

# Selected Publications and Presentations

## Journal Articles, Books, and Book Chapters

Comparing Estimates of Fuel Economy Improvement Via Fuel-Cell Powertrains

D. J. Santini, A. D. Vyas, R. Kumar, and J. L. Anderson

SAE Transactions 2002: paper no. 2002-01-1947, Journal of Engines, 2395-2408,  
(September 2003)

Performance of High-Temperature Polymer Electrolyte Fuel Cell Systems

R. K. Ahluwalia, E. D. Doss, and R. Kumar

J. Power Sources **117**(1-2), 45-60 (2003)

Fuel Processing for Fuel Cell Systems in Transportation and Portable Power Applications

M. Krumpelt, T. R. Krause, J. D. Carter, J. P. Kopasz, and S. Ahmed

Catal. Today **77**, 3-16 (2002)

## Abstracts and Proceedings Papers

Water-Gas Shift Catalysis on Pt Bimetallic Catalysts

S. Y. Choung, M. Ferrandon, and T. R. Krause

Extended Abstract, presented at 226<sup>th</sup> ACS National Meeting, New York, NY,  
September 7-11, 2003

Independent, Standardized Fuel Cell Testing: The Fuel Cell Testing Facilities at Argonne National Laboratory

I. Bloom, E. G. Polzin, and W. M. Swift

Abstracts, 2002 Fuel Cell Seminar, Palm Springs, CA, November 18-21, 2002, Book of  
Abstracts, Vol. 1, p. 703 (2002)

Fuel Processing of Available Fuels—The Enabling Technology for Fuel Cells

S. G. Calderone, T. L. Harvey, R. Randhava, E. H. Camara, S. H. D. Lee, D. V. Applegate,  
L. E. Miller, and S. Ahmed

Abstracts, Fuel Cell Seminar, Palm Springs, CA, November 18-21, 2002, pp. 674-677  
(2002)

## Papers Presented at Scientific Meetings

Water-Gas Shift Catalysis on Pt Bimetallic Catalysts

S. Y. Choung, J. Krebs, M. Ferrandon, and T. R. Krause

Presented at 226<sup>th</sup> ACS National Meeting, New York, NY, September 7-11, 2003.

Reforming Catalysts for On-Board Fuel Processing

T. R. Krause, M. Ferrandon, and C. Rossignol

Presented at 226<sup>th</sup> ACS National Meeting, New York, NY, September 7-11, 2003

Patents and Selected Publications and Presentations

Powder Metallurgy and Solid Oxide Fuel Cells

J. D. Carter, T. A. Cruse, J. M. Ralph, and D. J. Myers

Presented at 2003 International Conference on Powder Metallurgy and Particulate Materials, Las Vegas, NV, June 8-12, 2003

Powder Metallurgy and Solid Oxide Fuel Cells

T. A. Cruse, J.-M. Bae, J. D. Carter, M. Krumpelt, R. Kumar, D. J. Myers, and J. M. Ralph

Presented at the Int. Conf. on Powder Metallurgy and Particulate Materials, Las Vegas, NV, June 8-12, 2003

Effects of Multicomponent Fuels, Fuel Additives, and Fuel Impurities on Fuel Reforming

J. P. Kopasz, L. E. Miller, and D. V. Applegate

Presented at the Int. Future Transportation Technology Conf., Costa Mesa, CA, June 23-25, 2003

Transition Metals on Oxide Ion Conducting Supports as Reforming Catalysts for Fuel Cell Systems

T. R. Krause, C. Rossignol, M. Ferrandon, J. P. Kopasz, J. Mawdsley, and J.-M. Bae

Presented at the 18<sup>th</sup> North Am. Catalysis Soc. Meeting, Cancun, Mexico, June 1-6, 2003

Diesel Reforming in a Kilowatt Scale Autothermal Reformer with Liquid Injection

D.-J. Liu, H.-K. Liao, L. E. Miller, and S. Ahmed

Presented at 2003 Future Transportation Technology Conference, Costa Mesa, CA, June 23-25, 2003

Diesel Reforming for Fuel Cell Application in a 1- to 5-Kilowatt ATR Reformer

D.-J. Liu, H.-K. Liao, L. E. Miller, and S. Ahmed

Presented at 18<sup>th</sup> North American Meeting of the North American Catalysis Society, Cancun, Mexico, June 1-6, 2003

$\text{Ln}_{1-x}\text{Sr}_x\text{CoO}_3$  (Ln=Gd, Pr) as a Cathode for Intermediate-Temperature Solid Oxide Fuel Cells

C. Rossignol, J. M. Ralph, J.-M. Bae and J. T. Vaughey

Presented at 14<sup>th</sup> International Conference on Solid State Ionics, Monterey, CA, June 22-27, 2003

Metallic Bipolar Plate Supported Solid Oxide Fuel Cell ("TuffCell")

J. D. Carter, T. A. Cruse, R. Kumar, and D. J. Myers

Presented at 2003 Hydrogen and Fuel Cells Merit Review Meeting, Berkeley, CA, May 19-22, 2003

Water-Gas Shift Catalysis

S. Y. Choung, J. Krebs, M. Ferrandon, R. Souleimanova, D. J. Myers, and T. R. Krause

Presented at 2003 Hydrogen and Fuel Cells Merit Review Meeting, Berkeley, CA, May 19-22, 2003

Structured Catalysts for Autothermal Reforming of Hydrocarbon Fuels

J.-M. Bae, S. Ahmed, R. Kumar, and E. Doss

Presented at the Conf. on Fuel Cell Science, Engineering and Technology, Rochester, NY, April 21-23, 2003

