Crystalline ZnO/ZnS_xSe_{1-x} core-shell nanowire arrays for

efficient visible-light photoelectrocatalysis

Yajun Wang ^{a,b}, Xueying Zhan ^a, Fengmei Wang ^a, Qisheng Wang ^a, Muhammad

Safdar ^a and Jun He ^{a,*}

^a National Center for Nanoscience and Technology (NCNST), No.11

ZhongGuanCun BeiYiTiao, 100190 Beijing, P.R. China

^b State Key Laboratory of Heavy Oil Processing, China University of Petroleum, 102249 Beijing, P.R. China.



Supplementary data

Fig. S1 Large scale SEM image of ZnO/ZnS_xSe_{1-x} nanowires



Fig. S2 PL spectra of ZnO and ZnO/ZnS $_x$ Se $_{1-x}$ core/shell nanowire arrays



Fig.S3 EIS Nynquist plots of ZnO nanowire arrays and ZnO/ZnS_xSe_{1-x} core/shell nanowire arrays (a) under UV irradiation, (b) under visible light irradiation



Fig.S4 The effect of the external potential on MB degradation on ZnO/ZnS_xSe_{1-x} core/shell nanowires under UV irradiation.