

- 256 Haiyang Yuan, Ningning Sun, Jianfu Chen, *Hua Gui Yang*, P. Hu, Haifeng Wang*, Activity self-optimization steered by dynamically evolved Fe³⁺@Fe²⁺ double-center on Fe₂O₃ catalyst for NH₃-SCR, *JACS Au*, **2022**, 2 (10): 2352-2358.
- 255 Wenjing Li†, Zhenxin Lou†, Hai Yang Yuan*, *Hua Gui Yang**, Hai Feng Wang*, Oriented design of triple atom catalysts for electrocatalytic nitrogen reduction with the genetic-algorithm-based global optimization method driven by first principles calculations, *J. Mater. Chem. A*, **2022**, 10:16106-16114.
- 254 Weiye Qu, Haiyang Yuan, Zhouhong Ren, Jizhen Qi, Dongrun Xu, Junxiao Chen, Liwei Chen, *Hua Gui Yang*, Zhen Ma, Xi Liu*, Haifeng Wang*, Xingfu Tang*, An atom-pair design strategy for optimizing the synergistic electron effects of catalytic sites in NO selective reduction, *Angew. Chem. Int. Ed.*, **2022**, 61: e202212703.
- 253 Jiayue Zhao, Yuanwei Liu, Wenjing Li, Chunfang Wen, Huaiqin Fu, Hai Yang Yuan, Peng Fei Liu*, *Hua Gui Yang**, A focus on the electrolyte: Realizing CO₂ electroreduction from aqueous solution to pure water, *Chem Catal.*, **2022**, DOI: 10.1016/j.checat.2022.11.010.
- 252 Haoyang Lin†, Zhenxin Lou†, Yeliang Ding, Xiaoxia Li, Fangxin Mao, Hai Yang Yuan, Peng Fei Liu*, *Hua Gui Yang**, Oxygen evolution electrocatalysts for the proton exchange membrane electrolyzer: Challenges on stability, *Small Methods*, **2022**, 6 (12): 2201130.
- 251 Wenli Jia, Xuefeng Wu, Yuanwei Liu, Jiayue Zhao, Yang Zhang, Peng Fei Liu*, Qilin Cheng*, *Hua Gui Yang**, Porous ZnIn₂S₄ with confined sulfur vacancies for highly efficient visible-light-driven photocatalytic H₂ production, *J. Mater. Chem. A*, **2022**, 10 (48): 25586-25594.
- 250 Yang Zhang, Li Ting Gan, Mengmin Wang, Wenxin Ning, Peng Fei Liu*, *Hua Gui Yang**, A conformal carbon nanolayer coated Fe₂O₃ cocatalyst for the promoted activity of plasma-sputtered BiVO₄ photoanode, *Chem. Eur. J.*, **2022**, DOI: 10.1002/chem.202203165.
- 249 Yijun Zhang, Fangxin Mao, Yuanwei Liu, Xuefeng Wu, Chunfang Wen, Sheng Dai, Pengfei Liu*, *Hua Gui Yang**, Installation of high-valence tungsten in MIL-125(Ti) for boosted photocatalytic hydrogen evolution, *Sci. China Mater.*, **2022**, 65: 1237-1244.
- 248 Liting Gan, Yang Zhang, Peng Fei Liu*, *Hua Gui Yang**, Enhanced surface kinetics and charge transfer of BiVO₄ photoanodes by Rh₂O₃ cocatalyst loading for improved solar water oxidation, *Chem. Asian. J.*, **2022**, 17 (5): e202101359.
- 247 Lin Cao, Xuefeng Wu, Yuanwei Liu, Fangxin Mao, Yingli Shi, Jiayu Li, Minghui Zhu, Sheng Dai, Aiping Chen, Peng Fei Liu*, *Hua Gui Yang**, Electrochemical conversion of CO₂ to syngas with a stable H₂/CO ratio in a wide potential range over ligand-engineered metal-organic frameworks, *J. Mater. Chem. A*, **2022**, 10 (18): 9954-9959.
- 246 Yingli Shi, Chunfang Wen, Xuefeng Wu, Jiayue Zhao, Fangxin Mao*, Peng Fei

- Liu, ***Hua Gui Yang****, In situ reconstruction of vegetable sponge-like Bi₂O₃ for efficient CO₂ electroreduction to formate, ***Mater. Chem. Front.***, **2022**, 6 (8): 1091-1097.
- 245 Yiheng Shi, Jingjing He, Huijun Lian, Xinyi Liu, Haiyang Yuan*, Yu Hou, Shuang Yang*, ***Hua Gui Yang***, Cooperative adsorption of metal-organic complexes on CsPbI₂Br perovskite surface for photovoltaic efficiency exceeding 17%, ***ChemSusChem***, **2022**, 15 (23): e202202041.
- 244 Xinyi Liu, ***Hua Gui Yang***, Shuang Yang*, Yu Hou*, Spontaneous formation of heterostructured perovskite films for photovoltaic application, ***Chem. Eur. J.***, **2022**, e202202895.
- 243 Yu Peng, Xing Wang, Lina Li, Huang Ye, Shuang Yang, ***Hua Gui Yang***, Junhua Luo*, Yu Hou*, Moisture-resistant chiral perovskites for white-light circularly polarized photoluminescence, ***Adv. Opt. Mater.***, **2022**, 11(1): 2201888.
- 242 Qing Li†, Yichu Zheng†, Zhanpeng Wei, Jin Xie, Can Zou, Xinyi Liu, Da Liu, Ziren Zhou, ***Hua Gui Yang***, Shuang Yang*, Yu Hou*, Halide diffusion equilibrium and its impact on efficiency evolution of perovskite solar cells, ***Adv. Energy Mater.***, **2022**, 12(48): 2202982.
- 241 Hai Yang Yuan, Peng Fei Liu*, ***Hua Gui Yang****, Peculiar double-layered transition metal hydroxide nanosheets, ***Matter***, **2022**, 5 (4): 1063-1065.
- 240 Huai Qin Fu, Min Zhou, Peng Fei Liu, Porun Liu, Huajie Yin, Kai Zhi Sun, ***Hua Gui Yang****, Mohammad Al-Mamun, Peijun Hu, Hai-Feng Wang*, Huijun Zhao*, Hydrogen spillover-bridged Volmer/Tafel processes enabling ampere-level current density alkaline hydrogen evolution reaction under low overpotential, ***J. Am. Chem. Soc.***, **2022**, 144 (13): 6028-6039.
- 239 Huai Qin Fu, Junxian Liu, Nicholas M. Bedford, Yun Wang, Ji Wei Sun, Yu Zou, Mengyang Dong, Joshua Wright, Hui Diao, Porun Liu*, ***Hua Gui Yang***, Huijun Zhao*, Synergistic Cr₂O₃@Ag heterostructure enhanced electrocatalytic CO₂ reduction to CO, ***Adv. Mater.***, **2022**, 34 (29): 2202854.
- 238 Kai Zhi Sun, Chun Fang Wen, Xue Qu, Peng Fei Liu*, ***Hua Gui Yang****, 1D@2D hierarchical structures of Co(OH)_x nanosheets on NiMoO_x nanorods can mediate alkaline hydrogen evolution with industry-level current density and stability, ***Small Methods***, **2022**, 6(10): 2200484.
- 237 Benben Shen†, Mengjiong Chen†, Fan Zhang, Da Liu, Xinyi Liu, Jin Xie, Shuang Yang*, Yu Hou*, ***Hua Gui Yang***, Chemical bath deposition of NiO_x-NiSO₄ heterostructured hole transportlayer for perovskite solar cells, ***Adv. Energy Sustain. Res.***, **2022**, 3(11): 2200055.
- 236 Ming Hua Wang†, Zhen Xin Lou†, Xuefeng Wu, Yuanwei Liu, Jia Yue Zhao, Kai Zhi Sun, Wen Xin Li, Jiacheng Chen, Hai Yang Yuan*, Minghui Zhu, Sheng Dai, Peng Fei Liu*, ***Hua Gui Yang***, Operando high-valence Cr-modified NiFe hydroxides for water oxidation, ***Small***, **2022**, 18 (19): 2200303.
- 235 Huai Qin Fu, Junxian Liu, Nicholas M. Bedford, Yun Wang, Joshua Wright, Peng

- Fei Liu, Chun Fang Wen, Liang Wang, Huajie Yin, Dongchen Qi, Porun Liu*, ***Hua Gui Yang***, Huijun Zhao*, Operando converting BiOCl into Bi₂O₂(CO₃)_xCl_y for efficient electrocatalytic reduction of carbon dioxide to formate, ***Nano-Micro Lett.***, **2022**, 14 (1): 121.
- 234 Xin Yu Zhang, Wen Jing Li, Jiacheng Chen, Xue Feng Wu, Yuan Wei Liu, Fangxin Mao, Hai Yang Yuan*, Minghui Zhu, Sheng Dai, Hai Feng Wang, P. Hu, Chenghua Sun, Peng Fei Liu*, ***Hua Gui Yang****, In operando identification of in situ formed metalloid Zinc^{δ+} active sites for highly efficient electrocatalyzed carbon dioxide reduction, ***Angew. Chem. Int. Ed.***, **2022**, 61 (28): e202202298.
- 233 Yijun Zhang, Chunfang Wen, Xuefeng Wu, Peng Fei Liu*, Hua Gui Yang*, Reverse replacement in NH₂-MIL-125 with 1,4-Dicarboxybenzene for enhanced photocatalytic hydrogen generation, ***Chem. Eur. J.***, **2022**, 28(56): e202200938
- 232 Wen LiJia, Hai Yang Yuan, Xuefeng Wu, Yuanwei Liu, Sheng Dai, Qilin Cheng*, Peng Fei Liu*, ***Hua Gui Yang***, Surface Cu⁺ modified ZnIn₂S₄ for promoted visible-light photocatalytic hydrogen evolution, ***J. Energy. Chem.***, **2022**, 74: 341-348.
- 231 Yuanwei Liu, Zhen Xin Lou, Xuefeng Wu, Bingbao Mei, Jiacheng Chen, Jia Yue Zhao, Ji Li, Hai Yang Yuan, Minghui Zhu, Sheng Dai, Chenghua Sun, Peng Fei Liu*, Zheng Jiang*, ***Hua Gui Yang****, Molecularly distorted local structure in Bi₂CuO₄ oxide to stabilize lattice oxygen for efficient formate electrosynthesis, ***Adv. Mater.***, **2022**, 34(29):2202568.
- 230 Da Liu†, Mengjiong Chen†, Zhanpeng Wei, Can Zou, Xinyi Liu, Jin Xie, Qing Li, Shuang Yang*, Yu Hou*, ***Hua Gui Yang***, Strain-free hybrid perovskite films based on molecular buffer interface for efficient solar cells, ***J. Mater. Chem. A***, **2022**, 10 (20): 10865-10871.
- 229 Fan Zhang, Ziren Zhou, Can Zou, Xinyi Liu, Jin Xie, Da Liu, Shuang Yang*, Yu Hou*, ***Hua Gui Yang***, A self-formed stable PbI₂/NiO_x interface with increased Ni³⁺ centers for perovskite photovoltaics, ***Chem. Eur. J.***, **2022**, 28 (24): e202200202.
- 228 Zhenxin Lou, Wenjing Li, Haiyang Yuan*, Yu Hou, ***Hua Gui Yang***, Haifeng Wang*, Structural rule of N-coordinated single-atom catalysts for electrochemical CO₂ reduction, ***J. Mater. Chem. A***, **2022**, 10 (7): 3585-3594.
- 227 Ziren Zhou, Hui Jun Lian, Jin Xie, Wen Cheng Qiao, Xue Feng Wu, Yiheng Shi, Xue Lu Wang, Sheng Dai, Haiyang Yuan, Yu Hou*, Shuang Yang*, ***Hua Gui Yang***, Non-selective adsorption of organic cations enables conformal surface capping of perovskite grains for stabilized photovoltaic operation, ***Cell Rep. Phys. Sci.***, **2022**, 3 (2): 100760.
- 226 Xinyi Liu, Huijun Lian, Ziren Zhou, Can Zou, Jin Xie, Fan Zhang, Haiyang Yuan, Shuang Yang*, Yu Hou*, ***Hua Gui Yang***, Stoichiometric dissolution of defective CsPbI₂Br surfaces for inorganic solar cells with 17.5% efficiency, ***Adv. Energy Mater.***, **2022**, 12 (14): 2103933.

