

Friedrich Prinz

Leonardo Professor, Professor of Mechanical Engineering, of Materials Science and Engineering and Senior Fellow at the Precourt Institute for Energy

CONTACT INFORMATION

- **Alternate Contact**

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Bio

BIO

Fritz Prinz is the Leonardo Professor in the School of Engineering at Stanford University, Professor of Materials Science and Engineering, Professor of Mechanical Engineering, and Senior Fellow at the Precourt Institute for Energy. He also serves as the Director of the Nanoscale Prototyping Laboratory and Faculty Co-director of the NPL-Affiliate Program. A solid-state physicist by training, Prinz leads a group of doctoral students, postdoctoral scholars, and visiting scholars who are addressing fundamental issues on energy conversion and storage at the nanoscale. In his Laboratory, a wide range of nano-fabrication technologies are employed to build prototype fuel cells and capacitors with induced topological electronic states. We are testing these concepts and novel material structures through atomic layer deposition, scanning tunneling microscopy, impedance spectroscopy and other technologies. In addition, the Prinz group uses atomic scale modeling to gain insights into the nature of charge separation and recombination processes. Before coming to Stanford in 1994, he was on the faculty at Carnegie Mellon University. Prinz earned a PhD in Physics at the University of Vienna.

ACADEMIC APPOINTMENTS

- Professor, Mechanical Engineering
- Professor, Materials Science and Engineering
- Senior Fellow, Precourt Institute for Energy
- Affiliate, Stanford Woods Institute for the Environment

HONORS AND AWARDS

- Sir Christopher Hinton Lecture, Royal Academy of Engineering (1991)
- Engineer of the Year, American Society of Mechanical Engineers, Pittsburgh, PA Section (1991 - 1992)
- Corresponding member, Austrian Academy of Science, Vienna, Austria (1996)
- Award for Excellence, Literati Club (2002)
- Most Outstanding Paper in the 2001 volume, Rapid Prototyping Journal (2002)
- The AM Strickland Prize for Best Paper in 2005, The Institution of Mechanical Engineers, London, UK (2005)
- Tedori-Callinan Lecture, University of Pennsylvania (2006)
- Fellow, American Association for the Advancement of Science (AAAS) (2007)

- Woodruff Colloquium in the Theme of Energy, Georgia Institute of Technology, Atlanta, GA (2008)
- Munushian Lecture, University of Southern California (2009)

PROFESSIONAL EDUCATION

- PhD, University of Vienna , Physics (1975)

LINKS

- Nanoscale Prototyping Laboratory: <https://nplab.stanford.edu>

Teaching

COURSES

2025-26

- Manufacturing Processes and Design: ME 129 (Win)
- Quantum Field Theory (QFT) for Engineering Applications: MATSCI 405, ME 403 (Aut)

2024-25

- Manufacturing Processes and Design: ME 129 (Win)

2023-24

- Manufacturing Processes and Design: ME 129 (Win)
- Quantum Field Theory (QFT) for Engineering Applications: MATSCI 405, ME 403 (Aut)

2022-23

- Manufacturing Processes and Design: ME 129 (Win)
- Quantum Field Theory (QFT) for Engineering Applications: MATSCI 405, ME 403 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Dongjae Kong

Postdoctoral Faculty Sponsor

Hyung Jong Choi, Yunha Jung, Hojae Lee, Benedikt Raab

Doctoral Dissertation Advisor (AC)

Alex Boulton-McKeehan, Daniel Custer, Jiaxuan Guo, Tyler Howard, SeoYoung Kim, Xiting Zhang

Master's Program Advisor

Bradley Jackson, Nallely Lomeli Rubio

Doctoral Dissertation Co-Advisor (AC)

Zhennan Ru, Sreya Vangara

Doctoral (Program)

Tyler Howard, Jun Lee

Publications

PUBLICATIONS

- **Plasma-enhanced atomic layer deposition of tungsten nitride** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A*
Sowa, M. J., Yemane, Y., Prinz, F. B., Provine, J.
2016; 34 (5)
- **Plasma-Enhanced Atomic Layer Deposition of SiN-AIN Composites for Ultra Low Wet Etch Rates in Hydrofluoric Acid** *ACS APPLIED MATERIALS & INTERFACES*
Kim, Y., Provine, J., Waich, S. P., Park, J., Phuthong, W., Dadlani, A. L., Kim, H., Schindler, P., Kim, K., Prinz, F. B.
2016; 8 (27): 17599-17605
- **Correlation of film density and wet etch rate in hydrofluoric acid of plasma enhanced atomic layer deposited silicon nitride** *AIP ADVANCES*
Provine, J., Schindler, P., Kim, Y., Walch, S. P., Kim, H. J., Kim, K., Prinz, F. B.
2016; 6 (6)
- **Atomically Flat Silicon Oxide Monolayer Generated by Remote Plasma** *JOURNAL OF PHYSICAL CHEMISTRY C*
Thian, D., Yemane, Y. T., Logar, M., Xu, S., Schindler, P., Winterkorn, M. M., Provine, J., Prinz, F. B.
2016; 120 (15): 8148-8156
- **Relating Electronic and Geometric Structure of Atomic Layer Deposited BaTiO₃ to its Electrical Properties** *JOURNAL OF PHYSICAL CHEMISTRY LETTERS*
Torgersen, J., Acharya, S., Dadlani, A. L., Petousis, I., Kim, Y., Trejo, O., Nordlund, D., Prinz, F. B.
2016; 7 (8): 1428-1433
- **Oscillatory barrier-assisted Langmuir-Blodgett deposition of large-scale quantum dot monolayers** *APPLIED SURFACE SCIENCE*
Xu, S., Dadlani, A. L., Acharya, S., Schindler, P., Prinz, F. B.
2016; 367: 500-506
- **Plasma-enhanced atomic layer deposition of BaTiO₃** *SCRIPTA MATERIALIA*
Schindler, P., Kim, Y., Thian, D., An, J., Prinz, F. B.
2016; 111: 106-109
- **Self-limiting atomic layer deposition of barium oxide and barium titanate thin films using a novel pyrrole based precursor** *JOURNAL OF MATERIALS CHEMISTRY C*
Acharya, S., Torgersen, J., Kim, Y., Park, J., Schindler, P., Dadlani, A. L., Winterkorn, M., Xu, S., Walch, S. P., Usui, T., Schildknecht, C., Prinz, F. B.
2016; 4 (10): 1945-1952
- **Atomic layer deposition by reaction of molecular oxygen with tetrakisdimethylamido-metal precursors** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A*
Provine, J., Schindler, P., Torgersen, J., Kim, H. J., Karnthaler, H., Prinz, F. B.
2016; 34 (1)
- **Quantifying Geometric Strain at the PbS QD-TiO₂ Anode Interface and Its Effect on Electronic Structures** *NANO LETTERS*
Trejo, O., Roelofs, K. E., Xu, S., Logar, M., Sarangi, R., Nordlund, D., Dadlani, A. L., Kravec, R., Dasgupta, N. P., Bent, S. F., Prinz, F. B.
2015; 15 (12): 7829-7836
- **Effects of surface chemistry and microstructure of electrolyte on oxygen reduction kinetics of solid oxide fuel cells** *JOURNAL OF POWER SOURCES*
Park, J. S., An, J., Lee, M. H., Prinz, F. B., Lee, W.
2015; 295: 74-78
- **The Use of Contact Mode Atomic Force Microscopy in Aqueous Medium for Structural Analysis of Spinach Photosynthetic Complexes.** *Plant physiology*
Phuthong, W., Huang, Z., Wittkopp, T. M., Sznee, K., Heinnickel, M. L., Dekker, J. P., Frese, R. N., Prinz, F. B., Grossman, A. R.
2015; 169 (2): 1318-1332
- **Grain boundary blocking of ionic conductivity in nanocrystalline yttria-doped ceria thin films** *SCRIPTA MATERIALIA*
An, J., Bae, J., Hong, S., Koo, B., Kim, Y., Guer, T. M., Prinz, F. B.

2015; 104: 45-48

- **Enhanced Step Coverage of TiO₂ Deposited on High Aspect Ratio Surfaces by Plasma-Enhanced Atomic Layer Deposition** *LANGMUIR*
Schindler, P., Logar, M., Provine, J., Prinz, F. B.
2015; 31 (18): 5057-5062
- **Atomic Layer Deposition of Undoped TiO₂ Exhibiting p-Type Conductivity.** *ACS applied materials & interfaces*
Iancu, A. T., Logar, M., Park, J., Prinz, F. B.
2015; 7 (9): 5134-5140
- **Variation of Energy Density of States in Quantum Dot Arrays due to Interparticle Electronic Coupling.** *Nano letters*
Logar, M., Xu, S., Acharya, S., Prinz, F. B.
2015; 15 (3): 1855-1860
- **Exploring the local electronic structure and geometric arrangement of ALD Zn(O,S) buffer layers using X-ray absorption spectroscopy** *JOURNAL OF MATERIALS CHEMISTRY C*
Dadlani, A. L., Trejo, O., Acharya, S., Torgersen, J., Petousis, I., Nordlund, D., Sarangi, R., Schindler, P., Prinz, F. B.
2015; 3 (47): 12192-12198
- **Influence of the grain size of samaria-doped ceria cathodic interlayer for enhanced surface oxygen kinetics of low-temperature solid oxide fuel cell** *JOURNAL OF THE EUROPEAN CERAMIC SOCIETY*
Bae, J., Hong, S., Koo, B., An, J., Prinz, F. B., Kim, Y.
2014; 34 (15): 3763-3768
- **Energy States of Ligand Capped Ag Nanoparticles: Relating Surface Plasmon Resonance to Work Function** *JOURNAL OF PHYSICAL CHEMISTRY C*
Dadlani, A. L., Schindler, P., Logar, M., Walch, S. P., Prinz, F. B.
2014; 118 (43): 24827-24832
- **Effects of size polydispersity on electron mobility in a two-dimensional quantum-dot superlattice** *PHYSICAL REVIEW B*
Xu, S., Thian, D., Wang, S., Wang, Y., Prinz, F. B.
2014; 90 (14)
- **Nanostructuring Materials for Solar-to-Hydrogen Conversion** *JOURNAL OF PHYSICAL CHEMISTRY C*
Guer, T. M., Bent, S. F., Prinz, F. B.
2014; 118 (37): 21301-21315
- **MEMS-based thin-film solid-oxide fuel cells** *MRS BULLETIN*
An, J., Shim, J. H., Kim, Y., Park, J. S., Lee, W., Guer, T. M., Prinz, F. B.
2014; 39 (9): 798-804
- **Plasma Processing for Crystallization and Densification of Atomic Layer Deposition BaTiO₃ Thin Films.** *ACS applied materials & interfaces*
An, J., Usui, T., Logar, M., Park, J., Thian, D., Kim, S., Kim, K., Prinz, F. B.
2014; 6 (13): 10656-10660
- **Localized Charge Transfer Reactions near the Pt-YSZ Interfaces using Kelvin Probe Microscopy** *INTERNATIONAL JOURNAL OF PRECISION ENGINEERING AND MANUFACTURING-GREEN TECHNOLOGY*
Lee, W., Prinz, F. B.
2014; 1 (3): 201-205
- **Sol-flame synthesis of cobalt-doped TiO₂ nanowires with enhanced electrocatalytic activity for oxygen evolution reaction.** *Physical chemistry chemical physics*
Cai, L., Cho, I. S., Logar, M., Mehta, A., He, J., Lee, C. H., Rao, P. M., Feng, Y., Wilcox, J., Prinz, F. B., Zheng, X.
2014; 16 (24): 12299-12306
- **High performance Bi-layered electrolytes via atomic layer deposition for solid oxide fuel cells** *JOURNAL OF POWER SOURCES*
Jee, Y., Cho, G. Y., An, J., Kim, H., Son, J., Lee, J., Prinz, F. B., Lee, M. H., Cha, S. W.
2014; 253: 114-122
- **Electrodeposition and Behavior of Single Metal Nanowire Probes** *ACS NANO*
Motoyama, M., Prinz, F. B.

