Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A. This journal is © The Royal Society of Chemistry 2015

Supplementary Information

Draining the Photoinduced Electrons Away from anode: the Preparation of Ag/Ag₃PO₄

Composite Nanoplate Photoanode for High Efficient Water Splitting

Qingyong Wu^a, Peng Diao^{a,*}, Jie Sun^a, Di Xu^a, Tao Jin^b, Min Xiang^a

^aSchool of Materials Science and Engineering, Beihang University, Beijing 100191, PR China ^bChina Special Vehicle Research Institute, Aviation Key Laboratory of Science and Technology on Structural Corrosion Prevention and Control, Jingmen 448035, Hubei, P.R.China

*Corresponding Author: Peng Diao, Professor

Address: No. 37 Xueyuan Road, School of Material Science and Engineering, Beihang University, Beijing 100191, P.R.China.

Phone No. +86-10-82339562, E-mail: pdiao@buaa.edu.cn





Fig. S1. (a) A typical three-dimension AFM image of the Ag NP array prepared on an ITO substrate. (b) Surface height analysis of the Ag NP array. The Ag NP array was prepared by a double-potential deposition method (at -0.40 V and 0.25 V for 20 ms and 0.5 h, respectively) in an aqueous solution of 0.2 M KNO₃, 5 mM AgNO₃ and 1 mM sodium citrate.

Fig. S2



Fig. S2. Energy dispersive spectrum (EDS) of the Ag/Ag_3PO_4 composite electrode.



Fig. S3. SEM images of the Ag/Ag_3PO_4 composite with different Ag_3PO_4 deposition time: (a) and (b) 2 s, (c) and (d) 4 s, (e) and (f) 8 s, (g) and (h) 16 s.