- 225 Xin Yu Zhang†, Wen Jing Li†, Xue Feng Wu, Yuan Wei Liu, Jiacheng Chen, Minhui Zhu, Hai Yang Yuan*, Sheng Dai, Hai Feng Wang, Zheng Jiang, Peng Fei Liu* and Hua Gui Yang*, Selective methane electrosynthesis enabled by a hydrophobic carbon coated copper core-shell architecture, *Energy Environ. Sci.*, **2022**, 15 (1): 234-243.
- 224 Xuefeng Wu, Ji Wei Sun, Peng Fei Liu, Jia Yue Zhao, Yuanwei Liu, Lisheng Guo, Sheng Dai, Hua Gui Yang* and Huijun Zhao*, Molecularly dispersed cobalt phthalocyanine mediates selective and durable CO₂ reduction in a membrane flow cell, *Adv. Funct. Mater.*, **2021**, 32 (11): 2107301.
- 223 Chun Fang Wen, Min Zhou, Peng Fei Liu*, Yuanwei Liu, Xuefeng Wu, Fangxin Mao, Sheng Dai, Beibei Xu, Xue Lu Wang, Zheng Jiang, Peijun Hu, Shuang Yang, Hai Feng Wang*, Hua Gui Yang*, Highly ethylene-selective electrocatalytic CO₂ reduction enabled by isolated Cu-S motifs in metal-organic framework-based precatalysts, *Angew. Chem. Int. Ed.*, **2021**, 61 (2): e202111700.
- 222 Yichu Zheng†, Bing Ge†, Lirong Zheng, Yu Hou*, Shuang Yang* and Hua Gui Yang, Solution-processable nickel-chromium ternary oxide as an efficient hole transport layer for inverted planar perovskite solar cells, *J. Mater. Chem. A*, **2021**, 9 (38): 21792-21798.
- 221 Ze Qing Lin†, Hui Jun Lian†, Bing Ge, Ziren Zhou, Haiyang Yuan*, Yu Hou, Shuang Yang* and Hua Gui Yang, Mediating the local oxygen-bridge interactions of oxy salt/perovskite interface for defect passivation of perovskite photovoltaics, *Nano-Micro Lett.*, **2021**, 13 (1): 177.
- 220 Bing Ge, Zi Ren Zhou, Xue Feng Wu, Li Rong Zheng, Sheng Dai, Ai Ping Chen, Yu Hou, Hua Gui Yang* and Shuang Yang*, Self-organized Co₃O₄-SrCO₃ percolative composites enabling nanosized hole transport pathways for perovskite solar cells, *Adv. Funct. Mater.*, **2021**, 31 (46): 2106121.
- 219 Liangyao Xue, Xuefeng Wu, Yuanwei Liu, Beibei Xu, Xuelu Wang, Sheng Dai*, Pengfei Liu* and Hua Gui Yang*, Hydrophobic 1-octadecanethiol functionalized copper catalyst promotes robust high-current CO₂ gas-diffusion electrolysis, *Nano Res.*, **2021**, 15 (2): 1393-1398.
- 218 Yuanwei Liu†, Li Jie Wang†, Hao Zhang, Hai Yang Yuan, Qinghua Zhang, Lin Gu, Hai Feng Wang, P. Hu, Peng Fei Liu*, Zheng Jiang* and Hua Gui Yang*, Boosting photocatalytic water oxidation over bifunctional Rh⁰-Rh³⁺ sites, *Angew. Chem. Int. Ed.*, **2021**, 60 (42): 22761-22768.
- 217 Chuan Zhou, Jia Yue Zhao, Peng Fei Liu, Jianfu Chen, Sheng Dai, Hua Gui Yang, P. Hu and Haifeng Wang*, Towards the object-oriented design of active hydrogen evolution catalysts on single-atom alloys, *Chem. Sci.*, **2021**, 12 (31): 10634-10642.
- 216 Shi Yang Xiao, Yuanwei Liu, Xue Feng Wu, Li Ting Gan, Hao Yang Lin, Li Rong Zheng, Sheng Dai, Peng Fei Liu* and Hua Gui Yang*, A low-valent cobalt oxide co-catalyst to boost photocatalytic water oxidation via enhanced hole-capturing ability, *J. Mater. Chem. A*, **2021**, 9 (26): 14786-14792.

- 215 Hong Wei Qiao, Mengjiong Chen, Ziren Zhou, Qilin Cheng, Yu Hou* and **Hua Gui Yang***, Improved photovoltaic performance of CsPbI₂Br perovskite films via bivalent metal chloride doping, *Front. Energy Res.*, **2021**, 9: 692059.
- 214 Hai Yang Yuan, Jing Yang Bai, Beibei Xu, Xin Yan Li, Shi Yang Xiao, Peng Fei Liu, Xue Lu Wang and **Hua Gui Yang**, Graphite carbon nitride doped with a benzene ring for enhanced photocatalytic H₂ evolution, *Chem. Commun.*, **2021**, 57 (24): 3042-3045.
- 213 Pengfei Liu, Chongwu Wang, Yun Wang, Yuhang Li, Bo Zhang, Li Rong Zheng, Zheng Jiang, Huijun Zhao and **Hua Gui Yang**, Grey hematite photoanodes decrease the onset potential in photoelectrochemical water oxidation, *Sci. Bull.*, **2021**, 66 (10): 1013-1021.
- 212 Can Zou, Mengjiong Chen, Ziren Zhou, Shuang Yang*, Yu Hou* and **Hua Gui Yang**, Highly ordered mesoporous Co₃O₄ cubes/graphene oxide heterostructure as efficient counter electrodes in dye-sensitized solar cells, *J. Mater. Sci. Mater. Electron.*, **2021**, 32 (12): 16519-16527.
- 211 Mengjiong Chen†, Hong Wei Qiao†, Ziren Zhou, Bing Ge, Jingjing He, Shuang Yang*, Yu Hou* and **Hua Gui Yang**, Homogeneous doping of entire perovskite solar cells via alkali cation diffusion from hole transport layer, *J. Mater. Chem. A*, **2021**, 9 (14): 9266-9271.
- 210 Bing Ge, Ze Qing Lin, Zi Ren Zhou, Hong Wei Qiao, Ai Ping Chen, Yu Hou*, Shuang Yang* and **Hua Gui Yang**, Boric acid mediated formation and doping of NiO_x layers for perovskite solar cells with efficiency over 21%, *Sol. RRL*, **2021**, 5 (4): 2000810.
- 209 Ziren Zhou†, Hongwei Qiao†, Xiaolong Li, Chen Lin, Jin Xie, Yiheng Shi, Zeqing Lin, Bing Ge, Mengjiong Chen, Yizheng Jin, Shuang Yang*, Yu Hou* and **Hua Gui Yang**, Oriented inorganic perovskite absorbers processed by colloidal-phase fumigation, *Sci. China Mater.*, **2021**, 64 (10): 2421-2429.
- 208 Xinyi Liu, Hong Wei Qiao, Mengjiong Chen, Bing Ge, Shuang Yang*, Yu Hou* and **Hua Gui Yang**, Inverted perovskite solar cells based on potassium salt-modified NiO_x hole transport layers, *Mater. Chem. Front.*, **2021**, 5 (9): 3614-3620.
- 207 Zhonghui Gao, Ying Zhao, Haifeng Wang, Yun Wang Yun Wang, Lixue Jiang, Yiming Xu, Baixiang Xu, Li Rong Zheng, Chuanhong Jin, Porun Liu*, **Hua Gui Yang**, Huijun Zhao, Xianjin Yang and Yunhui Huang*, Rapid-heating-triggered in situ solid-state transformation of amorphous TiO₂ nanotubes into well-defined anatase nanocrystals, *Cryst. Growth Des.*, **2019**, 19 (2): 1086-1094.
- 206 Ziren Zhou, Hong Wei Qiao, Yu Hou*, **Hua Gui Yang*** and Shuang Yang*, Epitaxial halide perovskite-based materials for photoelectric energy conversion, *Energy Environ. Sci.*, **2021**, 14 (1): 127-157.
- 205 Fangxin Mao, Peng Fei Liu, Pengfei Yang, Jinlou Gu* and **Hua Gui Yang***, One-step coating of commercial Ni nanoparticles with a Ni, N-co-doped carbon shell

- towards efficient electrocatalysts for CO₂ reduction, *Chem. Commun.*, **2020**, 56 (54): 7495-7498.
- 204 Fangxin Mao, Peng Fei Liu, Pengfei Yang, Jinlou Gu*, and Hua Gui Yang*, Carbon nanotubes Co doped with nickel and nitrogen for electrochemical syngas production, *ACS Appl. Nano Mater.*, **2020**, 3 (9): 8581-8585
- 203 Jin Xie†, Ziren Zhou†, Hongwei Qiao, Mengjiong Chen, Lijie Wang, Shuang Yang*, Yu Hou* and Hua Gui Yang, Modulating MAPbI₃ perovskite solar cells by amide molecules: Crystallographic regulation and surface passivation, *J. Energy Chem.*, **2021**, 56: 179-185.
- 202 Jingjing He, Junxian Liu, Yu Hou*, Yun Wang*, Shuang Yang* and Hua Gui Yang, Surface chelation of cesium halide perovskite by dithiocarbamate for efficient and stable solar cells, *Nat. Commun.*, **2020**, 11 (1): 4237.
- 201 Jingjing He, Bing Ge, Yu Hou*, Shuang Yang* and Hua Gui Yang, A dendrite-structured RbX (X=Br, I) interlayer for CsPbI₂Br perovskite solar cells with over 15 % stabilized efficiency, *ChemSusChem*, **2020**, 13 (20): 5443-5448.
- 200 Ze Qing Lin, Hong Wei Qiao, Zi Ren Zhou, Yu Hou, Xiaolong Li, Hua Gui Yang* and Shuang Yang*, Water assisted formation of highly oriented CsPbI₂Br perovskite films with the solar cell efficiency exceeding 16%, *J. Mater. Chem. A*, **2020**, 8 (34): 17670-17674.
- 199 Xiaole Zhao, Shan Chen, Huajie Yin*, Shuaiyu Jiang, Kun Zhao, Jian Kang, Peng Fei Liu, Lixue Jiang, Zhengju Zhu, Dandan Cui, Porun Liu, Xiaojun Han, Hua Gui Yang* and Huijun Zhao*, Perovskite microcrystals with intercalated monolayer MoS₂ nanosheets as advanced photocatalyst for solar-powered hydrogen generation, *Matter*, **2020**, 3 (3): 935-949.
- 198 Jinze Liu, Yuhang Li*, Xiaodong Zhou, Hao Jiang, Hua Gui Yang and Chunzhong Li*, Positively charged Pt-based cocatalysts: an orientation for achieving efficient photocatalytic water splitting, *J. Mater. Chem. A*, **2020**, 8 (1): 17-26.
- 197 Peng Fei Liu†, Huajie Yin†, Huai Qin Fu, Meng Yang Zu, Hua Gui Yang* and Huijun Zhao*, Activation strategies of water-splitting electrocatalysts, *J. Mater. Chem. A*, **2020**, 8 (20): 10096-10129.
- 196 Jing Jing He, Zi Ren Zhou, Ze Qing Lin, Bing Ge, Hong Wei Qiao, Yu Hou*, Shuang Yang*, and Hua Gui Yang, Spontaneous passivation of perovskite solar cells by titanium tetrafluoride, *ACS Appl. Energy Mater.*, **2020**, 3 (5): 4121-4126.
- 195 Pengfei Liu†, Chongwu Wang†, Lijie Wang, Xuefeng Wu, Li Rong Zheng and Hua Gui Yang*, Ultrathin hematite photoanode with gradient Ti doping, *Research*, **2020**, 2020: 5473217.
- 194 Ziren Zhou, Shuang Yang*, Kaixuan Xu, Hong Wei Qiao, Jin Xie, Zeqing Lin, Bing Ge, Jingjing He, Mengjiong Chen, Jun Zhang, Yu Hou* and Hua Gui Yang, Diammonium-cesium lead halide perovskite with phase-segregated

