

<u>基本信息</u>	
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<u>教育背景</u>	
2006.08-2012.01	中国科学院长春应用化学研究所，高分子化学与物理专业，理学博士
2002.09-2006.07	哈尔滨工业大学，化学工程与工艺专业，工学学士
<u>工作经历</u>	
2017.03-至今	北京理工大学前沿交叉学院，准聘教授
2013.01-2017.02	哈尔滨工业大学基础交叉学院，教授
2012.02-2012.12	哈尔滨工业大学基础交叉学院，副教授
<u>研究方向</u>	
1.	锂二次电池（锂离子、锂硫）关键材料研究
2.	电催化关键材料及机理研究
<u>承担项目</u>	
1.	国家自然科学基金青年科学基金项目
2.	北京理工大学引进人才启动项目
3.	中国博士后特别资助
4.	中国博士后面上资助
5.	黑龙江省博士后特别资助
<u>研究成果</u>	

主要从事电化学与新能源材料领域的研究，在关键纳米电催化剂材料设计和制备、新型光伏器件、纳米界面特性及电化学过程研究等方面有多年的研究工作积累。文章发表在 Nat. Mater.、J. Am. Chem. Soc.、Chem. Commun.、Chem. Rev.等国际知名期刊，文章总引用 2500 余次。研究工作被 Nature、Chem.&Eng. News、Chemistry World、Nature China、Nature Chemistry、NPG Asia Materials 和 MIT Technology Review 评述。研究成果入选“中国百篇最具影响优秀国际学术论文”。

代表性论文

1.	Yu Zhou, Bai Yu*, Zhang Naiqing, Yang Weiwei, Ma Jiahuan, Wang Zhenhua, Sun Wang, Qiao Jinshuo, Sun Kening. Metal-organic framework-derived heterostructured ZnCo ₂ O ₄ @FeOOH hollow polyhedrons for oxygen evolution reaction. Journal of Alloys and Compounds, 2020, 832, 155067.
2.	Yang Fan, Sun Wang, Bai Yu, Xu Tianye, Cai Kedi*, Cai Huiqun, Sun Kening, and Wang Zhenhua*. Rational Design of Sandwich-Like “Gel-Liquid-Gel” Electrolytes for Dendrite-Free Lithium Metal Batteries. Industrial & Engineering Chemistry Research, 2020, 59:14207-14216.
3.	Dan Ni, Wang Sun*, Zhenhua Wang, Yu Bai, Hongshuai Lei, Xinhua Lai, Kening Sun*. Heteroatom-Doped Mesoporous Hollow Carbon Spheres for Fast Sodium Storage with an Ultralong Cycle Life. Advanced Energy Materials, 2019, 9, 1900036.
4.	Yu Zhou, Bai Yu*, Zhang Shimin, Liu Yuxuan, Zhang Naiqing and Sun Kening. Metal-organic framework-derived Zn _{0.975} Co _{0.025} S/CoS ₂ embedded in N,S-codoped carbon nanotube/nanopolyhedra as an efficient electrocatalyst for overall water splitting. Journal of Materials Chemistry A, 2018, 6:10441-10446.
5.	Yu Zhou, Bai Yu*, Zhang Shimin, Liu Yuxuan, Zhang Naiqing, Sun Kening. MOF-directed templating synthesis of hollow nickel-cobalt sulfide with enhanced electrocatalytic activity for oxygen evolution. International journal of hydrogen energy, 2018, 43:8815-8823.
6.	Yu Zhou, Bai Yu*, Zhang Shimin, Liu Yuxuan, Zhang Naiqing, Wang Guohua, Wei Junhua, Wu Qibing, and Sun Kening. Metal – Organic Framework-Derived Co ₃ ZnC/Co Embedded in Nitrogen-Doped Carbon Nanotube-Grafted Carbon Polyhedra as a High-Performance Electrocatalyst for Water Splitting. ACS Applied Materials & Interfaces, 2018, 10:6245-6252.
7.	Liu Yuxuan, Bai Yu*, Han Yu, Yu Zhou, Zhang Shimin, Wang Guohua, Wei Junhua, Wu Qibing, and Sun Kening. Self-Supported Hierarchical FeCoNi-LTH/NiCo ₂ O ₄ /CC Electrodes with Enhanced Bifunctional Performance for

