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# **CALL FOR APPLICATIONS 2025 – FELLOWS**

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Supervisor page	https://cv.hal.science/lahouari-krim
Host Institution	Sorbonne Université https://www.sorbonne-universite.fr/en
Research Lab	De la Molécule aux Nano-objets : Réactivité, Interactions et Spectroscopies <u>https://www.monaris.cnrs.fr/</u>
Research Team	Caractérisations, Interactions et Réactivités : Spectroscopie moléculaire <a href="https://www.monaris.cnrs.fr/2-cirs/">https://www.monaris.cnrs.fr/2-cirs/</a>

## **Project Title**

Chemistry of the interstellar medium: Formation and evolution of prebiotic species under extreme conditions.

### **Project Description**

We aim to describe the formation and evolution of prebiotic molecules such as NH-CHRn-CO- bricks, the motif that forms the backbone of proteins, under extreme conditions similar to those found in the interstellar medium (ISM). Indeed, many prebiotic molecules, direct precursors of proteins and amino acids, have already been observed in the ISM. How are these prebiotic molecules formed? What transformations can they undergo to evolve into more complex compounds such as amino acids or proteins?

## Keywords

astrochemistry, interstellar medium, prebiotic molecules

#### **Description of the Host Research Lab**

The laboratory's research activities are built on an approach shared by the different teams, based on the development, understanding and characterization, both experimental and theoretical, of nanophase systems, and in particular of chemical bonding in the construction of the organization and reactivity of matter.