Bringing Chemistry to Life podcast series

Season 4: Expanding Chemistry Perspectives Episode 5: The Extra-Terrestrial Chemist



Episode abstract

Among the various chemical disciplines we have discussed so far, astrochemistry is by far the most surprising. And Chris Shingledecker is a surprisingly charming member of this relatively new and growing scientific niche. He's managed to naturally balance his passions for chemistry, born from a chemical set received as a gift in his childhood, and for astronomy, that grew in him during middle school. This is a great story of someone who took his education and professional path in his own hands and gave it the shape he wanted to follow his interests and passions.

Chris is now living the excitement of a new science. So many things to understand and explain given such fast progress in the field. We learn about what a young discipline astrochemistry is, where until three or four decades ago it was thought complex chemistry could not occur in outer space, and hear how Chris and his colleagues are quickly showing that chemistry beyond the boundaries of planet Earth is in fact extremely rich, diverse, and complex.

This is a fascinating discussion about the story and the future of astrochemistry, a jump into new ideas about the origins of life on our planet and hypothetical other worlds.

About our guest

Christopher Shingledecker, PhD

Assistant Professor of Physics and Astronomy, Benedictine College

Christopher's group site: <u>https://www.shingledecker.org/</u>

Christopher's Recent Publications:

- <u>A general method for the inclusion of radiation chemistry in astrochemical models</u>
- On Simulating the Proton-irradiation of O2 and H2O Ices
 Using Astrochemical-type Models, with Implications for Bulk
 Reactivity
- Isomers in Interstellar Environments. I. The Case of Z- and E-cyanomethanimine

Christopher's Content Recommendations:

- <u>A Canticle for Leibowitz</u>, a science fiction novel by Walter Miller, Jr.
- <u>"On the Origin of Life: A Scientific Perspective"</u>, a talk given by Christopher in April 2022
- Playtime, a film by Jacques Tati
- "Be Still", a choral work by Timothy John Tharaldson
- <u>The Kinetic Database for Astrochemistry</u> (KIDA), a resource for reactions relevant to interstellar space

This podcast series is available via the following links



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