A. Solar Energy Materials and Solar Cells

Session A1: Friday Afternoon, Oct. 21, 2016
Chairs: Prof. Zou Dechun, Peking University
Prof. Wang Cong, Beihang University
Room: 51006

13:30-14:00 A-01(Invited)
A hydrophobic hole transporting system to improve moisture stability of perovskite solar cells
Lixin Xiao, Cuncun Wu
Peking University

14:00-14:30 A-02(Invited)
Solar Thermal Power and Key Material Technology
Cong Wang, Ying Sun, Lei Wang, Yuping Ning, Ping Song
Dept. of Physics, Beihang University (BUAA), Beijing, 100191 CHINA

14:30-14:50 A-03
The sintering microstructure, and electrical properties of Nb2O5-doped TiO2 ceramic targets
Qi Ling, Haitao Yang
School of Materials, Shenzhen University

14:50-15:10 A-04
Stability of Lead-Free Tin Halide Perovskite Thin Films
Jianqing Chen, Zhexie Chen, Lin Wang, Donghui Yang, Dan Song, Qiping Tan, Jinghua Jiang, Aibin Ma
College of Mechanics and Materials, Hohai University

15:10-15:30 A-05
Improved performance of co-sputtered Ni-Ti oxide films for all-solid-state electrochromic devices
Dongmei Dong, Wemwen Wang, Guobo Dong, Fan Zhang, Hang Yu, Yinchun He, Xungang Diao
Beihang University

15:30-15:40 Coffee Break

15:40-16:10 A-06(Invited)
Fabrication of 6.2% Efficient CZTSSe Solar Cells by two step process
Hsin Ying Lin, Cherng Yuh Su
Taipei University of Technology

16:10-16:40 A-07(Invited)
All-solid light driven charging and storage textile for wearable applications
Xing Fan, Nannan Zhang, Yi Huang, Li Cheng
College of Chemistry and Chemical Engineering, Chongqing University

16:40-17:00 A-08
Fabrication of Au Wire/ITO Film Based Flexible and Transparent Heaters by an Electroplating Process
Xiaodan Xue, Jiangan Ma, Peng Li
Northeast Normal University

17:00-17:20 A-09
Efficient Planar Perovskite Solar Cells via Low-Pressure Vapor-Assisted Solution Process with TiO2/Fullerene as Electron Collection Bilayer
Zheng Zhou1,2, Jia Xu1,2, Li Xiao1,2, Jing Chen1, Bing Zhang1, Jianxi Yao1,3, Songyuan Dai1,2
1. State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, North China Electric Power University, Beijing 102206, China
2. Beijing Key Laboratory of Energy Safety and Clean Utilization, North China Electric Power University, Beijing 102206, China
3. Beijing Key Laboratory of Novel Film Solar Cell, North China Electric Power University, Beijing 102206, China

Session A2: Saturday Morning, Oct. 22, 2016
Chairs: Prof. Xiao Lixin, Peking University
Prof. Fan Xing, Chongqing University
Room: 51006

08:30-09:00 A-01(Invited)
Efficient and Stable Inverted Planar Structured Perovskite Solar Cells with Heavily Doped Inorganic Interfacial Layers
Wei Chen
Huazhong University of Science and Technology

09:00-09:30 A-02(Invited)
SnO-based front-contact silver paste for crystalline solar cells
Liangliang Li, Jiachu Jiang
School of Materials Science and Engineering, Tsinghua University

09:30-09:50 A-03
Mixed-Organic-Cation (FA)x(MA)1-xPbI3 Planar Perovskite Solar Cells via Low-pressure
Vapor-assisted Solution Process
Jing Chen1, Jia Xu2,3, Li Xiao2,3, Bin Zhang1, Jianxi Yao1, Songyuan Dai1
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2. Beijing Key Laboratory of Novel Film Solar Cell, North China Electric Power University, Beijing 102206, China
3. Beijing Key Laboratory of Energy Safety and Clean Utilization, North China Electric Power University, Beijing 102206, China

Effect of sintering temperature on the physical properties of CIGS targets and the sputtered CIGS films
Zhou Yu1, Tao Guo1, Lian Liu1, Yong Zhao1,2
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2. School of physics science and technology, Southwest Jiaotong University, Chengdu 610031, China

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2. School of physics science and technology, Southwest Jiaotong University, Chengdu 610031, China
Infrared-Reflective ZnFe2O4 Dark Pigments
Mantana Šuwan, Nuchjarin Sangwong, Sithisunthorn Supothina
National Metal and Materials Technology Center, National Science and Technology Development Agency