- interpenetrating morphology for photovoltaics, *J. Phys. Chem. Lett.*, **2020**, 11 (3): 747-754.
- 193 Li Jie Wang, Jing Yang Bai, Yi Jun Zhang, Fangxin Mao, Yuanwei Liu, Haiyang Yuan, Peng Fei Liu* and Hua Gui Yang*, Controllable synthesis of conical BiVO₄ for photocatalytic water oxidation, *J. Mater. Chem. A*, **2020**, 8 (5): 2331-2335.
- 192 Jing Yang Bai, Li Jie Wang, Yi Jun Zhang, Chun Fang Wen, Xue Lu Wang*, Hua Gui Yang*, Carboxyl functionalized graphite carbon nitride for remarkably enhanced photocatalytic hydrogen evolution, *Appl. Catal. B Environ.*, **2020**, 266: 118590.
- 191 Yijun Zhang, Fangxin Mao, Lijie Wang, Haiyang Yuan*, Peng Fei Liu*, Hua Gui Yang*, Recent advances in photocatalysis over metal-organic frameworks-based materials, *Sol. RRL*, **2019**, 4 (5): 1900438.
- 190 Chun Fang Wen, Fangxin Mao, Yuanwei Liu, Xin Yu Zhang, Huai Qin Fu, Li Rong Zheng, Peng Fei Liu* and Hua Gui Yang*, Nitrogen-stabilized low-valent Ni motifs for efficient CO₂ electrocatalysis, *ACS Catal.*, **2020**, 10 (2): 1086-1093.
- 189 Peng Zhao, Lijie Wang, Yusen Wu, Tao Yang, Yun Ding, Hua Gui Yang and Aiguo Hu*, Hyperbranched conjugated polymer dots: the enhanced photocatalytic activity for visible light-driven hydrogen production, *Macromolecules*, **2019**, 52 (11): 4376-4384.
- 188 Xin Yu Zhang, Haiyang Yuan, Fangxin Mao, Chun Fang Wen, Li Rong Zheng, Peng Fei Liu* and Hua Gui Yang*, Boosting the alkaline hydrogen evolution electrocatalysis over metallic nickel sites through synergistic coupling with vanadium sesquioxide, *ChemSusChem*, **2019**, 12 (23): 5063-5069.
- 187 Peng Fei Liu†, Meng Yang Zu†, Li Rong Zheng and Hua Gui Yang*, Bismuth oxyiodide microflower-derived catalysts for efficient CO₂ electroreduction in a wide negative potential region, *Chem. Commun.*, **2019**, 55 (82): 12392-12395.
- 186 Fangxin Mao†, Yan-Huan Jin†, Peng Fei Liu, Pengfei Yang, Le Zhang, Luyang Chen, Xiao-Ming Cao* Jinlou Gu* and Hua Gui Yang*, Accelerated proton transmission in metal-organic frameworks for the efficient reduction of CO₂ in aqueous solutions, *J. Mater. Chem. A*, **2019**, 7 (40): 23055-23063.
- 185 Yu Hou†, Li Juan Tang†, Hong Wei Qiao, Zi Ren Zhou, Yu Lin Zhong, Li Rong Zheng, Meng Jiong Chen, Shuang Yang* and Hua Gui Yang*, Ni-Co-O hole transport materials: gap state assisted hole extraction with superior electrical conductivity, *J. Mater. Chem. A*, **2019**, 7 (36): 20905-20910.

- 184 Bing Ge, Hong Wei Qiao, Ze Qing Lin, Zi Ren Zhou, Ai Ping Chen*, Shuang Yang*, Yu Hou* and Hua Gui Yang, Deepening the valence band edges of NiO_x contacts by alkaline earth metal doping for efficient perovskite photovoltaics with high open-circuit voltage, *Sol. RRL*, **2019**, 3 (8): 1900192.
- 183 Huai Qin Fu, Le Zhang, Li Rong Zheng, Peng Fei Liu*, Huijun Zhao and Hua Gui Yang*, Enhanced CO₂ electroreduction performance over Cl-modified metal catalysts, *J. Mater. Chem. A*, **2019**, 7 (20): 12420-12425.
- 182 Peng Yun Liu, Wei Wang, Shao Min Liu*, Hua Gui Yang, Zong Ping Shao*, Fundamental understanding of photocurrent hysteresis in perovskite solar cells, *Adv. Energy Mater.* **2019**, 9 (13): 1803017.
- 181 Lulu Wang, Mohammad Al-Mamun*, Yu Lin Zhong*, Porun Liu, Yun Wang, Hua Gui Yang, Huijun Zhao*, Enhanced thermochemical water splitting through formation of oxygen vacancy in La_{0.6}Sr_{0.4}BO_{3-δ} (B=Cr, Mn, Fe, Co, and Ni) perovskites, *ChemPlusChem*, **2018**, 83 (10): 924-928.
- 180 Peng Fei Liu, Le Zhang, Li Rong Zheng and Hua Gui Yang*, Surface engineering of nickel selenide for an enhanced intrinsic overall water splitting ability, *Mater. Chem. Front.*, **2018**, 2 (9): 1725-1731.
- 179 Zhangfeng Shen, Meiwen Wang, Lihong Liu*, M. Veronica Sofianos, Hua Gui Yang, Shaobin Wang, Shaomin Liu*, Carbon-coated three-dimensional WS₂ film consisting of WO₃@WS₂ core-shell blocks and layered WS₂ nanostructures as counter electrodes for efficient dye-sensitized solar cells, *Electrochim. Acta*, **2018**, 266: 130-138.
- 178 Lulu Wang†, Mohammad Al-Mamun†, Porun Liu, Yu Lin Zhong, Yun Wang, Hua Gui Yang, Huijun Zhao*, Enhanced thermochemical H₂ production on Ca-doped lanthanum manganite perovskites through optimizing the dopant level and re-oxidation temperature, *Acta Metall. Sin-Engl.*, **2018**, 31 (4): 431-439.
- 177 Lulu Wang†, Mohammad Al-Mamun†, Porun Liu, Yun Wang, Hua Gui Yang, Huijun Zhao*, Notable hydrogen production on La_xCa_{1-x}CoO₃ perovskites via two-step thermochemical water splitting, *J. Mater. Sci.*, **2018**, 53 (9): 6796-6806.
- 176 Chongwu Wang, Jianfeng Tang, Xinyu Zhang, Ling Qian, Hua Gui Yang*, WO₃ nanoflakes decorated with CuO clusters for enhanced photoelectrochemical water splitting, *Prog. Nat. Sci-Mater.*, **2018**, 28 (2): 200-204.
- 175 Hong Wei Qiao†, Shuang Yang†, Yun Wang†, Xiao Chen, Tian Yu Wen, Li Juan Tang, Qilin Cheng, Yu Hou*, Huijun Zhao* and Hua Gui Yang*, A gradient heterostructure based on tolerance factor in high-performance perovskite solar

- cells with 0.84 fill factor, *Adv. Mater.*, **2018**, 31 (5): 1804217.
- 174 Yu Hang Li, Peng Fei Liu, Chunzhong Li* and Hua Gui Yang*, Sharp-tipped zinc nanowires as an efficient electrocatalyst for carbon dioxide reduction, *Chem-Eur. J.*, **2018**, 24 (58):15486-15490.
- 173 Hui Lu, Le Zhang, Ju Hua Zhong*, Hua Gui Yang*, Partially oxidized palladium nanodots for enhanced electrocatalytic carbon dioxide reduction, *Chem-Asian J.*, **2018**, 13 (19): 2800-2804.
- 172 Huai Qin Fu, Le Zhang, Chong Wu Wang, Li Rong Zheng, Peng Fei Liu* and Hua Gui Yang*, 1D/1D hierarchical nickel sulfide/phosphide nanostructures for electrocatalytic water oxidation, *ACS Energy Lett.*, **2018**, 3 (9): 2021-2029.
- 171 Yu Hang Li, Ling Cheng, Peng Fei Liu, Le Zhang, Meng Yang Zu, Chong Wu Wang, Yan Huan Jin, Xiao Ming Cao*, Hua Gui Yang* and Chunzhong Li*, Simple cadmium sulfide compound with stable 95% selectivity for carbon dioxide electroreduction in aqueous medium, *ChemSusChem*, **2018**, 11 (9): 1421-1425.
- 170 Meng Yang Zu, Le Zhang, Chongwu Wang, Li Rong Zheng and Hua Gui Yang*, Copper-modulated bismuth nanocrystals alter the formate formation pathway to achieve highly selective CO₂ electroreduction, *J. Mater. Chem. A*, **2018**, 6 (35): 16804-16809.
- 169 Le Zhang, Fangxin Mao, Li Rong Zheng, Hai Feng Wang*, Xiao Hua Yang*, and Hua Gui Yang*, Tuning metal catalyst with metal-C₃N₄ interaction for efficient CO₂ electroreduction, *ACS Catal.*, **2018**, 8 (12): 11035-11041.
- 168 Yu Hou†, Zi Ren Zhou†, Tian Yu Wen, Hong Wei Qiao, Ze Qing Lin, Bing Ge, Hua Gui Yang*, Enhanced moisture stability of metal halide perovskite solar cells based on sulfur-oleylamine surface modification, *Nanoscale Horiz.*, **2019**, 4 (1): 208-213.
- 167 Meng Yang Zu, Chongwu Wang, Le Zhang, Li Rong Zheng, Hua Gui Yang*, Reconstructing bimetallic carbide Mo₆Ni₆C for carbon interconnected MoNi alloys to boost oxygen evolution electrocatalysis, *Mater. Horiz.*, **2019**, 6 (1): 115-121.
- 166 Yu Hou, Mengjiong Chen, Hongwei Qiao, Hua Gui Yang*, A one-pot method for controlled synthesis and selective etching of organic-inorganic hybrid perovskite crystals, *J. Energy Chem.*, **2019**, 33: 149-154.
- 165 Yu Lei Wang†, Jia Min Jin†, Yu Hang Li, Xue Lu Wang, Bo Zhang, Xiwen Gong, Hai Feng Wang, Ai Ping Chen, Li Rong Zheng, P. Hu, Hua Gui Yang*, Ce_{0.3}Zr_{0.7}O_{1.88}N_{0.12} solid solution as a stable photocatalyst for visible light driven

