

GRAPHENE OXIDE: FROM SYNTHESIS TO ADSORPTIVE APPLICATION

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Since Geim and Novoselov won the Nobel Prize in physics for the isolation of one perfect atomic layer of graphene in 2010, the interest of researchers towards graphene field has awakened. In the search for the best way to synthesize graphene, a large number of new carbon nanomaterials have been discovered. One of the most important materials discovered around graphene is graphene oxide (GO), which can be defined as few functionalized layers of graphene with molecules of carbon, oxygen and hydrogen attached to the structure [1]. This material and its derivatives are widely used in a wide range of applications, from electronic devices and medical treatments to adsorber media. It has been demonstrated that the characteristics of the obtained graphene oxide, as well as, the efficiency of that applications, would lie in the raw graphite characteristics [2].

One of the most important adsorption process is the removal of textile dyes which are important water pollution sources. In this context, methylene blue (MB) is one of the most commonly widely used dyes in all around the world. Some researchers have been demonstrated the great capacity of graphene oxide for the adsorption of a large variety of compounds: heavy metals, dyes, fluoride ions or pharmaceutical wastes [3].

In that way, the aim of this work is the study of GO characteristics attending to the raw material and the MB adsorption capacity of the final product.

References

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- [2] B. Dommisa, D. and R. K. Dash, Effect of the precursor graphite on the structure and morphology of graphite oxide and reduced graphene oxide, *Vol. 8* (2017) 315-321.
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Figures

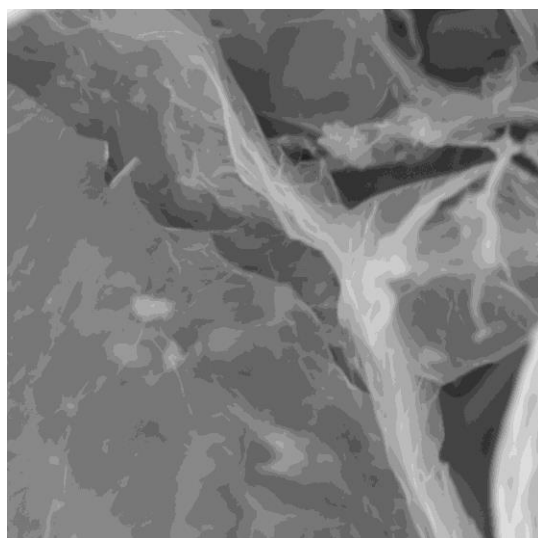


Figure 1: SEM Image of graphene oxide
