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Chih-Jung Chen^a, Kai-Chih Yang^b, Chi-Wei Liu^c, Ying-Rui Lu^{d,e}, Chung-Li Dong^f, Da-Hua Wei^{c,*}, Shu-Fen Hu^{b,*}, and Ru-Shi Liu^{a,c,*}

^a Department of Chemistry, National Taiwan University, Taipei 10617, Taiwan

^b Department of Physics, National Taiwan Normal University, Taipei 11677, Taiwan

^c Department of Mechanical Engineering and Graduate Institute of Manufacturing Technology, National Taipei University of Technology, Taipei 10608, Taiwan

^d National Synchrotron Radiation Research Center, Hsinchu 30076, Taiwan

^e Program for Science and Technology of Accelerator Light Source, National Chiao Tung University, Hsinchu 30010, Taiwan

^f Department of Physics, Tamkang University, Tamsui 25137, Taiwan

ABSTRACT

Silicon is a promising photocathode material for solar hydrogen evolution because of its small band gap, negative conduction band position, and ideal theoretical current density. In this study, p-type Si microwire (p-Si MW) arrays were prepared as photocathodes because of the large surface area and high light-harvesting capability. However, Si MWs suffered from low photocatalytic activity because of slow photo-induced carriers during driving of water-splitting reaction. Therefore, molybdenum sulfide

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