2014; 8 (4): 3556-3566

- **Proton incorporation in yttria-stabilized zirconia during atomic layer deposition** *INTERNATIONAL JOURNAL OF HYDROGEN ENERGY*
Bae, K., Son, K. S., Kim, J. W., Park, S. W., An, J., Prinz, F. B., Shim, J. H.
2014; 39 (6): 2621-2627
- **Nanotubular array solid oxide fuel cell.** *ACS nano*
Motoyama, M., Chao, C., An, J., Jung, H. J., Gür, T. M., Prinz, F. B.
2014; 8 (1): 340-351
- **Rapid and Controllable Flame Reduction of TiO₂ Nanowires for Enhanced Solar Water-Splitting** *NANO LETTERS*
Cho, I. S., Logar, M., Lee, C. H., Cai, L., Prinz, F. B., Zheng, X.
2014; 14 (1): 24-31
- **Digitally-patterned nanoprobe arrays for single cell insertion enabled by wet tapping** *RSC ADVANCES*
Seo, Y. H., Kim, L. H., Prinz, F. B., Ryu, W.
2014; 4 (32): 16655-16661
- **Nanostructuring Methods for Enhancing Light Absorption Rate of Si-Based Photovoltaic Devices: A Review** *INTERNATIONAL JOURNAL OF PRECISION ENGINEERING AND MANUFACTURING-GREEN TECHNOLOGY*
Hong, S., Bae, J., Koo, B., Chang, I., Cho, G. Y., Kim, Y., Cha, S. W., Prinz, F. B.
2014; 1 (1): 67-74
- **Electrochemical tuning of vertically aligned MoS₂ nanofilms and its application in improving hydrogen evolution reaction** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Wang, H., Lu, Z., Xu, S., Kong, D., Cha, J. J., Zheng, G., Hsu, P., Yan, K., Bradshaw, D., Prinz, F. B., Cui, Y.
2013; 110 (49): 19701-19706
- **Approaching the limits of dielectric breakdown for SiO₂ films deposited by plasma-enhanced atomic layer deposition** *ACTA MATERIALIA*
Usui, T., Donnelly, C. A., Logar, M., Sinclair, R., Schoonman, J., Prinz, F. B.
2013; 61 (20): 7660-7670
- **Atomic Scale Verification of Oxide-Ion Vacancy Distribution near a Single Grain Boundary in YSZ.** *Scientific reports*
An, J., Park, J. S., Koh, A. L., Lee, H. B., Jung, H. J., Schoonman, J., Sinclair, R., Gür, T. M., Prinz, F. B.
2013; 3: 2680-?
- **Three-Dimensional Nanostructured Bilayer Solid Oxide Fuel Cell with 1.3 W/cm² at 450 °C.** *Nano letters*
An, J., Kim, Y., Park, J., Gür, T. M., Prinz, F. B.
2013; 13 (9): 4551-4555
- **Atomic Layer Deposition of Platinum Catalysts on Nanowire Surfaces for Photoelectrochemical Water Reduction** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Dasgupta, N. P., Liu, C., Andrews, S., Prinz, F. B., Yang, P.
2013; 135 (35): 12932-12935
- **Three-Dimensional Nanostructured Bilayer Solid Oxide Fuel Cell with 1.3 W/cm² at 450 degrees C** *NANO LETTERS*
An, J., Kim, Y., Park, J., Guer, T. M., Prinz, F. B.
2013; 13 (9): 4551-4555
- **Effect of cation non-stoichiometry and crystallinity on the ionic conductivity of atomic layer deposited Y:BaZrO₃ films** *THIN SOLID FILMS*
Park, J. S., Kim, Y., An, J., Shim, J. H., Guer, T. M., Prinz, F. B.
2013; 539: 166-169
- **Atomistic simulations of grain boundary segregation in nanocrystalline yttria-stabilized zirconia and gadolinia-doped ceria solid oxide electrolytes** *ACTA MATERIALIA*
Lee, H. B., Prinz, F. B., Cai, W.
2013; 61 (10): 3872-3887
- **Ultra-thin platinum catalytic electrodes fabricated by atomic layer deposition.** *Physical chemistry chemical physics*
An, J., Kim, Y., Prinz, F. B.
2013; 15 (20): 7520-7525

- **Aberration-Corrected TEM Imaging of Oxygen Occupancy in YSZ** *JOURNAL OF PHYSICAL CHEMISTRY LETTERS*
An, J., Koh, A. L., Park, J. S., Sinclair, R., Guer, T. M., Prinz, F. B.
2013; 4 (7): 1156-1160
- **Enhanced oxygen exchange on surface-engineered yttria-stabilized zirconia.** *ACS nano*
Chao, C., Park, J. S., Tian, X., Shim, J. H., Gür, T. M., Prinz, F. B.
2013; 7 (3): 2186-2191
- **Enhanced Oxygen Exchange on Surface-Engineered Yttria-Stabilized Zirconia** *ACS NANO*
Chao, C., Park, J. S., Tian, X., Shim, J. H., Guer, T. M., Prinz, F. B.
2013; 7 (3): 2186-2191
- **Spatial Variation of Available Electronic Excitations within Individual Quantum Dots** *NANO LETTERS*
Jung, H. J., Dasgupta, N. P., Van Stockum, P. B., Koh, A. L., Sinclair, R., Prinz, F. B.
2013; 13 (2): 716-721
- **Atomic Scale Verification of Oxide-Ion Vacancy Distribution near a Single Grain Boundary in YSZ** *Scientific Reports*
An, J., Park, J. S., Koh, A. L., Lee, Hark, B., Jung, H. J., Schoonman, J., Prinz, F. B.
2013
- **Three-Dimensional Nanostructured Bilayer Solid Oxide Fuel Cell with 1.3 W/cm² at 450C** *Nano Letters*
An, J., Kim, Y., Park, J., Gur, Turgut, M., Prinz, Fritz, B.
2013
- **STANFORD ENGINEERS DEVELOP FUEL CELL THAT CAN DELIVER RECORD POWER-PER-SQUARE INCH AT RECORD-LOW TEMPERATURES** (<http://engineering.stanford.edu/research-profile/stanford-engineers-develop-fuel-cell-can-deliver-record-power-square-inch-record-lo>) *Stanford Engineering News*
Prinz, F., B., Davenport, M.
2013
- **Nanotubular Array Solid Oxide Fuel Cell** *ACS Nano*
Motoyama, M., Chao, C., An, J., Jung, H. J., Gür, Turgut, M., Prinz, F. (.
2013
- **Atomic layer deposition of thin-film ceramic electrolytes for high-performance fuel cells** *J. Mater. Chem. A (feature article)*
Shim, J. H., Kang, S., Cha, S., Lee, W., Kim, Y. B., Park, J. S., Prinz, F. B.
2013
- **Ultra-Thin Catalytic Electrodes for LT-SOFC** *Phys. Chem. Chem. Phys.*
An, J., Kim, Y., B., Prinz, F., B.
2013; 15: 7520
- **Editor's Choice (Materials Science: 3D Lowers T)** *Science*
Prinz, F., B., Lavine, Marc, S.
2013; 342: 15
- **Three-Dimensional Nanostructured Bilayer Solid Oxide Fuel Cell with 1.3 W/cm² at 450C** *Nano Letters*
An, J., Kim, Y., Park, J., Gur, Turgut, M., Prinz, Fritz, B.
2013
- **STANFORD ENGINEERS DEVELOP FUEL CELL THAT CAN DELIVER RECORD POWER-PER-SQUARE INCH AT RECORD-LOW TEMPERATURES** (<http://engineering.stanford.edu/research-profile/stanford-engineers-develop-fuel-cell-can-deliver-record-power-square-inch-record-lo>) *Stanford Engineering News*
Prinz, F., B., Davenport, M.
2013
- **Nanotubular Array Solid Oxide Fuel Cell** *ACS Nano*
Motoyama, M., Chao, C., An, J., Jung, H. J., Gür, Turgut, M., Prinz, F. (.
2013

- **Atomic layer deposition of thin-film ceramic electrolytes for high-performance fuel cells** *J. Mater. Chem. A (feature article)*
Shim, J. H., Kang, S., Cha, S., Lee, W., Kim, Y. B., Park, J. S., Prinz, F. B.
2013
- **Enhancing Charge Transfer Kinetics by Nanoscale Catalytic Cermet Interlayer** *ACS APPLIED MATERIALS & INTERFACES*
An, J., Kim, Y., Guer, T. M., Prinz, F. B.
2012; 4 (12): 6789-6794
- **Enhancing charge transfer kinetics by nanoscale catalytic cermet interlayer.** *ACS applied materials & interfaces*
An, J., Kim, Y., Gür, T. M., Prinz, F. B.
2012; 4 (12): 6790-6795
- **Oxygen diffusion across the grain boundary in bicrystal yttria stabilized zirconia** *SOLID STATE COMMUNICATIONS*
Park, J. S., Kim, Y., An, J., Prinz, F. B.
2012; 152 (24): 2169-2171
- **Observing the Nucleation Phase of Atomic Layer Deposition In Situ** *CHEMISTRY OF MATERIALS*
Mack, J. F., Van Stockum, P. B., Yemane, Y. T., Logar, M., Iwadate, H., Prinz, F. B.
2012; 24 (22): 4357-4362
- **In Situ Cycle-by-Cycle Flash Annealing of Atomic Layer Deposited Materials** *JOURNAL OF PHYSICAL CHEMISTRY C*
Langston, M. C., Dasgupta, N. P., Jung, H. J., Logar, M., Huang, Y., Sinclair, R., Prinz, F. B.
2012; 116 (45): 24177-24183
- **Thickness effects of yttria-doped ceria interlayers on solid oxide fuel cells** *JOURNAL OF POWER SOURCES*
Fan, Z., An, J., Iancu, A., Prinz, F. B.
2012; 218: 187-191
- **Nickel Silicide Nanowire Arrays for Anti-Reflective Electrodes in Photovoltaics** *ADVANCED FUNCTIONAL MATERIALS*
Dasgupta, N. P., Xu, S., Jung, H. J., Iancu, A., Fasching, R., Sinclair, R., Prinz, F. B.
2012; 22 (17): 3650-3657
- **Ab initio kinetic Monte Carlo model of ionic conduction in bulk yttria-stabilized zirconia** *MODELLING AND SIMULATION IN MATERIALS SCIENCE AND ENGINEERING*
Lee, E., Prinz, F. B., Cai, W.
2012; 20 (6)
- **Improved oxygen surface exchange kinetics at grain boundaries in nanocrystalline yttria-stabilized zirconia** *MRS COMMUNICATIONS*
Park, J. S., Holme, T. P., Shim, J. H., Prinz, F. B.
2012; 2 (3): 107-111
- **High aspect ratio and high breakdown strength metal-oxide capacitors** *APPLIED PHYSICS LETTERS*
Usui, T., Mollinger, S. A., IANCU, A. T., Reis, R. M., Prinz, F. B.
2012; 101 (3)
- **Structural and compositional analysis of solid oxide fuel cell electrolytes using transmission electron microscopy** *INTERNATIONAL JOURNAL OF PRECISION ENGINEERING AND MANUFACTURING*
An, J., Kim, Y. B., Jung, H. J., Park, J. S., Cha, S. W., Guer, T. M., Prinz, F. B.
2012; 13 (7): 1273-1279
- **Nanoscale impedance and complex properties in energy-related systems** *MRS BULLETIN*
Lee, W., Prinz, F. B., Chen, X., Nonnenmann, S., Bonnell, D. A., O'Hayre, R. P.
2012; 37 (7): 659-667
- **Nanostructured Platinum Catalysts by Atomic-Layer Deposition for Solid-Oxide Fuel Cells** *ADVANCED ENERGY MATERIALS*
Chao, C., Motoyama, M., Prinz, F. B.
2012; 2 (6): 651-654
- **Oxygen Surface Exchange at Grain Boundaries of Oxide Ion Conductors** *ADVANCED FUNCTIONAL MATERIALS*
Lee, W., Jung, H. J., Lee, M. H., Kim, Y., Park, J. S., Sinclair, R., Prinz, F. B.