- water splitting, *Appl. Catal. B Environ.*, **2018**, 224: 733-739.
- 164 Di Jia, Yu Lei Wang, Hua Gui Yang*, Fabrication of TiO₂/β-cyclodextrin double-ring composite and its photodegradation performance, *ChemistrySelect*, **2017**, 2 (34): 11231-11234.
- 163 Qizhong Xiong, Yun Wang, Peng Fei Liu, Li Rong Zheng, Guozhong Wang, Hua Gui Yang, Po Keung Wong, Haimin Zhang*, Huijun Zhao*, Cobalt cvalent doping in MoS₂ to induce bifunctionality of overall water splitting, *Adv. Mater.*, **2018**, 30 (29): 1801450.
- 162 Zhengju Zhu†, Huajie Yin*†, Chun Ting He†, Mohammad Al Mamun, Porun Liu, Lixue Jiang, Yong Zhao, Yun Wang, Hua Gui Yang, Zhiyong Tang, Dan Wang, Xiao Ming Chen, Huijun Zhao*, Ultrathin transition metal dichalcogenide/3d metal hydroxide hybridized nanosheets to enhance hydrogen evolution activity, *Adv. Mater.*, **2018**, 30 (28): 1801171.
- 161 Duo Xu, Xin Hua*, Shao Chuang Liu, Hong Wei Qiao, Hua Gui Yang, Yi Tao Long* and He Tian, In situ and real-time ToF-SIMS analysis of light-induced chemical changes in perovskite CH₃NH₃PbI₃, *Chem. Commun.*, **2018**, 54 (43): 5434-5437.
- 160 Le Zhang, Peng Fei Liu, Yu Hang Li, Meng Yang Zu, Xu Li, Zheng Jiang, Yun Wang, Huijun Zhao, and Hua Gui Yang*, N-modified NiO surface for superior alkaline hydrogen evolution, *ChemSusChem*, **2018**, 11 (6): 1020-1024.
- 159 Le Zhang, Peng Fei Liu, Yu Hang Li, Chong Wu Wang, Meng Yang Zu, Huai Qin Fu, Xiao Hua Yang*, and Hua Gui Yang*, Accelerating neutral hydrogen evolution with tungsten modulated amorphous metal hydroxides, *ACS Catal.*, **2018**, 8 (6): 5200-5205.
- 158 Meng Yang Zu, Peng Fei Liu, Chongwu Wang, Yun Wang, Li Rong Zheng, Bo Zhang, Huijun Zhao, and Hua Gui Yang*, Bimetallic carbide as a stable hydrogen evolution catalyst in harsh acidic water, *ACS Energy Lett.*, **2018**, 3 (1): 78-84.
- 157 Li Juan Tang, Xiao Chen, Tian Yu Wen, Shuang Yang, Jun Jie Zhao, Hong Wei Qiao, Yu Hou* and Hua Gui Yang*, A solution-processed transparent NiO hole-extraction layer for high-performance inverted perovskite solar cells, *Chem. Eur. J.*, **2018**, 24 (12): 2845-2849.
- 156 Tian Yu Wen, Shuang Yang, Peng Fei Liu, Li Juan Tang, Hong Wei Qiao, Xiao Chen, Xiao Hua Yang, Yu Hou* and Hua Gui Yang*, Surface electronic modification of perovskite thin film with water-resistant electron delocalized molecules for stable and efficient photovoltaics, *Adv. Energy Mater.*, **2018**, 8 (13):

1703143.

- 155 Xue Lu Wang, Wen Qi Fang, Wenqing Liu, Yi Jia, Dengwei Jing, Yun Wang*, Ling-Yun Yang, Xue-Qing Gong*, Ye-Feng Yao, ***Hua Gui Yang**** and Xiangdong Yao*, Bronsted base site engineering of graphitic carbon nitride for enhanced photocatalytic activity, ***J. Mater. Chem. A***, **2017**, 5 (36): 19227-19236.
- 154 Mohammad Al-Mamun, Huajie Yin, Porun Liu, Xintai Su, Haimin Zhang, ***Hua Gui Yang***, Dan Wang, Zhiyong Tang, Yun Wang*, Huijun Zhao*, Carbon-encapsulated heazlewoodite nanoparticles as highly efficient and durable electrocatalysts for oxygen evolution reactions, ***Nano Research***, **2017**, 10 (10): 3522-3533.
- 153 Yu Hang Li, Chunzhong Li*, ***Hua Gui Yang****, Quantitative analysis of the PtO structure during photocatalytic water splitting by operando XAFS, ***J. Mater. Chem. A***, **2017**, 5 (39): 20631-20634.
- 152 Jun Jie Zhao†, Peng Fei Liu†, Yu Lei Wang, Yu Hang Li, Meng Yang Zu, Chong Wu Wang, Xue Lu Wang, Li Jun Fang, Hui Dan Zeng*, ***Hua Gui Yang****, Metallic Ni₃P/Ni Co-catalyst to enhance photocatalytic hydrogen evolution, ***Chem. Eur. J.***, **2017**, 23 (66): 16734-16737.
- 151 Jun Jie Zhao, Yu Hang Li, Peng Fei Liu, Yu Lei Wang, Xu Lei Du, Xue Lu Wang, Hui Dan Zeng, Li Rong Zheng, ***Hua Gui Yang****, Local coulomb attraction for enhanced H₂ evolution stability of metal sulfide photocatalysts, ***Appl. Catal. B Environ.***, **2017**, 221: 152-157.
- 150 Peng Fei Liu, Xu Li, Shuang Yang, Meng Yang Zu, Porun Liu, Bo Zhang, Li Rong Zheng, Huijun Zhao, ***Hua Gui Yang****, Ni₂P(O)/Fe₂P(O) interface can boost oxygen evolution electrocatalysis, ***ACS Energy Lett.***, **2017**, 2 (10): 2257-2263.
- 149 Xu Lei Du†, Xue Lu Wang†, Yu Hang Li, Yu Lei Wang, Jun Jie Zhao, Li Jun Fang, Li Rong Zheng, Hua Tong, ***Hua Gui Yang****, Isolation of single Pt atom in silver cluster: forming highly efficient silver-based cocatalysts for photocatalytic hydrogen evolution, ***Chem. Commun.***, **2017**, 53 (68): 9402-9405.
- 148 Yu Lei Wang, Ting Nie, Yu Hang Li, Xue Lu Wang, Li Rong Zheng, Ai Ping Chen, Xue Qing Gong, ***Hua Gui Yang****, Black tungsten nitride as metallic photocatalyst for overall water splitting operable at up to 765 nm, ***Angew. Chem. Int. Ed.***, **2017**, 56 (26): 7430-7434.
- 147 Ling Qian, Pengfei Liu, Le Zhang, Chongwu Wang, Shuang Yang, Li Rong Zheng, Aiping Chen*, ***Hua Gui Yang****, Amorphous ferric oxide as a hole-extraction and transfer layer on nanoporous bismuth vanadate photoanode for water oxidation,

- Chin. J. Catal.*, 2017, 38 (6): 1045-1051.
- 146 Yu Lei Wang†, Yu Hang Li†, Xue Lu Wang, Ai Ping Chen*, Hua Gui Yang*, Rhodium dopants on Zn₂GeO₄ surfaces as active sites for photocatalytic water splitting, *ChemPlusChem*, 2017, 82 (2): 199-203.
- 145 Chongwu Wang, Shuang Yang, Xiao Chen, Tianyu Wen, Hua Gui Yang*, Surface-functionalized perovskite films for stable photoelectrochemical water splitting, *J. Mater. Chem. A*, 2017, 5 (3): 910-913.
- 144 Yu Hou†, Shuang Yang†, Xiao Chen, Chunzhong Li, Huijun Zhao*, Hua Gui Yang*, Thermally induced crystallization of high quality CH₃NH₃PbI₃ film with large grains for highly efficient perovskite solar cells, *Chem. Eur. J.*, 2017, 23 (24): 5658-5662.
- 143 Yu Hou†, Xiao Chen†, Shuang Yang, Chunzhong Li, Huijun Zhao*, Hua Gui Yang*, A band-edge potential gradient heterostructure to enhance electron extraction efficiency of electron transport layer in high performance perovskite solar cells, *Adv. Funct. Mater.*, 2017, 27 (27): 1700878.
- 142 Yu Hou†, Xiao Chen†, Shuang Yang†, Yu Lin Zhong, Chunzhong Li, Huijun Zhao*, Hua Gui Yang*, Low-temperature processed In₂S₃ electron transport layer for efficient hybrid perovskite solar cells, *Nano Energy*, 2017, 36: 102-109.
- 141 Yu Hang Li, Yun Wang, Li Rong Zheng, Hui Jun Zhao, Hua Gui Yang*, Chun Zhong Li*, Water-soluble inorganic photocatalyst for overall water splitting, *Appl. Catal. B Environ.*, 2017, 209: 247-252.
- 140 Xue Lu Wang, Hua Gui Yang*, Facile fabrication of high-yield graphitic carbon nitride with a large surface area using bifunctional urea for enhanced photocatalytic performance, *Appl. Catal. B Environ.*, 2017, 205: 624-630.
- 139 Ling Qian, Chong Wu Wang, Ai Ping Chen*, Hua Gui Yang*, BiOI nanosheets grown by chemical vapor deposition and its conversion to highly efficient BiVO₄ photoanode, *Chin. J. Chem.*, 2017, 35 (1): 30-34.
- 138 Peng Fei Liu, Shuang Yang, Li Rong Zheng, Bo Zhang, Hua Gui Yang*, Mo⁶⁺ activated multimetal oxygen-evolving catalysts, *Chem. Sci.*, 2017, 8 (5): 3484-3488.
- 137 Yu Lei Wang, Xue Lu Wang, Yu Hang Li, Li Jun Fang, Jun Jie Zhao, Xu Lei Du, Ai Ping Chen*, Hua Gui Yang*, Controllable synthesis of hexagonal WO₃ nanoplates for efficient visible-light-driven photocatalytic oxygen production, *Chem.-Asian J.*, 2017, 12 (4): 387-391.
- 136 Yu Hou†, Hongwei Qiao†, Shuang Yang, Chunzhong Li, Huijun Zhao, Hua Gui Yang*, Molten salt assisted growth of perovskite films with submillimeter-sized

