**Two post-doctoral positions in the field of plasma-based H2 synthesis are available at ChIPS (University of Mons, Belgium).**

The positions are offered in the field of plasma-based gas conversion in which our lab is active for more than 15 years. More specifically, we are nowadays interested in the conversion of hydrocarbon molecules to produce green hydrogen (and carbonated by-products).

**Plasma-based H2 synthesis from hydrocarbons** is an interesting complementary approach to water electrolysis, because it also uses renewable electricity and has no CO2 emission, and in addition, it can valorize CH4 and plastic waste, generate high value C-materials as side-product, and is thermodynamically more favorable. However, before exploiting this application, it is crucial to gain a better fundamental understanding of the plasma processes. In this context, we perform green H2 synthesis experiments from **various hydrocarbons in a gliding arc plasma** and develop a **multi-diagnostics platform** for time- and spatially-resolved characterization to study the underlying mechanisms. We are interested in both hydrogen production but also in the carbon-based by-products. The research outcomes will lay the basis for green H2 synthesis by plasma technology and will open up a new area in the field of plastic waste recycling.

The researchers will be part of a research team that is supported by several fundings which, more of the time are collaborative projects. One of these projects is an Excellence of Science project (PLASynthH2, <https://www.uantwerpen.be/en/projects/plasynth2/>) and is developed in close collaboration with the Universities of Antwerp (Prof. Bogaerts), Brussels (Prof. Reniers) and Gent (Prof. Morent and prof. De Geyter). **In this context the activities of the hired persons will mainly focus on the plasma-diagnostic aspects.**

For general information about the University of Mons please visit <https://web.umons.ac.be/fr/>. For precise information about our group, please visit <https://web.umons.ac.be/cips/>.

**Requirements for candidates**: Strong background in the domains of plasma chemistry and/or plasma catalyst. Good to very good knowledge related to the physics of gases, gaseous discharges, and optical spectroscopy. An expertise in laser diagnostic (LIF) is a very strong asset. Fluent English is mandatory. Last but not least, the personal interest to the listed research domains, ability to self-develop and to supervise young master/PhD student are among the decisive factors.

**We offer:**

* A full-time position, initially offered for one year, but it could be renewed up to maximum three years upon positive evaluation.
* You will be directly embedded in a research team and a consortium composed of plasma-oriented international research teams of different Belgian universities and research centers.
* You will have access to state-of-the-art tools and facilities, a rich training environment and the possibility to collaborate with many other groups within excellence-based universities.
* Envisaged starting date: **from April 2023**.

**To apply, please provide, in English:**

* Personal (motivation) letter
* Curriculum vitae (an official proof of English language skills is an added value)
* List of publications (if available)
* Copy of your diplomas (if already available)

The requested documents should be sent to Dany Cornelissen ([dany.cornelissen@umons.ac.be](mailto:dany.cornelissen@umons.ac.be)) before March 31st, entering as subject of your mail: Green H2\_your name