

Huiwen Bai

University of Science and Technology Beijing
Institute for Advanced Materials and Technology
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Education

M.S. in University of Science and Technology Beijing Sept. 2015 –Jan. 2018

Materials Science and Engineering (GPA: 3.7/4)

Dissertation: Photodetectors and Dye/QDs-sensitized Solar Cells, Counter Electrodes, Perovskite Solar Cells, CsPbX₃ and PbS quantum dots

B.S. in North China University of Science and Technology Sept. 2011 – June. 2015

Materials Science (GPA: 3.3/4)

Project: Investigation on corrosion types under different conditions and protection method of stainless steels

Relevant coursework includes:

Fundamentals of Materials Science, Physical Chemistry, Inorganic Chemistry, Chemistry of Nanomaterials, Energy Materials, Introduction to Crystallography, Electron Microscopy and Analysis, X-ray Diffraction of Crystals, Preparative Chemistry of Materials, Powder Metallurgy, Polymer chemistry and Physics, Composites Interfaces.

Awards and honors

- **The Best Graduates in Beijing City**, 2018.
- The Best Graduates of University of Science and Technology Beijing, 2018.
- The Best Master Theses of University of Science and Technology Beijing, 2018
- **National Scholarship**, 2017.
- **Excellent graduation thesis**, 2018.
- Miyoshi Students Award in University of Science and Technology Beijing, 2016/2017.
- Scholarship: First class scholarship, 2016.
- Excellent practitioner of scientific service activity, 2016.

- Scholarship: First class scholarship, 2014.
- First prize in English drama competition, 2013.
- Scholarship: Second class scholarship, 2012.

Laboratory Experience:

Scanning Electron Microscopy (Hitachi, SU8200), Transmission Electron Microscopy (FEI/Tecnai G2), X-ray Diffractometer (X'pert3), Ultraviolet-visible (UV-Vis) spectrophotometer (UV-3600, Shimadzu), Time resolved fluorescence spectrometer (FLS980, Endinbergh), Fourier Transform Infrared Spectroscopy (Bruker/VERTEX80v), Raman Spectroscopy (LabRAM), TGA/DSC Instrument (Mettler STAR^e system), Nitrogen Sorption Analyzer (ASAP2020), Cleanroom Processing, Electrochemical Station (Zahner), Intensity-Modulated Photovoltage/Photocurrent Spectroscopy (IMVS/IMPS), Incident Photon-to-current Conversion Efficiency (IPCE) spectra.

Skills:

- Photoshop, Origin, Microsoft software packages (Word, Excel, PowerPoint), Gatan Digital Micrograph (TEM Image software), 3D-Max, Auto CAD, Zview (Impedance analysis software), Highscore and Jade (X-ray spectrum analysis software), XPS Peak Fit.
- TOEFL: 86, GRE: 302, English certification of China Scholarship Council in 2018.

Publications and experiences:

1. **Huiwen Bai**, Ting Shen, Shixun Wang, Bo Li, Guozhong Cao, Jianjun Tian: Controlled growth of Cu₃Se₂ nanosheets array counter electrode for quantum dots sensitized solar cell through ion exchange, *Science China-Materials* (IF=3.956), **2017**, DOI: 10.1007/s40843-017-9037-1.
2. **Huiwen Bai**, Ting Shen, Jianjun Tian: Air-stable ultraviolet photodetector based on mesoporous TiO₂/Spiro-OMeTAD, *Journal of Materials Chemistry C* (IF=5.256), **2017**, DOI: 10.1039/C7TC02787G.
3. Shixun Wang, Ting Shen, **Huiwen Bai**, Bo Li, Jianjun Tian: Cu₃Se₂ nanostructure as counter electrode for high efficiency quantum dot-sensitized solar cells. *Journal of Materials Chemistry C*, **2016**, 4(34), DOI:10.1039/C6TC02309F
4. Bo Chen¹, Zhe Hao¹, **Huiwen Bai**¹, Yingna Zhao²: Corrosion Types under Different Conditions of Stainless Steels and the Present Research Status, *Monograph*, **2014**, 28(7):15-19. DOI : 10.13726/j.cnki.11-2706/tq.2014.07.015.05. (* Co-first Author)
5. Yingna Zhao, Jiang Ren, Bo Chen, **Huiwen Bai**, Zhe Hao: Preparation and Characterization of ZrO₂ Coated Mullite Short Fibres by Sol-gel, *China Ceramics*, **2014**, 50(7): 58-60.
6. Internship in Purchasing Department, *Merck Serono Co. Ltd.* China (Winter Internship in 2015)

7. Internship in Quality Testing Department, *Avic China Aero-polytechnology Establishment* (Summer Internship in 2016)
8. Participated in the *USTB-TU (Tohoku University) Joint Workshop on Advanced Materials and Manufacture* at Beijing (03/2016)
9. *Scientific service team of USTB* for metallurgical enterprise in Qingdao (2016)
10. Wrote two paper's review comments about photodetector (2017)

Professional references:

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University of Washington (United State)
E-mail: gzcao@u.washington.edu
2. Professor Jianjun Tian
University of Science and Technology, Beijing (China)
E-mail: tianjianjun@mater.ustb.edu.cn