**KARREN L. MORE**

Center for Nanophase Materials Sciences, Oak Ridge National Laboratory

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**Education/Training:**

1983 B.S. - Materials Science & Engineering, North Carolina State University, Raleigh, NC

 1985 M.S. - Materials Science & Engineering, North Carolina State University, Raleigh, NC

 1992 Ph.D. - Materials Science, North Carolina State University, Raleigh, NC

**Research and Professional Experience:**

2019-present Division Director, Center for Nanophase Materials Sciences, Oak Ridge National

 Laboratory, Oak Ridge, TN

2013-present Group Leader, Electron & Atom Probe Microscopy Group Center for Nanophase

 Materials Sciences, Oak Ridge National Laboratory, Oak Ridge, TN

 2006-2016 Group Leader, Microscopy Group, Materials Science and Technology Division, Oak

 Ridge National Laboratory, Oak Ridge, TN

 2006-2013 Director, Shared Research Equipment (ShaRE) User Facility, an Office of Science Electron Beam Microcharacterization Center, Oak Ridge National Laboratory, Oak Ridge, TN

 1988-present Distinguished R&D Staff Member, Oak Ridge National Laboratory, Oak Ridge, TN

 1986-1988 Shared Research Equipment (ShaRE) User Facility Staff Microscopist, Oak Ridge

 Associated Universities, Oak Ridge, TN

 1983-1986 Graduate Research Assistant, North Carolina State University, Raleigh, NC

**Significant Awards and Honors:**

* North Carolina State University, Materials Science and Engineering Department "Hall of Fame" (2022)
* 2020 Highly Cited Researcher, Clarivate Analytics (2020)
* DOE Hydrogen and Fuel Cells Program Special Recognition Award (2020)
* Fellow, Microscopy Society of America (2019)
* U.S. Patent #9,732,445 O. Rios, M.A. McGuire, K.L. More, et al. (2017)
* ORNL Award (UT-Battelle Awards Night) for *Mentor of Early Career Researchers* (2016)
* DOE Hydrogen and Fuel Cells Program Research & Development Award (2013)
* R&D 100 Award Team Member (2010)
* IGTI/ASME Ceramics Committee Best Paper Award – Paper #2009-GT-59223 (2009)
* Fellow, American Ceramic Society (2007)
* DOE Hydrogen Program Research & Development Award (2006)
* ORNL Significant Event Award (1997, 1999, 2002, 2004, 2005, 2017)
* Research listed in “Top Ten Accomplishments for DOE Fuel Cell Program” by US DRIVE Fuel Cell Tech Team (2004, 2005, 2007, 2008, 2010, 2013, 2015, 2017)
* NASA's "Turning Goals into Reality (TGIR)" Award (2004)
* IGTI/ASME Ceramics Committee Best Paper Award - Paper #GT-2002-30630 (2002)
* U.S. DOE, Office of Power Technologies, Research Partnership Award (2001)
* Lockheed Martin Energy Research Corp. Award for *Development Accomplishment* (1999)
* Lockheed Martin Energy Research Corp. Award for *Team Technical Accomplishment* (1998)
* 1st Partnership for a New Generation of Vehicles (PNGV) Award for Technical Accomplishment (1996)
* American Women in Science, Distinguished Technology Award (1995)
* Martin Marietta Energy Systems Award for *Best Technical Publication* (1993)
* Society of Women Engineers Outstanding Female Graduate Student Award, NCSU Chapter (1986)
* Presidential Award, Microscopy Society of America (1986)
* Materials Research Society (MRS) Student Award (1985)