2012; 22 (5): 965-971

- **Nanoscale membrane electrolyte array for solid oxide fuel cells** *ELECTROCHEMISTRY COMMUNICATIONS*
Su, P., Prinz, F. B.
2012; 16 (1): 77-79
- **Enhanced oxygen exchange and incorporation at surface grain boundaries on an oxide ion conductor** *ACTA MATERIALIA*
Shim, J. H., Park, J. S., Holme, T. P., Crabb, K., Lee, W., Kim, Y. B., Tian, X., Guer, T. M., Prinz, F. B.
2012; 60 (1): 1-7
- **Effect of High Surface Area Pd Electrodes on SOFC Performance at 350 degrees C** *A4 Symposium on Grand Challenges in Energy Conversion and Storage / 220th Meeting of the Electrochemical-Society (ECS)*
Komadina, J., Motoyama, M., Kim, Y. B., Prinz, F. B.
ELECTROCHEMICAL SOC INC.2012: 35-41
- **Fluorine contamination in yttrium-doped barium zirconate film deposited by atomic layer deposition** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A*
An, J., Kim, Y. B., Park, J. S., Shim, J. H., Guer, T. M., Prinz, F. B.
2012; 30 (1)
- **Use of a high-flow diaphragm valve in the exhaust line of atomic layer deposition reactors** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A*
Dasgupta, N. P., Trejo, O., Prinz, F. B.
2012; 30 (1)
- **Patterned Silver Nanomesh Cathode for Low-Temperature Solid Oxide Fuel Cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Shim, J. H., Kim, Y. B., Park, J. S., An, J., Guer, T. M., Prinz, F. B.
2012; 159 (5): B541-B545
- **Mechanical masking of films deposited by atomic layer deposition** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A*
Langston, M. C., Usui, T., Prinz, F. B.
2012; 30 (1)
- **Surface-Modified Low-Temperature Solid Oxide Fuel Cell** *ADVANCED FUNCTIONAL MATERIALS*
Kim, Y. B., Holme, T. P., Guer, T. M., Prinz, F. B.
2011; 21 (24): 4684-4690
- **Oxygen activation over engineered surface grains on YDC/YSZ interlayered composite electrolyte for LT-SOFC** *JOURNAL OF POWER SOURCES*
Kim, Y. B., Park, J. S., Guer, T. M., Prinz, F. B.
2011; 196 (24): 10550-10555
- **A combined scanning tunneling microscope-atomic layer deposition tool** *REVIEW OF SCIENTIFIC INSTRUMENTS*
Mack, J. F., Van Stockum, P. B., Iwadate, H., Prinz, F. B.
2011; 82 (12)
- **ALD for clean energy conversion, utilization, and storage** *MRS BULLETIN*
Elam, J. W., Dasgupta, N. P., Prinz, F. B.
2011; 36 (11): 899-906
- **In vivo electrochemical impedance measurement on single cell membrane** *MICROELECTRONIC ENGINEERING*
Bai, S., Prinz, F. B.
2011; 88 (10): 3094-3100
- **Effect of crystallinity on proton conductivity in yttrium-doped barium zirconate thin films** *SOLID STATE IONICS*
Kim, Y. B., Guer, T. M., Jung, H., Kang, S., Sinclair, R., Prinz, F. B.
2011; 198 (1): 39-46
- **Three-dimensional biodegradable microscavolding: Scaffold characterization and cell population at single cell resolution** *ACTA BIOMATERIALIA*
Ryu, W., Hammerick, K. E., Kim, Y. B., Kim, J. B., Fasching, R., Prinz, F. B.

2011; 7 (9): 3325-3335

- **Cup-shaped yttria-doped barium zirconate membrane fuel cell array** *MICROELECTRONIC ENGINEERING*
Su, P., Prinz, F. B.
2011; 88 (8): 2405-2407
- **In vivo O-2 measurement inside single photosynthetic cells** *BIOTECHNOLOGY LETTERS*
Bai, S., Ryu, W., Fasching, R. J., Grossman, A. R., Prinz, F. B.
2011; 33 (8): 1675-1681
- **Improved Solid Oxide Fuel Cell Performance with Nanostructured Electrolytes** *ACS NANO*
Chao, C., Hsu, C., Cui, Y., Prinz, F. B.
2011; 5 (7): 5692-5696
- **Nonprecious Metal Catalysts for Low Temperature Solid Oxide Fuel Cells** *JOURNAL OF PHYSICAL CHEMISTRY C*
Holme, T. P., Prinz, F. B.
2011; 115 (23): 11641-11648
- **Enhancing Oxide Ion Incorporation Kinetics by Nanoscale Yttria-Doped Ceria interlayers** *NANO LETTERS*
Fan, Z., Prinz, F. B.
2011; 11 (6): 2202-2205
- **Crater patterned 3-D proton conducting ceramic fuel cell architecture with ultra thin Y:BaZrO₃ electrolyte** *ELECTROCHEMISTRY COMMUNICATIONS*
Kim, Y. B., Guer, T. M., Kang, S., Jung, H., Sinclair, R., Prinz, F. B.
2011; 13 (5): 403-406
- **Atomic Layer Deposition of Lead Sulfide Quantum Dots on Nanowire Surfaces** *NANO LETTERS*
Dasgupta, N. P., Jung, H. J., Trejo, O., McDowell, M. T., Hryciw, A., Brongersma, M., Sinclair, R., Prinz, F. B.
2011; 11 (3): 934-940
- **Enhancing ionic conductivity of bulk single-crystal yttria-stabilized zirconia by tailoring dopant distribution** *PHYSICAL REVIEW B*
Lee, E., Prinz, F. B., Cai, W.
2011; 83 (5)
- **Elastic Properties of Induced Pluripotent Stem Cells** *TISSUE ENGINEERING PART A*
Hammerick, K. E., Huang, Z., Sun, N., Lam, M. T., Prinz, F. B., Wu, J. C., Commons, G. W., Longaker, M. T.
2011; 17 (3-4): 495-502
- **Gadolinia-doped Ceria Cathode Interlayer for Low Temperature Solid Oxide Fuel Cell** *12th International Symposium on Solid Oxide Fuel Cells (SOFC)*
Kim, Y. B., Guer, T. M., Prinz, F. B.
ELECTROCHEMICAL SOC INC.2011: 1155-59
- **Low Temperature Direct Methanol Fuel Cell with YSZ Electrolyte** *12th International Symposium on Solid Oxide Fuel Cells (SOFC)*
Komadina, J., Kim, Y. B., Park, J. S., Guer, T. M., Kang, S., Prinz, F. B.
ELECTROCHEMICAL SOC INC.2011: 2855-66
- **Atomic Layer Deposited Yttria Stabilized Zirconia Barrier Layer for Proton Conducting Oxide** *7th Symposium on Atomic Layer Deposition Applications/220th Meeting of the Electrochemical-Society (ECS)*
Park, J. S., Kang, S. K., Guer, T. M., Prinz, F. B.
ELECTROCHEMICAL SOC INC.2011: 315-19
- **Fabrication of Nanotubular Membrane Electrode Assembly for A Solid Oxide Fuel Cell** *Symposium on Tutorials in Nanotechnology - Focus on Luminescence and Display Materials/218th Meeting of the Electrochemical-Society/High Resolution Characterization of Corrosion Processes 2/ Symposium on Solid State Ionic Devices 8 - NEMCA*
Motoyama, M., Chao, C., Guer, T. M., Prinz, F. B.
ELECTROCHEMICAL SOCIETY INC.2011: 129-39
- **ALD-METAL UNCOOLED BOLOMETER** *24th IEEE International Conference on Micro Electro Mechanical Systems (MEMS)*
Yoneoka, S., Liger, M., Yama, G., Schuster, R., Purkl, F., Provine, J., Prinz, F. B., Howe, R. T., Kenny, T. W.

IEEE.2011: 676–679

- **Epitaxial and Polycrystalline Gadolinia-Doped Ceria Cathode Interlayers for Low Temperature Solid Oxide Fuel Cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Kim, Y. B., Shim, J. H., Guer, T. M., Prinz, F. B.
2011; 158 (11): B1453-B1457
- **Electrodeposited Metallic Nanowires as a Scanning Probe Tip** *International Symposium on Pits and Pores IV - New Materials and Applications in Memory of Ulrich Gosele as Part of the 218th Meeting of the Electrochemical-Society*
Motoyama, M., Prinz, F. B.
ELECTROCHEMICAL SOC INC.2011: 101–8
- **Atomic Layer Deposited Yttria Stabilized Zirconia Barrier Layer for Proton Conducting Oxide** *7th Symposium on Atomic Layer Deposition Applications/220th Meeting of the Electrochemical-Society (ECS)*
Park, J. S., Kang, S. K., Guer, T. M., Prinz, F. B.
ELECTROCHEMICAL SOC INC.2011: 315–19
- **Fabrication of Nanotubular Membrane Electrode Assembly for A Solid Oxide Fuel Cell** *Symposium on Tutorials in Nanotechnology - Focus on Luminescence and Display Materials/218th Meeting of the Electrochemical-Society/High Resolution Characterization of Corrosion Processes 2/ Symposium on Solid State Ionic Devices 8 - NEMCA*
Motoyama, M., Chao, C., Guer, T. M., Prinz, F. B.
ELECTROCHEMICAL SOCIETY INC.2011: 129–39
- **ALD-METAL UNCOOLED BOLOMETER** *24th IEEE International Conference on Micro Electro Mechanical Systems (MEMS)*
Yoneoka, S., Liger, M., Yama, G., Schuster, R., Purkl, F., Provine, J., Prinz, F. B., Howe, R. T., Kenny, T. W.
IEEE.2011: 676–679
- **Epitaxial and Polycrystalline Gadolinia-Doped Ceria Cathode Interlayers for Low Temperature Solid Oxide Fuel Cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Kim, Y. B., Shim, J. H., Guer, T. M., Prinz, F. B.
2011; 158 (11): B1453-B1457
- **Electrodeposited Metallic Nanowires as a Scanning Probe Tip** *International Symposium on Pits and Pores IV - New Materials and Applications in Memory of Ulrich Gosele as Part of the 218th Meeting of the Electrochemical-Society*
Motoyama, M., Prinz, F. B.
ELECTROCHEMICAL SOC INC.2011: 101–8
- **Scanning tunneling spectroscopy of lead sulfide quantum wells fabricated by atomic layer deposition** *NANOTECHNOLOGY*
Lee, W., Dasgupta, N. P., Jung, H. J., Lee, J., Sinclair, R., Prinz, F. B.
2010; 21 (48)
- **Evidence of Proton Transport in Atomic Layer Deposited Yttria-Stabilized Zirconia Films** *CHEMISTRY OF MATERIALS*
Park, J. S., Kim, Y. B., Shim, J. H., Kang, S., Guer, T. M., Prinz, F. B.
2010; 22 (18): 5366-5370
- **Atomic Layer Deposition of Al-doped ZnO Films: Effect of Grain Orientation on Conductivity** *CHEMISTRY OF MATERIALS*
Dasgupta, N. P., Neubert, S., Lee, W., Trejo, O., Lee, J., Prinz, F. B.
2010; 22 (16): 4769-4775
- **Increased Cathodic Kinetics on Platinum in IT-SOFCs by Inserting Highly Ionic-Conducting Nanocrystalline Materials** *JOURNAL OF FUEL CELL SCIENCE AND TECHNOLOGY*
Huang, H., Holme, T., Prinz, F. B.
2010; 7 (4)
- **In vitro effects of direct current electric fields on adipose-derived stromal cells** *BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS*
Hammerick, K. E., Longaker, M. T., Prinz, F. B.
2010; 397 (1): 12-17
- **Active water management at the cathode of a planar air-breathing polymer electrolyte membrane fuel cell using an electroosmotic pump** *JOURNAL OF POWER SOURCES*
Fabian, T., O'Hayre, R., Litster, S., Prinz, F. B., Santiago, J. G.

2010; 195 (11): 3640-3644

- **Atomic Layer Deposition (ALD) Co-Deposited Pt-Ru Binary and Pt Skin Catalysts for Concentrated Methanol Oxidation** *CHEMISTRY OF MATERIALS*

Jiang, X., Guer, T. N., Prinz, F. B., Bent, S. F.

2010; 22 (10): 3024-3032

- **Passive water management at the cathode of a planar air-breathing proton exchange membrane fuel cell** *JOURNAL OF POWER SOURCES*

Fabian, T., O'Hayre, R., Litster, S., Prinz, F. B., Santiago, J. G.

2010; 195 (10): 3201-3206

- **Area-Selective Atomic Layer Deposition of Lead Sulfide: Nanoscale Patterning and DFT Simulations** *LANGMUIR*

Lee, W., Dasgupta, N. P., Trejo, O., Lee, J., Hwang, J., Usui, T., Prinz, F. B.

2010; 26 (9): 6845-6852

- **Direct Extraction of Photosynthetic Electrons from Single Algal Cells by Nanoprobng System** *NANO LETTERS*

Ryu, W., Bai, S., Park, J. S., Huang, Z., Moseley, J., Fabian, T., Fasching, R. J., Grossman, A. R., Prinz, F. B.

