Yanhong Lu

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Education and Work Experience

Drexel University	Visiting scholar (*Supervisor:* Prof. Yury Gogotsi)	Nano Material	Oct. 2018 - now
Langfang Normal University	Associate Professor	Nano Material	Sep. 2015 - Oct. 2018
Tianjin University	Ph.D. (*Supervisor:* Prof. Yongsheng Chen and Mingjie Zhang)		Sep.2012 - Jul. 2015
Langfang Normal University	Lecturer	Nano Material	Jul. 2006 - Sep.2012
Nankai University	M.D. (*Supervisor:* Prof. Yongsheng Chen)	Nano Material	Sep.2003 - Jun. 2006
Heibei Normal University	B.S.	Chemistry	Sep.1998 - Jul. 2003

Selected Publications

[1] **Yanhong Lu***, Yanfeng Ma, Tengfei Zhang, Yang Yang, Lei Wei and Yongsheng Chen*, Monolithic 3D cross-linked polymeric graphene materials and the likes: preparation and their redox catalytic applications. ***J. Am. Chem. Soc.***, 2018, 140: 11538−11550.

[2] **Yanhong Lu***, Suling Zhang, Jiameng Yin, Congcong Bai, Junhao Zhang, Yingxue Li, Yang Yang, Zhen Ge, Miao Zhang, Lei Wei, Maixia Ma, Yanfeng Ma and Yongsheng Chen*, Mesoporous activated carbon materials with ultrahigh mesopore volume and effective surface area for high performance supercapacitors. ***Carbon***, 2017, 124: 64-71.

[3] **Yanhong Lu**†, Bo Ma†, Yang Yang, Erwei Huang, Zhen Ge, Tengfei Zhang, Suling Zhang, Landong Li*, Naijia Guan, Yanfeng Ma and Yongsheng Chen*, High activity of hot electrons from bulk 3D graphene materials for efficient photocatalytic hydrogen production. ***Nano Research***, 2017, 10(5): 1662-1672.

[4] **Yanhong Lu**†, Yang Yang†, Tengfei Zhang†, Zhen Ge, Huicong Chang, Peishuang Xiao, Yuanyuan Xie, Lei Hua, Qingyun Li, Haiyang Li, Bo Ma, Naijia Guan, Yanfeng Ma and Yongsheng Chen*, Photoprompted hot electrons from bulk cross-linked graphene materials and their efficient catalysis for atmospheric ammonia synthesis. ***ACS Nano***, 2016, 10(11):10507-10515.

[5] **Yanhong Lu***, Guankui Long, Long Zhang, Tengfei Zhang, Mingtao Zhang, Fan Zhang, Yang Yang, Yanfeng Ma, Yongsheng Chen*, What are the practical limits for the specific surface area and capacitance of bulk sp^2 carbon materials. ***Science China Chemistry***, 2016, 59(2):225-230.

[6] **Yanhong Lu**, Fan Zhang, Tengfei Zhang, Kai Leng, Long Zhang, Xi Yang, Yanfeng Ma, Yi Huang, Mingjie Zhang*, Yongsheng Chen*, Synthesis and supercapacitor performance studies of N-doped graphene materials

using o-phenylenediamine as the double-N precursor. ***Carbon***, 2013, 63:508-516.

[7] **Yanhong Lu**, Yi Huang*, Mingjie Zhang, Yongsheng Chen, Nitrogen-doped graphene materials for supercapacitor applications. ***J. Nanoscience and Nanotechnology***, 2014, 14:1134-1144.

[8] **Yanhong Lu***, Yi Huang, Fan Zhang, Long Zhang, Xi Yang, Tengfei Zhang, Kai Leng, Mingjie Zhang, Yongsheng Chen*, Functionalized graphene oxide based on p-phenylenediamine as spacers and nitrogen dopants for high performance supercapacitors. ***Chinese Science Bulletin***, 2014, 59(16):1809-1815.

[9] **Yanhong Lu**, Yongsheng Chen. Graphene and porous nanocarbon materials for supercapacitor applications [A]. Xinliang Feng. Nanocarbons for advanced energy storage [M]. Germany, John Wiley & Sons, **2015**, ISBN: 3527336656.

Patents

1. The preparation method and the application of an activated carbon material with high specific surface area based on a biomass. **Yanhong Lu**, Suling Zhang, Lei Wei, Maixia Ma, Congcong Bai; CN107244671A.

2. A catalyst and the preparation method and application. Yongsheng Chen, Yanfeng Ma, **Yanhong Lu**, Yang Yang; CN106391015A.

Funds

1. **Yanhong Lu (Principle Investigator)**, Compression-tolerant supercapacitor with high energy storage based on three dimensional graphene/metal oxide composite material, **the National Natural Science Foundation of China**, 51502125, 2015-2018.

2. **Yanhong Lu (Principle Investigator)**, Study on high-performance hybrid supercapacitor based on graphene composite, **the Natural Science Foundation of Hebei Province of China**, E2016408035, 2015-2018.

Current Researches

Research interests are focused on the design and synthesis of nanomaterials based on carbon materials with controlled chemical composition and structural morphology and the application in energy storage and catalysis field.

1. Synthesis porous/graphene based nanomaterials toward energy storage and conversion devices, including supercapacitors and lithium-ion batteries. Extensive researches have been focusing on the flexible supercapacitors such as the compression-tolerant device (NFSC project) based on 3D graphene.

2. Design 3D bulk cross-linked graphene and the composites with photoprompted hot electrons for efficient catalysis, including catalysis for atmospheric ammonia and photocatalytic hydrogen production. Other catalysis systems, such as reduction of CO_2 and organic pollutants, are under investigating.