

## Interpretation of Low-Frequency Inductive Loops in PEM Fuel Cell Impedance Data

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Electrochemical Impedance Spectroscopy (EIS) is a powerful technique which, in principle, allows identification and characterization of the different processes governing electrochemical systems. Impedance spectroscopy has been applied to PEM fuel cells, but the electrical circuit analogues commonly used to interpret data do not yield unambiguous interpretations of the process. The object of this work was to explore the use of impedance measurements for fuel cells.

*Mark Orazem obtained his BS and MS degrees from Kansas State University and his doctorate in 1983 from the University of California, Berkeley. In 1988 he joined the faculty of the University of Florida where, since 1992, he holds the position of Professor of Chemical Engineering. He is the director and organizer of the UF/BP Engineering Development Program for the Caspian Sea Region. Orazem is the recipient of two teaching awards and two research professorships from the University of Florida. He was recognized as an outstanding educator in 2004 by BP Azerbaijan. He was recognized as the 2005 College of Engineering Distinguished International Educator, and he received the 2006 Excellence in Teaching Award from the local student chapter of the AIChE. Orazem has over 100 refereed publications, and he has delivered 5 plenary lectures at international meetings. He is coauthoring a textbook on impedance spectroscopy.*