2010; 10 (4): 1137-1143

- **Design of an atomic layer deposition reactor for hydrogen sulfide compatibility** *REVIEW OF SCIENTIFIC INSTRUMENTS*

Dasgupta, N. P., Mack, J. F., Langston, M. C., Bousetta, A., Prinz, F. B.

2010; 81 (4)

- **Modification of Nafion (R) Using 3-mercaptopropyl Trimethoxysilane** *JOURNAL OF THE KOREAN PHYSICAL SOCIETY*

Lee, H., Park, S. B., Oh, M., Coe, K., Park, Y., Suzuki, S., Nagai, M., Prinz, F. B.

2010; 56 (4): 1215-1222

- **Atomistic simulations of surface segregation of defects in solid oxide electrolytes** *ACTA MATERIALIA*

Lee, H. B., Prinz, F. B., Cai, W.

2010; 58 (6): 2197-2206

- **Pulsed Direct Current Electric Fields Enhance Osteogenesis in Adipose-Derived Stromal Cells** *TISSUE ENGINEERING PART A*

Hammerick, K. E., James, A. W., Huang, Z., Prinz, F. B., Longaker, M. T.

2010; 16 (3): 917-931

- **Kinetic Monte Carlo simulations of oxygen vacancy diffusion in a solid electrolyte: Computing the electrical impedance using the fluctuation-dissipation theorem** *ELECTROCHEMISTRY COMMUNICATIONS*

Lee, E., Prinz, F. B., Cai, W.

2010; 12 (2): 223-226

- **Sputtered Pt-Ru Alloys as Catalysts for Highly Concentrated Methanol Oxidation** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*

Jiang, X., Guer, T. M., Prinz, F. B., Bent, S. F.

2010; 157 (3): B314-B319

- **Silicon-based Thin Film Solid Oxide Fuel Cell Array** *Conference on Nondestructive Characterization for Composite Materials, Aerospace Engineering, Civil Infrastructure, and Homeland Security 2010*

Su, P., Prinz, F. B.

SPIE-INT SOC OPTICAL ENGINEERING.2010

- **Proton Conductivity Studies of Y-Doped Barium Zirconate: Theoretical and Experimental Approaches** *Symposium on Battery/Energy Technology Joint General Session Held During the 216th Meeting of the Electrochemical-Society (ECS)*

Pornprasertsuk, R., Kosasang, O., Somroop, K., Jinawath, S., Prinz, F. B.

ELECTROCHEMICAL SOC INC.2010: 367-81

- **Effects of Ion Irradiation on the Performance of Solid Oxide Fuel Cells** *J. Electrochem. Soc.*

Crabb, K., M., Park, J., S., Chao, C. -C., Prinz, F., B.

2010; 157: 166-172

- **Dopant-Induced Electronic Structure Modification of HOPG Surfaces: Implications for High Activity Fuel Cell Catalysts** *J. Phys. Chem. C*

Prinz, F., B., Zhou, Y., Holme, T., Berry, J., Ohno, T., Ginley, D.

2010; 114: 506-515

- **First principles study of doped carbon supports for enhanced platinum catalysts** *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*
Holme, T., Zhou, Y., Pasquarelli, R., O'Hayre, R.
2010; 12 (32): 9461-9468
- **Effects of Ion Irradiation on the Performance of Solid Oxide Fuel Cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Crabb, K. M., Park, J. S., Chao, C., Prinz, F. B.
2010; 157 (1): B166-B172
- **Interpretation of Low Temperature Solid Oxide Fuel Cell Electrochemical Impedance Spectra** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Holme, T. P., Pornprasertsuk, R., Prinz, F. B.
2010; 157 (1): B64-B70
- **Nanopore Patterned Pt Array Electrodes for Triple Phase Boundary Study in Low Temperature SOFC** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Kim, Y. B., Hsu, C., Connor, S. T., Guer, T. M., Cui, Y., Prinz, F. B.
2010; 157 (9): B1269-B1274
- **Impact of Accompanying Hydrogen Generation on Metal Nanotube Electrodeposition** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Motoyama, M., Fukunaka, Y., Ogata, Y. H., Prinz, F. B.
2010; 157 (6): D357-D369
- **Catalysts with Pt Surface Coating by Atomic Layer Deposition for Solid Oxide Fuel Cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Shim, J. H., Jiang, X., Bent, S. F., Prinz, F. B.
2010; 157 (6): B793-B797
- **Reduction and oxidation of oxide ion conductors with conductive atomic force microscopy** *NANOTECHNOLOGY*
Lee, W., Lee, M., Kim, Y., Prinz, F. B.
2009; 20 (44)
- **Surface Modification of Yttria-Stabilized Zirconia Electrolyte by Atomic Layer Deposition** *NANO LETTERS*
Chao, C., Kim, Y. B., Prinz, F. B.
2009; 9 (10): 3626-3628
- **Atomic Layer Deposition of Lead Sulfide Thin Films for Quantum Confinement** *CHEMISTRY OF MATERIALS*
Dasgupta, N. P., Lee, W., Prinz, F. B.
2009; 21 (17): 3973-3978
- **Intermediate-Temperature Ceramic Fuel Cells with Thin Film Yttrium-Doped Barium Zirconate Electrolytes** *CHEMISTRY OF MATERIALS*
Shim, J. H., Park, J. S., An, J., Guer, T. M., Kang, S., Prinz, F. B.
2009; 21 (14): 3290-3296
- **A Computational Comparison of Electron Transfer from Reduced Ferredoxin to Flavin Adenine Dinucleotide and a Gold Electrode** *JOURNAL OF PHYSICAL CHEMISTRY B*
Walch, S. P., Komadina, J. D., Prinz, F. B.
2009; 113 (20): 7298-7307
- **Area-Selective Atomic Layer Deposition Using Self-Assembled Monolayer and Scanning Probe Lithography** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Lee, W., Prinz, F. B.
2009; 156 (9): G125-G128
- **Electrochemical Deposition of Metallic Nanowires as a Scanning Probe Tip** *ECS Trans.*
Motoyama, M., Dasgupta, N., P., Prinz, F., B.
2009; 16: 3-12
- **Geometric Effects of Triple Phase Boundary in Solid Oxide Fuel Cells** *ECS Trans.*
Kim, Y., B., Chao, C. -C., Gür, T., M., Prinz, F., B.
2009; 25: 917-924

- **Synthesis of Microscale Lead Sulfide Disks by Patterned Self-Assembled Monolayer** *ECS Trans.*
Usui, T., Dasgupta, N. P., Jiang, X., Lee, W., Prinz, F., B.
2009; 25: 3-8
- **Solid Oxide Fuel Cells with Atomic Layer Deposited Platinum Catalyst** *ECS Trans.*
Chao, C. -C., Prinz, F., B.
2009; 25: 855-858
- **Design of heterogeneous catalysts and the application to the oxygen reduction reaction** *Thin Film Metal-Oxides: Fundamentals and Applications, Springer*
Holme, T., Huang, H., Prinz, F.
2009
- **Improving PEM fuel cell catalyst activity and durability using nitrogen-doped carbon supports: observations from model Pt/HOPG systems** *J. Mater. Chem.*
Prinz, F., B., Zhou, Y., Pasquarelli, R., Holme, T., Berry, J., Ginley, D.
2009; 19: 7830
- **ATOMIC LAYER DEPOSITION OF PbS-ZnS QUANTUM WELLS FOR HIGH-EFFICIENCY SOLAR CELLS** *34th IEEE Photovoltaic Specialists Conference*
Dasgupta, N. P., Lee, W., Holme, T. P., Prinz, F. B.
IEEE.2009: 2299-2303
- **Electrochemical Deposition of Metallic Nanowires as a Scanning Probe Tip** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Motoyama, M., Dasgupta, N. P., Prinz, F. B.
2009; 156 (10): D431-D438
- **SCANNING TUNNELING MICROSCOPY OF QUANTUM CONFINEMENT EFFECTS IN LEAD SULFIDE THIN FILMS** *34th IEEE Photovoltaic Specialists Conference*
Lee, W., Dasgupta, N. P., Prinz, F. B.
IEEE.2009: 1257-1259
- **Characteristics of Oxygen Reduction on Nanocrystalline YSZ** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Huang, H., Shim, J. H., Chao, C., Pornprasertsuk, R., Sugawara, M., Guer, T. M., Prinz, F. B.
2009; 156 (3): B392-B396
- **An Image-Based Localization Algorithm for Catheter Navigation in the Left Atrium** *11th International Symposium on Experimental Robotics (ISER)*
Koolwal, A. B., Barbagli, F., Carlson, C. R., Liang, D. H., Prinz, F. B.
SPRINGER-VERLAG BERLIN.2009: 251-260
- **ENERGY TRANSFER BETWEEN QUANTUM DOTS OF DIFFERENT SIZES FOR QUANTUM DOT SOLAR CELLS** *34th IEEE Photovoltaic Specialists Conference*
Holme, T. P., Chao, C. C., Prinz, F. B.
IEEE.2009: 2137-2141
- **Kinetic Monte Carlo Simulations of Solid Oxide Fuel Cell** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Pornprasertsuk, R., Holme, T., Prinz, F. B.
2009; 156 (12): B1406-B1416
- **Characteristics of Oxygen Reduction on Nanocrystalline YSZ** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Huang, H., Shim, J. H., Chao, C., Pornprasertsuk, R., Sugawara, M., Guer, T. M., Prinz, F. B.
2009; 156 (3): B392-B396
- **An Image-Based Localization Algorithm for Catheter Navigation in the Left Atrium** *11th International Symposium on Experimental Robotics (ISER)*
Koolwal, A. B., Barbagli, F., Carlson, C. R., Liang, D. H., Prinz, F. B.
SPRINGER-VERLAG BERLIN.2009: 251-260
- **ENERGY TRANSFER BETWEEN QUANTUM DOTS OF DIFFERENT SIZES FOR QUANTUM DOT SOLAR CELLS** *34th IEEE Photovoltaic Specialists Conference*

-
- Holme, T. P., Chao, C. C., Prinz, F. B.
IEEE.2009: 2137–2141
- **Kinetic Monte Carlo Simulations of Solid Oxide Fuel Cell** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Pornprasertsuk, R., Holme, T., Prinz, F. B.
2009; 156 (12): B1406-B1416
 - **Atomic layer deposition of LSM cathodes for solid oxide fuel cells** *16th International Conference on Solid State Ionics*
Holme, T. P., Lee, C., Prinz, F. B.
ELSEVIER SCIENCE BV.2008: 1540–44
 - **Open micro-fluidic system for atomic force microscopy-guided in situ electrochemical probing of a single cell** *LAB ON A CHIP*
Ryu, W., Huang, Z., Park, J. S., Moseley, J., Grossman, A. R., Fasching, R. J., Prinz, F. B.
2008; 8 (9): 1460-1467
 - **Solid oxide fuel cell with corrugated thin film electrolyte** *NANO LETTERS*
Su, P., Chao, C., Shim, J. H., Fasching, R., Prinz, F. B.
2008; 8 (8): 2289-2292
 - **Application of atomic layer deposition of platinum to solid oxide fuel cells** *CHEMISTRY OF MATERIALS*
Jiang, X., Huang, H., Prinz, F. B., Bent, S. F.
2008; 20 (12): 3897-3905
 - **Proton conduction in thin film yttrium-doped barium zirconate** *APPLIED PHYSICS LETTERS*
Shim, J. H., Guer, T. M., Prinz, F. B.
2008; 92 (25)
 - **Nanoscale probe system for cell-organelle analysis** *SENSORS AND ACTUATORS B-CHEMICAL*
Bai, S., Fabian, T., Prinz, F. B., Fasching, R. J.
2008; 130 (1): 249-257
 - **3D Microfluidic Approach to Mechanical Stimulation of Osteocyte Processes** *CELLULAR AND MOLECULAR BIOENGINEERING*
You, L., Temiyasathit, S., Tao, E., Prinz, F., Jacobs, C. R.
2008; 1 (1): 103-107
 - **A resolution study for electrostatic force microscopy on bimetallic samples using the boundary element method** *NANOTECHNOLOGY*
Shen, Y., Lee, M., Lee, W., Barnett, D. M., Pinsky, P., Prinz, F. B.
2008; 19 (3)
 - **Thermal stabilities of nanoporous metallic electrodes at elevated temperatures** *JOURNAL OF POWER SOURCES*
Wang, X., Huang, H., Holme, T., Tian, X., Prinz, F. B.
2008; 175 (1): 75-81
 - **Oxidative Removal of Self-Assembled Monolayers for Selective Atomic Layer Deposition** *4th Symposium on Atomic Layer Deposition Applications held at the 214th Meeting of the Electrochemical-Society*
Lee, W., Chao, C., Jiang, X., Hwang, J., Bent, S. F., Prinz, F. B.
ELECTROCHEMICAL SOCIETY INC.2008: 173–79
 - **Characteristics of Oxygen Reduction on Nanocrystalline YSZ** *ECS Trans.*
Huang, H., Shim, J., H., Chao, C., C., Pornprasertsuk, R., Sugawara, M., Gür, T., M., Prinz, F. B.
2008; 13: 97-104
 - **In-Plane Conductivities of Atomic Layer Deposited Ytria-Stabilized Zirconia Electrolytes for Solid Oxide Fuel Cells** *ECS Trans.*
Chao, C., C., Park, J., S., Prinz, F., B.
2008; 16: 157-164
 - **Atomic Layer Deposition of Mixed Conducting Cathodes for Solid Oxide Fuel Cells** *Solid State Ion.*
Holme, T., Lee, C., Prinz, F.
2008; 179: 1540-1544
-

