

# Curriculum Vitae

## Personal Information

Name: Shuliang Yang

Place of birth: Hunan, China

E-mail: yslichem@gmail.com

## Experiences

- **Sep 2013~Jul 2016 Ph.D. Physical Chemistry (Material Chemistry)**  
Beijing National Laboratory for Molecular Sciences (BNLMS), Laboratory of Molecular Nanostructures and Nanotechnology, Institute of Chemistry (ICCAS), Chinese Academy of Sciences, Beijing, China.
- **Sep 2010~Jul 2013 M.S. Analytical Chemistry (Organic Methodology)**  
State Key Laboratory of Electro-analytical Chemistry, Changchun Institute of Applied Chemistry (CIAC), Chinese Academy of Sciences, Changchun, China.
- **Sep 2006~Jul 2010 B.S. Polymer Materials and Engineering**  
College of Chemistry, Xiangtan University (XTU), Xiangtan, China.

## Publications

1. **S. Yang**, L. Peng, P. Huang, X. Wang, C. Cao, Y. Sun, W. Song, Nitrogen, phosphorus, and sulfur co-doped hollow carbon shell as superior metal-free catalyst for selective oxidation of aromatic alkanes. *Angew. Chem. Int. Ed.*, **2016**, 55, 4016-4020.
2. **S. Yang**, C. Cao, Y. Sun, P. Huang, F. Wei, W. Song, Nanoscale magnetic stirring bars for heterogeneous catalysis in microscopic systems. *Angew. Chem. Int. Ed.*, **2015**, 54, 2661-2664.
3. **S. Yang**, C. Cao, L. Peng, J. Zhang, B. Han, W. Song, Pd-Cu<sub>2</sub>O nanocomposite as an effective synergistic catalyst for selective semi-hydrogenation of terminal alkynes only. *Chem. Commun.*, **2016**, 52, 3627-3630.
4. **S. Yang**, C. Cao, L. Peng, P. Huang, Y. Sun, F. Wei, W. Song, Spindle-shaped nanoscale yolk/shell magnetic stirring bars for heterogeneous catalysis in macro- and microscopic systems. *Chem. Commun.*, **2016**, 52, 1575-1578.
5. **S. Yang**, P. Huang, L. Peng, C. Cao, Y. Zhu, F. Wei, F. Wei, Y. Sun, W. Song, Hierarchical flowerlike magnesium oxide hollow spheres with extremely high surface area for adsorption and catalysis. *J. Mater. Chem. A*, **2016**, 4, 400-406.
6. **S. Yang**, L. Peng, C. Cao\*, F. Wei, J. Liu, Y. Zhu, C. Liu, X. Wang, W. Song\*, Preparation of magnetic tubular shape nanoreactors for highly efficient catalysis. *Chem. Asian J.*, **2016**, 11, 2797-2801.
7. **S. Yang**, C. Cao, G. Li, Y. Sun, P. Huang, F. Wei, W. Song, Improving the electrochemical performance of Fe<sub>3</sub>O<sub>4</sub> nanoparticles via a double protection strategy through carbon nanotube decoration and graphene networks. *Nano Res.*, **2015**, 8, 1339-1347.
8. **S. Yang**, C. Cao, P. Huang, L. Peng, Y. Sun, F. Wei, W. Song, Sandwich-like porous TiO<sub>2</sub>/reduced graphene oxide (rGO) for high-performance lithium-ion batteries. *J. Mater. Chem. A*, **2015**, 3, 8701-8705.
9. **S. Yang**, C.-Y. Cao, F.-F. Wei, P.-P. Huang, Y.-B. Sun, W.-G. Song, Controllable loading of noble metal nanoparticles on multiwalled carbon nanotubes/Fe<sub>3</sub>O<sub>4</sub> through an in situ galvanic replacement reaction for high-performance catalysis. *ChemCatChem*, **2014**, 6, 1868-1872.
10. **S. Yang**, W. Xie, H. Zhou, C. Wu, Y. Yang, J. Niu, W. Yang, J. Xu, Alkoxylation reactions of aryl halides catalyzed by magnetic copper ferrite. *Tetrahedron*, **2013**, 69, 3415-3418.
11. **S. Yang**, C. Wu, H. Zhou, Y. Yang, Y. Zhao, C. Wang, W. Yang, J. Xu, An Ullmann C-O coupling reaction catalyzed by magnetic copper ferrite nanoparticles. *Adv. Synth. Catal.*, **2013**, 355, 53-58.

