Gang Huang

Institute of Theoretical Physics,
Chinese Academy of Sciences,
Zhongguancun East Street 55, North Building 312
Beijing, China 100190

ganhuang@uni-mainz.de
https://hg08.github.io/
Skype: gang.huang8

Education   **Johannes Gutenberg University of Mainz, Germany**
Ph.D., Statistical Physics and Soft Matter
Fields: Statistical Mechanics (Supervisor: Apl. Prof. Dr. M. Sulpizi)
Research: Density functional theory(DFT)-based molecular dynamics,
Vibrational sum-frequency generation (VSFG) spectra
Main courses: Ab initio molecular dynamics (Apl. Prof. Dr. M. Sulpizi),
Advanced computer simulations (Dr. H. Behringer, Jun.-Prof. Dr. T. D. Kühne,
Dr. G. Settanni, PD Dr. P. Virnau),
Stochastic thermodynamics (Prof. Dr. T. Speck)

Lanzhou University, Lanzhou, China
M.S., Theoretical Physics, 2008-2011
Main courses: Advanced quantum mechanics (Assoc. Prof. Jie Yang)
Advanced statistical physics (Prof. Lei Tan),
Group theory (Prof. Yuxiao Liu),
Introduction to condensed matter physics (Prof. Honggang Luo),
Quantum field theory (Prof. Jirong Ren),

China West Normal University, Nanchong, China
B.S., Physics, 2004-2008
Main courses: Advanced Mathematics (Prof. Zhonglin Dai)
Atomic physics (Prof. Silin Fan),
Electrical engineering (Prof. Yong Huang)
Electrodynamics (Prof. Zhiquan Luo),
Electromagnetics (Prof. Qiyin Ran),
Experiments of modern physics (Prof. Yong Huang),
Mathematical methods of physics (Prof. Jianshe Peng),
Mechanics (Assoc. Prof. Pingchuan Xu),
Optics (Assoc. Prof. Lijun Liu),
Quantum Mechanics (Prof. Caide Tao),
Theoretical mechanics (Prof. Ruibin Huang)
Thermodynamics and statistical physics (Prof. Silin Fan),
Thermology (Prof. Zhiquan Luo),

Dissertation   Structure, Dynamics and Vibrational Spectroscopy of Interfacial Alkali Nitrate
and Alkali Halide Aqueous Solutions from ab initio Molecular Dynamics

Research **Institute of Theoretical Physics, Chinese Academy of Sciences (CAS), Beijing, China**
Postdoctoral Research Associate, 2019.11-
Project: Hierarchical structure in deep neural networks, (Prof. Yuliang Jin)

Shanghai Institute of Applied Physics, CAS, Shanghai, China
Visiting Scholar, 2015.12-2016.6
Project: Ab initio molecular dynamics and VSFG spectra calculation
(Prof. Haiping Fang)

Teaching **Institute of Theoretical Physics, CAS, Beijing, China**
Instructor, Introduction to machine learning, 2019.11

School of Electronic Engineering, Chengdu Technological University, Chengdu, China
Instructor, General physics and experiments, 2017.2-2019.6

Institute for Physics, Johannes Gutenberg University of Mainz, Germany
Teaching Associate, 2013.3-2013.8
DFT and applications (Prof. Dr. M. Sulpizi)
Teaching Associate, 2014.3-2014.8
Quantum field theory (Prof. Dr. H. Meyer)

School of Physics, Lanzhou University, Lanzhou, China
Teaching Associate, Statistical physics (Prof. Lei Tan), 2009.2-2009.7
Teaching Associate, Quantum mechanics (Prof. Lei Tan), 2009.9-2010.1

Awards **Excellent Graduate of the Year 2008**
School of Physics, China West Normal University, Nanchong, China, 2008.7

Chinese Scholarship Council (CSC) Scholarship
Chinese Scholarship Council, China, 2011.9-2014.9

Recent Publications

1. Jie Huang, **Gang Huang***, and Shiben Li*, A machine learning model to classify dynamic processes in liquid water, *ChemPhysChem*, **23**, 42-49, DOI: 10.1002/cphc.202100599, 2022, Cover Article

2. Jie Huang, Shiben Li*, Xinghua Zhang*, and **Gang Huang**, Neural Network Model for Structure Factor of Polymer Systems, *The Journal of Chemical Physics*, **153** (12) 124902, DOI:10.1063/5.0022464, 2020

3. Xing Liu, **Gang Huang**, Kuan-Kan Hu, Nan Sheng, Chuanshan Tian, Y. Ron Shen, Yu-Chieh Wen, Guosheng Shi*, and Haiping Fang, Sharing of Na^+ by Three COO^- Groups at Deprotonated Carboxyl-Terminated Self-Assembled Monolayer-Charged Aqueous Interface, *J. Phys. Chem. C* **122**, 16, 9111-9116, DOI:10.1021/acs.jpcc.8b02065, 2018

Languages **Chinese, English**
Skills **Python, Fortran**
Specific Codes **CP2K, LAMMPS**
Nationality **Chinese**

Gang Huang