**Synergistic Activities:**

* Co-Chair, BES Roundtable "Foundation Science for Carbon-Neutral Hydrogen Technologies," August 2-5, 2021. Roundtable Report can be found at https://science.osti.gov/bes/Community-Resources/Reports
* Member, External Advisory Board, NSF Southeastern Nanotechnology Infrastructure Corridor (SENIC) (2022-2024)
* Member, Advisory Board, Materials Science and Engineering Department, University of Tennessee, Knoxville (2020-2024)
* Co-Organizer, 2019 Frontiers of Electron Microscopy in Materials Science (FEMMS) Conference, Asheville, NC
* Member, International Advisory Committee, Frontiers of Electron Microscopy in Materials Science (FEMMS) Conference (2014-2020)
* Member, Scientific Advisory Committee, Center for Nanoscale Materials, a U.S. DOE Office of Science User Facility at Argonne National Laboratory (2018-2020)
* Basic Science Division Representative on American Ceramic Society (ACerS) Fellows Committee (2017-2021)
* Member, Steering Committee, Fuel Cell Performance & Durability (FC-PAD) Consortium (2016-2020)
* Member, Steering Committee, Electrocatalysis (ElectroCat) Consortium (2016-2020)
* Chair, ACerS Sosman Lecture Award Committee (2015-2016)
* Organizer, Ceramographic Exhibit, Annual ACerS Meeting (2003-2019)
* Member, MRS Turnbull Lecture Award Committee (2013-2015)
* Chair, Ceramics Committee, IGTI/ASME, 2007-2008 (Vice Chair 2005-2006)

**ORNL Committees:**

* Member, Initiative Review Committee, Self-Driven Experiments for Science/Interconnected Science Ecosystems (INTERSECT), Director's Research & Development Program, Oak Ridge National Laboratory (2021-2025)
* Materials Science & Technology Division Director Search Committee (2022)
* Chemical Sciences Division Director Search Committee (2021)
* Chair, ORNL Metrics Committee (2017-2018)
* Co-Organizer, Group Leader Workshop (2016-2017)
* Materials Science & Technology Division Director Search Committee (2015)
* ORNL Master Technician Committee (2013-2015)

**Graduate Students Supervised:**

Nelly Cantillo (University of Tennessee); Danna Qian (University of California – San Diego); Lei Yu (University of Kentucky); Melonie Thomas (University of Kentucky); Kelly Perry (Rensselaer Polytechnic Institute); Sharon Robinson (Rutgers University); K.S. Ailey-Trent (North Carolina State University); Erin McDevitt (Northwestern University); Matthew Stoudt (Pennsylvania State University)

**Post-docs Supervised:**

Ai Serizawa (University of Tskuba, Japan); Cheng Ma (Chinese Academy of Sciences); Baishakhi Mazumder (SUNY-Buffalo); Wei Guo (Timken Co.); Brian Sneed (Cabot Microelectronics); Jordan Hachtel (ORNL R&D Staff); Xing Wang (Pennsylvania State University); Debangshu Mukherjee (ORNL R&D Staff); Michael Zachman (ORNL R&D Staff)

