

Popular Scientific Abstract

This thesis presents the work performed from September 2011 to September 2014 at the Institute of Chemical Engineering, Biotechnology and Environmental Technology, University of Southern Denmark. Its main topic is the use of new advanced nanostructures for electrochemical energy conversion with a focus on fuel cells.

Fuel cells are electrochemical energy converters that can transform the energy of a fuel such as hydrogen, in useful energy. The key bottleneck of such devices is the electrochemical activity and stability of the electrode. The heart of an electrode is the electrocatalyst which is deposited on a high surface area support. The aim of this thesis is to investigate the electrochemical stability of the support under simulated fuel cell conditions.