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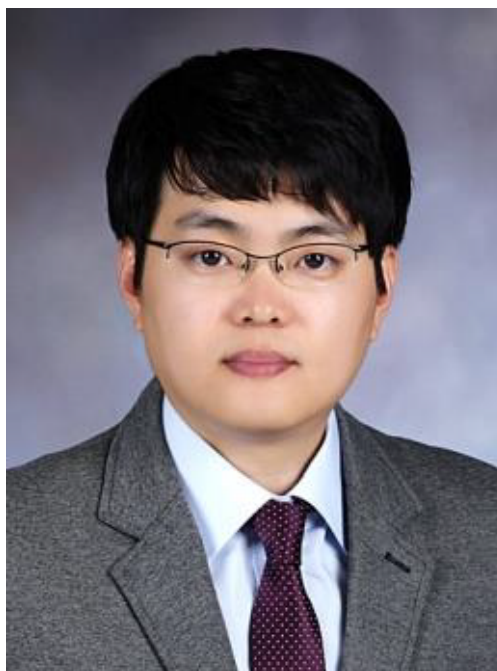
能源学院
College of Energy



首页 学院概况 学院资讯 师资队伍 人才培养 科学研究 党群工作 学生园地 合作交流 SIEMIS

Jinho Choi

发布者: 李梦溪 发布时间: 2019-03-28 浏览次数: 1424



姓名: Jinho Choi

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Dr. Jinho Choi earned his PhD from Hanyang University (Korea) in 2011. He then worked as a distinguished postdoctoral researcher at the International Center for Quantum Design of Functional Materials (ICQD), University of Science and Technology of China between 2011 to 2015. During 2015 to 2016, he has been a research professor fellow at Department of Energy and Materials Engineering and Advanced Energy and Electronic Materials Research Center, Dongguk University. He is currently a researcher fellow at Research Institute of Mechanical Technology, Pusan National University. So far, Dr. Jin-Ho Choi has published more than 26 papers. His research interests lie particularly on the following aspects: 1) Discovery and optimization of new advanced materials based on theoretical search methods; 2) Interfaces in thin film solar cells and related heterostructural materials for clean energy; 3) Stability and performance of photovoltaic devices; 4) Excitonic properties of low-dimensional materials; 5) Graphene synthesis on metal substrate; 6) Self-assembly of low-dimensional nanostructures on solid substrates; 7) Quantum effects in low-dimensional nanostructure.

Work Experience:

2016.2 ~ 2017.7 Researcher, Research Institute of Mechanical Technology, Pusan National University
2015.2 ~ 2016.1 Research Professor, Department of Energy and Materials Engineering and Advanced Energy and Electronic Materials Research Center, Dongguk University
2011.12 ~ 2015.2 Distinguished Postdoctoral Researcher, International Center for Quantum Design of Functional Materials (ICQD), University of Science and Technology of China Supervisor: Prof. Zhenyu Zhang
2013.3 ~ 2013.6 Visiting Researcher, Department of Physics, McGill University, Canada Host group: Prof. HongGuo's group
2010.1 ~ 2010.2 17th winter institute sponsored by the Japan-Korea industrial technology Co-Operation Foundation (JKF), RIKEN (理化研究所), Wako, Japan Supervisor: Dr. Yousoo Kim, Surface and Interface Laboratory
2009.6 ~ 2009.12 Research Assistant, Pohang University of Science and Technology Supervisor: Prof. Kwang soo Kim, Chemistry

Funding & Scholarship:

2012.7 ~ 2014.6 Research Fund for International Young Scientists, National Natural Science Foundation of China, 400,000 RMB \approx 65,000 USD
Project title: Multi-scale Modeling and Simulations of Quantum Plasmon Enhanced Intermediated Band Solar Cells

Principal Investigator: Dr. Jin-Ho Choi

Grant Number: 11250110056

2013.1 ~ 2014.12 Fundamental Research Funds for the Central Universities, University of Science and Technology of China, 100,000 RMB \approx 16,300 USD

