

# GGG

## GRENOBLE GREEN GRAPHENE FACTORY

MATURATION

### PRODUCTION OF LOW COST GRAPHENE NANOSHEETS

#### BENEFITS

- Small installation (1m3)
- Low energy consumption
- No hazardous substances required
- Production on demand

#### KEY WORDS

- Graphene
- Microfluidics
- Exfoliation
- Conductivity

#### INTELLECTUAL PROPERTY

- 1 patent pending

#### LABORATORY

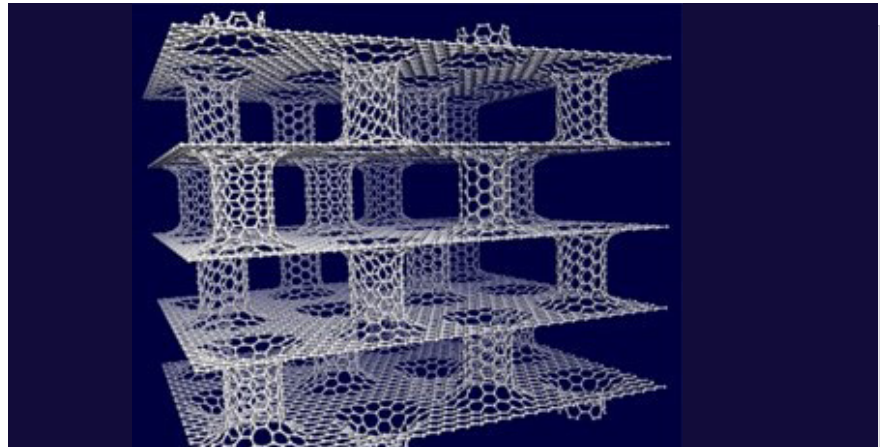
- Laboratoire des Écoulements Géophysiques et Industriels

#### TRL & USAGES SCALES

##### ECHELLE TRL (Technology readiness level)



##### ECHELLE URL (Usage readiness level)



#### CONTEXT

In the context of Graphene being the material of the future due to its particular properties in strength, thermal and electric conductivity, transparency, etc., research conducted at the LEGI Grenoble has resulted in an innovative exfoliation process.

#### TECHNOLOGY

The production process is based on a hydrodynamic cavitation 'on a chip'. Its exfoliation of graphene within a fluidic microsystem is working at low pressure.

#### STATE OF PROGRESS

A first prototype of the microfluidic system has been developed in the laboratory. The proof of concept has enabled to validate the production of graphene nanosheets in a liquid solution. Further work to validate the adequation of the graphene produced for different applications will be carried out in 2018-2019.

#### APPLICATION

- Industrial Paints & Coatings
- Paper Industry
- Electronical and mechanical applications
- Biological applications

#### PROJET

##### MATURATION

TEL : 06 33 63 44 99

MAIL : GISELA.SCHACH