Xin Wu
Curriculum Vitae

South China University of Technology
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DOB: Oct. 2nd, 1997

Education

2022.11– present   **The University of Tokyo**, *Joint PhD student* (Supervisor: Prof. Masahiro Nomura)

2019.9– present   **South China University of Technology**, *PhD student, Solid Mechanics* (Supervisor: Prof. Qiang Han)

2018.9– 2019.9   **South China University of Technology**, *Master degree student, Solid Mechanics* (Supervisor: Prof. Qiang Han)

2014.9– 2018.7   **Chang'an University**, *Bachelor of Engineering, Engineering Mechanics* (Supervisor: Prof. Guansheng Yin, and Lec. Wei Sun)

Research Interests

- Thermal transport in low-dimensional materials and their heterostructures
- Modulation of phonon thermal transport properties based on structural design based on machine learning algorithms
- Thermal transport in defective, porous and amorphous two-dimensional materials

Publications

[1] **Xin Wu**, Qiang Han*, Tunable anisotropic in-plane thermal transport of multilayer graphene induced by 2D empty space: insights from interfaces **Surfaces and Interfaces**, 2022. (IF = 6.137)

[2] **Xin Wu**, Qiang Han*, Maximum thermal conductivity of multilayer graphene with periodic two-dimensional empty space, **International Journal of Heat and Mass Transfer**, 2022, 191, 122829. (IF = 5.431)

[3] **Xin Wu**, Qiang Han*, Transition from incoherent to coherent phonon thermal transport across graphene/h-BN van der Waals superlattices, **International Journal of Heat and Mass Transfer**, 2022, 184, 122390. (IF = 5.431)

[4] **Xin Wu**, Qiang Han*, Phonon Thermal Transport across Multilayer Graphene/Hexagonal Boron Nitride van der Waals Heterostructures, **ACS Applied Materials & Interfaces**, 2021, 13, 32564-32578. (IF = 10.383)

[5] **Xin Wu**, Qiang Han*, Thermal transport in pristine and defective two-dimensional polyaniline (C_3N), **International Journal of Heat and Mass Transfer**, 2021, 173, 121235. (IF = 5.431)

[6] **Xin Wu**, Qiang Han*, Semidefective Graphene/h-BN In-Plane Heterostructures: Enhancing Interface Thermal Conductance by Topological Defects, **Journal of Physical Chemistry C**, 2021, 125, 2748-2760. (IF = 4.177)

[7] **Xin Wu**, Qiang Han*, Thermal conductivity of monolayer hexagonal boron nitride: From defective to amorphous, **Computational Materials Science**, 2020, 184, 109938. (IF = 3.571)

[8] **Xin Wu**, Qiang Han*, Thermal conductivity of defective graphene: an efficient molecular dynamics study based on graphics processing units, **Nanotechnology**, 2020, 31, 215708. (IF = 3.874)

[9] **Xin Wu**, Qiang Han*, Directional Gradientless Thermoexcited Rotating System Based on Carbon Nanotubes and Graphene, **Journal of Nanomaterials**, 2019, No. 8263843. (IF = 2.953)

[10] Tianchong Wu, Xu Jiang, **Xin Wu**, Qiang Han*, Acoustic topological valley transport with multimode edge states, **Journal of Applied Physics**, 2021, 130, 124401. (IF = 2.877)

[11] Chunlei Li, Qiang Han*, Zhan Wang, **Xin Wu**, Analysis of wave propagation in functionally graded piezoelectric composite plates reinforced with graphene platelets, **Applied Mathematical Modelling**, 2020, 81, 487-505. (IF = 5.336)

Awards

2022 **Academic Geek** in South China University of Technology, China
Eight PhD students in the school can receive the honor every year

2021 **National scholarship** for PhD Students, China

2021 **Principal scholarship** for PhD Students in South China University of Technology, China

2020 **National scholarship** for PhD Students, China

2020 **Principal scholarship** for PhD Students in South China University of Technology, China

2019 **PhD Preparatory Student Fund** in South China University of Technology, China

2019 **Second-class Scholarship** in South China University of Technology, China

2018 **Advanced Individual of Cultural activities** in Chang'an University, China

2017 **Project leader** of the Undergraduate Innovation and Entrepreneurship Project in Chang'an University, China

Skills & Abilities

Programming Languages	Python, C++, MATLAB, CUDA (learning)
Theoretical basis	Quantum mechanics, Solid-state physics, Statistical mechanics (learning)
Software	LAMMPS, GPUMD, LaTeX, CAD, Microsoft Office
Visual Designer	Matplotlib, Photoshop, Adobe Illustrator, C4D