CV of Dong Wang

University of Science and Technology of China, Hefei, China
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EDUCATION

Li-siguang Geophysics Training Program, Jilin University, Changchun, China.
B.Sc. in Geophysics ***September 2017 – June 2021***

School of Earth and Space Sciences, University of Science and Technology of China (USTC), Hefei, China.
Ph.D. in Geophysics (Supervisor: Prof. Zhongqing Wu) ***September 2021 – June 2026***

Institut de physique du globe de Paris (IPGP), Université Paris Cité, Paris, France.
Jointing Ph.D. Student in Geophysics (Supervisor: Prof. Razvan Caracas) ***March 2025 – March 2026***

RESEARCH INTERESTS

- **Ab initio calculations and machine learning-based molecular dynamics simulations**
- **Evolution of the early Earth**
- **Structure and dynamics of the deep Earth**

RESEARCH EXPERIENCE

Thermal Conductivity of Minerals
- Calculated the lattice thermal conductivity of mantle minerals by machine learning potential (MLP).

Transport Properties of Hydrous Diopside Melts at Low Temperatures
- Trained the MLP for diopside melts by enhanced sampling and investigated the transport properties at low temperatures.

Elastic Properties of the Upper Continental Crust (UCC)
- Investigated the thermal elastic properties of Libermanite and K-hollandite II and the seismic signature of the UCC.

Water-Induced Mantle Overturn and Paleomagnetic field
- Explored the effect of mantle overturn on the geomagnetic field by modeling the Archean magnetic field intensity.

Sulfur Degassing from the Magma
- Investigated the degassing behavior of sulfur under varying redox conditions using Ab initio calculations.

PUBLICATIONS

[1] **Dong Wang**, Zhongqing Wu, Xin, Deng. (2022). Thermal Conductivity of Hydrous Wadsleyite Determined by Non-Equilibrium Molecular Dynamics Based on Machine Learning. ***Geophysical Research Letters***, 49(22), e2022GL100337.

[2] **Dong Wang**, Zhongqing Wu, & Xin, Deng. (2023). Thermal conductivity of Fe-bearing bridgmanite and post-perovskite: Implications for the heat flux from the core. ***Earth and Planetary Science Letters***, 621, 118368.

[3] **Dong Wang**, Longyu Duan, Xin Deng, Wenzhong Wang, Zhongqing Wu (2025). Seismic Signature of the Upper Continental Crust: Implications from the thermoelastic properties of Liebermannite and K-hollandite II. ***American Mineralogist***.

[4] **Dong Wang**, Zhongqing Wu. (2025). Water-Induced Mantle Overturn Provides a Unifying Explanation for Paleomagnetic Records and Formation of Archean Continents. ***National Science Review***. (Under review).

[5] Feiyang Xu, **Dong Wang**, et al. (2024) Large-scale simulation of thermal conductivity in $CaSiO_3$ perovskite with neuroevolution potential. ***Appl. Phys. Lett***, 125 (3): 034104.

INVITED TALKS

Early Career Scientists Seminar, European Geosciences Union **2025**

HONORS AND AWARDS

National Scholarship for Undergraduate Student **2019**
Outstanding Graduate **2021**
Outstanding Student Presentation Award, CGU Fall General Assembly **2022**
National Scholarship for Graduate Student **2023**
Best Poster Award, IPACES General Assembly **2023**
Outstanding Achievement Award of Deep Space Exploration Lab **2024**
Outstanding Student and PhD candidate Presentation (OSPP) Award, EGU General Assembly **2024**