**Refereed Publications (**total number 300**;** Citations: >28,000; h-index=71); >100 Invited Presentations

**Selected Publications:**

1. X. Wang, C. Hatzogku, B. Sneed, Z. Fan, W. Guo, K. Jin, D. Chen, H. Bei, Y. Wang, W.J. Weber, Y. Zhang, B. Gault, K.L. More, F. Vurpillot, and J.D. Poplawsky, "Interpreting Nanovoids in Atom Probe Tomography Data for Accurate Local Compositional Measurements," *Nature Communications* **11**[1] 1022 (2020).
2. P.P. Lopes, D. Li, H. Lv, C. Wang, D. Tripkovic, Y. Zhu, R. Schimmenti, H. Daimon, Y. Kang, J. Snyder, N. Becknell, K.L. More, D. Strmcnik, N. Markovic, M. Mavrikakis, and V.R. Stamenkovic, "Eliminating Dissolution of Platinum-based Electrocatalysts at the Atomic Scale," *Nature Materials* **19**[11] 1207 (2020).
3. H. Zhang, H.T. Chung, D.A. Cullen, S. Wagner, U. Kramm, K.L. More, P. Zelenay, and G. Wu, "High-Performance Fuel Cell Cathodes Exclusively Containing Atomically Dispersed Iron Active Sites," *Energy & Environmental Science* **12**[8] 502-509 (2019). citations=273
4. J. Li, H. Zhang, W. Samarakoon, W. Shan, D.A. Cullen, S. Karakalos, M. Chen, D. Gu, K.L. More, G. Wang, Z. Feng, Z. Wang, and G. Wu, "Thermally Driven Structure and Performance Evolution of Atomically Dispersed FeN4 Sites for Oxygen Reduction," *Angewandte Chemie - International Edition* **58**[52] 18971-18980 (2019). citations=219
5. X. Wang, K. Jin, D. Chen, H. Bei, Y. Wang, W.J. Weber, Y. Zhang, and K.L. More, “Effects of Fe Concentration on Helium Bubble Formation in NiFex Single-phase Concentrated Solid Solution Alloys,” *Materialia* **5** 100183 (2019).
6. X. Wang, C.M. Barr, K. Jin, H. Bei, K. Hattar, W. J. Weber, Y. Zhang, and K.L. More, “Defect Evolution in Ni and NiCoCr by in situ 2.8 MeV Au Irradiation,” *Journal of Nuclear Materials* **523** 502-509 (2019).
7. J. Li, S. Sharma, X. Liu, Y. Pan, J.S. Spendelow, M. Chi, Y. Jia, P. Zhang, D.A. Cullen, Z. Xi, H. Lin, Z. Yin, B. Shen, M. Muzzio, C. Yu, Y.S. Kim, A.A. Peterson, K.L. More, H. Zhu, and S. Sun, “Hard-magnet L10-CoPt Nanoparticles Advance Fuel Cell Catalysts,” *Joule* **3**[1] 124-135 (2019). 166 citations
8. Y. He, S. Hwang, D.A. Cullen, M.A. Uddin, L. Langhorst, B. Li, S. Karakalos, A.J. Kropf, E.C. Wegener, J. Sokolowski, M. Chen, D. Myers, D. Su, K.L. More, G. Wang, S. Litster, and G. Wu, “Highly Active Atomically Dispersed CoN4 Fuel Cell Cathode Catalysts Derived from Surfactant-assisted MOFs: Carbon-shell Confinement Strategy,” *Energy & Environmental Science* **12**[1] c8ee02694g (2019). 457 citations
9. J. Li, M. Chen, D.A. Cullen, S. Hwang, M. Wang, B. Li, K. Liu, S. Karakalos, M. Lucero, H. Zhang, C. Lei, H. Xu, G.E. Sterbinsky, Z. Feng, D. Su, K.L. More, G. Wang, Z. Wang, and G. Wu, “Atomically Dispersed Manganese Catalysts for Oxygen Reduction in Proton-exchange Membrane Fuel Cells,” *Nature Catalysis* **1**[12] 935-945 (2018). 661 citations
10. S. Mukherjee, D.A. Cullen, S. Karakalos, K. Liu, H. Zhang, S. Zhao, H. Xu, K.L. More, G. Wang, And G. Wu, “Metal Organic Framework Derived Nitrogen-doped Highly Disordered Carbon for Electrochemical Ammonia Synthesis using N2 and H2O in Alkaline Electrolytes,” *Nano Energy* **48** 217-226 (2018). 292 citations
