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Characterization of graphene oxide/Nafion colloids by spectrophotometry for desalination applications**Oscar A Jaramillo Quintero, Maria O Concha Guzman, and Marina E Rincon**
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In recent years, graphene oxide (GO) has been widely explored in many applications due to its exceptional properties. GO combined with polymeric materials offers the opportunity to develop novel functional and

eco-friendly materials for the production of membranes and films. In this work, we report the fabrication of membranes based on GO and Nafion (N) colloids with different concentrations deposited on carbon paper (CP) by vacuum filtration technique. The morphological and structural characterization of the membranes was conducted by scanning electron microscopy and X-ray diffraction methods, respectively. To quantify the retention of GO/N colloids on the CP surface and bulk, UV-Vis optical spectrophotometry was carried out before and after the

filtration process. UV-Vis spectra demonstrated total retention of GO/N colloids on the complete structure of the CP, which was also confirmed by energy dispersive X-ray spectrometry analysis.

Biography

Oscar A Jaramillo Quintero received his PhD in Materials Science and Engineering from UNAM in 2016. He joined (Renewable Energy Institute) of UNAM as Catedrático Researcher CONACYT-IER since 2017. His research is focused on the nanomaterial synthesis of semiconductor oxides and carbon nanostructures for development and fabrication of electrochemical energy conversion and storage devices, as well as the study of interfacial phenomena in emerging photovoltaics.

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