

G. Wu, K.L. More, C.M. Johnston, and P. Zelenay, "High-Performance Electrocatalysts for Oxygen Reduction Derived from Polyaniline, Iron, and Cobalt," *Science* **322** 443-447 (2011).

M.K. Miller and C.M. Parish, "Role of Alloying Elements in Nanostructured Ferritic Steels," *Materials Science and Technology* **27**[4] 469-472 (2011).

M.K. Miller, L. Longstreth-Spoor, and K.F. Kelton, "Detecting Density Variations and Nanovoids," *Ultramicroscopy* **11** [6] 469-472 (2011).

M.K. Miller and Y. Zhang, "Fabrication and Characterization of APT Specimens from High Dose Heavy Ion Irradiated Materials," *Ultramicroscopy* **111**[6] 672-675 (2011).

M. Chi, T. Mizoguchi, L.W. Martin, J.P. Bradley, H. Ikeno, R. Ramesh, I. Tanaka, and N. Browning, "Atomic and Electronic Structures of the SrVO<sub>3</sub>-LaAlO<sub>3</sub> Interface," *Journal of Applied Physics* **110**[4] 046104-1-3 (2011).

G. Polizos, E. Tuncer, I. Sauers, and K.L. More, "Physical Properties of Epoxy Resin/Titanium Dioxide Nanocomposites," *Polymer Engineering and Science* **51**[1] 87-93 (2011).

V. Schwartz, H. Xie, H.M. Meyer, S.H. Overbury, and C. Liang, "Oxidative Dehydrogenation of Isobutane on Phosphorous-Modified Graphitic Mesoporous Carbon," *Carbon* **49**[2] 659-668 (2011).

L. Tan, L. Rakotojaona, T.R. Allen, R.K. Nanstad, and J.T. Busby, "Microstructure Optimization of Austenitic Alloy 800H (Fe-21Cr-32Ni)," *Materials Science and Engineering A* **528**[6] 2755-2761 (2011).

C.A. Bridges, A.S. Sefat, E.A. Payzant, L. Cranswick, and M.P. Paranthaman, "Structure and Magnetic Order in the Series Bi<sub>x</sub>Re<sub>1-x</sub>Fe<sub>0.5</sub>O<sub>3</sub> (RE=La,Nd)," *Journal of Solid State Chemistry* **184**[4] 830-842 (2011).

S.M. Mahurin, J. John, M.J. Sepaniak, and S. Dai, "A Reusable Surface-Enhanced Raman Scattering (SERS) Substrate Prepared by Atomic Layer Deposition of Alumina on a Multi-Layer Gold and Silver Film," *Applied Spectroscopy* **65**[4] 417-422 (2011).

Y. Yamamoto, M.P. Brady, M.L. Santella, H. Bei, P.J. Maziasz, and B.A. Pint, "Overview of Strategies for High-Temperature Creep and Oxidation Resistance of Alumina-Forming Austenitic Stainless Steels," *Metallurgical and Materials Transactions A* **42A**[4] 922-931 (2011).

A. Goyal, D.P. Field, R. Held, and J. Mannhart, "Grain Boundary Networks in High-Performance, Heteroepitaxial, YBCO films on Polycrystalline, Cube-textured Metals," *Philosophical Magazine Letters* **91**[4] 246-255 (2011).

D. Bhandari, I.I. Kravchenko, N.V. Lavrik, and M.J. Sepaniak, "Nanotransfer Printing Using Plasma Etched Silicon Stamps and Mediated by in Situ Deposited Fluoropolymer," *Journal of the American Chemical Society* **133**[20] 7722-7724 (2011).

M.P. Brady, M. Fayek, J.R. Keiser, H.M. Meyer, K.L. More, L.M. Anovitz, D.J. Wesolowski, and D.R. Cole, "Wet Oxidation of Stainless Steels: New Insights into Hydrogen Ingress," *Corrosion Science* **53**[5] 1633-1638 (2011).

M.P. Brady, K.A. Unocic, M.J. Lance, M.L. Santella, Y. Yamamoto, and L.R. Walker, "Increasing the Upper Temperature Oxidation Limit of Alumina Forming Austenitic Stainless Steels in Air with Water Vapor," *Oxidation of Metals* **75**[5-6] 337-357 (2011).