11. F. Pan, H. Zhang, K. Liu, D.A. Cullen, K.L. More, M. Wang, Z. Feng, G. Wang, G. Wu, and Y. Li, “Unveiling Active Sites of CO2 Reduction on Nitrogen-coordinated and Atomically Dispersed Iron and Cobalt Catalysts,” *ACS Catalysis* **8**[4] 3116-3122 (2018). 299 citations
12. X.X. Wang, D.A. Cullen, Y.T. Pan, S. Hwang, M. Wang, A. Feng, J. Wang, M.H. Engelhard, H. Zhang, Y. He, Y. Shao, D. Su, K.L. More, J.S. Spendelow, and G. Wu, “Nitrogen-coordinated Single Co Atom Catalysts for Oxygen Reduction in Proton Exchange Membrane Fuel Cells,” *Advanced Materials* **30**[11] 1706758 (2018). 667 citations
13. N. Macauley, D.D. Papadias, J. Fairweather, D. Spernjak, D. Langlois, R. Ahluwalia, K.L. More, R. Mukundan, and R.L. Borup, “Carbon Corrosion in PEM Fuel Cells and the Development of Accelerated Stress Tests,” *Journal of the Electrochemical Society* **165**[6] F3148-F3160 (2018). 126 citations
14. B.T. Sneed, D.A. Cullen, R. Mukundan, R.L. Borup, and K.L. More, “PtCo Cathode Catalyst Morphological and Compositional Changes After PEM Fuel Cell Accelerated Stress Testing,” *Journal of the Electrochemical Society* **165**[6] F1-F7 (2018).
15. H.T. Chung, D.A. Cullen, D. Higgins, B.T. Sneed, E.F. Holby, K.L. More, and P. Zelenay, “Direct Atomic-level Insight into the Active Sites of a High-performance PGM-free ORR Catalyst,” *Science* **357**[6350] 479-484 (2017). 893 citations
16. B.T. Sneed, D.A. Cullen, K.S. Reeves, O.E. Dyck, D.A. Langlois, R. Mukundan, R.L. Borup, and K.L. More, “3D Analysis of Fuel Cell Eletrocatalyst Degradation on Alternate Carbon Supports,” *ACS Applied Materials & Interfaces* **9**[35] 29839-29848 (2017).
17. N. Becknell, Y. Son, D. Kim, D. Li, Y. Yu, Z. Niu, T. Lei, B.T. Sneed, K.L. More, N.M. Markovic, V.R. Stamenkovic, and P. Yang, “Control of Architecture in Rhombic Dodecahedral Pt-Ni Nanoframe Electrocatalysts,” *Journal of the American Chemical Society* **139**[34] 11678-11681 (2017). 140 citations
18. S.D. Han, S. Kim, D.G. Li, V. Petkov, H.D. Yoo, P.J. Phillips, H. Wang, J.J. Kim, K.L. More, B. Key, R.F. Klie, J. Cabana, V.R. Stamenkovic, T.T. Fister, N.M. Markovic, A.K. Burrell, S. Tepavcevic, and J.T. Vaughey, “Mechanism of Zn Insertion into Nanostructured d-MnO2: A Nonaqueous Rechargeable Zn Metal Battery,” *Chemistry of Materials* **29**[11] 4874-4884 (2017). 164 citations
19. C. Ma, Y.Q. Chen, K.B. Yin, J. Luo, A. Sharafi, J. Sakamoto, J.C. Li, K.L. More, N.J. Dudney, and M. Chi, “Interfacial Stability of Li Metal-Solid Electrolyte Elucidated via *in situ* Electron Microscopy,” *Nano Letters* **16**[11] 7030-7036 (2016). 231 citations
20. J.D. Poplawsky, W. Guo, N. Paudel, A. Ng, K.L. More, D.N. Leonard, and Y. Yan, “Structural and Compositional Dependence of the CdTexSe1-x Alloy Layer Photoactivity in CdTe-based Solar Cells,” *Nature Communications* **7** Article 12537 (2016). 107 citations
