

Xiaokun Pei

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Education

University of California, Berkeley Graduate Student in Chemistry, Advisor: Prof. Omar Yaghi	2016/08 – Present
Beijing Institute of Technology B.Sc. in Chemistry	2012/06 – 2016/06

RESEARCH & WORK EXPERIENCES

Research project in “Hot-Pressing” MOF membranes 2014/11 – 2015/08

School of Chemistry, Beijing Institute of Technology

Advisor: Prof. Bo Wang

- Explored appropriate fabrication conditions for novel “Hot-Pressing” method with hundreds of attempts
- Confirmed the formation, well-defined morphology, resistance and super-hydrophobicity of MOF membranes by PXRD, SEM, XPS and contact angle measurement
- Investigated photocatalysis and selective filtration properties of the membranes by UV-Vis spectrum
- Proved feasibility of this method by successfully facilitating rapid growth (10 min) of carboxylate-based MOFs, imidazolate-based MOFs, mixed-metal MOFs and MOF nanocomposites onto desired substrates (e.g. foils, cloths and fibers)

Research project in synthesizing lanthanide MOFs 2014/09 – 2016/05

School of Chemistry, Beijing Institute of Technology

Advisor: Prof. Bo Wang

- Systematically investigated the synthesis conditions and developed three new MOFs *via* solvothermal reaction
- Explored metal exchange properties of the obtained MOFs

PUBLICATIONS

- Y. Chen†, S Li†, **X. Pei†**, J. Zhou, X. Feng, S. Zhang, Y. Cheng, H. Li, R. Han, B. Wang, “Iron it: a solvent-free hot-pressing method for the syntheses of metal-organic frameworks based membranes, films and fibers”, *Angew. Chem. Int. Ed.*, **2016**, *55*, 3419–3423
- **X. Pei†**, Y. Chen†, S. Li, S. Zhang, X. Feng, J. Zhou, B. Wang, “Metal-Organic Frameworks Derived Porous Carbons: Syntheses, Porosity and Gas Sorption Properties” (Review), *Chin. J. Chem.*, **2016**, *34*, 157–174

AWARDS & HONORS

- Excellent Student of Beijing (41 of 20k students), Beijing Education Committee, 2014
- National Scholarship (Top 1%), Ministry of Education of P. R. China, 2013 & 2014
- Second Prize in Beijing Contest District in National English Competition for College Students, 2013
- First-Class Scholarship of Beijing Institute of Technology (Top 5%), 2013 – 2014
- Model Student of Beijing Institute of Technology (Top 5%), 2013