- **Fabrication and Characterization of Lead Sulfide Thin Films by Atomic Layer Deposition" *ECS Trans.***
Dasgupta, N. P., Walch, S. P., Prinz, F. B.
2008; 16: 29-36
- **Pt-Ru Alloys Deposited by Sputtering as Catalysts for Methanol Oxidation *8th Symposium on Proton Exchange Membrane Fuel Cells***
Jiang, X., Prinz, F. B., Bent, S. F.
ELECTROCHEMICAL SOCIETY INC.2008: 605-12
- **Reversible oxidation of spinach ferredoxin at surface-modified electrodes *JOURNAL OF THE ELECTROCHEMICAL SOCIETY***
Komadina, J., Walch, S., Fasching, R., Grossman, A., Prinz, F. B.
2008; 155 (10): B1008-B1012
- **Fabrication and Characterization of Lead Sulfide Thin Films by Atomic Layer Deposition *4th Symposium on Atomic Layer Deposition Applications held at the 214th Meeting of the Electrochemical-Society***
Dasgupta, N. P., Walch, S. P., Prinz, F. B.
ELECTROCHEMICAL SOCIETY INC.2008: 29-36
- **INCREASED CATHODIC KINETICS IN IT-SOFCs BY INSERTING HIGHLY-CONDUCTIVE NANOCRYSTALLINE MATERIALS *6th International Conference on Fuel Cell Science, Engineering and Technology***
Huang, H., Holme, T., Prinz, F. B.
AMER SOC MECHANICAL ENGINEERS.2008: 55-60
- **Opportunities of ALD for Thin Film Solid Oxide Fuel Cells *4th Symposium on Atomic Layer Deposition Applications held at the 214th Meeting of the Electrochemical-Society***
Prinz, F. B.
ELECTROCHEMICAL SOCIETY INC.2008: 15-18
- **Biodegradable micro-osmotic pump for long-term and controlled release of basic fibroblast growth factor *JOURNAL OF CONTROLLED RELEASE***
Ryu, W., Huang, Z., Prinz, F. B., Goodman, S. B., Fasching, R.
2007; 124 (1-2): 98-105
- **Fabrication of multi-layered biodegradable drug delivery device based on micro-structuring of PLGA polymers *BIOMEDICAL MICRODEVICES***
Ryu, W. H., Vyakarnam, M., Greco, R. S., Prinz, F. B., Fasching, R. J.
2007; 9 (6): 845-853
- **High temperature O-17 MAS NMR study scandia and yttria stabilized of calcia, magnesia, zirconia *SOLID STATE IONICS***
Kim, N., Hsieh, C., Huang, H., Prinz, F. B., Stebbins, J. F.
2007; 178 (27-28): 1499-1506
- **Atomic layer deposition and chemical vapor deposition precursor selection method application to strontium and barium precursors *JOURNAL OF PHYSICAL CHEMISTRY A***
Holme, T. P., Prinz, F. B.
2007; 111 (33): 8147-8151
- **FUEL 192-Conversion of a plant chloroplast to a biological fuel cell**
Walch, S. P., Komadina, J. D., Prinz, F. B.
AMER CHEMICAL SOC.2007
- **COMP 73-Conversion of a plant chloroplast to a biological fuel cell: 1. Comparison of electron transfer from reduced ferredoxin to FAD and a gold electrode**
Walch, S. P., Komadina, J. D., Prinz, F. B.
AMER CHEMICAL SOC.2007
- **Atomic layer deposition of yttria-stabilized zirconia for solid oxide fuel cells *CHEMISTRY OF MATERIALS***
Shim, J. H., Chao, C., Huang, H., Prinz, F. B.
2007; 19 (15): 3850-3854
- **Engineering model of a passive planar air breathing fuel cell cathode *JOURNAL OF POWER SOURCES***
O'Hayre, R., Fabian, T., Litster, S., Prinz, F. B., Santiago, J. G.

2007; 167 (1): 118-129

- **The construction of three-dimensional micro-fluidic scaffolds of biodegradable polymers by solvent vapor based bonding of micro-molded layers** *BIOMATERIALS*
Ryu, W., Min, S. W., Hammerick, K. E., Vyakarnam, M., Greco, R. S., Prinz, F. B., Fasching, R. J.
2007; 28 (6): 1174-1184
- **Electrochemical impedance analysis of solid oxide fuel cell electrolyte using kinetic Monte Carlo technique** *SOLID STATE IONICS*
Pornprasertsuk, R., Cheng, J., Huang, H., Prinz, F. B.
2007; 178 (3-4): 195-205
- **High-performance ultrathin solid oxide fuel cells for low-temperature operation** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Huang, H., Nakamura, M., Su, P., Fasching, R., Saito, Y., Prinz, F. B.
2007; 154 (1): B20-B24
- **Active Water Management for PEM Fuel Cells** *Journal of Electrochemical Society*
Prinz, F. B., Litster, S., Buie, C. R., Fabian, T., Eaton, J. K., Santiago, J. G.
2007; B1049: 154
- **Oxygen Reduction Characteristics on Ag, Pt, and Ag-Pt Alloys in Low-Temperature SOFCs** *ECS Transactions*
Huang, H., Holme, T. P., Prinz, F. B.
2007; 3
- **High Surface Area Density Nano Thin Film Solid Oxide Fuel Cells**
Su, P., Fasching, R., Prinz, F. B.
2007
- **Transient behaviour of magnetic micro-bead chains rotating in a fluid by external fields** *Lab Chip*
Prinz, F. B., Petousis, I., Homburg, E., Derks, R., Dietzel, A.
2007; 7: 1746-1751
- **Measurement of temperature and reaction species in the cathode diffusion layer of a free-convection fuel cell** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Fabian, T., O'Hayre, R., Prinz, F. B., Santiago, J. G.
2007; 154 (9): B910-B918
- **A CAD integration framework for designing devices with atomic scale resolution** *Conference on Instrumentation, Metrology and Standards for Nanomanufacturing*
Chang, Y., Ramaswami, K., Pinilla, M., Walch, S., Prinz, F.
SPIE-INT SOC OPTICAL ENGINEERING.2007
- **AFM/EC nano probing of single cells and organelles** *6th IEEE Sensors Conference*
Fasching, R., Ryu, W., Bai, S., Park, J., Fabian, T., Moseley, J., Grossman, A., Prinz, F.
IEEE.2007: 699-702
- **Ionic conduction in nanoscale films of yttrium-doped barium zirconate** *Symposium on Solid-State Ionics held at the 2006 MRS Fall Meeting*
Shim, J. H., Gur, T. M., Prinz, F. B.
MATERIALS RESEARCH SOCIETY.2007: 63-67
- **Microfabrication technology of biodegradable polymers for interconnecting microstructures** *JOURNAL OF MICROELECTROMECHANICAL SYSTEMS*
Ryu, W., Fasching, R. J., Vyakarnam, M., Greco, R. S., Prinz, F. B.
2006; 15 (6): 1457-1465
- **Water management in proton exchange membrane fuel cells using integrated electroosmotic pumping** *JOURNAL OF POWER SOURCES*
Buie, C. R., Posner, J. D., Fabian, T., Cha, S., Kim, D., Prinz, F. B., Eaton, J. K., Santiago, J. G.
2006; 161 (1): 191-202
- **Electrochemical impedance investigation of flooding in micro-flow channels for proton exchange membrane fuel cells** *JOURNAL OF POWER SOURCES*
Cha, S. W., O'Hayre, R., Park, Y., Prinz, F. B.

2006; 161 (1): 138-142

- **The role of ambient conditions on the performance of a planar, air-breathing hydrogen PEM fuel cell** *JOURNAL OF POWER SOURCES*
Fabian, T., Posner, J. D., O'Hayre, R., Cha, S., Eaton, J. K., Prinz, F. B., Santiago, J. G.
2006; 161 (1): 168-182
- **High ionic conductivity in ultrathin nanocrystalline gadolinia-doped ceria films** *APPLIED PHYSICS LETTERS*
Huang, H., Gur, T. M., Saito, Y., Prinz, F.
2006; 89 (14)
- **Geometric artefact suppressed surface potential measurements** *NANOTECHNOLOGY*
Lee, M., Lee, W., Prinz, F. B.
2006; 17 (15): 3728-3733
- **Nanoscale electrochemical probes for single cell analysis** *31st International Conference on Micro- and Nano-Engineering*
Fasching, R. J., Bai, S., Fabian, T., Prinz, F. B.
ELSEVIER SCIENCE BV.2006: 1638-41
- **Thin-film solid oxide fuel cells on porous nickel substrates with multistage nanohole array** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Kang, S., Su, P. C., Park, Y. I., Saito, Y., Prinz, F. B.
2006; 153 (3): A554-A559
- **Ion irradiation effects on yttria-stabilized zirconia conductivity** *Symposium on the Hydrogen Cycle held at the 2005 MRS Fall Meeting*
Cheng, J., Crabb, K., Pornprasertsuk, R., Huang, H., Saito, Y., Prinz, F.
MATERIALS RESEARCH SOCIETY.2006: 103-109
- **Direct water removal in gas diffusion layer of proton exchange membrane fuel cells by a flexible electroosmotic pump** *4th International Conference on Fuel Cell Science, Engineering and Technology*
Cha, S. W., Fabian, T., Posner, J., BUIE, C., Kim, D. J., Prinz, F. B., Eaton, J. K., Santiago, J.
AMER SOC MECHANICAL ENGINEERS.2006: 1169-1171
- **Making Photovoltaic Power Competitive with Grid Power**
Prinz, F., B., Gowrishankar, V., Hutton, D., Fluhrer, C., Dasgupta, N.
2006
- **Water Removal from Proton Exchange Membrane Fuel Cells via Electroosmotic Pumping** *ECS Trans.*
Buie, C., R., Posner, J., Fabian, T., Cha, S., W., Kim, D., Prinz, F., B.
2006; 6 (1): 439
- **Micro-structured Biodegradable Polymers Embedded with Cells and Drugs for Tissue Engineering and Drug Delivery**
Ryu, W., H., Fasching, R., Hammerick, K., Min, S., Prinz, F., B.
2006
- **Water Management at the Cathode of a Planar Air-Breathing Fuel Cell with an Electroosmotic Pump** *ECS Trans.*
Fabian, T., O'Hayre, R., Litster, S., Prinz, F., B., Santiago, J., G.
2006; 3 (1): 949
- **MEMS Fabrication and Performances of Nano-Thin Solid Oxide Fuel Cell** *208th ECS Meeting*
Huang, H., Nakamura, M., Su, P., Fasching, R., Saito, Y., Prinz, F., Fritz, B.
2006
- **Interconnected Biodegradable Polymers in Sub-Micron Precision** *Transaction of the 31st annual meeting of the society for biomaterials, Pittsburgh*
Fasching, R., Ryu, W., H., Prinz, F.
2006; 29
- **3D Multi-layered Micro-fabricated Tissue Scaffolds of Biodegradable Polymers** *Transaction of the 31st annual meeting of the society for biomaterials, Pittsburgh*
Ryu, W., H., Min, S., Fasching, R., Prinz, F.
2006; 29