21. R.R. Unocic, L. Baggetto, G.M. Veith, J.A. Aguiar, K.A. Unocic, R.L. Sacci, N.J. Dudney, and K.L. More, “Probing Battery Chemistry with Liquid Cell Electron Energy Loss Spectroscopy,” *Chemical Communications* **51**[91] 16377-16380 (2015).
22. M. Chi, C. Wang, Y.K. Lei, G.F. Wang, D.G. Li, K.L. More, A. Lupini, L.F. Allard, N.M. Markovic, and V.R. Stamenkovic, “Surface Faceting and Elemental Diffusion Behavior at Atomic Scale for Alloy Nanoparticles During *in situ* Annealing,” *Nature Communications* **6** Article 8925 (2015). 129 citations
23. R.L. Sacci, J.M. Black, N. Balke, N.J. Dudney, K.L. More, and R.R. Unocic, “Nanoscale Imaging of Fundamental Li Battery Chemistry: Solid-Electrolyte Interphase Formation and Preferential Growth of Li Metal Nanoclusters,” *Nano Letters* **15**[3] 2011-2018 (2015). 142 citations
24. Y.J. Kang, J. Snyder, M. Chi, D.G. Li, K.L. More, N.M. Markovic, and V.R. Stamenkovic, “Multimetallic Core/Interlayer/Shell Nanostructures as Advanced Electrocatalysts,” *Nano Letters* **14**[11] 6361-6367 (2014). 131 citations
25. D.J. Chadderdon, L. Xin, J. Qi, Y. Qui, P. Krishna, K.L. More, and W.Z. Li, “Electrocatalytic Oxidation of 5-Hydroxymethylfurfural to 2,5-Furandicarboxylic Acid on Supported Au and Pd Bimetallic Nanoparticles,” *Green Chemistry* **16**[8] 3778-3786 (2014). 153 citations
26. R.R. Unocic, X.G. Sun, R.L. Sacci, L.A. Adamczyk, D.H. Alsem, S. Dai, N.J. Dudney, and K.L. More, “Direct Visualization of Solid Electrolyte Interphase Formation in Li-Ion Batteries with *in situ* Electrochemical Transmission Electron Microscopy,” *Microscopy and Microanalysis* **20**[4] 1029-1037 (2014).
27. C. Ma, K. Chen, C.D. Liang, C.W. Nan, R. Ishikawa, K.L. More, and M. Chi, “Atomic-Scale Origin of the Large Grain Boundary Resistance in Perovskite Li-ion-conducting Solid Electrolytes,” *Energy & Environmental Science* **7**[5] 1638-1642 (2014). 168 citations
28. W. Gao, G. Wu, M.T. Janicke, D.A. Cullen, R. Mukundan, J.K. Baldwin, E.L. Brosha, C. Garlande, P.M. Ajayan, K.L. More, A.M. Dattlebaum, and P. Zelenay, “Ozonated Graphene Oxide Film as a Proton Exchange Membrane,” *Angewandte Chemie International Edition* **53**[14] 3588-3593 (2014). 167 citations
29. C. Chen, Y.J. Kang, Z.Y. Huo, Z.W. Zhu, W.Y. Huang, H.L.L. Xin, J.D. Snyder, D.G. Li, J.A. Herron, M. Mavrikakis, M. Chi, K.L. More, Y.D. Li,N.M. Markovic, G.A. Somorjai, P.D. Yang, and V.R. Stamenkovic, “Highly Crystalline Nanoframes with Three-Dimensional Electrocatalytic Surfaces,” *Science* **343** 1339-1343 (2014). 1937 citations
30. D.A. Cullen, R. Koestner, R.S. Kukreja, Z.Y. Liu, S. Minko, O. Trotsenko, A. Tokarev, L. Guetaz, H.M. Meyer, C.M. Parish, and K.L. More, “Imaging and Microanalysis of Thin Ionomer Layers by STEM,” *Journal of The Electrochemical Society* **161**[10] F1111-F1117 (2014).
31. R.L. Sacci, N.J. Dudney, K.L. More, L.R. Parent, I Arslan, N.D. Browning, and R.R. Unocic, “Direct Visualization of Initial SEI Morphology and Growth Kinetics During Lithium Deposition by *in situ* Electrochemical TEM,” *Chemical Communications* **50**[17] 2104-2107 (2014). 127 citations
