

Xin Huang

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EDUCATION

TSINGHUA UNIVERSITY

M.ENG. IN MATERIALS SCIENCE AND ENGINEERING
2015-2019 | China

CENTRAL SOUTH UNIVERSITY

B.ENG. IN MATERIALS SCIENCE AND ENGINEERING

2011-2015 | China
with honor of Outstanding Undergraduate Student Award of Hunan Province.

SKILLS

LAB

- I assembled molecular beam epitaxy (MBE) with reflection high-energy electron diffraction (RHEED).
- I fixed and worked with scanning tunneling microscopes (STM) of 340 mK (Unisoku), and 4 K (Createc).

PROGRAMMING

- python (>2000 lines) • julia (>3000 lines)

CONFERENCES

- Mar 2024 | Physics Days 2024 of *Finnish Physical Society*, **Talk**, University of Helsinki, Finland
- Nov 2023 | 801. *WE-Heraeus-Seminar*: Plenty of Room at the Bottom, **Poster**, Bad Honnef, Germany
- May 2023 | *Gordon Research Conference*: Superconductivity, **Poster**, Les Diablerets, Switzerland
- Mar 2023 | Physics Days 2023 of *Finnish Physical Society*, **Talk**, Tampere University, Finland
- Sep 2022 | CryoCourse 2022, **Poster**, Heidelberg University, Germany
- Aug 2022 | Molecule based quantum science and technology conference (molQueST), **Talk**, Ascona, Switzerland
- Aug 2022 | 31st Jyväskylä Summer School, **Poster**, University of Jyväskylä, Finland
- Jun 2022 | II International conference on Novel 2D materials explored via scanning probe microscopy & spectroscopy (2DSPM), **Poster**, San Sebastián, Spain
- Jun 2022 | *InstituteQ*, **Poster**, Espoo, Finland

TEACHING ACTIVITIES

- Summer 2021 | Instructor of 2 summer intern students, for Aalto Science Institute and for Department of Applied Physics of Aalto University.

EXPERIENCE

AALTO UNIVERSITY | DOCTORAL RESEARCHER

2020 - Now | Finland

I am currently a Doctoral researcher in Department of Applied Physics and researching in artificial designer strongly correlated quantum materials via heterostructure technique in two-dimensional transition metal dichalcogenides grown by molecular beam epitaxy with characterization by low-temperature scanning tunneling microscopy and spectroscopy.

TSINGHUA UNIVERSITY | STUDENT RESEARCHER

2015 - 2019 | China

I was studying in School of Materials Science and Engineering. I was involved in several projects: synthesizing low-dimensional nanostructures, fabricating polymer nanocomposites, benchmarking materials' performance, performing materials theoretic calculations.

MONASH UNIVERSITY | VISITING STUDENT

Jan 2015 - Aug 2015 | Australia

I researched in 2D TMDC materials via first principles calculations about its electronic structure, ion absorption and transportation, in the Department of Materials Science and Engineering.

UNIVERSITY OF MANITOBA | MITACS GLOBALINK INTERN

Jun 2014 - Sep 2014 | Canada

I researched in the strength and plasticity of nanoglass and nanocrystalline, amorphous composites by molecular dynamics simulation, in the Department of Mechanical Engineering.

CENTRAL SOUTH UNIVERSITY | STUDENT RESEARCHER

2012 - 2013 | China

I researched for the structure and strength of Fe-Ni interfaces through first principles calculations, about surface energy and work of separation, in School of Materials Science and Engineering.

AWARDS

- 2015 | Outstanding Undergraduate Student Award, Department of Education of Hunan Province
- 2013 | National Scholarship, Ministry of Education of P.R.China
- 2013 | Lee Hsun Student Scholarship, Institute of Metal Research, Chinese Academy of Sciences

PUBLICATIONS

- **Huang X**, González-Herrero H, Silveira OJ, Kezilebieke S, Liljeroth P, Sainio J. *arXiv.2405.17231* (2024)
- **Huang X**, Lado J, Sainio J, Liljeroth P, Ganguli SC. *arXiv.2401.08296* (2024)
- Wang Y, Li W, Guo Y, **Huang X**, Luo Z, Wu S, Wang H, Chen J, Li X, Zhan X, Wang H. *J Mater Sci & Tech* 128, 239-44 (2022)
- Aapro M, Huda MN, Karthikeyan J, Kezilebieke S, Ganguli SC, Herrero HG, **Huang X**, Liljeroth P, Komsa HP. *ACS Nano* 15, 8, 13794-802 (2021)
- Xu B, Liu Z, Li J, **Huang X**, Qie B, Gong T, Tan L, Yang X, Paley D, Dontigny M, Zaghbi K, Liao X, Cheng Q, Zhai H, Chen X, Chen L-Q, Nan C-W, Lin Y-H, Yang Y. *Nano Energy* 67 (2020)
- **Huang X**, Zhang X, Ren G-K, Jiang J, Dan Z, Zhang Q, Zhang X, Nan C-W, Shen Y. *J Mater Chem A* 7, 25, 15198-206 (2019)
- Zhang X, Liu T, Zhang S, **Huang X**, Xu B, Lin Y, Xu B, Li L, Nan CW, Shen Y. *J Am Chem Soc* 139, 39, 13779-85 (2017)
- Shen Y, Du J, Zhang X, **Huang X**, Song Y, Wu H, Lin Y, Li M, Nan C-W. *Materials Express* 6, 3, 277-82 (2016)