

## **Plasma Internship – Optimization of a reactor for hydrogen production by cold nanopulsed plasmalysis**

Spark Cleantech is a start-up that designs decentralized, low-power consumption, decarbonized hydrogen production units. Our process uses nanopulsed cold plasmas (nanosecond-controlled electric arcs) to decompose (bio)methane into hydrogen and solid carbon, with **zero CO2 emissions** and up to **5x less electricity than an electrolyzer**.

We are looking for an intern to join our R&D team. The mission (shall you accept it!) is to:

1. Participate in test campaigns to optimize the plasma process on our v7 reactor.  
In practice: set-up, operation and characterization of products.
2. Improve test bench operation and instrumentation: design and production of auxiliary parts; centralization of data acquisition.
3. Work on the design of our v8 reactor with the team's design engineers.
4. Finally, test the v8 reactor!

We are looking for a candidate at L3/M1/M2 level, 2A engineer / gap year / end of studies:

- Interested in experimentation and instrumentation, with previous experience (projects/TP/internships).
- Comfortable with data analysis (scientific Python / Matlab / etc.)
- Interested in learning experimental characterization techniques (spectroscopy, nanosecond analysis), curious about plasma physics and who is eager to work in a dynamic start-up.
- And above all, interested in contributing to the **decarbonization of industry** and storing carbon!

Is this you? Contact us: [contact@spark-cleantech.eu](mailto:contact@spark-cleantech.eu)

Please attach your CV and describe any projects you've already completed.

No cover letter required, interview on site or by videoconference.

*Internship coordinator: Erwan Pannier, co-founder and CTO Spark Cleantech*

*Place of internship: Incubateur CentraleSupélec, 3 rue Joliot Curie, 91190 Gif-sur-Yvette.*

*Internship period: 6 months*

*Start date: flexible*