



4<sup>th</sup> International Symposium on  
**E**nergy **C**hallenges & **M**echanics  
- working on small scales

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### Speaker of Session 11

### NANOMECHANICS



Qin-Qin Xu works in the School of Chemical Machinery in Dalian University of Technology, serving as a lecturer. In Sept. 2014 she got the PhD degree of chemical process machinery at Dalian University of technology. Her research interest is in the area of applications of supercritical fluids such as preparing nano-composites using supercritical carbon dioxide, application and thermodynamics of supercritical micro emulsion etc. Since 2009, She has published 29 papers, of which 16 has been indexed by SCI. She got 2 awards of academic achievements in science and nature of LiaoNing Province in 2012 and 2013, and has applied for 7 national invention patents, 2 of which has been authorized.

#### Representative publications

1. **Qin-qin Xu**, Gang Xu, Jian-Zhong Yin\* et al. Preparation of Super-highly Dispersed  $\text{Co}_3\text{O}_4$ @ SBA-15 with Different Morphology in Supercritical  $\text{CO}_2$  with the Assistance of Dilute Acids. *Industrial & Engineering Chemistry Research*. 2014, 53(25):10366-10371
2. **Qin-qin Xu**, Yu-Ling Ma, Gang-Xu, Ai-qin Wang, Jian-Zhong Yin\*, et al. Comprehensive Study of the Role of Ethylene Glycol When Preparing Ag@SBA-15 in Supercritical  $\text{CO}_2$ . *The Journal of Supercritical Fluids*. 2014, 92: 100-106
3. **Qin-qin Xu**, Yu-Ling Ma, Gang-Xu et al. Synthesis of Highly Dispersed Silver Nanoparticles or Nano-network Modified KIT-6 Using Supercritical Carbon Dioxide, *Journal of Materials Science*. 2015, 50(2): 855-862
4. **Qin-qin Xu**, Ya-qiong Wang, Ai-qin Wang, Jian-zhong Yin\* and Yu-Liu. Systematical study of depositing nanoparticles and nanowires in mesoporous silica using supercritical carbon dioxide and co-solvents: morphology control, thermodynamics and kinetics of adsorption, *Nanotechnology*, 2012, 23(28): 285602
5. **Qin-qin Xu**, Chuan-Jie Zhang, Xian-Zhen Zhang, Jian-Zhong Yin\*, Yu Liu. Controlled synthesis of Ag nanowires and nanoparticles in mesoporous silica using supercritical carbon dioxide and co-solvent, *The Journal of Supercritical Fluids*, 2012, 62:184-189
6. Jun-chen Xu, Song Wang, Wen Yu, **Qin-qin Xu** et al. Molecular Dynamics Simulation for the Binary Mixtures of High Pressure Carbon Dioxide and Ionic Liquids, *Chinese Journal of Chemical Engineering*, 2014, 22 (2): 153-163