C. Cantoni, Y. Gao, S.H. Wee, E.D. Specht, J. Gazquez, J. Meng, S.J. Pennycook, and A. Goyal, "Strain-Driven Oxygen Deficiency in Self-Assembled, Nanostructured, Composite Oxide Films," *ACS Nano* **5**[6] 4783-4789 (2011).

S.H. Wee, E.D. Specht, C. Cantoni, Y.L. Zuev, V. Maroni, W. Wong-Ng, G. Liu, T.J. Haugan, and A. Goyal, "Formation of Stacking Faults and their Correlation with Flux Pinning and Critical Current Density in Sm-Doped YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7- $\delta$</sub>  Films," *Physical Review B* **83**[22] 224520-1-6 (2011).

K.J. Leonard, J.T. Busby, and S.J. Zinkle, "Influence of Thermal and Radiation Effects on Microstructural and Mechanical Properties of Nb-1Zr," *Journal of Nuclear Materials* **414**[2] 286-302 (2011).

I. Vlassiouk, S. Smirnov, I. Ivanov, P.F. Fulvio, S. Dai, H. Meyer, M. Chi, D. Hensley, P. Datskos, and N.V. Lavrik, "Electrical and Thermal Conductivity of Low Temperature CVD Graphene: The Effect of Disorder," *Nanotechnology* **22**[27] 1-9 (2011).

T-H. Kim, D.M. Nicholson, X.-G. Zhang, B.M. Evans, N.S. Kulkarni, E.A. Kenik, H.M. Meyer, B. Radhakrishnan, and A-P. Li, "Structural Dependence of Grain Boundary Resistivity in Copper Nanowires," *Japanese Journal of Applied Physics* **50**[8] 08LB09-1-4 (2011).

J. Qu, M. Chi, H.M. Meyer, P.J. Blau, S. Dai, and H. Luo, "Nanostructure and Composition of Tribo-Boundary Films Formed in Ionic Liquid Lubrication," *Tribology Letters* **43**[2] 205-211 (2011).

E. Tuncer, G. Polizos, I. Sauers, D.R. James, A.R. Ellis, and K.L. More, "Epoxy Nanodielectrics Fabricated with *in situ* and *ex situ* Techniques," *Journal of Experimental Nanoscience* **6** 1-8 (2011).

C. Wang, M. Chi, G. Wang, D. van der Vliet, D. Li, K.L. More, H.-H. Wang, J.A. Schlueter, N.M. Markovic, and V.R. Stamenkovic, "Correlation between Surface Chemistry and Electrocatalytic Properties of Monodisperse Pt<sub>x</sub>Ni<sub>1-x</sub> Nanoparticles," *Advanced Functional Materials* **21**[1] 147-152 (2011).

L. Huang, A. Cao, H.M. Meyer, P.K. Liaw, E. Garlea, J.R. Dunlap, T. Zhang, and W. He, "Responses of Bone-Forming Cells on Pre-immersed Zr-based Bulk Metallic Glasses: Effects of Composition and Roughness," *Acta Biomaterialia* **7**[1] 395-405 (2011).

C. Mossaad, M.-C. Tan, M. Starr, E.A. Payzant, J.Y. Howe, and R.E. Riman, "Size-Dependent Crystalline to Amorphous Uphill Phase Transformation of Hydroxyapatite Nanoparticles," *Crystal Growth & Design* **11**[1] 45-52 (2011).

S. Mehraeen, A. Kulkarni, M. Chi, B.W. Reed, N.L. Okamoto, N.D. Browning, and B.C. Gates, "Triosmium Clusters on a Support: Determination of Structure by X-ray Absorption Spectroscopy and High-Resolution Microscopy," *Chemistry: A European Journal* **17**[3] 1000-1008 (2011).

J.R. Whitney, S. Sarkar, J. Zhang, T. Do, T. Young, M.K. Manson, T.A. Campbell, A.A. Puretzky, C.M. Rouleau, K.L. More, D.B. Geohegan, C.G. Rylander, H.C. Dorn, and M.N. Rylander, "Single Walled Carbon Nanohorns as Photothermal Cancer Agents," *Lasers in Surgery and Medicine* **43**[1] 43-51 (2011).

