Titanium electrodes for flow batteries

This paper describes the trend of electrolyte research for redox flow batteries and the characteristics of the titanium-manganese electrolyte.

In this study, three-dimensional nitrogen-doped carbon nanofiber composite carbon felt electrodes (N-CNF/CF) were prepared using a simple pyrolysis method to address the kinetic ...

Surface-modified graphite felt incorporating synergistic effects of TiO 2 decoration, nitrogen doping, and porous structure for high-performance vanadium redox flow batteries

Titanium-based RFBs, first developed by NASA in the 1970s, are an interesting albeit less examined chemistry and are the focus of the present review.

Using a mixed solution of (NH 4) 2 TiF 6 and H 3 BO 3, this study performed liquid phase deposition (LPD) to deposit TiO 2 on graphite felt (GF) for application in the negative electrode of a ...

To advance the integration of a titanium-cerium electrode-decoupled redox flow battery (Ti-Ce ED-RFB) system with conventional fossil-fueled power plants through detailed technical and economic system ...

In this study, we have investigated using highly conductive static mixers ability to improve the slurry electrodes in the vanadium redox flow battery, compared to polymer 3D-printed static mixers.

This study demonstrates for the first time an electrode for the positive half-cell reaction of a VRFB, consisting of a 3-dimensional nitrogen-doped carbon nanotube (NCNTs) surface layer with a ...

Herein, binder-free TiN nanorods array-decorated 3D graphite felt composite electrode-is demonstrated. The dendrite-like TiN nanorods array increases the specific surface area of the electrode.