Application of Cathode Materials to Co-Sintered Metal Supported SOFC

J. D. Carter, T. A. Cruse, J.-M. Bae, J. M. Ralph, C. Rossignol, D. J. Myers, R. Kumar, and M. Krumpelt

Presented at American Ceramic Society Annual Meeting, Nashville, TN, April 27-30, 2003

Fuel Processing for Mobile Fuel Cell Systems

M. Krumpelt, T. R. Krause, and J. P. Kopasz

Presented at First International Conference on Fuel Cell Science, Engineering and Technology, Rochester, NY, April 21-23, 2003

An In-Situ, Real-Time XANES and EXAFS Characterization of Noble Metal Catalyst Perovskite Catalysts for Producing Hydrogen Using Gasoline Fuel

J. R. Mawdsley, T. R. Krause, and J. P. Kopasz

Presented at the 105<sup>th</sup> Annual Meeting & Exposition of the Am. Ceram. Soc., Nashville, TN, April 27-30, 2003

Perovskite Catalysts for Producing Hydrogen from Gasoline Surrogates

J. R. Mawdsley, T. R. Krause, J. P. Kopasz, and J. Critchfield

Presented at 105<sup>th</sup> Annual Meeting of the American Ceramic Society, Nashville, TN, April 30, 2003

The Role of A-Site Deficiency in the Performance of Sr-Doped Lanthanum Ferrite Cathodes for SOFCs

J. M. Ralph, C. Rossignol, and J. T. Vaughey

Presented at 105<sup>th</sup> Annual Meeting & Exposition of the Am. Ceram. Soc., Nashville, TN, April 27-30, 2003

Effects of Additives and Impurities on the Reforming of Gasoline

J. P. Kopasz, L. E. Miller, D. V. Applegate and S. Ahmed

Presented at the AIChE Spring National Meeting, New Orleans, LA, March 30-April 3, 2003

Pt, Rh, and Ni Supported on Oxide-Ion-Conducting Substrates as Catalysts for Generating H<sub>2</sub> for Fuel Cells

T. R. Krause, C. Rossignol, M. Ferrandon, J. P. Kopasz, and J.-M. Bae

Presented at the AIChE Spring 2003 National Meeting, New Orleans, LA, March 30-April 3, 2003

Challenges of Converting Diesel Fuel to Hydrogen-Rich Reformate

M. Krumpelt, J. P. Kopasz, and D.-J. Liu

Presented at Fuel Cells 2003 Conference, Stamford, CT, March 31-April 1, 2003

Sulfur Removal from Reformate

X. Wang, T. R. Krause, and R. Kumar

Presented at the 225<sup>th</sup> Am. Chem. Soc. National Meeting & Exposition, New Orleans, LA, March 23-27, 2003

## Patents and Selected Publications and Presentations

### Fuel Cell Vehicle Developments

W. F. Podolski and P. Davis

Presented at the Fuels, Lubricants, and Engineers Conf., Charleston, SC, February 25–26, 2003

### Electrode Development for Solid Oxide Fuel Cells

J. M. Ralph, C. Rossignol, D. J. Myers, and R. Kumar

Presented at the 5<sup>th</sup> IBA-HBC Yeager Memorial Symp., Waikoloa Beach, HI, January 7–10, 2003

### Bipolar Plate-Supported Solid Oxide Fuel Cells for Auxiliary Power Units

J. D. Carter, T. A. Cruse, J.-M. Bae, J. M. Ralph, D. J. Myers, M. Krumpelt, and R. Kumar

Presented at the Mater. Res. Soc. Fall 2002 National Meeting, Boston, MA, December 2–6, 2002

### Improved Materials and Cell Design for Mechanically Robust Solid Oxide Fuel Cells

J. D. Carter, J. M. Ralph, J.-M. Bae, T. A. Cruse, C. Rossignol, M. Krumpelt, and R. Kumar

Presented at the 2002 Fuel Cell Seminar, Palm Springs, CA, November 18–21, 2002

### A Novel Approach to Making Metallic Interconnects for Planar Solid Oxide Fuel Cells

T. A. Cruse, J.-M. Bae, J. D. Carter, R. Kumar, and M. Krumpelt

Presented at the 2002 Fuel Cell Seminar, Palm Springs, CA, November 18–21, 2002

### Auto-thermal Reforming Catalysis

T. R. Krause, J. Mawdsley, J. D. Carter, M. Krumpelt, C. Rossignol, and J. P. Kopasz

Presented at the 2002 Fuel Cell Seminar, Palm Springs, CA, November 18–21, 2002

### Hydrogen Generation via Fuel Reforming

J. Krebs

Presented at the Int. Workshop on Hydrogen in Materials & Vacuum Systems, Newport News, VA, November 11–13, 2002

### Development of Advanced Fuel Processors for Fuel Cell Vehicles

J. F. Miller, S. Ahmed, R. Kumar, S. H. D. Lee, and C. Pereira

Presented at the 19<sup>th</sup> Int. Battery, Hybrid and Fuel Cell Electric Vehicle Symp. and Exhibition, Seoul, Korea, October 19–23, 2002

### Electrode Materials for Solid Oxide Fuel Cells

J. M. Ralph, C. Rossignol, and R. Kumar

Presented at the 202<sup>nd</sup> Electrochem. Soc. Fall Meeting, Salt Lake City, UT, October 20–25, 2002