

# Xiao Wang

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## (i) Education:

2010-2015	Ph.D.	Inorganic Chemistry, Peking University (Prof. Yan Li, research advisor)
2006-2010	B.S.	Chemistry, Shandong University

## (ii) Research Experience:

2015-2016	Theoretical Studies on the Chirality-Controlled Growth of SWNTs on Different Metal Clusters in certain H <sub>2</sub> pressures and Temperatures Theoretical Studies on the Cloning Growth of SWNTs Theoretical Studies on the Nucleation Mechanisms of graphene on Different Metal Substrates Theoretical Studies on the Chirality-Controlled Growth of SWNTs on Different Metal Surfaces
2014-2015	Theoretical Studies on the Interactions Between SWNT and Graphene
2012-2014	Theoretical Studies on the Chirality-Controlled Growth of SWNTs
2011-2012	CVD Growth of SWNT by Cr-based Catalyst Theoretical Studies on the Deformation of SWNT with the Interaction of Quartz Substrate
2010-2011	Interaction Between SWNT and Porpholactone (Porpholactone is one kind of fluorescent molecule)

## (iii) Skills

Scientific	Proficient at spectroscopic techniques (Raman, fluorescence, FTIR, <i>etc.</i> )
Software	Proficient at Linux, Windows System, VASP, VMD, MS Office, Origin, Endnote, <i>etc.</i>
Knowledge	Proficient at growth mechanisms of low-dimensional nanomaterials.

## (iv) Honors and Awards:

2014-2015	"Merit Student" of Peking University Honor, "Merit-based " Scholarship
2013-2014	"Xianguang" Scholarship

#### (v) Publications:

1. X. Wang, J. Yang, R. Li, H. Jiang\*, Y. Li\*, “Deformation of Single-Walled Carbon Nanotubes by Interaction with Graphene: A First-Principles Study”, *J. Comput. Chem.*, **2015**, 36, 717-722.
2. F. Yang, X. Wang, D. Zhang, J. Yang, D. Luo, Z. Xu, J. Wei, J. Wang, Z. Xu, F. Peng, X. Li, R. Li, Y. Li, M. Li, X. Bai, F. Ding, and Y. Li, “Chirality-specific Growth of Single-walled Carbon Nanotubes on Solid Alloy Catalysts,” *Nature* **2014**, 510, 522-524.
3. D. Luo, F. Yang, X. Wang, H. Sun, D. Gao, R. Li, J. Yang, and Y. Li\*, “Anisotropic Etching of Graphite Flakes with Water Vapor to Produce Armchair-Edged Graphene”, *Small*, **2014**, 10, 2809-2814.
4. J. Yang, N. Yang, D. Zhang, X. Wang, Y. Li, Y. Li\*, “Photoluminescence from Exciton Energy Transfer of Single-Walled Carbon Nanotube Bundles Dispersed in Ionic Liquids”, *J. Phys. Chem. C*, **2012**, 116, 22028-22035.
5. Yang, Y. Liu, D. Zhang, X. Wang, R, and Y. Li\*, “Radial deformation of single-walled carbon nanotubes on quartz substrates and the resultant anomalous diameter-dependent reaction selectivity”, *Nano Res.*, **2015**, DOI: 10.1007/s12274-015-0811-1.

#### (vi) Conferences

1. X. Wang, Y. Li, “Theoretical Study of Single-Walled Carbon Nanotube with the Interaction of Graphene”, the 29th Annual Meeting of the Chinese Chemical Society, Beijing, China, August 2014, Oral.
2. X. Wang, Y. Li, “Interaction between single-walled carbon nanotube and graphene: a first-principle calculation”, 2014 Asian Conference on Nanoscience and Nanotechnology, Jeju, Korea, October 2014, Poster.
3. X. Wang, Y. Li, “Origination of Chirality Selectivity in Single-Walled Carbon Nanotube Growth Catalyzed by Tungsten-Based Intermetallic Compounds: A Theoretical Study”, The 16th International Conference on the Science and Application of Nanotubes, Nagoya, Japan, June 2015, Oral.