

عنوان مقاله:

Adsorption of Hydrocarbons Using Synthetic organic sorbent materials for oil/water separation and Spill cleanup: A review

محل انتشار:

چهارمین کنفرانس بین المللی پژوهش های کاربردی در علوم و مهندسی (سال: 1398)

تعداد صفحات اصل مقاله: 16

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خلاصه مقاله:

Environmental contamination of water by different types of hydrocarbon compounds has been, and continues to be a specific and serious issue. As one of the most critical sources of energy in the modern world, oil is essential for everyone. However, there is a risk of spillage when exploring, storing, transporting and using the crude oil. Treatment of organic matter spill remains a global concern due to its significant environmental impact. Traditional treatment techniques to remove the oil compounds from water are physical (Skimmer and Booms), In-situ burning, Bioremediation, Dispersants and sorbents. Among them, sorption is a good promising technique for oil spill cleanup. Synthesis organic sorbents are ideal materials for oil recovery from the water surface compared to natural adsorbents, due to their hydrophobic characteristics and their capability to absorb oil selectively in the attendance of water. So, in this paper, some oil spill accidents, effects related to oil spillage are discussed, then the sorption mechanism, types of synthetic organic sorbent materials and their efficiency in sorption of hydrocarbon compounds will be reviewed and their advantages, and disadvantages will be discussed.

کلمات کلیدی:

Hydrocarbons, Environmental Contamination, Spillage accident, Sorption Mechanism, Synthetic Organic Sorbent materials.

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1000694>