- **Proton Transport Membranes for Fuel Cells: Polymeric versus Dense Ceramic" ECS Trans.**
Shim, J., H., Cha, S., W., O'Hayre, R., Gür, T., M., Prinz, F., B.
2006; 3 (1): 1059
- **Fuel Cells for Intermediate Temperature Operation J. Korean Ceram. Soc.**
Shim, Joon, H., Cha, S. W., Gür, Turgut, M., Prinz, F., B.
2006; 43 (12): 751
- **Combined Heat and Mass Transfer Model of a Passive Air Breathing Fuel Cell Cathode ECS Trans.**
O'Hayre, R., Fabian, T., Litster, S., Prinz, F., B., Santiago, J., G.
2006; 1 (3): 1125
- **Biodegradable Micro-Fluidic Sheet-Devices for Programmed Drug Release Transactions of the 33rd annual meeting and exposition of the controlled release society, Vienna, Austria**
Ryu, W., H., Prinz, F., B., Greco, R., S., Fasching, R.
2006
- **A microfabricated direct methanol fuel cell with integrated electroosmotic pump 19th IEEE International Conference on Micro Electro Mechanical Systems (MEMS 2006)**
Buie, C. R., BANIN, Y., Tang, C. Y., Santiago, J. G., Prinz, F. B., Pruitt, B. L.
IEEE.2006: 938–941
- **Nanofabrication of electrochemical planar probes for single cell analysis Conference on Micromachining and Microfabrication Process Technology XI**
Fasching, R. J., Bai, S., Fabian, T., Prinz, F. B.
SPIE-INT SOC OPTICAL ENGINEERING.2006
- **Thin-film SOFCs using gastight YSZ thin films on nanoporous substrates JOURNAL OF THE ELECTROCHEMICAL SOCIETY**
Park, Y. I., Su, P. C., Cha, S. W., Saito, Y., Prinz, F. B.
2006; 153 (2): A431-A436
- **Finding narrow passages with Probabilistic Roadmaps: The small-step retraction method AUTONOMOUS ROBOTS**
Saha, M., Latombe, J. C., Chang, Y. C., Prinz, F.
2005; 19 (3): 301-319
- **Predicting ionic conductivity of solid oxide fuel cell electrolyte from first principles JOURNAL OF APPLIED PHYSICS**
Pornprasertsuk, R., Ramanarayanan, P., Musgrave, C. B., Prinz, F. B.
2005; 98 (10)
- **Cantilever tip probe arrays for simultaneous SECM and AFM analysis 10th International Meeting on Chemical Sensors**
Fasching, R. J., Tao, Y., Prinz, F. B.
ELSEVIER SCIENCE SA.2005: 964–72
- **Rapid prototyping methods of silicon carbide micro heat exchangers PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART B-JOURNAL OF ENGINEERING MANUFACTURE**
Liu, H. C., Tsuru, H., Cooper, A. G., Prinz, F. B.
2005; 219 (7): 525-538
- **Capacitive sensor for active tip clearance control in a palm-sized gas turbine generator IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT**
Fabian, T., Prinz, F. B., Brasseur, G.
2005; 54 (3): 1133-1143
- **Gas-tight alumina films on nanoporous substrates through oxidation of sputtered metal films THIN SOLID FILMS**
Park, Y. I., Cha, S. W., Saito, Y., Prinz, F. B.
2005; 476 (1): 168-173
- **Design and tuning of a vacuum microplasma spray system: Particle entrainment Symposium on Surface Engineering in Materials Science III held at the 2005 TMS Annual Meeting**
Crawford, W. S., Cappelli, M. A., Prinz, F. B.

MINERALS, METALS & MATERIALS SOC.2005: 267–282

- **Active water management for proton exchange membrane fuel cells using an integrated electroosmotic pump** *ASME International Mechanical Engineering Congress and Exposition*
Buie, C. R., Posner, J. D., Fabian, T., Cha, S., Prinz, F. B., Eaton, J. K., Santiago, J. G.
AMER SOC MECHANICAL ENGINEERS.2005: 243–247
- **Damage in yttria-stabilized zirconia by Xe irradiation measured by X-ray diffraction** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS*
Cheng, J., Prinz, F. B.
2005; 227 (4): 577-583
- **The triple phase boundary - A mathematical model and experimental investigations for fuel cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
O'Hayre, R., Barnett, D. M., Prinz, F. B.
2005; 152 (2): A439-A444
- **A microfabricated intravascular ultrasound scanner for intravascular interventions** *Conference on MOEMS Display and Imaging Systems III*
Liang, D. H., Park, B. H., Koolwal, A., Prinz, F.
SPIE-INT SOC OPTICAL ENGINEERING.2005: 115–118
- **The influence of size scale on the performance of fuel cells** *14th International Conference on Solid State Ionics*
Cha, S. W., O'Hayre, R., Prinz, F. B.
ELSEVIER SCIENCE BV.2004: 789–95
- **Electrochemical nanopatterning of Ag on solid-state ionic conductor RbAg₄I₅ using atomic force microscopy** *APPLIED PHYSICS LETTERS*
Lee, M., O'Hayre, R., Prinz, F. B., Gur, T. M.
2004; 85 (16): 3552-3554
- **Quantitative impedance measurement using atomic force microscopy** *JOURNAL OF APPLIED PHYSICS*
O'Hayre, R., Feng, G., Nix, W. D., Prinz, F. B.
2004; 96 (6): 3540-3549
- **LayTracks: a new approach to automated geometry adaptive quadrilateral mesh generation using medial axis transform** *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING*
Quadros, W. R., Ramaswami, K., Prinz, F. B., Gurumoorthy, B.
2004; 61 (2): 209-237
- **The scaling behavior of flow patterns: a model investigation** *JOURNAL OF POWER SOURCES*
Cha, S. W., O'Hayre, R., Saito, Y., Prinz, F. B.
2004; 134 (1): 57-71
- **Analytical and experimental study on noncontact sensing with embedded fiber-optic sensors in rotating metal parts** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
Li, X. C., Prinz, F.
2004; 22 (7): 1720-1727
- **Ionic and electronic impedance imaging using atomic force microscopy** *JOURNAL OF APPLIED PHYSICS*
O'Hayre, R., Lee, M., Prinz, F. B.
2004; 95 (12): 8382-8392
- **The Air/Platinum/Nafion triple-phase boundary: Characteristics, scaling, and implications for fuel cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
O'Hayre, R., Prinz, F. B.
2004; 151 (5): A756-A762
- **Scaling Effect in Micro Fuel Cell** *Solid State Ionics*
Cha, S. W., O'Hayre, R., Prinz, F. B.
2004; 175: 789-795

- **AC Impedance Investigation of Transport Phenomena in Micro Flow Channels in Fuel Cells**
Cha, S. W., O'Hayre, R., Prinz, F., B.
2004
- **Ultra-sharp High-aspect-ratio Probe Array for SECM and AFM Analysis.**
Tao, Y., Fasching, R., Prinz, F., B.
2004
- **Fabrication of an electrochemical tip-probe system embedded in SiNx-cantilevers for simultaneous SECM and AFM analysis** *Conference on Micromachining and Microfabrication Process Technology IX*
Fasching, R. J., Tao, Y., Prinz, F. B.
SPIE-INT SOC OPTICAL ENGINEERING.2004: 53–64
- **Ion irradiation effects in solid oxide fuel cell electrolytes** *Symposium on Materials and Technology for Hydrogen Economy held at the 2003 MRS Fall Meeting*
Cheng, J., Pornprasertsuk, R., Saito, Y., Prinz, F. B.
MATERIALS RESEARCH SOCIETY.2004: 225–229
- **RP of Si3N4 burner arrays via assembly mould SDM** *RAPID PROTOTYPING JOURNAL*
Liu, H. C., Lee, S., Kang, S., Edwards, C. F., Prinz, F. B.
2004; 10 (4): 239-246
- **Geometric scale effect of flow channels on performance of fuel cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Cha, S. W., O'Hayre, R., Lee, S. J., Saito, Y., Prinz, F. B.
2004; 151 (11): A1856-A1864
- **Development of portable fuel cell arrays with printed-circuit technology** *JOURNAL OF POWER SOURCES*
O'Hayre, R., Braithwaite, D., Hermann, W., Lee, S. J., Fabian, T., Cha, S. W., Saito, Y., Prinz, F. B.
2003; 124 (2): 459-472
- **Lead-time reduction through flexible routing: application to Shape Deposition Manufacturing** *INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH*
Pinilla, J. M., Prinz, F. B.
2003; 41 (13): 2957-2973
- **Metal embedded Fiber Bragg Grating sensors in layered manufacturing** *JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING-TRANSACTIONS OF THE ASME*
Li, X. C., Prinz, F.
2003; 125 (3): 577-585
- **Lateral ionic conduction in planar array fuel cells** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
O'Hayre, R., Fabian, T., Lee, S. J., Prinz, F. B.
2003; 150 (4): A430-A438
- **Medial axis transform assists path planning in configuration spaces with narrow passages** *International Workshop on Robot Sensing*
Chang, Y. C., Saha, M., Prinz, F., Latombe, J. C., Pinilla, J. A.
IEEE.2003: 85–93
- **A pencil probe system for electrochemical analysis and modification in nanometer dimensions** *Conference on Smart Sensors, Actuators, and MEMS*
Fasching, R. J., Tao, Y., Hammerick, K., Prinz, F. B.
SPIE-INT SOC OPTICAL ENGINEERING.2003: 128–135
- **High-density multi-layer connection technology for MEMS and CMOS applications** *Conference on Smart Sensors, Actuators, and MEMS*
Bai, S. J., Fasching, R. J., Prinz, F. B.
SPIE-INT SOC OPTICAL ENGINEERING.2003: 536–542
- **Electrical properties of YSZ thin films deposited on nanoporous substrates** *8th International Symposium on Solid Oxide Fuel Cells*
Park, Y. I., Saito, Y., Pornprasertsuk, R., Cheng, J., Cha, S. W., Prinz, F. B.
ELECTROCHEMICAL SOCIETY INC.2003: 169–80

- **High-density multi-layer connection technology for MEMS and CMOS applications** *Conference on Smart Sensors, Actuators, and MEMS*
Bai, S. J., Fasching, R. J., Prinz, F. B.
SPIE-INT SOC OPTICAL ENGINEERING.2003: 536–542
- **Electrical properties of YSZ thin films deposited on nanoporous substrates** *8th International Symposium on Solid Oxide Fuel Cells*
Park, Y. I., Saito, Y., Pornprasertsuk, R., Cheng, J., Cha, S. W., Prinz, F. B.
ELECTROCHEMICAL SOCIETY INC.2003: 169–80
- **Design and fabrication of a micro fuel cell array with "flip-flop" interconnection** *JOURNAL OF POWER SOURCES*
Lee, S. J., Chang-Chien, A., Cha, S. W., O'Hayre, R., Park, Y. I., Saito, Y., Prinz, F. B.
2002; 112 (2): 410-418
- **Processing and microstructures of fiber Bragg grating sensors embedded in stainless steel** *METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE*
Li, X. C., Johnsen, J., Groza, J., Prinz, F.
2002; 33 (9): 3019-3024
- **Rapid prototyping and manufacturing by gelcasting of metallic and ceramic slurries** *MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING*
Stampfl, J., Liu, H. C., Nam, S. W., Sakamoto, K., Tsuru, H., KANG, S. Y., Cooper, A. G., Nickel, A., Prinz, F. B.
2002; 334 (1-2): 187-192
- **A sharp peak in the performance of sputtered platinum fuel cells at ultra-low platinum loading** *JOURNAL OF POWER SOURCES*
O'Hayre, R., Lee, S. J., Cha, S. W., Prinz, F. B.
2002; 109 (2): 483-493
- **Capacitive blade tip clearance measurements for a micro gas turbine** *19th IEEE Instrumentation and Measurement Technology Conference (IMTC/2002)*
Fabian, T., Kang, S., Prinz, F., Brasseur, G.
IEEE.2002: 1011–1015
- **Fabrication of ceramic components for micro gas turbine engines**
Liu, H., C., Stampfl, J., Kang, S., Prinz, F., B.
2002
- **Thermal stresses and deposition patterns in layered manufacturing** *MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING*
Nickel, A. H., Barnett, D. M., Prinz, F. B.
2001; 317 (1-2): 59-64
- **Thermal behavior of a metal embedded fiber Bragg grating sensor** *SMART MATERIALS & STRUCTURES*
Li, X. C., Prinz, F., Seim, J.
2001; 10 (4): 575-579
- **Miniature fuel cells with non-planar interface by microfabrication** *Symposium on Power Sources for the New Millennium*
Lee, S. J., Cha, S. W., O'Hayre, R., Chang-Chien, A., Prinz, F. B.
ELECTROCHEMICAL SOCIETY INC.2001: 67–76
- **Conceptual data model for advanced rapid prototyping** *10th International Conference on Precision Engineering (ICPE)*
Kobayashi, K. G., Fujii, M., Prinz, F. B.
SPRINGER.2001: 122–126
- **A novel miniaturized sensor for carbon dioxide dissolved in liquids** *Journal of Sensors and Actuators B*
Prinz, F., B., Fasching, R., Keplinger, F., Hanreich, G., Jobst, G., Urban, G.
2001; 3987: 1-7
- **Skeletons for representation and reasoning in engineering applications** *ENGINEERING WITH COMPUTERS*
Quadros, W. R., Gurumoorthy, B., Ramaswami, K., Prinz, F. B.
2001; 17 (2): 186-198

