High-Performance Nanofiber Fuel Cell Electrodes

A nanofiber electrode is fabricated by electrospinning an ink composed of Pt/C catalyst particles in a solution of Nafion and poly(acrylic acid). Exceptionally high power densities and platinum mass activity are achieved when using the mat as cathode in H2/air and H2/O2 fuel cell membrane-electrode assemblies. The nanofiber cathode also exhibits outstanding stability in accelerated durability tests. © 2011 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.