R.D. Evans, P.J. Shiller, and J.Y. Howe, "Adhesion of Tungsten Carbide Reinforced Amorphous Hydrocarbon Thin Films (WC/a-C:H) to Steel Substrates for Tribological Applications," *Journal of Applied Physics* **109**[2] 023518-1 – 023518-6 (2011).

Z. Jiao and G.S. Was, "Impact of Localized Deformation on IASCC in Austenitic Stainless Steels," *Journal of Nuclear Materials* **408**[3] 246-256 (2011).

R. Ramachandra, H. Demers, and N. de Jonge, "Atomic-resolution Scanning Transmission Electron Microscopy through 50-nm-thick Silicon Nitride Membranes," *Applied Physics Letters* **98**[9] 093109-1 – 093109-3 (2011).

Z. Jiao and G.S. Was, "Novel Features of Radiation-induced Segregation and Radiation-Induced Precipitation in Austenitic Stainless Steels," *Acta Materialia* **59**[3] 1220-1238 (2011).

X. Qiu, J.Y. Howe, H.M. Meyer, E. Tuncer, and M.P. Paranthaman, "Thermal Stability of HfO<sub>2</sub> Nanotube Arrays," *Applied Surface Science* **257**[9] 4075-4081 (2011).

H. Yin, Z. Ma, M. Chi, and S. Dai, "Heterostructured Catalysts Prepared by Dispersing Au@Fe<sub>2</sub>O<sub>3</sub> Core-shell Structures on Supports and their Performance in CO Oxidation," *Catalysis Today* **160**[1] 87-95 (2011).

Z. Zhang, K.L. More, K. Sun, Z. Wu, and W. Li, "Preparation and Characterization of PdFe Nanoleaves as Electrocatalysts for Oxygen Reduction Reaction," *Chemistry of Materials* **23**[6] 1570-1577 (2011).

C. Wang, D. van der Vliet, K.L. More, N.J. Zaluzec, S. Peng, S. Sun, H. Daimon, G. Wang, J. Greeley, J. Pearson, A.P. Paulikas, G. Karapetrov, D. Strmcnik, N.M.

- Markovic, and V.R. Stamenkovic, "Multimetallic Au/FePt<sub>3</sub> Nanoparticles as Highly Durable Electrocatalyst," *Nano Letters* **11**[3] 919-926 (2011).
- L. Luo, C. Wilhelm, C.N. Young, C.P. Grey, G.P. Halada, K. Xiao, I.N. Ivanov, J.Y. Howe, D.B. Geohegan, and N.S. Goroff, "Characterization and Carbonization of Highly Oriented Poly(diiododiacetylene) Nanofibers," *Macromolecules* **44**[8] 2626-2631 (2011).
- D.B. Peckys and N. de Jonge, "Visualizing Gold Nanoparticle Uptake in Live Cells with Liquid Scanning Transmission Electron Microscopy," *Nano Letters* **11**[4] 1733-1738 (2011).
- X. Shi, J. Yang, J.R. Salvador, M. Chi, J.Y. Cho, H. Wang, S. Bai, J. Yang, W. Zhang, and L. Chen, "Multiple-Filled Skutterudites: High Thermoelectric Figure of Merit through Separately Optimizing Electrical and Thermal Transports," *Journal of the American Chemical Society* **133**[20] 7837-7846 (2011).
- D.B. Peckys, P. Mazur, K.L. Gould, and N. de Jonge, "Fully Hydrated Yeast Cells Imaged with Electron Microscopy," *Biophysical Journal* **100**[10] (2011).
- K.L. Klein, I.M. Anderson, and N. de Jonge, "Transmission Electron Microscopy with a Liquid Flow Cell," *Journal of Microscopy* **242**[2] 117-123 (2011).
- B. Xu, C.R. Fell, M. Chi, and Y.S. Meng, "Identifying Surface Structural Changes in Layered Li-excess Nickel Manganese Oxides in High Voltage Lithium Ion Batteries: A Joint Experimental and Theoretical Study," *Energy & Environmental Science* **4**[6] 2223-2233 (2011).
- Z. Gu, Y. Yang, K. Li, X. Tao, G. Eres, J.Y. Howe, L. Zhang, X. Li, and Z. Pan, "Aligned Carbon Nanotube-Reinforced Silicon Carbide Composites Produced by Chemical Vapor Infiltration," *Carbon* **49**[7] (2011).
- Z. Jiao and G.S. Was, "Segregation Behavior in Proton- and Heavy-Ion-Irradiated Ferritic-Martensitic Alloys," *Acta Materialia* **59**[11] 4467-4481 (2011).
- M.J. Dukes, R. Ramachandra, J-P. Baudoin, W.G. Jerome, and N. de Jonge, "Three-Dimensional Locations of Gold-Labeled Proteins in a Whole Mount Eukaryotic Cell Obtained with 3nm Precision Using Aberration-Corrected Scanning Transmission Electron Microscopy," *Journal of Structural Biology* **174**[3] 552-562 (2011).
- H.-J. Chang, S.V. Kalinin, A.N. Morozovska, M. Huijben, Y-H. Chu, P. Yu, R. Ramesh, E.A. Eliseev, G.S. Svehnikov, S.J. Pennycook, and A.Y. Borisevich, "Atomically Resolved Mapping of Polarization and Electric Fields Across Ferroelectric/Oxide Interfaces by Z-Contrast Imaging," *Advanced Materials* **23**[21] 2474-2479 (2011).