- grains, *Ind. Eng. Chem. Res.*, **2017**, 56 (2): 524-529.
- 135 Li Jun Fang, Yu Hang Li, Peng Fei Liu, Dan Ping Wang, Hui Dan Zeng*, Xue Lu Wang*, *Hua Gui Yang*, Facile fabrication of large-aspect-ratio g-C₃N₄ nanosheets for enhanced photocatalytic hydrogen evolution, *ACS Sustain Chem. Eng.*, **2017**, 5 (3): 2039-2043.
- 134 Danping Wang, Chongwu Wang, F. Pelayo García de Arquer, Juhua Zhong*, Ling Qian, Lijun Fang, Pengfei Liu, Yuanjie Pang, Min Liu, Mengxia Liu, Gengfeng Zheng, David Sinton, Edward H. Sargent, *Hua Gui Yang*, Bo Zhang*, Band-aligned C₃N_{4-x}S_{3x/2} stabilizes CdS/CuInGaS₂ photocathodes for efficient water reduction, *J. Mater. Chem. A*, **2017**, 5 (7): 3167-3171.
- 133 Li Jun Fang†, Xue Lu Wang†, Yu Hang Li†, Peng Fei Liu, Yu Lei Wang, Hui Dan Zeng, *Hua Gui Yang**, Nickel nanoparticles coated with graphene layers as efficient co-catalyst for photocatalytic hydrogen evolution, *Appl. Catal. B Environ.*, **2017**, 200: 578-584.
- 132 Zhi Fei He, Yong Hua Su, Shuang Yang, Long Wu, Sheng You Liu, Chang Quan Ling*, *Hua Gui Yang**, Hierarchical structure engineering of brookite TiO₂ crystals for enhanced photocatalytic and external antitumor property, *Sci. Bull.*, **2016**, 61 (23):1818-1825.
- 131 Yu Lei Wang, Yu Hang Li, Xue Lu Wang, Yu Hou, Ai Ping Chen*, *Hua Gui Yang**, Effects of redox mediators on alpha-Fe₂O₃ exposed by {012} and {104} facets for photocatalytic water oxidation, *Appl. Catal. B Environ.*, **2016**, 206: 216-220.
- 130 Peng Fei Liu, Shuang Yang, Bo Zhang, *Hua Gui Yang**, Defect-rich ultrathin cobalt-iron layered double hydroxide for electrochemical overall water splitting, *ACS Appl. Mater. Inter.*, **2016**, 8 (50): 34474-34481.
- 129 Li Jun Fang†, Xue Lu Wang†, Jun Jie Zhao, Yu Hang Li, Yu Lei Wang, Xu Lei Du, Zhi Fei He, Hui Dan Zeng, *Hua Gui Yang**, One-step fabrication of porous oxygen-doped g-C₃N₄ with feeble nitrogen vacancies for enhanced photocatalytic performance, *Chem. Commun.*, **2016**, 52 (100): 14408-14411.
- 128 Mohammad Al-Mamun, Zhengju Zhu, Huajie Yin, Xintai Su, Haimin Zhang, Porun Liu, *Hua Gui Yang*, Dan Wang, Zhiyong Tang, Yun Wang*, Huijun Zhao*, The surface sulfur doping induced enhanced performance of cobalt catalysts in oxygen evolution reactions, *Chem. Commun.*, **2016**, 52 (60): 9450-9453.
- 127 Mohammad Al-Mamun, Yun Wang*, Porun Liu, Yu Lin Zhong, Huajie Yin, Xintai Su, Haimin Zhang, *Hua Gui Yang*, Dan Wang, Zhiyong Tang, Huijun Zhao*, One-step solid phase synthesis of a highly efficient and robust cobalt pentlandite electrocatalyst for the oxygen evolution reaction, *J. Mater. Chem. A.*, **2016**, 4 (47): 18314-18321.

- 126 Mohammad Al-Mamun, Xintai Su, Haimin Zhang, Huajie Yin, Porun Liu, Hua Gui Yang, Dan Wang, Zhiyong Tang, Yun Wang*, Huijun Zhao*, Strongly coupled CoCr₂O₄/carbon nanosheets as high performance electrocatalysts for oxygen evolution reaction, *Small*, **2016**, 12 (21): 2866-2871.
- 125 Yu Hou†, Shuang Yang†, Chunzhong Li, Huijun Zhao, Hua Gui Yang*, TiO₂ cement for high-performance dye-sensitized solar cells, *RSC Adv.*, **2016**, 6 (87): 83802-83807.
- 124 Xu Li, Peng Fei Liu, Le Zhang, Meng Yang Zu, Yun Xia Yang, Hua Gui Yang*, Enhancing alkaline hydrogen evolution reaction activity through Ni-Mn₃O₄ nanocomposites, *Chem. Commun.*, **2016**, 52 (69): 10566-10569.
- 123 Peng Fei Liu, Shuang Yang, Li Rong Zheng, Bo Zhang*, Hua Gui Yang*, Electrochemical etching of alpha-cobalt hydroxide for improvement of oxygen evolution reaction, *J. Mater. Chem. A*, **2016**, 4 (24): 9578-9584.
- 122 Xue Lu Wang†, Wenqing Liu†, Yan-Yan Yu, Yanhong Song, Wen Qi Fang, Daxiu Wei, Xue-Qing Gong*, Yefeng Yao*, Hua Gui Yang*, Operando NMR spectroscopic analysis of proton transfer in heterogeneous photocatalytic reactions, *Nat. Commun.*, **2016**, 7: 11918.
- 121 Shuang Yang†, Yun Wang†, Porun Liu, Yi Bing Cheng, Hui Jun Zhao*, Hua Gui Yang*, Functionalization of perovskite thin films with moisture-tolerant molecules, *Nat. Energy*, **2016**, 1: 15016.
- 120 Lili Fan†, Peng Fei Liu†, Xuecheng Yan, Lin Gu, Zhen Zhong Yang, Hua Gui Yang*, Shilun Qiu*, Xiangdong Yao*, Atomically isolated nickel species anchored on graphitized carbon for efficient hydrogen evolution electrocatalysis, *Nat. Commun.*, **2016**, 7: 10667.
- 119 Chong Wu Wang†, Shuang Yang†, Wen Qi Fang, Porun Liu, Huijun Zhao*, Hua Gui Yang*, Engineered hematite mesoporous single crystals drive drastic enhancement in solar water splitting, *Nano Lett.*, **2016**, 16 (1): 427-433.
- 118 Bo Zhang†, Xueli Zheng†, Oleksandr Voznyy†, Riccardo Comin, Michal Bajdich, Max García-Melchor, Jixian Xu, Min Liu, F. Pelayo García de Arquer, Cao Thang Dinh, Fengjia Fan, Mingjian Yuan, Emre Yassitepe, Alyf Janmohamed, Ning Chen, Tom Regier, Lili Han, Pengfei Liu, Yuhang Li, Phil De Luna, Huolin L. Xin, Li Rong Zheng, Hua Gui Yang, Aleksandra Vojvodic*, Edward H. Sargent*, Homogeneously dispersed multimetal oxygen-evolving catalysts, *Science*, **2016**, 352 (6283): 333-337.
- 117 Xiao Chen, Li Juan Tang, Shuang Yang, Yu Hou*, Hua Gui Yang*, A low-temperature processed flower-like TiO₂ array as an electron transport layer for high-performance perovskite solar cells, *J. Mater. Chem. A*, **2016**, 4 (17): 6521-6526.
- 116 Yun Wang, Bobby G. Sumpter, Jingsong Huang*, Haimin Zhang, Porun Liu, Hua Gui Yang, Huijun Zhao*, Density functional studies of stoichiometric surfaces of

- orthorhombic hybrid perovskite $\text{CH}_3\text{NH}_3\text{PbI}_3$, *J. Phys. Chem. C.*, **2015**, 119 (2): 1136-1145.
- 115 Yibing Li, Haimin Zhang*, Porun Liu, Yun Wang, Hua Gui Yang, Ying Li, Huijun Zhao*, Self-supported bimodal-pore structured nitrogen-doped carbon fiber aerogel as electrocatalyst for oxygen reduction reaction, *Electrochem. Commun.*, **2015**, 51: 6-10.
- 114 Xiao Chen, Shuang Yang, Yi Chu Zheng, Ying Chen, Yu Hou, Xiao Hua Yang*, Hua Gui Yang*, Multifunctional inverse opal-like TiO_2 electron transport layer for efficient hybrid perovskite solar cells, *Adv. Sci.* **2015**, 2 (9): 1500105.
- 113 Lulu Wang†, Mohammad Al-Mamun†, Porun Liu, Yun Wang, Hua Gui Yang, Hai Feng Wang, Huijun Zhao*, The search for efficient electrocatalysts as counter electrode materials for dye-sensitized solar cells: mechanistic study, material screening and experimental validation, *NPG Asia Mater.*, **2015**, 7 (11): e226.
- 112 Yu Hang Li, Li Rong Zheng*, Hua Gui Yang*, A novel strategy for tailoring copper oxide cluster with Pt-like activity for photocatalytic hydrogen evolution, *Int. J. Hydrogen Energy*, **2015**, 40 (45): 15454-15459.
- 111 Haitao Lu, Xinhai Yu*, Shuang Yang, Hua Gui Yang, Shan-Tung Tu, $\text{MgO-Li}_2\text{O}$ catalysts templated by a PDMS-PEO comb-like copolymer for transesterification of vegetable oil to biodiesel, *Fuel*, **2015**, 165: 215-223.
- 110 Chong Wu Wang, Shuang Yang, Hai Bo Jiang*, Hua Gui Yang*, Chemical vapor deposition of FeOCl nanosheet arrays and their conversion to porous $\alpha\text{-Fe}_2\text{O}_3$ photoanodes for photoelectrochemical water splitting, *Chem. Eur. J.*, **2015**, 21 (50): 18024-18028.
- 109 Shuang Yang, Ying Chen, Yi Chu Zheng, Xiao Chen, Yu Hou, Hua Gui Yang*, Formation of high-quality perovskite thin film for planar heterojunction solar cells, *RSC Adv.*, **2015**, 5 (85): 69502-69508.
- 108 Ling Qian, Jian Fu Chen, Yu Hang Li, Long Wu, Hai Feng Wang, Ai Ping Chen, P. Hu, Li Rong Zheng*, Hua Gui Yang*, Orange zinc germanate with metallic Ge-Ge bonds as a chromophore-like center for visible-light-driven water splitting, *Angew. Chem. Int. Ed.*, **2015**, 54 (39): 11467-11471.
- 107 Yu Hang Li, Peng Fei Liu, Lin Feng Pan, Hai Feng Wang*, Zhen Zhong Yang, Li Rong Zheng, P. Hu, Hui Jun Zhao, Lin Gu, Hua Gui Yang*, Local atomic structure modulations activate metal oxide as electrocatalyst for hydrogen evolution in acidic water, *Nat. Commun.*, **2015**, 6: 8064.
- 106 Ming Quan Yu, Li Xue Jiang, Hua Gui Yang*, Ultrathin nanosheets constructed CoMoO_4 porous flowers with high activity for electrocatalytic oxygen evolution, *Chem. Commun.*, **2015**, 51 (76): 14361-14364.
- 105 Yu Hang Li, Chao Peng, Shuang Yang, Hai Feng Wang, Hua Gui Yang*, Critical roles of co-catalysts for molecular hydrogen formation in photocatalysis, *J. Catal.*, **2015**, 330: 120-128.

