

Electrospun Nanofibrous Membrane for Oil Spill Cleanup

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An oil spill is the release of a liquid petroleum hydrocarbon into the environment, especially in marine areas due to the human activity. Effective separation of oil from water is of significant importance globally for environmental and water source protection. Among the numerous approaches for oil spill cleanup, separation is considered to be one of the most versatile and promising approaches due to its convenience, and ease of operation. Electrospun nanofibers have unique properties such as large surface area and high porosity. Therefore, they can be used as advanced polymeric membrane for oil separation from water. In this study, a series of polymeric nanofibrous membrane will be made by electrospinning method. The membranes will be functionalized by chemical modification. Physical-Chemical properties of these membranes will be investigated by various techniques. The efficiency of these membranes for oil separation from water will be studied.