Project title: A genetic algorithm approach to the stability problem of CdTe solar cell

Principal Investigator: Dr. Jin-Ho Choi

Grant Number: 2340000046

2011.12 ~ 2014.6 Fellowship For Young International Scientists, Chinese Academy of Sciences
300,000 RMB \approx 48,500 USD

Project title: Multi-scale Modeling and Simulations of Quantum Plasmon Enhanced Intermediated Band Solar Cells

Principal Investigator: Dr. Jin-Ho Choi

Grant Number: 2011Y2JB10

2012.9 ~ 2013.8 Oversea Postdoctoral Fellowship, National Research Foundation of Korea 31,000,000 KRW \approx 27,800 USD

Project title: Multi-scale Modeling and Simulations for Photovoltaic Devices

Principal Investigator: Dr. Jin-Ho Choi

Grant Number: 2012R1A6A3A03040199

Honors & Awards:

- 2011 Best Dissertation Award
 Graduate school, Hanyang University
- 2009 Best Presentation Award
 Brain Korea 21, Hanyang University
- 2008 Best Presentation Award
 Brain Korea 21, Hanyang University
- 2007 Best Publication Award
 The Research Institute for Natural Sciences, Hanyang University
- 2006 Best Publication Award
 The Research Institute for Natural Sciences, Hanyang University

Publications:

- 1.P1. Cui, J.-H. Choi, W. Chen, J. Zeng, C.-K. Shih, Z. Li, Z. Zhang, Contrasting Structural Reconstructions, Electronic Properties, and Magnetic Orderings along Different Edges of Zigzag Transition Metal Dichalcogenide Nanoribbons, *Nano Lett.* 17, 1097 (2017).
- 2.P2. Cui, J.-H. Choi, C. Zeng, Z. Li, J. Yang, Z. Zhang, A Kinetic Pathway toward High-Density Ordered N Doping of Epitaxial Graphene on Cu(111) Using C5NCl5 Precursors, *J. Am. Chem. Soc.* 139, 7196 (2017).
- 33.3.J.-H. Choi, P. Cui, W. Chen, J.-H. Cho, Z. Zhang, Atomistic mechanisms of van der Waals epitaxy and property optimization of layered materials, *WIREs Comput. Mol. Sci.*, (2017) doi: 10.1002/wcms.1300.
- 4.S4. Yi, J.-H. Choi,* H.-J. Kim, C. H. Park, J.-H. Cho,* Contrasting diffusion behaviors of O and F atoms on graphene and within bilayer graphene, *Phys. Chem. Chem. Phys.* 19, 9107 (2017).

