

Title for a stage

Using the HDL as a pollutant removal

Location: **Institute Charles Gerhardt, Montpellier, Bat 15, 1er étage**

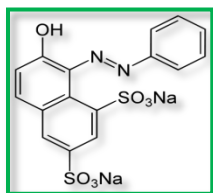
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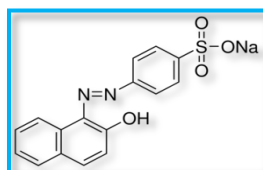
Description of the job for the master internationalship (1st year)

Nowadays, depollution is quite common occurrence in scientific research. Dye wastewater is one of the major sources of the pollutants in the textile industry. In that context, adsorption processes will be used as an efficient way to remove organic and inorganic contaminants.

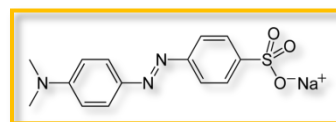
For this purpose potential sorbent Mg-Al layered double hydroxides will be synthesized and used for pollutant removal. Chloride anions will be introduced as interlayer counter-ions owing to their good ion-exchange activity. To find out the chemical composition, crystal structure and surface properties of these sorbents, different characterization techniques will be used, such as X-ray diffraction, thermogravimetric analysis, N₂ physisorption.



Orange G (OG),



Orange II (OII),



Methyl Orange (MO)

Then this material will be used as ion exchanger to study the removal capacities and the mechanisms of the pollutants sorption. Three often used organic dyes, Methyl Orange, Orange G and Orange II will be assessed for this work. The originality of this internship will be also to quantify and understand the selectivity of Mg-Al(Cl) LDH sorbent in real conditions.

Please feel free to contact Anna DARMOGRAI (Ganna.Darmograi@etud.univ-montp2.fr) from the Institut Charles Gerhardt Montpellier for more information on this subject.