	Efficient Overall Water Splitting. ACS Applied Materials & Interfaces, 2017, 9:36917-36926.
8.	Yu Zhou, Bai Yu*, Liu Yuxuan, Zhang Shimin, Chen Dandan, Zhang Naiqing, Sun Kening*. Metal-Organic-Framework-Derived Yolk-Shell-Structured Cobalt-Based Bimetallic Oxide Polyhedron with High Activity for Electrocatalytic Oxygen Evolution. ACS Applied Materials & Interfaces, 2017, 9:31777-31785.
9.	Yu Zhou, Bai Yu, Wang Yanxiang, Liu Yuxuan, Zhao Yanli, Liu Yang, Sun Kening. One-step synthesis of three-dimensional nitrogen and sulfur co-doped graphene networks as low cost metal-free counter electrodes for dye-sensitized solar cells. Chemical Engineering Journal, 2017, 311:302-309.
10.	Sun Lijuan, Lu Lei, Bai Yu, Sun, Kening*. Three-dimensional porous reduced graphene oxide/sphere-like CoS hierarchical architecture composite as efficient counter electrodes for dye-sensitized solar cells. Journal Of Alloys and Compounds, 2016, 654:196-201.
11.	Sun Lijuan, Bai Yu*, Zhang Naiqing, Sun, Kening*. The facile preparation of a cobalt disulfide-reduced graphene oxide composite film as an efficient counter electrode for dye-sensitized solar cells. Chemical Communications, 2015, 51, 1846-1849.
12.	Bai Yu, Liu Zhimin, Zhang Naiqing*, Sun Kening*. One-pot synthesis of 3-D dandelion-like architectures constructed by rutile TiO ₂ nanorods grown along [001] axis for high-rate lithium ion batteries. RSC Advances, 2015, 5: 21285-21289.
13.	Sun Lijuan, Bai Yu*, Sun Kening*. Organic molecule controlled synthesis of three-dimensional rhododendron-like cobalt sulfide hierarchitectures as counter electrodes for dye-sensitized solar cells. RSC Advances, 2014, 4: 42087-42091.
14.	Bai Yu, Mora-Sero Ivan, De Angelis Filippo, Bisquert Juan, Wang Peng*. Titanium dioxide nanomaterials for photovoltaic applications. Chemical Reviews, 2014, 114:10095-10130.
15.	Bai Yu, Zhang Jing, Zhou Difei, Wang Yinghui, Zhang Min, Wang Peng*. Engineering of organic sensitizers for iodine-free dye-sensitized solar cells: a red-shifted current response concomitant with an attenuated charge recombination. Journal of the American Chemical Society, 2011, 133:11442-11445.
16.	Bai Yu, Yu Qingjiang, Cai Ning, Wang Yinghui, Zhang Min, Wang, Peng*. High-efficiency organic dye-sensitized mesoscopic solar cells with a copper redox shuttle. Chemical Communications, 2011, 47:4376-4378.
17.	Bai Yu, Zhang Jing, Wang Yinghui, Zhang Min, Wang Peng*. Lithium modulated conduction band edge shifts and charge-transfer dynamics in dye-sensitized solar cells based on a dicyanamide ionic liquid. Langmuir, 2011, 27:4749-5755.
18.	Zhou Difei, Yu Qingjiang, Cai Ning, Bai Yu, Wang Yinghui, Wang Peng*. Efficient organic dye-sensitized thin-film solar cells based on the tris(1,10-

	phenanthroline)cobalt(II/III) redox shuttle. <i>Energy & Environmental Science</i> , 2011, 4:2030-2034.
19.	Zhang Min, Zhang Jing, Bai Yu, Wang Yinghui, Su Mei, Wang Peng*. Anion-correlated conduction band edge shifts and charge transfer kinetics in dye-sensitized solar cells with ionic liquid electrolytes. <i>Physical Chemistry Chemical Physics</i> , 2011, 13:3788-3794.
20.	Zhou Difei, Bai Yu, Zhang Jing, Cai Ning, Su Mei, Wang Yinghui, Zhang Min, Wang Peng*. Anion effects in organic dye-sensitized mesoscopic solar cells with ionic liquid electrolytes: tetracyanoborate versus dicyanamide. <i>Journal of Physical Chemistry C</i> , 2011, 115:816-822.
21.	Zeng Wangdong, Cao Yiming, Bai Yu, Wang Yinghui, Shi Yushuai, Zhang Min, Wang Fangfang, Pan Chunyue, Wang Peng*. Efficient dye-sensitized solar cells with an organic photosensitizer featuring orderly conjugated ethylenedioxythiophene and dithienosilole blocks. <i>Chemistry of Materials</i> , 2010, 22:1916-1920.
22.	Cao Yiming, Bai Yu, Yu Qingjiang, Cheng Yueming, Liu Shi, Shi Dong, Gao Feifei, Wang Peng*. Dye-sensitized solar cells with a high absorptivity ruthenium sensitizer featuring a 2-(hexylthio)thiophene conjugated bipyridine. <i>Journal of Physical Chemistry C</i> , 2009, 113:6290-6297.
23.	Zhang, Guangliang, Bai Yu, Li Renzhi, Shi Dong, Wenger Sophie, Zakeeruddin, Graetzel Michael, Wang Peng*. Employ a bithienothiophene linker to construct an organic chromophore for efficient and stable dye-sensitized solar cells. <i>Energy & Environmental Science</i> , 2009, 2:92-95.
24.	Bai Yu, Cao Yiming, Zhang Jing, Wang Mingkui, Li Renzhi, Wang Peng*, Zakeeruddin Shaik M, Graetzel Michael*. High-performance dye-sensitized solar cells based on solvent-free electrolytes produced from eutectic melts. <i>Nature Materials</i> , 2008, 7:626-630.
25.	Cao Yiming, Zhang Jing, Bai Yu, Li Renzhi, Zakeeruddin Shaik M., Graetzel Michael, Wang, Peng*. Dye-sensitized solar cells with solvent-free ionic liquid electrolytes. <i>Journal of Physical Chemistry C</i> , 2008, 112:13775 -13781.