12. **S. Yang**, C. Wu, M. Ruan, Y. Yang, Y. Zhao, J. Niu, W. Yang, J. Xu, Metal- and ligand-free Ullmann-type C-O and C-N coupling reactions promoted by potassium tert-butoxide. *Tetrahedron Lett.*, **2012**, 53, 4288-4292.
13. L. Peng, J. Zhang, **S. Yang**, B. Han, X. Sang, C. Liu, X. Ma, G. Yang, Ultra-small gold nanoparticles immobilized on mesoporous silica/graphene oxide as highly active and stable heterogeneous catalysts. *Chem. Commun.*, **2015**, 51, 4398-4401.
14. L. Peng, J. Zhang, **S. Yang**, B. Han, X. Sang, C. Liu, G. Yang, The ionic liquid microphase enhances the catalytic activity of Pd nanoparticles supported by a metal-organic framework. *Green Chem.*, **2015**, 17, 4178-4182.
15. P. Huang, C. Cao, Y. Sun, **S. Yang**, F. Wei, W. Song, One-pot synthesis of sandwich-like reduced graphene oxide@CoNiAl layered double hydroxide with excellent pseudocapacitive properties. *J. Mater. Chem. A*, **2015**, 3, 10858-10863.
16. C. Liu, J. Liu, **S. Yang**, C. Cao, W. Song, Palladium nanoparticles encapsulated in a silicalite-1 zeolite shell for size-selective catalysis in liquid-phase solution. *ChemCatChem*, **2016**, 8, 1279-1282.
17. F. Wei, C. Cao, Y. Sun, **S. Yang**, P. Huang, W. Song, Highly active and stable palladium nanoparticles encapsulated in a mesoporous silica yolk-shell nanoreactor for Suzuki-Miyaura reactions. *ChemCatChem*, **2015**, 7, 2475-2479.
18. L. Peng, J. Zhang, **S. Yang**, B. Han, X. Sang, C. Liu, G. Yang, Porosity control in mesoporous polymers using CO<sub>2</sub>-swollen block copolymer micelles as templates and their use as catalyst supports. *Chem. Commun.* **2014**, 50, 11957-11960.
19. Y.-B. Sun, C.-Y. Cao, **S. Yang**, P.-P. Huang, C.-R. Wang, W.-G. Song, C60 fullerene as an active and stable catalyst for the synthesis of cyclic carbonates from CO<sub>2</sub> and epoxides. *Chem. Commun.*, **2014**, 50, 10307-10310.
20. Y. Yu, Y. Sun, C. Cao, **S. Yang**, H. Liu, P. Li, P. Huang, W. Song, Graphene-based composite supercapacitor electrodes with diethylene glycol as inter-layer spacer. *J. Mater. Chem. A*, **2014**, 2, 7706-7710.
21. Y. Sun, C. Cao, P. Huang, **S. Yang**, W. Song, Amines modified C<sub>60</sub> as solid base catalysts for Knoevenagel condensation with high activity and stability. *RSC Adv.*, **2015**, 5, 86082-86087.
22. Y. Zhao, Y. Xiao, **S. Yang**, J. Xu, W. Yang, M. Li, D. Wang, Y. Zhou, Alignment of single-walled carbon nanotubes with ferroelectric liquid crystal. *J. Phys. Chem. C*, **2012**, 116, 16694-16699.

## Research Interest

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- ✧ Design and synthesis of nanomaterials with interesting morphologies and desired functions.
- ✧ Applications of nanomaterials in electrocatalysis, heterogeneous catalysis and photocatalysis.
- ✧ Novel inorganic/organic porous materials for methane activation, CO<sub>2</sub> utilization, water splitting, energy conversion and green chemistry.