- **Scalable rotary actuators with embedded Shape Memory Alloys** *Smart Structures and Materials 2001 Conference*
Park, B. H., Shantz, M., Prinz, F.
SPIE-INT SOC OPTICAL ENGINEERING.2001: 79–87
- **Part strength improvement in polymer shape deposition manufacturing** *RAPID PROTOTYPING JOURNAL*
Kietzman, J., Park, B. H., Prinz, F.
2001; 7 (3): 130-137
- **Medial Axis Transform (MAT) of general 2D shapes and 3D polyhedra for engineering applications** *IFIP TC5/WG5 2 6th International Workshop on Geometric Modelling*
Chang, Y. C., Kao, J. H., Pinilla, J. M., Dong, J., Prinz, F. B.
KLUWER ACADEMIC PUBLISHERS.2001: 37–52
- **Does integrated-circuit fabrication show the path for the future of mechanical manufacturing?** *MRS BULLETIN*
Prinz, F. B., Golnas, A., Nickel, A.
2000; 25 (10): 32-35
- **Mechanical and thermal expansion behavior of laser deposited metal matrix composites of Invar and TiC** *MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING*
Li, X. C., Stampfl, J., Prinz, F. B.
2000; 282 (1-2): 86-90
- **Electro-discharge machining of mesoscopic parts with electroplated copper and hot-pressed silver tungsten electrodes** *JOURNAL OF MICROMECHANICS AND MICROENGINEERING*
Stampfl, J., Leitgeb, R., Cheng, Y. L., Prinz, F. B.
2000; 10 (1): 1-6
- **Shape Deposition Manufacturing of smart metallic structures with embedded sensors** *Smart Structures and Materials 2000 Conference*
Li, X. C., Golnas, A., Prinz, F.
SPIE-INT SOC OPTICAL ENGINEERING.2000: 160–171
- **Application of the Mold SDM process to the fabrication of ceramic parts for a micro gas turbine engine.**
Kang, S., Stampfl, J., Cooper, A., G., Prinz, F.
edited by Heinrich, J., G.
2000
- **Mesoscopic Assemblies with SDM Processing**
Park, B., H., Prinz, F., B.
2000
- **Fabrication of ceramic parts for a miniature jet engine application using Mold SDM.** *In: Innovative Processing and Synthesis of Ceramics, Glasses and Composites III*
Cooper, A., G., Kang, S., Stampfl, J., Prinz, F., B.
Ceramic Transactions.2000: 389–398
- **Fabrication of Turbine-Compressor-Shaft Assembly for Micro Gas Turbine Engine** *Master thesis, December*
Prinz, F., Schilp, H.
2000
- **A novel miniaturized sensor for carbon dioxide dissolved in liquids**
Prinz, F., B., Fasching, R., Keplinger, F., Hanreich, G., Jobst, G., Urban, G.
2000
- **High Power-Density Polymer-Electrolyte Fuel Cells by Microfabrication.** *In: Micro Power Sources*
Lee, S., J., Cha, S., W., Liu, Y., C., O'Hayre, R., Prinz, F., B.
edited by Zaghbi, K., Surampudi, S.
2000
- **mMold Shape Deposition Manufacturing**
Nam, S., W., Liu, H., C., Stampfl, J., Kang, S., Prinz, F., B.

2000

- **Micromachined Semiconductor Flow Sensor**
Prinz, F., B., Kohl, F., Fasching, R., Glanninger, A., Jachimowicz, A., Chabicovsky, R.
2000
- **Thermal analysis of new silicon-based substrates**
Prinz, F., B., Hanreich, G., Nicolics, J., Fasching, R.
2000
- **Rapid prototyping of mesoscopic devices** *3rd International Micro Materials Conference*
Stampfl, J., Liu, H. C., Nam, S. W., Kang, S., Prinz, F. B.
DDP GOLDENBOGEN SIGURD GOLDENBOGEN.2000: 1073–1078
- **Compact graph representation for Solid Freeform Fabrication (SFF)** *JOURNAL OF MANUFACTURING SYSTEMS*
Pinilla, J. M., Kao, J. H., Prinz, F.
2000; 19 (5): 341-354
- **mu-Mold Shape Deposition Manufacturing of ceramic parts** *Symposium on Solid Freeform and Additive Fabrication*
Nam, S. W., Stampfl, J., Liu, H. C., Kang, S., Prinz, F. B.
MATERIALS RESEARCH SOCIETY.2000: 187–192
- **Automated fabrication of complex molded parts using mold shape deposition manufacturing** *MATERIALS & DESIGN*
Cooper, A. G., Kang, S., Kietzman, J. W., Prinz, F. B., Lombardi, J. L., Weiss, L. E.
1999; 20 (2-3): 83-89
- **Expanding the design space through innovative design and manufacturing processes** *3rd International Workshop on Cooperative Knowledge Processing for Engineering Problem Solving*
Prinz, F. B.
KLUWER ACADEMIC PUBLISHERS.1999: 373–406
- **Mikrostrukturierung von Funktions- und Strukturwerkstoffen mittels plasmageätzten Siliziums**
Stampfl, J., Leitgeb, R., Cheng, Y., L., Prinz, F., B.
edited by Kempter, K., Hausselt, J.
Werkstoffwoche 98, München.1999
- **Design and fabrication of materials for Laser Shape Deposition Manufacturing**
Li, X., C., Stampfl, J., Prinz, F., B.
edited by Cohen et al., L., J.
1999
- **Graph based process planning for Mold Shape Deposition Manufacturing**
Cooper, A., G., Pinilla, J., M., Kao, J., Prinz, F., B.
1999
- **Novel Technologies for the Assembling of ASIC's and MEMS, Current Developments of Microelectronics, Seminar organized by the society for microelectronics** *in Bad Hofgastein, Salzburg*
Prinz, F., B., Fasching, R., Keplinger, F., Kohl, F.
1999; 3 (45): 3-6
- **Impact of axial and radial rotor offset on the measurement error of a capacitive angular-position sensor with modified front-end topology,***Instrumentation and Measurement Technology Conference, IMTC/99.*
Prinz, F., B., Fabian, T., Brasseur, G., Hauser, H.
1999
- **The Mesicopter: A Meso-Scale Flight Vehicle** *NIAC Phase I Final Report*
Kroo, I., Prinz, F., Leitgeb, R., Cheng, Y., L.
1999
- **Additive/subtractive material processing for mesoscopic parts** *10th Solid Freeform Fabrication Symposium (SFF)*
Cheng, Y. L., Stampfl, J., Leitgeb, R., Prinz, F. B.

UNIV TEXAS AUSTIN.1999: 687–694

- **Automated layer decomposition for additive/subtractive Solid Freeform Fabrication** *10th Solid Freeform Fabrication Symposium (SFF)*
Chang, Y. C., Pinilla, J. M., Kao, J. H., Dong, J., Ramaswami, K., Prinz, F. B.
UNIV TEXAS AUSTIN.1999: 111–119
- **Automated planning for material shaping operations in additive/subtractive Solid Freeform Fabrication** *10th Solid Freeform Fabrication Symposium (SFF)*
Dong, J. P., Kao, J. H., Pinilla, J. M., Chang, Y. C., Prinz, F. B.
UNIV TEXAS AUSTIN.1999: 121–128
- **Reducing part: Deformation by inducing phase transformation** *10th Solid Freeform Fabrication Symposium (SFF)*
Link, G., Huntley, T., Nickel, A., Leitgeb, R., Nguyen, T., Prinz, F.
UNIV TEXAS AUSTIN.1999: 727–734
- **Residual stresses in layered manufacturing** *10th Solid Freeform Fabrication Symposium (SFF)*
Nickel, A., BARNETT, D., Link, G., Prinz, F.
UNIV TEXAS AUSTIN.1999: 239–246
- **Fabrication of high quality ceramic parts using mold SDM** *10th Solid Freeform Fabrication Symposium (SFF)*
Kang, S., Cooper, A. G., Stampfl, J., Prinz, F., Lombardi, J., Weiss, L., Sherbeck, J.
UNIV TEXAS AUSTIN.1999: 427–434
- **Shape deposition manufacturing with microcasting: Processing, thermal and mechanical issues** *JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING-TRANSACTIONS OF THE ASME*
Amon, C. H., Beuth, J. L., Weiss, L. E., Merz, R., Prinz, F. B.
1998; 120 (3): 656-665
- **Material strength in polymer shape deposition manufacturing** *9th Solid Freeform Fabrication (SFF) Symposium*
Kietzman, J. W., Prinz, F. B.
UNIV TEXAS AUSTIN.1998: 567–574
- **Rapid tooling die cast inserts using shape deposition manufacturing** *MATERIALS AND MANUFACTURING PROCESSES*
Link, G. R., Fessler, J., Nickel, A., Prinz, F.
1998; 13 (2): 263-274
- **Medial axis transform (MAT) of general 2D shapes and 3D polyhedra for engineering applications**
Chang, Y. -C., Kao, J. -H., Pinilla, J., M., Dong, J., Prinz, F., B.
1998
- **Vergleich und Optimierung der Ansteuerverfahren eines kapazitiven Winkel- und Winkelgeschwindigkeitssensors** *Master Thesis, Vienna University of Technology*
Prinz, F., B., Fabian, T.
1998
- **TRADEWIND: A Prototype Internet Marketplace for Solid Free-form Fabrication** *ASME DETC/CIE Conference, Atlanta, GA*
Prinz, F., B., Tan, S., Pinilla et al., J., M.
1998
- **Mesicopter: A Meso-Scale Flight Vehicle for Atmospheric Sensing** *Phase1 Proposal*
Kroo, I., Prinz, F., Murphy, B.
1998
- **Silicon microtechnology for thermal sensors** *e&i*
Prinz, F., B., Kohl, F., Fasching, R., Urban, G., Steurer, J., Olcaytug, F.
1998; 115: 391
- **A measurement algorithm for capacitive speed encoder with a modified front-end topology , Instrumentation and Measurement** *IEEE Transactions on*
Prinz, F., B., Fabian, T., Brasseur, G.
1998; 47 (5): 1341 - 1345

