

DOI: 10.1007/s42765-022-00214-y Corpus ID: 252721739; Electrospun Metal-Organic Framework Nanofiber Membranes for Energy Storage and Environmental Protection @article{Liu2022ElectrospunMF, title={Electrospun Metal-Organic Framework Nanofiber Membranes for Energy Storage and Environmental Protection}, author={Xiaoge Liu and Yi ...

Environmental Impact Statement. This Programmatic EIS evaluates the potential environmental and cost impacts of strategic management alternatives for managing five types of radioactive and hazardous wastes that have resulted and will continue to result from nuclear defense and research activities at a variety of sites around the United States.

Bipolar membrane electrodialysis (BMED) is a new membrane separation technology composed of electrodialysis (ED) through a bipolar membrane (BPM). ...

Energy, water, and healthy air are the basic needs to survive, and all these resources are intricately connected. Modern lifestyle activities and growing energy demands cause more consumption of fossil fuels and contamination of water and air. The inappropriate discharge of a substantial biomass waste byproduct worsened these problems, mainly in ...

Process Safety and Environmental Protection. Supports open access. 11.4 CiteScore. 6.9 Impact Factor. Articles & Issues. About. Publish. Order journal. Menu. Articles & Issues. Latest issue; ... Smart energy storage systems for better resilience, safety, and environment. Last update 17 October 2024. Guest Editors: Nader Javani; Pouria AHMADI;

The demand for energy has increased tremendously around the whole world due to rapid urbanization and booming industrialization. Energy is the major key to ...

The environmental protection indices of SC are much lower than those of anthracite as confirmed by tests and expert demonstrations by the Shaanxi Science and Technology Department. ... Although SC has recently achieved great success in the fields of energy storage and environmental remediation in a fairly short period, a number of challenges ...

In this paper, batteries from various aspects including design features, advantages, disadvantages, and environmental impacts are assessed. This review reaffirms ...

By facilitating the integration of renewable energy, optimising grid operations, reducing greenhouse gas emissions, promoting localised energy generation, and focusing on durability and recyclability, energy storage

systems emerge as a ...

Green synthesis offers a superior alternative to traditional methods for producing metal and metal oxide nanoparticles. This approach is not only benign and safe but ...

Therefore, there is a crucial need for energy storage devices that can rapidly store this intermittent and unstable clean energy, thereby enabling the establishment of a continuous and stable energy supply system through these storage solutions. In all kinds of energy storage systems, electric energy storage systems occupy a key position, and ...

The second paper [121], PEG (poly-ethylene glycol) with an average molecular weight of 2000 g/mol has been investigated as a phase change material for thermal energy storage applications. PEG sets were maintained at 80 °C for 861 h in air, nitrogen, and vacuum environment; the samples maintained in vacuum were further treated with air for a period of ...

Environmental impacts of energy storage waste and regional legislation to curtail their effects - highlighting the status in Jordan ... the need for an ESS waste management system is emerging in order to ensure environmental protection and human health as well as sustainability. 1.1 ... Storage until treatment is available: 535 liquid-based ...

The U.S. Environmental Protection Agency's (EPA) Superfund--the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) database--has collected and built an open-source database based on nearly 2000 US soil remediation cases since 1980, providing detailed information and references for researchers worldwide to carry out ...

Ever since the commencement of the Industrial Revolution in Great Britain in the mid-18th century, the annual global energy consumption from various fossil fuels, encompassing wood, coal, natural gas, and petroleum, has demonstrated an exponential surge over the past four centuries [1,2]. The finite fossil fuel resources on our planet are diminishing ...

Increased process control, ecosystem monitoring, and environmental decision-making occur when pollutant detection technology is more available and cheaper [10]. Fast and accurate sensors that are able to detect pollutants at the molecular level increase the human ability to support sustainable human health and the environment [11]. A sensor is essentially a ...

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