Graphene structure applied as a nanofiltration membrane

Abstract

Graphene discovered in 2004 [1], is one of the crystalline forms of carbon, corresponds to a nanomaterial of a single layer of carbon atoms, resembles a two-dimensional sheet arranged in a hexagonal ring structure of benzene, consisting of carbon atoms hybridized with sp2 [2]. Nanofiltration is a very important technique because it promotes the separation of particles through filter membranes. Graphene nanomembranes demonstrate high selectivity in the emerging research field [3], superior to traditional filters using other polymers or silica [4], due to ultrafine characteristics [5]. Graphene nanofiltration membranes have applications in various areas, such as desalination and separation of organic materials, among other floating in the water, depending on the structure of its pores [6].

Keywords: Graphene; Nanomaterial; Nanofiltration; Pore Structure

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