

## **Variation of Raman spectra of polycyclic aromatic hydrocarbons as an indicator of thermal alteration of ordinary chondrites**

Spectroscopic studies of polycyclic aromatic hydrocarbon (PAH) materials in carbonaceous chondrites, specifically of petrologic types 3.0-3.9, are numerous due to the ubiquitous organic constituencies of those meteorites. However, only some attention has been allocated to studying the carbonaceous materials of the ordinary chondrite meteorite class. Motivated by the general lack of spectroscopic data for ordinary chondrites, this study seeks to use Raman spectroscopy to observe and characterize the PAH material of primitive (petrologic types 3-3.9) and thermally altered (petrologic types 4-6) ordinary chondrites. Spectrally characterizing the PAH populations of ordinary chondrites, on what can be considered the thermal alteration continuum, will allow a clearer understanding of temperature dependence of PAH spectra. Ultimately, understanding the relationship between spectral parameters and metamorphic temperature will allow for the construction and calibration of a meteoritic carbon thermometer.