Title: Green Carbon nanomaterials used as additives for lubrication

Period: 6 months

Mission and activities
The student will synthesize green Carbons and determine their tribological performances as friction reduction additives in several lubricant bases. Physicochemical characterization techniques, such as Raman spectroscopy, Atomic Force Microscopy, Infrared Spectroscopy, scanning and Transmission Electron Microscopy, optical profilometry will be used to evaluate the structural evolution of the synthetized green carbons. Characterization of the corresponding wear scars formed during the tribological test will be performed to determine the antiwear performances of the materials.

Profil and competencies
- second year of a physics and/or chemical Master student
- Curious, motivated, patient, persistent
- team working with spirit of initiative and synthesis
- Knowledge in raman and infrared spectroscopy or other characterization method that will be used.
- The student can easily appropriate a data analysis soft.

Gratification: according to current standard

Laboratory: The stage will take place in a laboratory of “Universite des Antilles” : Groupe de Technologie des Surfaces et Interfaces » (GTSI)  http://gtsi.univ-antilles.fr/

Country: Guadeloupe

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