Qian Song

Massachusettes Institute of Technology
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EDUCATION BACKGROUND

Department of Physics, Massachusettes Institute of Technology Cambridge, MA
Research Assistant Sep. 2017- Present
Department of Physics, Nanjing University Nanjing, China
B.S in Physics, Overall Score: 90.6/100 (2%) Sep. 2013 - Jun. 2017
Department of Materials Science, University of British Columbia Vancouver, Canada
Internship Aug. 2016 - Jan. 2017

Research Experiences

Nov. 2017 - Present Cambridge, MA
Advisor: Prof. Riccardo Comin Department of Physics, Massachusettes Institute of Technology
Study the relationship between charge density wave and superconductivity

- Synthesis, doping control and scattering studies of $TaTe_4$

Aug. 2016 - Jan. 2017 Vancouver, Canada
Advisor: Prof. Guangrui Xia Department of Materials Engineering, University of British Columbia
Study of Black Phosphorus Using 442 nm Angular Resolved Raman Spectroscopy

- Studied Black Phosphorus with different wavelengthes of Raman Spectroscopy
- Measured the Raman Peak Shift on both Zigzag and Armchair directions of BP from room temperature to 320 ^{0}C on both SiO_2/Si substrate and Polyimide substrate
- Simulated the Temperature Field under the 442 nm Laser heating effect by COMSOL

Oct. 2015 - June.2016 Nanjing, China
Advisor: Prof. Libo Gao Collaborative innovation center of Artificial Microstructure Science and Technology
Synthesis of 2-D semiconductor MoS_2 by CVD and measurement of its property

- Studied the growth and the characterizations of single-crystal graphene with Cu substrate
- Peeled off the bulk graphite to mono-layer graphene and characterized the sample using AFM
- Analyzed the growth condition for large scale single-crystal MoS_2 through CVD tube furnaces

Journal Publications

[1]. **Qian Song**, Wangfei Yang. A method to highly improve the quality of the reappearing image in Finel hologram, 2016 (7) 32-35, Physics Experimentation (in Chinese) [pdf]

[2]. Weijun Luo, **Qian Song**, Guangnan Zhou, and Guangrui (Maggie) Xia. Study of Black Phosphorus Using 442 nm Angular Resolved Raman Spectroscopy, 2016, submitted to Acs Nano, arXiv:1610.03382

[3]. Jianhui Zhang, Linwei Yu, **Qian Song**, Youwei Du, Tunable surface and/or interface ferromagnetism of ZnO nanoparticles, 2015, Annals of Physics(358) 159-171 [pdf]

Awards/Honors/Scholarships

06/2017	Xuxin Scholarship	50,000 USD	0.5%
04/2016	Scholarship issued Chinese Academy of Science	2000 CHY	4%
11/2015	1st Elite Program Scholarship	8000 CHY	4%
11/2014	1st Elite Program Scholarship	5000 CHY	4%
10/2014	National Scholarship Award issued by Ministry of Education of China	8000 CHY	2%
09/2012	1st Prize of Chinese Physics Olympiad (Provincial Competition Area)		0.08%