
Three membranes were prepared using silica (SiO 2), zirconium dioxide (ZrO 2) and tin dioxide (SnO 2) surface modifications on a PVA-SiO 2 composite membrane for an all-vanadium ...

In vanadium redox flow batteries (VRFBs), ultrathin perfluorinated sulfonic acid (PFSA) membranes with a highly ordered ...

The proposed method represents a convenient, economical, and non-destructive membrane detecting and repairing strategy, demonstrating great potential for redox flow ...

In vanadium redox flow batteries (VRFBs), ultrathin perfluorinated sulfonic acid (PFSA) membranes with a highly ordered morphology are proposed to enhance ...

Download our white paper to learn about the important features to consider when selecting a membrane, and how each aspect of an ion-exchange ...

The widely studied nonfluorinated ion exchange membranes have poor chemical stability. Most importantly, these membranes are confronted with a trade-off between ...

In general, perfluorinated sulfonic acid (PFSA) ionomer membrane, e.g., Nafion membrane, is widely used as the ion-selective membrane in a VRFB because of high proton conductivity and ...

Given the cost advantages of hydrocarbon vs perfluorinated membranes, and the ease of preparing the composite, these separators ...

Given the cost advantages of hydrocarbon vs perfluorinated membranes, and the ease of preparing the composite, these separators should also be of interest for other flow ...

In this study, we demonstrate an ultrathin (~30 nm) PFSA membrane with highly ordered hydrophilic domains.

NafionTM membranes have good mechanical strength. Reinforced NafionTM membranes are also available for the applications where a mechanical stress is applied on membranes during cell ...

The membranes with different thicknesses are produced for use in redox flow batteries, fuel cells, electrolyzers, and electrochemical sensors. Its advantages include high ...

Download our white paper to learn about the important features to consider when selecting a membrane, and how each aspect of an ion-exchange membrane impacts the lifetime and ...

Web: https://afasystem.info.pl