32. W.E. Tenhaeff, O. Rios, K.L. More, and M.A. McGuire, “Highly Robust Lithium Ion Battery Anodes from Lignin: An Abundant, Renewable, and Low-Cost Material,” *Advanced Functional Materials* **24**[1] 86-94 (2014). 168 citations
33. G. Wu, K.L. More, P. Xu, H.L. Wang, M. Ferrandon, A.J. Kropf, D.J. Myers, S. Ma, C.M. Johnston, and P. Zelenay, “A Carbon-nanotube-supported Graphene-rich Non-precious Metal Oxygen Reduction Catalyst with Enhanced Performance Durability,” *Chemical Communications* **49**[32] 3291-3293 (2013). 175 citations
34. M. Li, D.A. Cullen, K. Sasaki, N.S. Marinkovic, K.L. More, and R.R. Adzic, “Ternary Electrocatalysts for Oxidizing Ethanol to Carbon Dioxide: Making Ir Capable of Splitting C-C Bond,” *Journal of the American Chemical Society* **135**[1] 132-141 (2013). 149 citations
35. C. Wang, D.G. Li, M. Chi, J. Pearson, R.B. Rankin, J. Greeley, Z.Y. Duan, G.F. Wang, D. van der Vliet, K.L. More, N.M. Markovic, and V.R. Stamenkovic, “Rational Development of Ternary Alloy Electrocatalysts,” *Journal of Physical Chemistry Letters* **3**[12] 1668-1673 (2012). 113 citations
36. V. Mazumder, M. Chi, M.N. Mankin, Y. Liu, O. Metin, D.H. Sun, K.L. More, and S.H. Sun, “A Facile Synthesis of MPd (M=Co, Cu) Nanoparticles and Their Catalysis for Formic Acid Oxidation,” *Nano Letters* **12**[2] 1102-1106 (2012). 199 citations
37. X.Y. Liu, S. Sen, J.Y. Liu, I. Kulaots, D.B. Geohegan, A. Kane, A.A. Puretzky, C.M. Rouleau, K.L. More, G.T.R. Palmore, and R.H. Hurt, “Antioxidant Deactivation on Graphenic Nanocarbon Surfaces,” *Small* **7**[19] 2775-2785 (2011). 114 citations
38. D.B. Geohegan, A.A. Puretzky, J.J. Jackson, C.M. Rouleau, G. Eres, and K.L. More, “Flux-Dependent Growth Kinetics and Diameter Selectivity in SWCNT Arrays,” *ACS Nano* **5**[10] 8311-8321 (2011).
39. C. Wang, M. Chi, D.G. Li, D. van der Vliet, G.F. Wang, Q.Y. Lin, J.F. Mitchell, K.L. More, N.M. Markovic, and V.R. Stamenkovic, “Synthesis of Homogeneous Pt-Bimetallic Nanoparticles as Highly Efficient Electrocatlysts,” *ACS Catalysis* **1**[10] 1355-1359 (2011). 105 citations
40. Y. Liu, M. Chi, V. Mazumder, K.L. More, S. Soled, J.D. Henao, and S.H. Sun, “Composition-Controlled Synthesis of Bimetallic PdPt Nanoparticles and their Electro-oxidation of Methanol,” *Chemistry of Materials* **23**[18] 4199-4203 (2011). 219 citations
41. C. Wang, M. Chi, D.G. Li, D. Strmcnik, D. van der Vliet, G.F. 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 Electrocatalysts with Multilayered Pt-Skin Surfaces,” *Journal of the American Chemical Society* **133**[36] 14396-14403 (2011). 474 citations
42. G. Wu, K.L. More, C.M. Johnston, and P. Zelenay, “High-Performance Electrocatalysts for Oxygen Reduction Derived from Polyanilene, Iron, and Cobalt,” *Science* **332** 443-447 (2011). 3,199 citations
43. C. Wang, D. van der Vliet, K.L. More, N.J. Zaluzec, S. Peng, S.H. Sun, H. Daimon, G.F. Wang, J. Greeley, J. Pearson, A.P. Paulikas, G. Karapetrov, D. Strmcnik, N.M. Markovic, and V.R. Stamenkovic, “Multimetallic Au/FePt3 Nanoparticles as Highly Durable Electrocatalysts,” *Nano Letters* **11**[3] 919-926 (2011) 393 citations