A-P07
Facile Synthesis of Ag2Se Quantum Dots and Enhanced Performances of Co-sensitized Solar Cells Based on Ag2Se/N719 TiO2 photoanode
Deng Duo1,2, Xueyi Guo1,2, Qinghua Tian1
1. School of Metallurgy and Environment, Central South University, Hunan Changsha 410083
2. Cleaner Metallurgical Engineering Research Center, Nonferrous Metal Industry of China, Hunan Changsha 410083

A-P08
Bifacial Dye-sensitized Solar Cells Based on Ag2S Quantum Dots Modified Transparent Polyaniline Counter Electrode
Jing Gao, Xueyi Guo, Zheng Zhang, Dequn Pan, Ying Yang
School of Metallurgy and Environment, Central South University

A-P09
Influence of TiO2 Film Porosity on the Performance of CH3NH3PbI3 based perovskite solar cells
Xiaodan Sun1,2, Li Xiao1,2, Jing Chen1, Jia Xu1,2, Jianxi Yao1,3, Songyuan Dai1,2
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3. Beijing Key Laboratory of Novel Film Solar Cell, North China Electric Power University, Beijing 102206, China

A-P10
Controllable remnant PbI2 for highly efficient perovskite solar cells through PbAc2 additives
Li Xiao1,2, Jia Xu1,2, Jing Chen1,2, Xiaodan Sun1, Bing Zhang1, Jianxi Yao1, Songyuan Dai1
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A-P11
Fabrication a novel hierarchical TiO2 nanorod
arrays for application in dye-sensitized solar cells  
Jingyang Wang, Rentao Xie, Lexiao Cheng, Shaohua Qu, Zhicheng Zhong, Song Wang  
1. School of Physics and Electronic Engineering, Hubei University of Arts and Science, Xiangyang, 441053, China  
2. Hubei Key Laboratory of Low Dimensional Optoelectronic Materials and Devices, Hubei University of Arts and Science, Xiangyang, 441053, China

A-P12  
Controllable growth of single phase Cu2O modified TiO2 nanotube arrays heterojunction with enhanced visible light degradation of methyl orange  
Xu Zhan, Qing Ma, Jian Jun Chen, Gui Gen Wang, Shao Jun Liu, Man Lin Tan  
1. research institute of tsinghua university in Shenzhen  
2. Harbin Institute of Technology Shenzhen Graduate  
3. Central South University

A-P13  
Controllable preparation, construction and photocatalysis of early transition metal composite oxides with monolayer 2D nanosheets morphology  
Ling Wu, Jinhua Xiong, Shijing Liang, Yuhao Liu, Yujie Song  
State key laboratory of photocatalysis on energy and environment, Fuzhou University, Fuzhou 350002, P. R. China.

A-P14  
Metal-assisted chemical etching of silicon and photoelectric applications  
Bin Li, Gao Niu, Xiu Wen Zhou, Xu Dong Liu, Xin Ye, Chao Yang Wang  
1. Research Center of Laser Fusion, China Academy of Engineering Physics  
2. School of Materials Science and Engineering, Southwest University of Science and Technology

A-P15  
Novel solar absorptive and infrared reflective properties of Cu-doped Sm0.5Sr0.5Col-xCuxO3  
Ling Wei, Yi Lu, Zhenggang Fang, Rong Zhang, Chunhua Lu, Zhongzi Xu, Shunyan Tao  
1. State Key Laboratory of Materials-Oriented Chemical Engineering, College of Materials Science and Engineering, Nanjing Tech University, Nanjing 210009, P. R. China  
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3. Jiangsu National Synergetic Innovation Center for Advanced Materials (SICAM), Nanjing Tech University, Nanjing 210009, P. R. China  
4. Key Laboratory of Inorganic Coating Materials, Chinese Academy of Sciences, Shanghai 200050, P. R. China

A-P16  
Investigation on the thermal stability of solar selective absorbing coating  
Beibei Dai  
Center for Condensed Matter and Materials Physics, Department of Physics, Beihang University, Beijing 100191, P.R.China

A-P17  
Graphene/zinc aluminum mixed metal oxides photo anode for CdS quantum dot-sensitized solar cell  
Jiupeng Cao, Yatong Zhu, Xiaoyu Yang, Xiaoyan Tang, Cha Liu, Hongdi Xiao, Haiping Li, Wanguo Hou, Jianqiang Liu  
1. School of Physics, Shandong University  
2. Key Laboratory of Colloid and Interface Chemistry (Ministry of Education), Shandong University

A-P18  
Study on properties of solar selective absorbing coatings deposited by magnetron sputtering  
Ping Song, Ying Sun, Yongxin Wu, Yuling Zhang, Beibei Dai, Cong Wang  
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