Research Field: COSMOCHEMISTRY
Focused Field: First-Principles Calculation

SHORT BIO

I studied Chemistry at Nanjing University for my undergraduate and master's degrees. I honed my skills in the synthesis of compounds and the use of advanced instrumental analysis techniques. During this period, I collaborated with TCL to synthesize novel OLED materials.

Apart from my work in the lab, I also study computational calculations based on DFT, which can predict some physical properties and chemical reaction mechanisms of compounds.

I then went on to Macau University of Science and Technology to complete my PhD. and focused on first-principles computations for meteorites and mineral materials.

Post Doctoral

Pak-Kin Leong
(梁柏健)

PhD.: Earth and Planetry Science
– Macau University of Science and Technology

M.Sc.: Chemistry – Nanjing University

B.Sc.: Chemistry – Nanjing University

KEY PUBLICATIONS (*first author*)

Leong Pak-Kin, Sekine Toshimori, Tam Kuan-Vai, Tam Sok-I, and Tang Chi-Pui. 2023.
First-Principles Calculations with Six Structures of Alkaline Earth Metal Cyanide $A(CN)_2$ (A = Be, Mg, Ca, Sr, and Ba): Structural, Electrical, and Phonon Properties. ***ACS Omega***.

Leong Pak-Kin, Tang Chi-Pui, Tam Sok-I, and Sekine Toshimori. 2019.
A DFT Study of the Structure and Properties of Nitrogen Doping Spinel $MgAl_2O_{3.5}N_{0.5}$. ***Meteorit. Planet. Sci.***

PROFESSIONAL EXPERIENCE

Ongoing – 2023 – *Macau University of Science and Technology, Macao (China) – Post doctoral*

2022/11 – 2023/1 – *University of Tokyo, Tokyo (Japan) – Exchange with Mikouchi group*

GRANTS

FDTC – 2021-2023 – Participant
The cause and mechanism to accommodate certain elements in meteoritic silicates

FDCT – 2017-2020 – Participant
Geochemical studies of Change'5 lunar samples

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