



## PCE<sub>3</sub> Seminar Series

Thurs, Nov 18<sup>th</sup>

1 p.m. EST/10 a.m. PST

More information & registration:

[prebioticchem.info/seminar-series/index.html](http://prebioticchem.info/seminar-series/index.html)



### Lucas Smith

Graduate Student  
*University of Arizona, Lunar and Planetary Laboratory*

“Investigating <sup>12</sup>CO-<sup>13</sup>CO fractionation through desorption experiments on CO interstellar ice analogues”



### Danna Qasim

Postdoctoral Researcher  
*NASA Goddard Space Flight Center, Astrochemistry Laboratory*

“The Interstellar Connection: D/H ratios of Aliphatics from Interstellar Space to our Solar System”

Topical introduction by Rachel Smith, Head of the Astronomy & Astrophysics Research Lab and Curator of Meteorites at the NC Museum of Natural Sciences and Associate and Adjunct Professor

## Lucas Smith

Lucas attended Appalachian State University for his undergraduate studies, where he earned a B.S. in Physics in 2015. While at App State, he was a student researcher on Dr. Rachel Smith's NASA - Emerging Worlds grant, during which he studied the desorption of CO ice under Dr. Murthy Gudipati at NASA's Jet Propulsion Laboratory. Lucas is currently working towards a PhD in Planetary Sciences at The University of Arizona's Lunar and Planetary Laboratory, where he studies presolar stardust and organics in carbonaceous chondrites analogous to asteroid Bennu under Dr. Pierre Haenecour.

## Danna Qasim

Danna Qasim is a postdoctoral researcher at NASA Goddard Space Flight Center in the Astrochemistry Laboratory. She is predominantly an experimentalist who investigates interstellar and solar system ices, the interactions between minerals and ices, early Earth chemistry, and aqueous alteration that occurs in meteorite parent bodies. To place her experimental work in the larger picture, she participates in astronomical observations and collaborates frequently with computational chemists and modelers. Prior to working at NASA Goddard, she conducted her PhD at Leiden Observatory and her MSc at Kennesaw State University.

## Rachel Smith

Rachel is an astronomer specializing in forming stars, particularly the chemistry of carbon and oxygen in protoplanetary disks, and how these chemical pathways connect to the early Solar System. She primarily uses large ground-based telescopes to observe a range of star-forming environments across the Galaxy. Rachel is Head of the Astronomy & Astrophysics Research Lab and Curator of Meteorites at the NC Museum of Natural Sciences in Raleigh, NC. She is also an Associate Professor in the Dept. of Physics & Astronomy at Appalachian State University, and Adjunct Professor at UNC-Chapel Hill. In addition to her research and teaching, Rachel works to engage the public in science and the excitement of research and discoveries. Rachel got her PhD at UCLA and did a postdoc in Planetary Science at Caltech. Read more about Rachel's background and interests at [naturalsciences.org/staff/rachel-smith](http://naturalsciences.org/staff/rachel-smith).