- 104 Ying Chen, Shuang Yang, Xiao Chen, Yi Chu Zheng, Yu Hou, Yu Hang Li, Hui Dan Zeng*, ***Hua Gui Yang****, Direct insight into crystallization and stability of hybrid perovskite $\text{CH}_3\text{NH}_3\text{PbI}_3$ via solvothermal synthesis, ***J. Mater. Chem. A***, **2015**, 3 (31): 15854-15857.
- 103 Yi Chu Zheng†, Shuang Yang†, Xiao Chen, Ying Chen, Yu Hou*, ***Hua Gui Yang****, Thermal-induced volmer-weber growth behavior for planar heterojunction perovskites solar cells, ***Chem. Mater.***, **2015**, 27 (14): 5116-5121.
- 102 Shuang Yang, Yi Chu Zheng, Yu Hou, ***Hua Gui Yang****, Controlled oriented attachment of bipyramidal-shaped anatase TiO_2 and their enhanced performance in dye-sensitized solar cells, ***ChemPlusChem***, **2015**, 80 (5): 805-809.
- 101 Shuang Yang†, Nian Huang†, Yong Mei Jin, Hui Qing Zhang, Yong Hua Su*, ***Hua Gui Yang****, Crystal shape engineering of anatase TiO_2 and its biomedical applications, ***CrystEngComm***, **2015**, 17 (35): 6617-6631.
- 100 Ming Quan Yu, Yu Hang Li, Shuang Yang, Peng Fei Liu, Lin Feng Pan, Le Zhang, ***Hua Gui Yang****, Mn_3O_4 nano-octahedrons on Ni foam as an efficient three-dimensional oxygen evolution electrocatalyst, ***J. Mater. Chem. A***, **2015**, 3 (27): 14101-14104.
- 99 Xiao Chen†, Jian Wei Guo†, Yu Hou, Yu Hang Li, Shuang Yang, Li Rong Zheng, Bo Zhang, Xiao Hua Yang*, ***Hua Gui Yang***, Novel PtO decorated MWCNTs as a highly efficient counter electrode for dye-sensitized solar cells, ***RSC Adv.***, **2015**, 5 (11): 8307-8310.
- 98 Xue Lu Wang, Wen Qi Fang, Yefeng Yao, Porun Liu, Yun Wang, Haimin Zhang, Huijun Zhao*, ***Hua Gui Yang****, Switching the photocatalytic activity of g- C_3N_4 by homogenous surface chemical modification with nitrogen residues and vacancies, ***RSC Adv.***, **2015**, 5 (27): 21430-21433.
- 97 Yibing Li, Haimin Zhang, Yun Wang, Porun Liu, ***Huagui Yang***, Xiangdong Yao, Dan Wang, Zhiyong Tang, Huijun Zhao*. A self-sponsored doping approach for controllable synthesis of S and N co-doped trimodal-porous structured graphitic carbon electrocatalysts, ***Energy Environ. Sci.***, **2014**, 7 (11): 3720-3726.
- 96 Feng Tian*†, Yuhang Li†, Jun Xing, Hua Tian, Lawrence Whitmore, ***Hua Gui Yang***, Xiaohua Yang*, Pores on TiO_2 nanosheets with exposed high active facets, ***Mater. Lett.***, **2014**, 123: 254-257.
- 95 Xue Lu Wang, Wen Qi Fang, Yu Hang Li, Pengfei Liu, Haimin Zhang, Yun Wang, Porun Liu, Yefeng Yao, Huijun Zhao*, ***Hua Gui Yang****, Bottom-up enhancement of g- C_3N_4 photocatalytic H_2 evolution utilising disordering intermolecular interactions of precursor, ***Int. J. Photoenergy.***, **2014**: 149520.
- 94 Shuang Yang, Yi Chu Zheng, Yu Hou, Xiao Chen, Ying Chen, Yun Wang, Huijun Zhao, ***Hua Gui Yang****, Formation mechanism of freestanding $\text{CH}_3\text{NH}_3\text{PbI}_3$ functional crystals: in situ transformation vs dissolution–crystallization, ***Chem. Mater.***, **2014**, 26 (23): 6705-6710.

- 93 Shuang Yang†, Bing Xing Yang†, Long Wu†, Yu Hang Li, Porun Liu, Huijun Zhao, Yan Yan Yu, Xue Qing Gong*, ***Hua Gui Yang****, Titania single crystals with a curved surface, ***Nat. Commun.***, **2014**, 5: 5355.
- 92 Shuang Yang, Yu Hou, Bo Zhang, Xiao Hua Yang, Haimin Zhang, Hui Jun Zhao, ***Hua Gui Yang****, Precisely controlled heterogeneous nucleation sites for TiO₂ crystal growth, ***CrystEngComm***, **2014**, 16 (32): 7502-7506.
- 91 Shuang Yang†, Yi Chu Zheng†, Yu Hou, Xiao hua Yang, ***Hua Gui Yang****, Anatase TiO₂ with nanopores for dye-sensitized solar cells, ***Phys. Chem. Chem. Phys.***, **2014**, 16 (42): 23038-23043.
- 90 Yun Wang, Tao Sun, Xiaolu Liu, Haimin Zhang, Porun Liu, ***Huagui Yang***, Xiangdong Yao, Huijun Zhao*, Geometric structure of rutile titanium dioxide (111) surfaces, ***Phys. Rev. B***, **2014**, 90 (4): 045304.
- 89 Gang Liu, ***Hua Gui Yang***, Jian Pan, Yong Qiang Yang, Gao Qing (Max) Lu*, Hui-Ming Cheng*, Titanium dioxide crystals with tailored facets, ***Chem. Rev.***, **2014**, 114 (19): 9559-9612.
- 88 Xiao Chen†, Yu Hou†, Shuang Yang, Xiao Hua Yang*, ***Hua Gui Yang****, A novel strategy to prepare a Pt-SnO₂ nanocomposite as a highly efficient counter electrode for dye-sensitized solar cells, ***J. Mater. Chem. A***, **2014**, 2 (41): 17253-17257.
- 87 Wen Qi Fang, Ziyang Huo, Porun Liu, Xue Lu Wang, Miao Zhang, Yi Jia, Haimin Zhang, Huijun Zhao, ***Hua Gui Yang****, Xiangdong Yao*, Fluorine doped porous single crystal rutile TiO₂ nanorods for enhancing photoelectrochemical water splitting, ***Chem. Eur. J.***, **2014**, 20 (36): 11439-11444.
- 86 Lin Feng Pan, Yu Hang Li, Shuang Yang, Peng Fei Liu, Ming Quan Yu, ***Hua Gui Yang****, Molybdenum carbide stabilized on graphene with high electrocatalytic activity for hydrogen evolution reaction, ***Chem. Commun.***, **2014**, 50 (86): 13135-13137.
- 85 Yibing Li, Haifeng Wang, Haimin Zhang*, Porun Liu, Yun Wang, Wenqi Fang, ***Huagui Yang***, Ying Li, Huijun Zhao*, A {0001} faceted single crystal NiS nanosheet electrocatalyst for dye-sensitized solar cells: sulfur-vacancy induced electrocatalytic activity, ***Chem. Commun.***, **2014**, 50 (42): 5569-5571.
- 84 Yu Hang Li, Jun Xing, Xiao Hua Yang, ***Hua Gui Yang****, Cluster size effects of platinum oxide as active sites in hydrogen evolution reactions, ***Chem. Eur. J.***, **2014**, 20 (39): 12377-12380.
- 83 Yu Hou, Zu Peng Chen, Dong Wang, Bo Zhang, Shuang Yang, Hai Feng Wang*, P. Hu, Hui Jun Zhao, ***Hua Gui Yang****, Highly electrocatalytic activity of RuO₂ nanocrystals for triiodide reduction in dye-sensitized solar cells, ***Small***, **2014**, 10 (3): 484-492.
- 82 Jun Xing, Jian Fu Chen, Yu Hang Li, Wen Tao Yuan, Ying Zhou, Li Rong Zheng, Hai Feng Wang*, Yun Wang, Hui Jun Zhao, Yong Wang, ***Hua Gui Yang****, Stable isolated metal atoms as active sites for photocatalytic hydrogen evolution, ***Chem.***

- Eur. J.*, **2014**, 20 (8): 2138-2144.
- 81 Bo Zhang*, Yuhang Li, Nannan Zhang, Juhua Zhong, Haimin Zhang, Huijun Zhao, *Hua Gui Yang**, Platinum@regular indium oxide nanooctahedra as difunctional counter electrodes for dye-sensitized solar cells, *J. Mater. Chem. A*, **2014**, 2 (18): 6331-6336.
- 80 Nan Nan Zhang†, Bo Zhang†, Yu Hang Li, Yu Hou, Shuang Yang, Ju Hua Zhong*, *Hua Gui Yang**, In situ growth of mirror-like platinum as highly-efficient counter electrode with light harvesting function for dye-sensitized solar cells, *J. Mater. Chem. A*, **2014**, 2 (6): 1641-1646.
- 79 Xiao Hua Yang†, Jian Wei Guo†, Shuang Yang, Yu Hou, Bo Zhang*, *Hua Gui Yang**, A free radical assisted strategy for preparing ultra-small Pt decorated CNTs as highly efficient counter electrode for dye-sensitized solar cells, *J. Mater. Chem. A*, **2014**, 2 (3): 614-619.
- 78 Wen Qi Fang, Xue Lu Wang, Haimin Zhang, Yi Jia, Ziyang Huo, Zhen Li, Huijun Zhao, *Hua Gui Yang**, Xiangdong Yao*, Manipulating solar absorption and electron transport properties of rutile TiO₂ photocatalysts via highly n-type F-doping, *J. Mater. Chem. A*, **2014**, 2 (10): 3513-3520.
- 77 Hai Bo Jiang†, Jun Xing†, Zu Peng Chen, Feng Tian, Qian Cuan, Xue-Qing Gong*, *Hua Gui Yang**, Enhancing photocatalytic activity of Sn doped TiO₂ dominated with {105} facets, *Catal. Today*, **2014**, 225 (15): 18-23.
- 76 Xue Lu Wang, Wen Qi Fang, Shuang Yang, Pengfei Liu, Huijun Zhao*, *Hua Gui Yang**, Structure disorder of graphitic carbon nitride induced by liquid-assisted grinding for enhanced photocatalytic conversion, *RSC Adv.*, **2014**, 4 (21): 10676-10679.
- 75 Yun Wang, Tim Gould, John F. Dobson, Haimin Zhang, *Huagui Yang*, Xiangdong Yao, Huijun Zhao*, Density functional theory analysis of structural and electronic properties of orthorhombic perovskite CH₃NH₃PbI₃, *Phys. Chem. Chem. Phys.*, **2014**, 16 (4): 1424-1429.
- 74 Jun Xing, Yu Hang Li, Hai Bo Jiang, Yun Wang, *Hua Gui Yang**, The size and valence state effect of Pt on photocatalytic H₂ evolution over platinumized TiO₂ photocatalyst, *Int. J. Hydrogen Energy*, **2014**, 39 (3): 1237-1242.
- 73 Xiao Hua Yang†, Ling Cheng†, Yu Hou, Bo Zhang, Long Wu, *Hua Gui Yang**, Turning commercial transition-metal oxides into efficient electrocatalysts via facile hydrogen treatment, *RSC Adv.*, **2014**, 4 (24): 12534-12537.
- 72 Hai-Bo Jiang, Lin-Feng Pan, Peng-Fei Liu, Wen-Qi Fang, *Hua-Gui Yang**, Synthesis of well-defined functional crystals by high temperature gas-phase reactions, *Chin. Sci. Bull.*, **2014**, 59 (18): 2135-2143.
- 71 Haimin Zhang, Yibing Li, Xiaolu Liu, Porun Liu, Yun Wang, Taicheng An*, *Huagui Yang*, Dengwei Jing, Huijun Zhao*. Determination of iodide via direct fluorescence quenching at nitrogen-doped carbon quantum dot fluorophores,