- **Material Strength in Polymer Shape Deposition Manufacturing Proceedings of the Solid Freeform Fabrication Symposium** *University of Texas at Austin, Austin, Texas, August*
Kietzman, J., W., Prinz, F., B.
1998: 567-574
- **Optimal motion planning for deposition in layered manufacturing**
Kao, J., H., Prinz, F., B.
1998
- **A robust capacitive angular speed sensor, Instrumentation and Measurement** *IEEE Transactions on*
Prinz, F., B., Fabian, T., Brasseur, G.
1998; 47 (1): 280 - 284
- **Automated fabrication of complex molded parts using mold SDM** *9th Solid Freeform Fabrication (SFF) Symposium*
Cooper, A. G., Kang, S., Kietzman, J. W., Prinz, F. B., Lombardi, J. L., Weiss, L.
UNIV TEXAS AUSTIN.1998: 721-728
- **Thin film thermo-mechanical sensors embedded in metallic structures** *6th International Symposium on Trends and New Applications of Thin Films (TATF 98)*
Golnas, T., Prinz, F. B.
TRANS TECH PUBLICATIONS LTD.1998: 201-204
- **Process planning and automation for additive-subtractive solid freeform fabrication** *9th Solid Freeform Fabrication (SFF) Symposium*
Pinilla, J. M., Mao, J. H., Prinz, F. B.
UNIV TEXAS AUSTIN.1998: 247-257
- **Rapid tooling die cast inserts using shape deposition manufacturing** *MATERIALS AND MANUFACTURING PROCESSES*
Link, G. R., Fessler, J., Nickel, A., Prinz, F.
1998; 13 (2): 263-274
- **Functional gradient metallic prototypes through shape deposition manufacturing** *8th Solid Freeform Fabrication (SFF) Symposium*
Fessler, J., Nickel, A., Link, G., Prinz, F., FUSSELL, P.
UNIV TEXAS AUSTIN.1997: 521-528
- **Shape deposition manufacturing of heterogeneous structures** *JOURNAL OF MANUFACTURING SYSTEMS*
Weiss, L. E., Merz, R., Prinz, F. B., Neplotnik, G., Padmanabhan, P., Schultz, L., Ramaswami, K.
1997; 16 (4): 239-248
- **The Compact Graph Format: An Interchange Standard for Solid Freeform Fabrication.** *NIST workshop on Rapid Prototyping, Maryland, NIST*
Pinilla, J., M., Kao, J., H., Prinz, F., B.
1997
- **Surface modification of platinum thin film electrodes towards a defined roughness and microporosity** *Journal of Electroanalytical Chemistry.*
Prinz, F., B., Aschauer, E., Fasching, R., Varahram, M., Jobst, G., Urban, G.
1997; 426: 157-165
- **Application of cylindrical electro-magnetrons for glow discharge deposition of amorphous carbon and amorphous carbon/germanium films**
Prinz, F., B., Fasching, R., Olcaytug, F., Schalko, J., Ebel, H., Gazicki, M.
1997
- **Layered manufacturing material issues for SDM of polymers and ceramics** *8th Solid Freeform Fabrication (SFF) Symposium*
Kietzman, J. W., Cooper, A. G., Weiss, L. E., Schultz, L., Lombardi, J. L., Prinz, F. B.
UNIV TEXAS AUSTIN.1997: 133-140
- **Box-skeletons of discrete solids** *COMPUTER-AIDED DESIGN*
Sudhalkar, A., Gursoz, L., Prinz, F.
1996; 28 (6-7): 507-517
- **Reflections on a concurrent design methodology: A case study in wearable computer design** *COMPUTER-AIDED DESIGN*
Finger, S., Stivoric, J., Amon, C., Gursoz, L., Prinz, F., Siewiorek, D., Smailagic, A., Weiss, L.

1996; 28 (5): 393-404

- **Rapid design and manufacture of wearable computers** *COMMUNICATIONS OF THE ACM*
Finger, S., Terk, M., Subrahmanian, E., Kasabach, C., Prinz, F., Siewiorek, D. P., Smailagic, A., Stivoric, J., Weiss, L.
1996; 39 (2): 63-70
- **Numerical and experimental investigation of interface bonding via substrate remelting of an impinging molten metal droplet** *JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME*
Amon, C. H., Schmaltz, K. S., Merz, R., Prinz, F. B.
1996; 118 (1): 164-172
- **Collision avoidance using asynchronous teams** *IEEE International Conference on Robotics and Automation*
Kao, J. H., HEMMERLE, J. S., Prinz, F. B.
IEEE.1996: 1093-1100
- **Shape Deposition Manufacturing of wearable computers** *7th Solid Freeform Fabrication (SFF) Symposium*
Weiss, L., Prinz, F., Neplotnik, G., Padmanabhan, K., Schultz, L., Merz, R.
UNIV TEXAS AUSTIN.1996: 31-38
- **Miniaturisierte, integrierte Biosensoren für Glucose- und Lactat - Monitoring.** *Multisensorikpraxis*
Prinz, F., B., Aschauer, E., Fasching, R., Jobst, G., Varahram, M., Svasek, P.
edited by Ahlers, H.
Springer-Verlag, Berlin.1996: 1
- **Numerical and Experimental Investigation of Interface Bonding Via Substrate Remelting of an Impinging Molten Metal Droplet** *ASME Journal of Heat Transfer*
Amon, C., H., Schmaltz, K., S., Merz, R., Prinz, F., B.
1996; 118 (1): 164-172
- **Laser deposition of metals for shape deposition manufacturing** *7th Solid Freeform Fabrication (SFF) Symposium*
Fessler, J. R., Merz, R., Nickel, A. H., Prinz, F. B., Weiss, L. E.
UNIV TEXAS AUSTIN.1996: 117-124
- **Entwicklung elektrochemischer Dünnschicht CO₂-Sensoren, Grundlagen und Technologie elektronischer Bauelemente** *Fortbildungsseminar der Gesellschaft für Mikroelektronik in Großarl*
Prinz, F., B., Fasching, R., Aschauer, E., Jobst, G., Moser, I., Urban, G.
1995: 7-10.
- **Processing, Thermal and Mechanical Issues in Shape Deposition Manufacturing**
Prinz, F., B., Weiss, L., Amon, C., Beuth, J.
1995
- **CNC Cutter Path Generation in Shape Deposition Manufacturing**
Ramaswami, K., Prinz, F., B.
1995
- **Miniaturized carbon dioxide sensors**
Prinz, F., B., Fasching, R., Aschauer, E., Urban, G.
1995
- **Surface characterization of thin film platinum electrodes applied for biosensors by means of cyclic voltammetry and laser - SNMS.** *Journal of Electroanalytical Chemistry.*
Prinz, F., B., Aschauer, E., Fasching, R., Urban, G., Nicolussi, G., Husinsky, W.
1995; 381: 143-152
- **Two types of electrochemical thin-film pCO₂-sensors for in vitro and in vivo applications.**
Prinz, F., B., Fasching, R., Aschauer, E., Jobst, G., Urban, G.
1994
- **ROBOT-ASSISTED SHAPE DEPOSITION MANUFACTURING** *1994 IEEE International Conference on Robotics and Automation*
Hartmann, K., Krishnan, R., Merz, R., Neplotnik, G., Prinz, F. B., Schultz, L., Terk, M., Weiss, L. E.

IEEE COMPUTER SOC.1994: 2890–2895

- **THERMAL MODELLING AND EXPERIMENTAL TESTING OF MD* SPRAY SHAPE DEPOSITION PROCESSES** *10th International Heat Transfer Conference*
Amon, C. H., Merz, R., Prinz, F. B., Schmaltz, K. S.
INST CHEMICAL ENGINEERS.1994: 321–26
- **Robot-Assisted Shape Deposition Manufacturing**
Hartmann, K., Krishnan, R., Merz, R., Neplotnik, G., Prinz, F., Schultz, L.
1994
- **Creating an Advanced Collaborative Open Resource Network**
Coyne, R., Finger, S., Konda, S., Prinz, F., B., Siewiorek, Daniel, P., Subrahmanian, E.
1994
- **Miniaturized integrated biosensors.** *Technology and Health Care.*
Prinz, F., B., Urban, G., Jobst, G., Keplinger, F., Aschauer, E., Fasching, R.
1994: 1: 215 - 218
- **Thermal Modelling and Experimental Testing of MD* Spray Shape Deposition Processes**
Amon, C., H., Merz, R., Prinz, F., B., Schmaltz, K., S.
1994
- **Shape Deposition Manufacturing**
Merz, R., Prinz, F., B., Ramaswami, K., Terk, M., Weiss, L.
1994
- **Electrochemical thin-film carbondioxide sensors on novel polymer membrane system for in vitro and in vivo applications.**
Prinz, F., B., Fasching, R., Jobst, G., Keplinger, F., Aschauer, E., Urban, G.
1993
- **THE ENGINEERING DESIGN RESEARCH-CENTER OF CARNEGIE-MELLON-UNIVERSITY** *PROCEEDINGS OF THE IEEE*
DEMES, G. H., Fenves, S. J., GROSSMANN, I. E., Hendrickson, C. T., Mitchell, T. M., Prinz, F. B., Siewiorek, D. P., Subrahmanian, E., Talukdar, S., Westerberg, A. W.
1993; 81 (1): 10-24
- **Material Issues in Layered Forming**
Amon, C., Beuth, J., Kirchner, H., Merz, R., Prinz, F., Schmaltz, K.
1993
- **CONCURRENT DESIGN APPLIED ARTIFICIAL INTELLIGENCE**
Finger, S., Fox, M. S., Prinz, F. B., RINDERLE, J. R.
1992; 6 (3): 257-283
- **Miniaturisierte Dünnschicht-Blutgassensoren für die in vivo und ex vivo Diagnostik.** *Biomedizinische Technik.Band 57; Ergänzungsband*
Prinz, F., B., Fasching, R., Urban, G., Aschauer, E., Jachimowicz, A., Kohl, F.
1992: 1: 161 - 163
- **NEXT GENERATION MANUFACTURING TASK PLANNER FOR ROBOTIC ARC-WELDING** *ISA TRANSACTIONS*
HEMMERLE, J. S., Terk, M., GURSOZ, E. L., Prinz, F. B., Doyle, T. E.
1992; 31 (2): 97-113
- **Integrated miniaturized biosensors for clinical analyzers and in vivo applications.**
Prinz, F., B., Urban, G., Jobst, G., Keplinger, F., Aschauer, E., Fasching, R.
1992
- **Miniaturized multi-enzyme biosensors integrated with pH-Sensors on flexible polymer carriers for in vivo applications.** *Biosensors and Bioelectronics.*
Prinz, F., B., Fasching, R., Kohl, F., Urban, G., Jobst, G., Keplinger, F.
1992: 7: 733 - 739.

- **pH-sensors for in vivo applications.**
Prinz, F., B., Fasching, R., Keplinger, F., Aschauer, E., Urban, G.
1992
- **OPTIMAL PATH PLACEMENT FOR KINEMATICALLY REDUNDANT MANIPULATORS** *1991 INTERNATIONAL CONF ON ROBOTICS AND AUTOMATION*
HEMMERLE, J. S., Prinz, F. B.
I E E E, COMPUTER SOC PRESS. 1991: 1234–1244
- **Laser-SNMS depth profiling of thin film multilayers: study of a Pt-Ti biosensor for glucose detection.**
Prinz, F., B., Fasching, R., Husinsky, W., Urban, G., Betz, G., Aschauer, E.
1991
- **THICKNESS EFFECTS MAY NOT DO WHAT YOU THINK THEY DO** *ENGINEERING FRACTURE MECHANICS*
Gurumoorthy, B., Kirchner, H. O., Prinz, F. B., Sinclair, G. B.
1988; 29 (6): 637-640
- **LIFETIME PREDICTIONS FOR A CERAMIC CUTTING-TOOL MATERIAL AT HIGH-TEMPERATURES** *JOURNAL OF MATERIALS SCIENCE*
Gurumoorthy, B., Kromp, K., Prinz, F. B., BORNHAUSER, A. C.
1987; 22 (6): 2051-2057
- **A PERTURBATION APPROACH TO ROBOT CALIBRATION** *INTERNATIONAL JOURNAL OF ROBOTICS RESEARCH*
Kirchner, H. O., Gurumoorthy, B., Prinz, F. B.
1987; 6 (4): 47-59
- **Implications of Electricity Liberalization for Combined Heat and Power (CHP) Fuel Cell Systems (FCSs): a Case Study of the United Kingdom** *Journal of Power Sources.*
Prinz, F., B., Colella, W.
- **The Mesicopter: A Meso-Scale Flight Vehicle** *NIAC Phase II Technical Proposal*
Kroo, I., Prinz, F.
- **Cantilever Tip-Probe Arrays for Simultaneous SECM and AFM Analysis** *Rapid Prototyping Laboratory*
Tao, Y., Fasching, R., Prinz, F.
- **Micro-scale Electrochemistry: Application to Fuel Cell**
Prinz, F., B., O'Hayre, R.
- **Near Net Shape Forming Of Advanced Structural Ceramic Devices**
Prinz, F., B., Liu, H.
- **Design Options for Achieving a Rapidly Variable Heat-to-Power Ratio in a Combined Heat and Power (CHP) Fuel Cell System** *Journal of Power Sources.*
Prinz, F., B., Colella, W.
- **Design Considerations for Effective Control of an Afterburner Sub-System in a Combined Heat and Power (CHP) Fuel Cell System (FCS)** *Journal of Power Sources.*
Prinz, F., B., Colella, W.
- **Modelling Results for the Thermal Management Sub-System of a Combined Heat and Power (CHP) Fuel Cell Systems (FCS)** *Journal of Power Sources.*
Prinz, F., B., Colella, W.
- **Design, Construction, and Testing of a Fuel Cell Powered Scooter** *Journal of Power Sources.*
Prinz, F., B., Colella, W.