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- 5.S5. Yi, J.-H. Choi, K. Lee, S. W. Kim, C. H. Park, J.-H. Cho, Stacking-sequence-independent band structure and shear exfoliation of two-dimensional electride materials, *Phys. Rev. B* 94, 235428 (2016).
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- 6.S6. Yi, H. Lee, J.-H. Choi, J.-H. Cho, Nature of the insulating ground state of the two-dimensional Sn atom lattice on SiC(0001), *Scientific Reports* 6, 30598 (2016).
- 7.P7. Cui,** J.-H. Choi,** H. Lan, J.-H. Cho, Q. Niu, J. Yang, Z. Zhang, Quantum stability and magic lengths of metal atom wires, *Phys Rev B* 93, 224102 (2016). **equally contributed
- 8.J8.J.-H. Choi, Y.-K. Han, Structural, electronic, and optical properties of bulk Cu₂Se, *Curr. Appl. Phys.*, 15, 1417 (2015).
- 99.9.S.-W. Kim, H.-J. Kim, J.-H. Choi, Ralph H. Scheicher, J.-H. Cho, Contrasting interedge superexchange interactions of graphene nanoribbons embedded in h-BN and graphane, *Phys. Rev. B* 92, 035443 (2015).
- 10.10.J.-H. Choi,** P. Cui,** H. Lan, Z. Zhang, Linear scaling of the exciton binding energy versus the band gap of two-dimensional materials, *Phys. Rev. Lett.* 115, 066403 (2015). **equally contributed
- 11.11.J.-H. Choi, W. Zhu, K.-M. Ho, D. Wang, Z. Zhang, Energetics and atomic structures of Cu₂Te overlayers on CdTe(111), *J. Phys. Chem. C* 119, 4843 (2015).
- 12.12.J.-H. Choi,* Z. Li, P. Cui, X. Fan, H. Zhang, C. Zeng,* Z. Zhang, Drastic reduction in the growth temperature of graphene on copper via enhanced London dispersion force, *Scientific Reports* 3, 1925 (2013). *co-corresponding authors
- 13.13.M. C. Nguyen,** J.-H. Choi,** X. Zhao, C.-Z. Wang, K.-M. Ho, Z. Zhang, New layered structures of Cuprous Chalcogenides as thin film solar cell materials: Cu₂Te and Cu₂Se, *Phys. Rev. Lett.* 111, 165502 (2013). **equally contributed
- 14.14.Y.-K. Choi, J.-H. Choi, J.-H. Cho, Self-assembled line growth of allyl alcohol on the H-terminated Si(100)-(2×1) surface, *Surf. Sci.* 606, 461 (2012).
- 15.15.J.-H. Choi, J.-H. Cho, Self-directed growth approach of Acetylacetone lines on an H-terminated Si(001)-2×1 surface, *Phys. Rev. B* 84, 35326 (2011).
- 16.16.J.-H. Lee, J.-H. Choi, J.-H. Cho, Enhanced stability and electronic structure of Phenylacetylene line on Si(001)-2×1:H surface, *J. Phys. Chem. C* 115, 14942 (2011).
- 17.17.J.-H. Choi, J.-H. Cho, First-principles calculations of the structure and growth mechanism of allyl mercaptan lines on the H/Si(100)-2×1 surface, *Phys. Rev. B* 83, 033406 (2011).
- 18.H. Zhang, J.-H. Choi, Y. Xu, X. Wang, X. Zhai, B. Wang, C. Zeng, J.-H. Cho, Z. Zhang, J. G. Hou, Atomic structure, energetics, and dynamics of topological soliton in indium chains on Si(111) surfaces, *Phys. Rev. Lett.* 106, 026801 (2011).
- 19.19.J.-H. Choi, J.-H. Cho, Structure and stability of one-dimensional o-phthalaldehyde lines on the Si(100)-2×1:H surface, *Phys. Chem. Chem. Phys.* 13, 418 (2011).
- 20.20.J.-H. Choi, K. Kim, J.-H. Cho, Antiferromagnetic spin ordering in the dissociative adsorption of H₂ on Si(001): Density-functional calculations, *J. Chem. Phys.* 131, 244704 (2009).
- 21.21.J.-H. Choi, J.-H. Cho, Theoretical prediction of the antiferromagnetic ground state of a C defect on Si(001), *Phys. Rev. B* 80, 125314 (2009).
- 22.22.J.-H. Choi, J.-H. Cho, Growth mechanism of a 1D molecular line across the dimer rows on H-terminated Si(001), *Phys. Rev. Lett.* 102, 166102 (2009).
- 23.23.J. Lee, J.-H. Choi, J.-H. Cho, Antiferromagnetic coupling between two adjacent dangling bonds on Si(001): Total-energy and force calculations, *Phys. Rev. B* 78, 081303(R) (2008).
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25.25.J.-H Choi, J.-H. Cho, Enhanced stability of 1D molecular lines on the H-terminated Si(001) surface, Phys. Rev. Lett. 98, 246101 (2007).

26.26.J.-H Choi, J.-H. Cho, Peierls instability in one-dimensional borine wire on Si(001), J. Am. Chem. Soc. 128, 11340 (2006).

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