- Environ. Sci. Technol. Lett.*, **2013**, 1 (1): 87-91.
- 70 Yu Hang Li†, Jun Xing†, Zong Jia Chen, Zhen Li, Feng Tian, Li Rong Zheng, Hai Feng Wang*, P. Hu, Hui Jun Zhao, *Hua Gui Yang**, Unidirectional suppression of hydrogen oxidation on oxidized platinum clusters, *Nat. Commun.*, **2013**, 4: 2500.
- 69 Yu Hou†, Dong Wang†, Xiao Hua Yang, Wen Qi Fang, Bo Zhang, Hai Feng Wang*, Guan Zhong Lu, P. Hu, Hui Jun Zhao, *Hua Gui Yang**, Rational screening low-cost counter electrodes for dye-sensitized solar cells, *Nat. Commun.*, **2013**, 4: 1583.
- 68 Porun Liu, Haimin Zhang, Hongwei Liu, Yun Wang, Taicheng An, Weiping Cai, *Huagui Yang*, Xiangdong Yao, Guangshan Zhu, Robyn Webb, Huijun Zhao*, Vapor-phase hydrothermal growth of novel segmentally configured nanotubular crystal structure, *Small*, **2013**, 9 (18): 3043-3050.
- 67 Bo Zhang†, Dong Wang†, Yu Hou, Shuang Yang, Xiao Hua Yang, Ju Hua Zhong, Jian Liu, Hai Feng Wang*, P. Hu, Hui Jun Zhao, *Hua Gui Yang**, Facet-dependent catalytic activity of platinum nanocrystals for triiodide reduction in dye-sensitized solar cells, *Sci. Rep.*, **2013**, 3: 1836.
- 66 Bo Zhang†, Nan Nan Zhang†, Jian Fu Chen†, Yu Hou, Shuang Yang, Jian Wei Guo, Xiao Hua Yang, Ju Hua Zhong, Hai Feng Wang*, P. Hu, Hui Jun Zhao, *Hua Gui Yang**, Turning indium oxide into a superior electrocatalyst: deterministic heteroatoms, *Sci. Rep.*, **2013**, 3: 3109.
- 65 Ling Cheng, Yu Hou, Bo Zhang, Shuang Yang, Jian Wei Guo, Long Wu, *Hua Gui Yang**, Hydrogen-treated commercial WO₃ as an efficient electrocatalyst for triiodide reduction in dye-sensitized solar cells, *Chem. Commun.*, **2013**, 49 (53): 5945-5947.
- 64 Xiao Chen†, Yu Hou†, Bo Zhang, Xiao Hua Yang*, *Hua Gui Yang**, Low-cost SnS_x counter electrodes for dye-sensitized solar cells, *Chem. Commun.*, **2013**, 49 (51): 5793-5795.
- 63 Long Wu, Hai Bo Jiang, Feng Tian, Zhigang Chen, Chenghua Sun*, *Hua Gui Yang**, Ti_{0.89}Si_{0.11}O₂ single crystals bound by high-index {201} facets showing enhanced visible-light photocatalytic hydrogen evolution, *Chem. Commun.*, **2013**, 49 (20): 2016-2018.
- 62 Long Wu, Jun Xing, Yu Hou, Fang Yuan Xiao, Zhen Li, *Hua Gui Yang**, Fabrication of regular ZnO/TiO₂ heterojunctions with enhanced photocatalytic properties, *Chem. Eur. J.*, **2013**, 19 (26): 8393-8396.
- 61 Shuang Yang, Yu Hou, Jun Xing, Bo Zhang, Feng Tian, Xiao Hua Yang*, *Hua Gui Yang**, Ultrathin SnO₂ scaffolds for TiO₂-based heterojunction photoanodes in dye-sensitized solar cells: oriented charge transport and improved light scattering, *Chem. Eur. J.*, **2013**, 19 (28): 9366-9370.
- 60 Zu Peng Chen, Jun Xing, Hai Bo Jiang, *Hua Gui Yang**, Disordered

- $\text{Co}_{1.28}\text{Mn}_{1.71}\text{O}_4$ as a visible-light-responsive photocatalyst for hydrogen evolution, *Chem. Eur. J.*, **2013**, 19 (13): 4123-4127.
- 59 Jun Xing, Zu Peng Chen, Fang Yuan Xiao, Xue Yan Ma, Ci Zhang Wen, Zhen Li, Hua Gui Yang*, Cu-Cu₂O-TiO₂ nanojunction systems with an unusual electron-hole transportation pathway and enhanced photocatalytic properties, *Chem. Asian J.*, **2013**, 8 (6): 1265-1270.
- 58 Jian Wei Guo†, Bo Zhang†, Yu Hou, Shuang Yang, Xiao Hua Yang, Hua Gui Yang*, A sulfur-assisted strategy to decorate MWCNTs with highly dispersed Pt nanoparticles for counter electrode in dye-sensitized solar cells, *J. Mater. Chem. A*, **2013**, 1 (6): 1982-1986.
- 57 Shuang Yang, Yu Hou, Bo Zhang, Xiao Hua Yang, Wen Qi Fang, Hui Jun Zhao, Hua Gui Yang*, Highly efficient overlayer derived from peroxotitanium for dye-sensitized solar cells, *J. Mater. Chem. A*, **2013**, 1 (4): 1374-1379.
- 56 Xue Lu Wang, Wen Qi Fang, Hai Feng Wang, Haimin Zhang, Huijun Zhao, Yefeng Yao*, Hua Gui Yang*, Surface hydrogen bonding can enhance photocatalytic H₂ evolution efficiency, *J. Mater. Chem. A*, **2013**, 1 (45): 14089-14096.
- 55 Jun Xing†, Hai Bo Jiang†, Jian Fu Chen, Yu Hang Li, Long Wu, Shuang Yang, Li Rong Zheng, Hai Feng Wang*, P. Hu, Hui Jun Zhao, Hua Gui Yang*, Active sites on hydrogen evolution photocatalyst, *J. Mater. Chem. A*, **2013**, 1 (48): 15258-15264.
- 54 Haimin Zhang, Yibing Li, Yun Wang, Porun Liu, Huagui Yang, Xiangdong Yao, Taicheng An, Barry J. Wood, Huijun Zhao*, A highly crystalline Nb₃O₇F nanostructured photoelectrode: fabrication and photosensitisation, *J. Mater. Chem. A*, **2013**, 1 (22): 6563-6571.
- 53 Yun Wang, Haimin Zhang, Porun Liu, Tao Sun, Yibing Li, Huagui Yang, Xiangdong Yao, Huijun Zhao*, Nature of visible-light responsive fluorinated titanium dioxides, *J. Mater. Chem. A*, **2013**, 1 (41): 12948-12953.
- 52 Haimin Zhang, Xiaolu Liu, Yun Wang, Porun Liu, Weiping Cai, Guangshan Zhu, Huagui Yang, Huijun Zhao*, Rutile TiO₂ films with 100% exposed pyramid-shaped (111) surface: photoelectron transport properties under UV and visible light irradiation, *J. Mater. Chem. A*, **2013**, 1 (7): 2646-2652.
- 51 Long Wu†, Bing Xing Yang†, Xiao Hua Yang, Zhi Gang Chen, Zhen Li, Hui Jun Zhao, Xue Qing Gong*, Hua Gui Yang*, On the synergistic effect of hydrohalic acids in the shape-controlled synthesis of anatase TiO₂ single crystals, *CrystEngComm*, **2013**, 15 (17): 3252-3255.
- 50 Shuang Yang, Yu Hou, Bo Zhang, Hua Gui Yang*, Impurity-free synthesis of cube-like single-crystal anatase TiO₂ for high performance dye-sensitized, *Ind. Eng. Chem. Res.*, **2013**, 52 (11): 4098-4102.
- 49 Zi Fei Yin†, Long Wu†, Hua Gui Yang*, Yong Hua Su*, Recent progress in

- biomedical applications of titanium dioxide, *Phys. Chem. Chem. Phys.*, **2013**, 15 (14): 4844-4858.
- 48 Fang Yuan Xiao, Jun Xing, Long Wu, Zu Peng Chen, Xue Lu Wang, *Hua Gui Yang**, Assembly of ultrathin PbBiO₂Br nanosheets with enhanced visible light photocatalytic properties, *RSC Adv.*, **2013**, 3 (27), 10687-10690.
- 47 Jun Xing†, Chen Yang†, Wei Kun Li, Xue Qing Gong, *Hua Gui Yang**, Soft chemistry synthesis of high-crystalline orthogermanate CeGeO₄: a new photocatalyst, *J. Solid State Chem.*, **2013**, 197: 204-208.
- 46 Bo Zhang, Juhua Zhong*, Zhenmin Cheng, *Huagui Yang*, A facile route to search antioxidant additives for dry charged negative plate of the lead acid battery, *J. Electroanal. Chem.*, **2013**, 689: 1-7.
- 45 Zu Peng Chen, Wen Qi Fang, Bo Zhang, *Hua Gui Yang**, High-yield synthesis and magnetic properties of ZnFe₂O₄ single crystal nanocubes in aqueous solution, *J. Alloys Compd.*, **2013**, 550: 348-352.
- 44 Hai Bo Jiang, Jun Xing, Chong Wu Wang, *Hua Gui Yang**, Deposition of SnO₂ on the anatase TiO₂ {105} facets with high photocatalytic performance, *Chin. J. Chem.*, **2013**, 31 (12): 1503-1507.
- 43 Guang Zeng, Kai-Kai Li, *Hua Gui Yang*, Yun-Hong Zhang*, Micro-Raman mapping on an anatase TiO₂ single crystal with a large percentage of reactive (001) facets, *Vib. Spectrosc.*, **2013**, 68: 279-284.
- 42 Jun Xing, Hai Feng Wang, Chen Yang, Dong Wang, Hui Jun Zhao, Guan Zhong Lu, P. Hu, *Hua Gui Yang**, Ceria foam with atomically thin single-crystal walls, *Angew. Chem. Int. Ed.*, **2012**, 51 (15): 3611-3615.
- 41 曾惠丹, 杨云霞, 赵崇军, 王以群, *杨化桂*, 唐颂超, 新能源材料与器件专业实验教学探讨, 实验室研究与探索, **2012**, 10 (31), 109-111.
- 40 Wen Qi Fang†, Xiao Hua Yang†, Hongjun Zhu, Zhen Li, Huijun Zhao, Xiangdong Yao, *Hua Gui Yang**, Yolk@shell anatase TiO₂ hierarchical microspheres with exposed {001} facets for high-performance dye sensitized solar cells, *J. Mater. Chem.*, **2012**, 22 (41): 22082-22089.
- 39 Jun Xing, Wen Qi Fang, Hui Jun Zhao, *Hua Gui Yang**, Inorganic photocatalysts for overall water splitting, *Chem. Asian J.*, **2012**, 7 (4): 642-657.
- 38 Jun Xing†, Wen Qi Fang†, Zhen Li, *Hua Gui Yang**, TiO₂-coated ultrathin SnO₂ nanosheets used as photoanodes for dye-sensitized solar cells with high efficiency, *Ind. Eng. Chem. Res.*, **2012**, 51 (11): 4247-4253.
- 37 Yu Hou, Zifei Yin, Hailiang Xin, Yonghua Su*, *Huagui Yang**, Fe₃O₄ modified up-conversion luminescent nanocrystals for biological applications, *Chin. J. Chem.*, **2012**, 30 (12): 2774-2778.
- 36 Haimin Zhang, Yibing Li, Porun Liu, Ying Li, Dongjiang Yang, *Huagui Yang*, Huijun Zhao*, A new vapor-phase hydrothermal method to concurrently grow ZnO nanotube and nanorod array films on different sides of a zinc foil substrate,

