Research Field: PLANETARY MINERALOGY
Focused Field: HYDROUS MINERALS ON MARS

SHORT BIO

I obtained a bachelor degree in Geological Engineering at Southwest University of Science and Technology (SWUST), China in 2013 and then went to Guangzhou Institute of Geochemistry, Chinese Academy of Sciences (GIGCAS) for further studies under the supervision of Prof. Peng Yuan. In 2018, I earned my PhD degree in Mineralogy of University of Chinese Academy of Sciences (UCAS). I continued to work at GIGCAS as a postdoc until I was offered a position of assistant professor at Macau University of Science and Technology (MUST) in 2020.

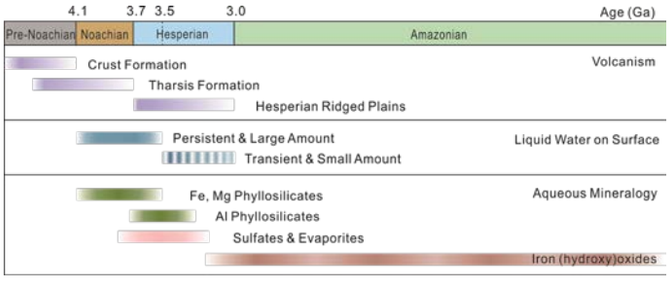
My current research interest includes i) Mars surface composition and processes, ii) Mars analog studies (e.g., Qaidam Basin) and iii) formation, alteration, and transformation of hydrous minerals (e.g., clay minerals and iron oxides).

Applicants for Master, PhD and postdoc opportunities, especially those with backgrounds in planetary science, geosciences, chemistry, etc., are welcome to contact me at any time.

Asst. Prof.

Peixin DU (杜培鑫)

PhD: MINERALOGY – University of Chinese Academy of Sciences (UCAS)
Degree: GEOLOGICAL ENGINEERING – Southwest University of Science and Technology (SWUST)



Timeline of some major events on the Martian surface (Du et al, *Earth-Science Reviews*, 2023).

KEY PUBLICATIONS (*first author & corresponding author*)

Xiang, X.Y.; **Du, P.X.***; Ye, B.L.; et al., 2024.
Hydrolysis products of Fe-Si systems with different Si/(Si+Fe) molar ratios: Implications for detection of ferrihydrite on Mars. ***Journal of Geophysical Research: Planets***

Du, P.X.*; Yuan, P; Liu, J.C.; Ye B.L., 2023.
Clay minerals on Mars: A up-to-date review with future perspectives. ***Earth-Science Reviews***

Du, P.X.; Wang, S.; Yuan, P.*; *et al*., 2022.
Structure of allophanes with varied Si/Al molar ratios and implications to their differentiation on Mars. ***Icarus***

Du, P.X.; Yuan, P*; Liu, J.C.; *et al*., 2020.
Effects of environmental Fe concentrations on formation and evolution of allophane in Al-Si-Fe systems: Implications for both Earth and Mars. ***Journal of Geophysical Research: Planets***

Du, P.X.; Thill, A.; Yuan, P.*; *et al*., 2020.
Tailoring structure and surface chemistry of hollow allophane nanospheres for optimization of aggregation by facile methyl modification. ***Applied Surface Science***

Du, P.X.; Yuan, P.*; Liu D.; *et al*., 2018.
Calcination-induced changes in structure, morphology, and porosity of allophane. ***Applied Clay Science***

Du, P. X.; Liu, D.*; Yuan, P.; *et al*., 2018.
Controlling the macroscopic liquid-like behaviour of halloysite-based solvent-free nanofluids via a facile core pretreatment. ***Applied Clay Science***

Du, P.X.; Yuan, P*; Thill, A.; *et al*., 2017.
Insights into the formation mechanism of imogolite from a full-range observation of its sol-gel growth. ***Applied Clay Science***

PROFESSIONAL EXPERIENCE

2020 – Present – *Macau University of Science and Technology (MUST) – Assistant Professor*
2018 – 2020 – *Guangzhou Institute of Geochemistry, Chinese Academy of Sciences (GIGCAS) – Post Doctoral*

GRANTS

Science and Technology Development Fund (FDTC), 2023.12~2025.12, **PI**
Guangdong Basic and Applied Basic Research Foundation, China, 2023.1~2025.12, **PI**
Science and Technology Development Fund (FDTC), 2021.7~2023.7, **PI**
Faculty Research Grants of the Macau University of Science and Technology, 2021.12~2022.12, **PI**
National Natural Science Foundation of China (NSFC), 2021.1~2022.12, **PI**
National Natural Science Foundation of Guangdong Province, China, 2019.10~2022.9, **PI**
China Postdoctoral Science Foundation (First Class), 2018.7~2020.6, **PI**

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