

PROPERTIES AND PERFORMANCE OF POLYMERIC MATERIALS USED IN FUEL CELL APPLICATIONS

Gilles Michel Marc Divoux

Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State
University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Macromolecular Science and Engineering

Robert B. Moore, Chair
Donald G. Baird
Michael W. Ellis
James E. McGrath
Kenneth A. Mauritz

February 20, 2012
Blacksburg, Virginia

Keywords: perfluorosulfonic acid ionomer, Nafion[®], semicrystalline ionomer, fuel cell, proton exchange membrane, morphology, processing, elastomers,

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Chapter 7

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Figure 7.5

Draft 09/01/2009

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Figure 9.2:



Title: Diffusion of Water in Nafion
Using Time-Resolved Fourier
Transform Infrared–Attenuated
Total Reflectance Spectroscopy

Author: Daniel T. Hallinan et al.

Publication: The Journal of Physical
Chemistry B

Publisher: American Chemical Society

Date: Apr 1, 2009

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