

# PCE<sub>3</sub> Newsletter



## General Announcements

**PCE3 is now also on [BlueSky](#)! Follow us [@pce3-sci.bsky.social](#)**

Have something you would like to share with the PCE3 community? Feel free to let us know [here](#).

### **Robert (Bob) Bruner obituary**

PCE3 is sad to report the passing last month of Robert B. Bruner, aged 86, whom many astrobiologists came to know from his frequent attendance at conferences on the origins of life. Bob was a wonderful citizen scientist. He volunteered at the Denver museum, and his work there led to Bob being invited to the 2011 Gordon Conference on the Origin of Life by its chair, Steven Benner. Bob assembled collections of rocks and minerals relevant to the origin of life, displayed them at these conferences, and updated them as theories advanced for geological-chemical interactions. His enthusiasm represents one reason why NASA exists, and will be missed.

### **Call for Seminar Series Speakers:**

Are you conducting research in prebiotic chemistry or exploring early Earth environments? We are seeking passionate speakers to share their work in our seminar series. This is a great opportunity to engage with an interdisciplinary audience and stimulate discussions in the field. If you are interested please get in

contact with us ([pce3scicomm@gmail.com](mailto:pce3scicomm@gmail.com)) with a brief bio and your proposed topic.

We look forward to hearing from you!

Check out the PCE3 Sci. Comm. twitter [here](#) for more updates.

## Ask an Author

### **Accelerating the Discovery of Abiotic Vesicles with AI-Guided Automated Experimentation (with Sarah Maurer and Joshua Schrier)**

**Q:** What excites you the most about this paper?

**A:**

- Exploring prebiotic chemical mixtures is a hard problem, and to date, most researchers (including ourselves) have primarily done this by tedious manual experimentation.
- Lab automation and automated analysis speeds up this process and gives higher quality data.
- While we have demonstrated this in the context of vesicle formation, the approach is general. Furthermore, we've published all of our data and code, to allow other researchers to adapt our approach for their own problems.

**Q:** What was the biggest challenge in your research?

**A:**

- **Sarah Maurer:** This was the first automation project in my lab. The biggest hurdle was learning how to make the robotic process reproducible. Once the robot was working, it only took us six weeks to get the data, but there was a large initial investment phase (in time and student training) to learn how to make the robot reproducibly make samples.
- **Joshua Schrier:** Origins of life is a totally new domain problem for me, and there were new characterization methodologies, like confocal microscopy, that I had not worked on before.

## Upcoming Meetings & Events

### **EGU Session on Exoplanets atmospheres**

Apr 27–May 2, 2025. Vienna, Austria

### **NASA Planetary Science Summer School (PSSS)**

May - July - August, 2025. On line and at JPL in Pasadena, California, USA

**Small Sample Handling Workshop**

May 20 - 22, 2025. West Lafayette, IN, USA

**EAI Summer School: TRACES OF EARLY LIFE**

June 3 - 13, 2025. Stirling, Scotland, UK.

**Proposal Writing Retreat (PWR)**

June 6 - 10, 2025. Nederland, CO - USA

**Astrobiology Graduate Conference (AbGradCon) 2025**

June 10 - 13, 2025. Boulder, CO - USA

**3rd OHP International Summer School: The Frontiers of LIFE**

June 23 - 27, 2025. Haute Provence, France

**FALCON - Frontier in Astrobiology and Origins of Life Conference 2025**

June 26 - 29, 2025. Reykjavik, Iceland

**Second Biennial European Astrobiology Conference (BEACON)**

July 1 - 5, 2025. Reykjavik, Iceland

**International Summer School in Astrobiology: Origins to Organisms:  
Understanding Life's Beginnings**

July 7 - 11, 2025. Santander, Spain

**Astrobiology Spectral Database: Bridging Disciplines for Standard  
Development**

July 23 - 24, 2025. Virtual

**EAI Conference: Impacts and their role in the origin and evolution of life**

September 1 - 4, 2025. Nördlingen, Germany

**European Astrobiology Network Association (EANA) 2025 Conference**

October 21 - 24, 2025. Lisboa, Portugal

## News

The Astrobiology Spectral Database (ASD) is a newly funded project to support the development of a database of molecular spectra for abiotic organic compounds relevant to planetary science. Initially ASD will serve as a repository for NMR and

mass spectrometry data, however in future iterations we would like to expand to in silico and other spectroscopy data.

To help make ASD your go-to resource, consider filling out this survey that aims to identify the community's needs, concerns, and other thoughts regarding this effort (<10 mins effort). We will also have a virtual meeting to workshop requirements for submitting data to the database. You can sign up here (for free).

If you would like to stay informed about this effort consider signing up for the ASD mailing list here (or at the end of the survey).

## General News

- [NASA's Curiosity Rover Detects Largest Organic Molecules Found on Mars](#)(March 24, 2025)
- [Rethinking the Origin of Life: Scientists Propose New Soda Lake Theory](#)(March 29, 2025)
- [Scientists redid an experiment that showed how life on Earth could have started. They found a new possibility](#) (March 28, 2025)
- [Scientists Reveal a Game-Changer in the Evolution of Life on Earth](#) (March 5, 2025)

## Funding Opportunities

### **NASA Astrobiology Early Career Collaboration Award**

Due April 15, 2025

### **Research Opportunities in Space and Earth Sciences 2024 (ROSES-2024)**

Due Mar 28, 2025

### **NSF PSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement Program**

Due July 08, 2025

### **Templeton Foundation OFI**

Due Aug 15, 2025; full proposal due Oct 10, 2025

### **NSF 22-605: Division of Chemistry: Disciplinary Research Programs**

(application window Sept 1 - 30, 2025)

### **NSF Chemistry of Life Processes (CLP)**

No due date

## Career Opportunities

**NASA-DARES Task Force 1 Members**

April 11th, 2025

**Blue Marble Space Institute of Science (BMSIS) Young Scientist Program (YSP)**

April 11th, 2025

**Inspiring Clipper: Opportunities for Next-generation Scientists (ICONS) Internship**

May 16th, 2025

**Dragonfly Student & Early Career Investigator Program**

June 9th, 2025

**NASA Postdoctoral Program (July 1st, 2025)**

- Agnostic Biosignatures and Planetary Mass Spectrometry
- Astrobiology of Ocean Worlds
- Chemical and physical processes that impact habitability and life-detection investigations
- Exploring the Astrobiology and Organic Chemistry Potential of Enceladus, Europa, Titan and/or Mars
- Investigations of Molecular Signatures and Organic Matter in Icy Environments of Mars and Ocean Worlds
- Solar System Exploration: Exogenous Organics for the Origin and Early Evolution of Life

**Max Planck Postdoc Program**

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