- Chem. Eur. J.*, **2012**, 18 (17): 5165-5169.
- 35 Porun Liu, Yun Wang, Haimin Zhang, Taicheng An, Huagui Yang, Zhiyong Tang, Weiping Cai, Huijun Zhao*, Vapor-phase hydrothermal transformation of HTiOF₃ intermediates into {001} faceted anatase single-crystalline nanosheets, *Small*, **2012**, 8 (23): 3664-3673.
- 34 Hai Bo Jiang, Qian Cuan, Ci Zhang Wen, Jun Xing, Di Wu, Xue-Qing Gong, Chunzhong Li*, Hua Gui Yang*, Anatase TiO₂ crystals with exposed high-index facets, *Angew. Chem. Int. Ed.*, **2011**, 50 (16): 3764-3768.
- 33 Xiao Hua Yang, Zhen Li, Chenghua Sun, Hua Gui Yang*, Chunzhong Li*. Hydrothermal stability of {001} faceted anatase TiO₂, *Chem. Mater.*, **2011**, 23 (15): 3486-3494.
- 32 Wen Qi Fang, Xue-Qing Gong, Hua Gui Yang*, On the unusual properties of anatase TiO₂ exposed by highly reactive facets, *J. Phys. Chem. Lett.*, **2011**, 2 (7): 725-734.
- 31 Ci Zhang Wen, Qiu Hong Hu, Ya Nan Guo, Xue Qing Gong, Shi Zhang Qiao*, Hua Gui Yang*, From titanium oxydifluoride (TiOF₂) to titania (TiO₂): phase transition and non-metal doping with enhanced photocatalytic hydrogen (H₂) evolution properties, *Chem. Commun.*, **2011**, 47 (21): 6138-6140.
- 30 Ci Zhang Wen, Ji Zhi Zhou, Hai Bo Jiang, Qiu Hong Hu, Shi Zhang Qiao*, Hua Gui Yang*, Synthesis of micro-sized titanium dioxide nanosheets wholly exposed with high-energy {001} and {100} facets, *Chem. Commun.*, **2011**, 47 (15): 4400-4402.
- 29 Ci Zhang Wen, Hai Bo Jiang, Shi Zhang Qiao*, Hua Gui Yang*, Gao Qing (Max) Lu. Synthesis of high-reactive facets dominated anatase TiO₂, *J. Mater. Chem.*, **2011**, 21 (20): 7052-7061.
- 28 Xiao Hua Yang, Hua Gui Yang*, Chunzhong Li*, Controllable nanocarving of anatase TiO₂ single crystals with reactive {001} facets, *Chem. Eur. J.*, **2011**, 17 (24): 6615-6619.
- 27 Wen Qi Fang, Ji Zhi Zhou, Jian Liu, Zhi Gang Chen, Chen Yang, Cheng Hua Sun, Guang Ren Qian, Jin Zou, Shi Zhang Qiao*, Hua Gui Yang*, Hierarchical structures of single-crystalline anatase TiO₂ nanosheets dominated by {001} facets, *Chem. Eur. J.*, **2011**, 17 (5): 1423-1427.
- 26 Xiao Hua Yang, Zhen Li, Gang Liu, Jun Xing, Chenghua Sun, Hua Gui Yang*, Chunzhong Li*, Ultra-thin anatase TiO₂ nanosheets dominated with {001} facets: thickness-controlled synthesis, growth mechanism and water-splitting properties, *CrystEngComm*, **2011**, 13 (5): 1378-1383.
- 25 Jun Xing, Gao Qing (Max) Lu, Hua Gui Yang, Enhanced solar water splitting by surface engineering of titanium dioxide, *SPIE Newsroom*, **2011**, 3894: 1-3.
- 24 Cheng hua Sun*, Yi Jia, Xiao-Hua Yang, Hua-Gui Yang, Xiangdong Yao, Gao Qing (Max) Lu, Annabella Selloni, Sean C. Smith*, Hydrogen incorporation and

- storage in well-defined nanocrystals of anatase titanium dioxide, *J. Phys. Chem. C*, **2011**, 115 (51): 25590-25594.
- 23 Jun Song Chen, Ting Zhu, Xiao Hua Yang, Hua Gui Yang, Xiong Wen Lou*, Top-down fabrication of alpha-Fe₂O₃ single-crystal nanodiscs and microparticles with tunable porosity for largely improved lithium storage properties, *J. Am. Chem. Soc.*, **2010**, 132 (38): 13162-13164.
- 22 Xue Yan Ma, Zhi Gang Chen, Sandy Budi Hartono, Hai Bo Jiang, Jin Zou, Shi Zhang Qiao*, Hua Gui Yang*, Fabrication of uniform anatase TiO₂ particles exposed by {001} facets, *Chem. Commun.*, **2010**, 46 (35): 6608-6610.
- 21 Cheng Hua Sun†, Xiao Hua Yang†, Jun Song Chen, Zhen Li, Xiong Wen Lou*, Chunzhong Li, Sean C. Smith, Gao Qing (Max) Lu, Hua Gui Yang*, Higher charge/discharge rates of lithium-ions across engineered TiO₂ surfaces leads to enhanced battery performance, *Chem. Commun.*, **2010**, 46 (33): 6129-6131.
- 20 Gang Liu, Chenghua Sun, Hua Gui Yang, Sean C. Smith, Lianzhou Wang, Gao Qing (Max) Lu*, Hui-Ming Cheng*, Nanosized anatase TiO₂ single crystals for enhanced photocatalytic activity, *Chem. Commun.*, **2010**, 46 (5): 755-757.
- 19 Gang Liu, Lianzhou Wang, Hua Gui Yang, Hui-Ming Cheng*, Gao Qing (Max) Lu*, Titania-based photocatalysts-crystal growth, doping and heterostructuring, *J. Mater. Chem.*, **2010**, 20 (5): 831-843.
- 18 Jian Zhu, Shaohua Wang, Zhenfeng Bian, Songhai Xie, Chenling Cai, Jinguo Wang, Huagui Yang, Hexing Li*, Solvothermally controllable synthesis of anatase TiO₂ nanocrystals with dominant {001} facets and enhanced photocatalytic activity, *CrystEngComm*, **2010**, 12 (7): 2219-2224.
- 17 Yonghua Su, Shizhang Qiao*, Huagui Yang, Chen Yang, Yonggang Jin, Frances Stahr, Jiayu Sheng, Lina Cheng, Changquan Ling*, Gao Qing Lu, Titanate–silica mesostructured nanocables: synthesis, structural analysis and biomedical applications, *Nanotechnology*, **2010**, 21 (6): 065604-065610.
- 16 Hua Gui Yang, Gang Liu, Shi Zhang Qiao*, Cheng Hua Sun, Yong Gang Jin, Sean Campbell Smith, Jin Zou, Hui Ming Cheng, Gao Qing (Max) Lu*, Solvothermal synthesis and photoreactivity of anatase TiO₂ nanosheets with dominant {001} facets, *J. Am. Chem. Soc.*, **2009**, 131 (11): 4078-4083.
- 15 Gang Liu, Hua Gui Yang, Xuwen Wang, Lina Cheng, Jian Pan, Gao Qing (Max) Lu*, Hui-Ming Cheng*, Visible light responsive nitrogen doped anatase TiO₂ sheets with dominant {001} facets derived from TiN, *J. Am. Chem. Soc.*, **2009**, 131 (36): 12868-12869.
- 14 Gang Liu, Hua Gui Yang, Xuwen Wang, Lina Cheng, Haofeng Lu, Lianzhou Wang, Gao Qing (Max) Lu*, Hui-Ming Cheng*, Enhanced photoactivity of oxygen-deficient anatase TiO₂ sheets with dominant {001} facets, *J. Phys. Chem. C*, **2009**, 113 (52): 21784-21788.
- 13 Gang Liu†, Hua Gui Yang†, Chenghua Sun, Lina Cheng, Lianzhou Wang, Gao

- Qing (Max) Lu*, Hui-Ming Cheng*, Titania polymorphs derived from crystalline titanium diboride, *CrystEngComm*, **2009**, 11 (12): 2677-2682.
- 12 **Hua Gui Yang**†, Cheng Hua Sun†, Shi Zhang Qiao*, Jin Zou, Gang Liu, Sean Campbell Smith, Hui Ming Cheng, Gao Qing Lu*, Anatase TiO₂ single crystals with a large percentage of reactive facets, *Nature*, **2008**, 453 (7195): 638-641. (**Highlighted** by *Nature Materials*, Chemistry World, Chemical & Engineering News, etc)
 - 11 Lei Zhang, Shizhang Qiao*, Yonggang Jin, **Huagui Yang**, Sandy Budihartono, Frances Stahr, Zifeng Yan*, Xiaolin Wang, Zhengping Hao, Gao Qing Lu*, Fabrication and size-selective bioseparation of magnetic silica nanospheres with highly ordered periodic mesostructure, *Adv. Funct. Mater.*, **2008**, 18 (20): 3203-3212.
 - 10 **Hua Gui Yang**, Hua Chun Zeng*, Synthetic Architectures of TiO₂/H₂Ti₅O₁₁ center dot H₂O, ZnO/H₂Ti₅O₁₁ center dot H₂O, ZnO/TiO₂/H₂Ti₅O₁₁ center dot H₂O, and ZnO/TiO₂ nanocomposites, *J. Am. Chem. Soc.*, **2005**, 127 (1): 270-278.
 - 9 **Hua Gui Yang**, Hua Chun Zeng*, Creation of intestine-like interior space for metal-oxide nanostructures with a quasi-reverse emulsion, *Angew. Chem. Int. Ed.*, **2004**, 43 (39): 5206-5209.
 - 8 **Hua Gui Yang**, Hua Chun Zeng*, Self-construction of hollow SnO₂ octahedra based on two-dimensional aggregation of nanocrystallites, *Angew. Chem. Int. Ed.*, **2004**, 43 (44): 6056-6059.
 - 7 **Hua Gui Yang**, Hua Chun Zeng*, Preparation of hollow anatase TiO₂ nanospheres via ostwald ripening, *J. Phys. Chem. B*, **2004**, 108 (11): 3492-3495.
 - 6 **Hua Gui Yang**, Hua Chun Zeng*, Lattice strain directed synthesis of anatase TiO₂ single-crystal microplatelet arrays on alpha-MoO₃ (010) template, *J. Phys. Chem. B*, **2004**, 108 (3): 819-823.
 - 5 **Hua Gui Yang**, Hua Chun Zeng*, Self-aligned growth of hexagonal TiO₂ nanosphere arrays on alpha-MoO₃ (010) surface, *Chem. Mater.*, **2003**, 15 (16): 3113-3120.
 - 4 **Hua Gui Yang**, Hua Chun Zeng*, Control of nucleation in solution growth of anatase TiO₂ on glass substrate, *J. Phys. Chem. B*, **2003**, 107 (44): 12244-12255.
 - 3 **Hua-Gui Yang***, Chun-Zhong Li, Hong-Chen Gu, Tu-Nan Fang, Rheological behavior of titanium dioxide suspensions, *J. Colloid Interf. Sci.*, **2001**, 236 (11): 96-103.
 - 2 **Hua Gui Yang**, Pei Ying Gao, Hong Chen Gu, Tu Nan Fang, Rheological behavior of TiO₂/water suspensions, *J. Inorg. Mater.*, **2000**, 15 (3): 431-436.
 - 1 **Hua Gui Yang**, Jin Yi Chen, Hong Chen Gu, Lu Ping Gan, Effects of additives on rheological properties of TiO₂/water dispersions, *Chem. J. Chinese U.*, **1999**, 20 (10): 1601-1604.