J. Nag, E.A. Payzant, K.L. More, and R.F. Haglund, Jr., "Enhanced Performance of Room-Temperature-Grown Epitaxial Thin Films of Vanadium Dioxide," *Applied Physics Letters* **98**[25] 251916-1-3 (2011).

J-H. Kim, Y.N. Kim, Z. Bi, A. Manthiram, M.P. Paranthaman, and A. Huq, "High Temperature Phase Stabilities and Electrochemical Properties of  $\text{InBaCo}_{4-x}\text{Zn}_x\text{O}_7$  Cathodes for Intermediate Temperature Solid Oxide Fuel Cells," *Electrochimica Acta* **56**[16] 5740-5745 (2011).

H.T. Sun, J. Chaudhuri, E.A. Kenik, H. Zhu, and Y. Ma, "Transmission Electron Microscopy Study of Eu-Doped  $\text{Y}_2\text{O}_3$  Nanosheets and Nanotubes," *Nanoscience and Nanotechnology Letters* **3**[3] 314-318 (2011).

K. Rhodes, M. Kirkham, R. Meisner, C.M. Parish, N. Dudney, and C. Daniel, "Novel Cell Design for Combined In-situ Acoustic Emission and X-ray Diffraction Study During Electrochemical Cycling of Batteries," *Review of Scientific Instruments* **82**[7] 075107-1 – 075107-7 (2011).

H. Li, J. Qu, Q. Cui, H. Xu, H. Luo, M. Chi, R.A. Meisner, W. Wang, and S. Dai, "TiO<sub>2</sub> Nanotube Arrays Grown in Ionic Liquids: High-Efficiency in Photocatalysis and Pore-widening," *Journal of Materials Chemistry* **21**[26] 9487-9490 (2011).

Q. Zhang, D.Q. Lima, I. Lee, F. Zaera, M. Chi, and Y. Yin, "A Highly Active Titanium Dioxide Based Visible-Light Photocatalyst with Nonmetal Doping and Plasmonic Metal Decoration," *Angewandte Chemie International Edition* **50**[31] 7088-7092 (2011).

M. Hong, D. Fredrick, D.M. Devito, J.Y. Howe, X.C. Yang, N.C. Giles, J.S. Neal, and Z.A. Munir, "Characterization of Green-Emitting Translucent Zinc Oxide Ceramics Prepared Via Spark Plasma Sintering," *International Journal of Applied Ceramic Technology* **8**[4] 725-733 (2011).

Y. Kim, G.M. Veith, J. Nanda, R.R. Unocic, M. Chi, and N.J. Dudney, "High-Voltage Stability of LiCoO<sub>2</sub> Particles with a Nano-Scale Lipon Coating," *Electrochimica Acta* **56**[19] 6573-6580 (2011).

J. Xu, A.R. Wilson, A.R. Rathmell, J. Howe, M. Chi, and B.J. Wiley, "Synthesis and Catalytic Properties of Au-Pd Nanoflowers," *ACS Nano* **5**[8] 6119-6127 (2011).

B.S. Gupton, V. Iberi, S. Li, D.N. Leonard, C.M. Parish, P.G. Kotula, M. Varela, G.C. Schatz, S.J. Pennycook, and J.P. Camden, "Correlated Optical Measurements and Plasmon Mapping of Silver Nanorods," *Nano Letters* **11**[8] 3482-3488 (2011).

