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Brief Summary

Primordial components within primitive meteorites preserve unique chemical and isotopic signatures of distinct evolutionary events within the interstellar medium and throughout the proto-planetary disk. Decoding these signatures is therefore vital to understanding the evolution of our solar system.

The study aims to target coordinated chemical, isotopic and microstructural studies on primordial materials in carbonaceous chondrites, in order to understand chemical and physical processing and shock effects within our solar system. Understanding these processes will contribute to our understanding of formation environments, formation mechanisms and the complex evolution of these primitive materials. My research will utilize new state-of-the-art techniques i.e. transmission kikuchi diffraction, in-order to better understand these distinct chemical, isotopic and microstructural changes within primordial materials at the micron scale.

Education: BSC Curtin University, Bentley Campus

Research interests: Cosmochemistry, structural geology, petrology, transmission kikuchi diffraction, atom probe microscopy.

Thesis title: Chemical and microstructural analysis of primordial components within primitive meteorites: Implications for the pre-solar environment and the formation of the protoplanetary disk.

Supervisors: Dr. Phil Bland and Dr Nick Timms

Conferences: 2017 33rd Lunar and Planetary Institute Intern Conference (Houston).

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