

August 2006

WFCG Partners

Industrial

[American Electric Power](#)
[Battelle](#)
[Dana Corporation](#)
[First Energy](#)
[HydroGen, LLC](#)
[Keithley Instruments](#)
[NexTech Materials](#)
[Parker Hannifin](#)
[SOFCo-EFS](#)

Academic

[Case](#)
[Cleveland State University](#)
[Ohio State University](#)
[Stark State College](#)
[University of Toledo](#)

Government/Nonprofit

[EMTEC](#)
[NASA - Glenn Research Center](#)
[Ohio Department of Development](#)
[Ohio Fuel Cell Coalition](#)

WFCG Capabilities

Material Development

Polymer scale-up and film processing capabilities
Polymer characterization suite
Ceramic processing
Catalyst synthesis

Device Development

Micro-fuel fabrication
Membrane fabrication for separations and reactive separations

Component Testing

Durability testing
Advanced electrochemical analysis
Membrane permeation
Optical profilometry and advanced mechanical testing

Fuel Processing

Reactors for catalyst testing
Reactor design test beds

System Testing

Hardware-in-the-loop system tests
Sensor development

University of Toledo and Catacel collaboration a success for fuel reforming technologies

The partnership that the [University of Toledo](#) and [Catacel Corp.](#) have created takes advantage of the skills of both partners in order to develop a commercially viable product. The partnership, which was facilitated by Wright Fuel Cell Group, directly capitalizes on their expertise and their strong interest in alternative energy technologies.

[Click here for details on their products and research.](#)

"The partnership with the University of Toledo and WFCG has been outstanding for Catacel," Bill Whittenberger, Catacel's President, remarks on benefits of the partnership. "Together, we have been able to attract significant grant funding. The funding has supported development of novel catalyst materials at UT, to be displayed on novel structures developed at Catacel. The combination has allowed us to attack new hydrogen production and fuel processing markets that will commercialize in the near future." With over \$2,000,000 in funded grant activity, this partnership has demonstrated the strength of the collaboration and recognition for potential long-term commercial success.



Dr. Martin Abraham, Professor of Chemical Engineering, leads the University of Toledo's side of the collaboration. "The partnership with Catacel has allowed us to work on practical applications of fuel reforming, with the potential to develop technologies that can be used in the development of a commercially viable product. The practical, applied experience has been a tremendous asset for our research group and a substantial bonus for our graduate students."

In the photo above, recent M.S. graduate Amanda McCoy and Dr. Martin Abraham are discussing research on the development of a sulfur-tolerant catalyst for reforming of jet fuel. The reactor system is designed for operation at high sulfur loading with on-line gas product analysis, permitting identification of sulfur concentrations in the low ppm levels. Funding was received from NASA with a subcontract to Catacel; additional support has been provided by the US Army.

Membership

In addition to having access to Ohio's largest fuel cell network, partners of WFCG receive discounted rates for service. Visit www.wfcg.org to find out more.

To submit materials or information for *Hot Off the Grid*, contact Lyndy Rutkowski at lyndy@case.edu.



[Visit Wright Fuel Cell Group Homepage](#)

Partner Facilities

Wright Fuel Cell Center accommodates to specific fuel cell testing needs, in addition, our partner's fuel cell facilities each have their own area of expertise:

Case

Wright Fuel Cell Center
CAPI: Analytical instruments
SOFC Lab

Cleveland State University

SOFC Lab

Ohio State University

Fuel Cell and Catalyst Research Lab

Stark State College of Technology

Fuel Cell Prototyping Center

University of Toledo

Designing new Fuel Cell Lab
Currently based in Engineering Labs

Links for More Information

[Become a WFCG Partner](#)

[Learn About Upcoming Events](#)

[Meet the WFCG Team](#)



MISSION STATEMENT

To enable the commercialization of fuel cell technologies by marshaling Ohio's unique industrial and intellectual resources

Contact Us

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