Z. Lu, C. Gao, Q. Zhang, M. Chi, J.Y. Howe, and Y. Yin, "Direct Assembly of Hydrophobic Nanoparticles to Multifunctional Structures," *Nano Letters* **11**[8] 3404-3412 (2011).

J. Lee, W. Zhou, J.C. Idrobo, S.J. Pennycook, and S.T. Pantelides, "Vacancy-Driven Anisotropic Defect Distribution in the Battery-Cathode Material  $\text{LiFePO}_4$ ," *Physical Review Letters* **107**[8] 085507-1-5 (2011).

G. Wu, C.M. Johnston, N.H. Mack, K. Artyushkova, M. Ferrandon, M. Nelson, J. S. Lezama-Pacheco, S. D. Conradson, K.L. More, D. J. Myers, and P. Zelenay, "Synthesis-Structure-Performance Correlation for Polyaniline-Me-C Non-precious Metal Cathode Catalysts for Oxygen Reduction in Fuel Cells," *Journal of Materials Chemistry* **21**[30] 11392-11405 (2011).

P. Sun, G. Siddiqi, W. C. Vining, M. Chi, and A.T. Bell, "Novel Pt/Mg(In)(Al)O Catalysts for Ethane and Propane Dehydrogenation," *Journal of Catalysis* **282**[1] 165-174 (2011).

H. Liu, Z. Bi, X-G. Sun, R.R. Unocic, M.P. Paranthaman, S. Dai, and G. M. Brown, "Mesoporous  $\text{TiO}_2$ -B Microspheres with Superior Rate Performance for Lithium Ion Batteries," *Advanced Materials* **23**[30] 3450-3454 (2011).

S.K. Martha, J.O. Kiggans, J. Nanda, and N.J. Dudney, "Advanced Lithium Battery Cathodes Using dispersed Carbon Fibers as the Current Collector," *Journal of The Electrochemical Society* **158**[9] A1060 – A1066 (2011).

C. Wang, M. Chi, D. Li, D. Strmcnik, D. van der Vliet, G. Wang, V. Komanicky, K-C. Chang, A.P. Paulikas, D. Tripkovic, J. Pearson, K.L. More, N.M. Markovic, and V.R. Stamenkovic, "Design and Synthesis of Bimetallic Electrocatalyst with Multilayered Pt-Skin Surfaces," *Journal of the American Chemical Society* **133**[36] 14396-14403 (2011).

H.-J. Chang, S.V. Kalinin, S. Yang, P. Yu, S. Bhattacharya, P.P. Wu, N. Balke, S. Jesse, L.Q. Chen, R. Ramesh, S.J. Pennycook, and A.Y. Borisevich, "Watching Domains Grow: In-situ Studies of Polarization Switching by Combined Scanning Probe and Scanning Transmission Electron Microscopy," *Journal of Applied Physics* **110**[5] 052014 (2011).

F.G. Caballero, H-W. Yen, M.K. Miller, J-R. Yang, J. Cornide, and C. Garcia-Mateo, "Complementary use of Transmission Electron Microscopy and Atom Probe Tomography for the Examination of Plastic Accommodation in Nanocrystalline Bainitic Steels," *Acta Materialia* **59**[15] 6117-6123 (2011).

Y. Liu, M. Chi, V. Mazumder, K.L. More, S. Soled, J.D. Henao, and S. Sun, "Composition-Controlled Synthesis of Bimetallic PdPt Nanoparticles and their Electro-Oxidation of Methanol," *Chemistry of Materials* **23**[18] 4199-4203 (2011).

Z. Bi, C.A. Bridges, J.-H. Kim, A. Huq, and M.P. Paranthaman, "Phase Stability and Electrical Conductivity of Ca-doped  $\text{LaNb}_{1-x}\text{Ta}_x\text{O}_{4-\delta}$  High Temperature Proton Conductors," *Journal of Power Sources* **196**[18] 7395-7403 (2011).

E.A. Ring, D.B. Peckys, M.J. Dukes, J.P. Baudoin, and N. de Jonge, "Silicon Nitride Windows for Electron Microscopy of Whole Cells," *Journal of Microscopy* **243**[3] 273-283 (2011).