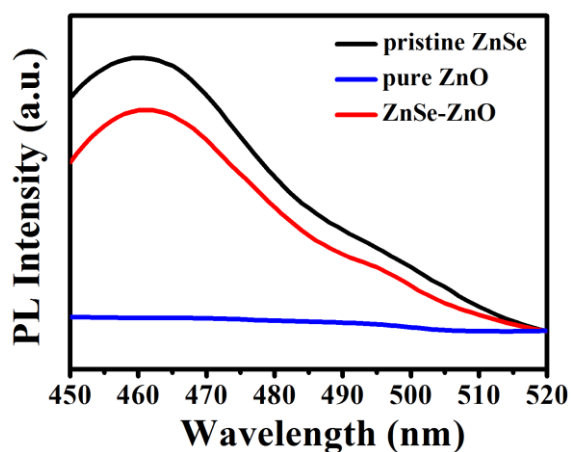
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Hsinchu, Taiwan 30010, Republic of China.

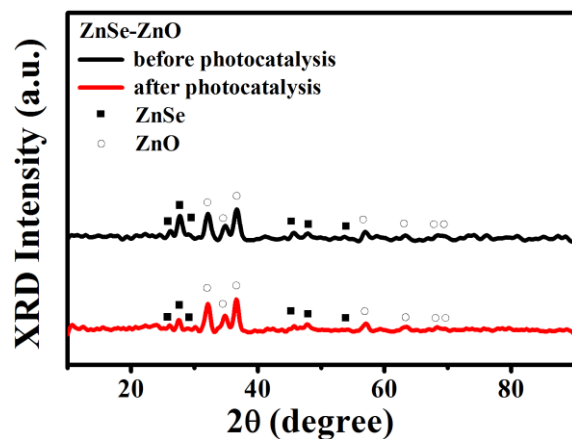
\*E-mail: yhsu@cc.nctu.edu.tw



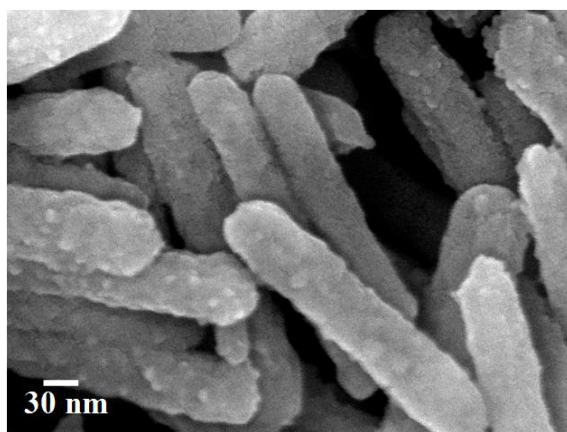
**Fig. S1.** (a) SEM image and (b) XRD pattern of Ag<sub>2</sub>Se NRs obtained by direct insertion of Ag<sup>+</sup> into Se NRs.



**Fig. S2.** Steady-state PL spectra for pristine ZnSe, pure ZnO and ZnSe-ZnO-1 NRs. The excitation wavelength was 375 nm.



**Fig. S3.** Comparison of XRD pattern for ZnSe-ZnO-1 NRs before and after used in RhB photodegradation for 2 hr.



**Fig. S4.** SEM image of CdO-decorated CdSe NRs obtained by replacing  $\text{Zn}(\text{NO}_3)_2$  with  $\text{Cd}(\text{NO}_3)_2$  in the cation exchange reaction.