

# Astrochemistry - Evolution from Stardust to Biomolecules

by Dr. Arunlibertsen Lawzer

Duration: 15 hours

Date of the first lecture: May 5, 2025

Register by April 28, 2025 – send an e-mail to [arunlibertsen.lawzer@ichf.edu.pl](mailto:arunlibertsen.lawzer@ichf.edu.pl)

(The availability of this lecture course depends on whether at least three Warsaw4PhD students are registered.)

## Syllabus

### Section I (4 hours)

Introduction to interstellar molecular clouds and planetary ices

From H, C, O atoms to hydrocarbons and oxygen containing molecules

### Section 2 (4 hours)

Nitrogen containing hydrocarbons in interstellar medium

Origin of amino acids, polypeptides, and nitrogenous bases

Phosphorus and sulphur chemistry

### Section 3 (4 hours)

Origin of carbohydrates

Formation of nucleic acids (DNA and RNA)

### Section 4 (3 hours)

Techniques involved in remote detections and laboratory investigation of space chemistry