44. C. Wang, M. Chi, G.F. Wang, D. van der Vliet, D.G. 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 PtXNi1-X Nanoparticles,” *Advanced Functional Materials* **21**[1] 147-152 (2011). 206 citations
45. G. Wu, C.M. Johnston, N.H. Mack, K. Artyushkova, M. Ferrandon, M. Nelson, J.S. Lezama-Pacheo, S.D. Conradson, K.L. More, D.J. Myers, and P. Zelenay, “Synthesis-structure-performance Correlation for Polyanilene-Me-C Non-precious Metal Cathode Catalysts for Oxygen Reduction in Fuel Cells,” *Journal of Materials Chemistry* **21**[30] 11392-11405 (2011). 460 citations
46. V. Mazumder, M. Chi, K.L. More, and S.H. Sun, “Core/Shell Pd/FePt Nanoparticles as an Active and Durable Catalyst for the Oxygen Reduction Reaction,” *Journal of the American Chemical Society* **132**[23] 7848 (2010). 333 citations
47. X.A. Bai, K.L. More, C.M. Rouleau, and A. Rabiei, “Functionally Graded Hydroxyapatite Coatings Doped with Antibacterial Components,” *Acta Biomaterialia* **6**[6] 2264-2273 (2010). 118 citations
48. P. Strasser, S. Koh, T. Anniyev, J. Greeley, K.L. More, C.F. Yu, Z.C. Liu, S. Kaya, D. Nordlund, H. Ogasawara, M.F. Toney, and A. Nilsson, “Lattice-Strain Control of the Activity in Dealloyed Core/Shell Fuel Cell Catalysts,” *Nature Chemistry* **2**[6] 454-460 (2010). 2052 citations
49. K. Sasaki, J.X. Wang, H. Naohara, N. Marinkovic, K.L. More, H. Inada, and R.R. Adzic, “Recent Advances in Pt-monolayer Electrocatalysts for Oxygen Reduction Reaction: Scale-up Synthesis, Structure, and Activity of Pt Shells on Pd Cores,” *Electrochimica Acta* **55**[8] 2645-2652 (2010). 222 citations
50. V. Mazumder, M. Chi, K.L. More, and S.H. Sun, “Synthesis and Characterization of Multimetallic Pd/Au and Pd/Au/FePt Core/Shell Nanoparticles,” *Angewandte Chemie – International Edition* **49**[49] 9368-9372 (2010). 152 citations
51. B.A. Pint and K.L. More, “Characterization of Alumina Interfaces in TBC Systems,” *Journal of Materials Science* **44**[7] 1676-1686 (2009).
52. K.L. More, L.R. Walker, Y.L. Wang, E. Lara-Curzio, T.M. Brummett, M. van Roode, J.R. Price, A. Szweda, and G. Merrill, “Microstructural and Mechanical Characterization of a Hybrid Oxide CMC Combustor Liner after 25,000-hour Engine Test,” Proceedings of the ASME Turbo Expo 2009 **1** 255-263 (2009).
53. B.A. Pint and K.L. More “Transformation of Al2O3 to LiAl2O3 in Pb-17Li at 800°C,” *Journal of Nuclear Materials* **376**[1] 108-113 (2008).
54. R. Borup, J. Meyers, B. Pivovar, Y.S. Kim, R. Mukundan, N. Garland, D. Myers, M. Wilson, F. Garzon, D. Wood, P. Zelenay, K.L. More, K. Stroh, T. Zawodzinski, J. Boncella, J.E. McGrath, M. Inaba, K. Miyatake, M. Hori, K. Ota, Z. Ogumi, S. Miyata, A. Nishikata, Z. Siroma, Y. Uchimoto, K. Yasuda, K.I. Kimijima, and N. Iwashita, “Scientific Aspects of PEM Fuel Cell Durability and Degradation,” *Chemical Reviews* **107**[10] 3904-3951 (2007). 2620 citations
55. E. Tuncer, I. Sauers, D.R. James, A.R. Ellis, M.P. Paranthaman, A. Goyal, and K.L. More, “Enhancement of Dielectric Strength in Nanocomposites,” *Nanotechnology* **18**[32] 325704 (2007). 123 citations
56. Y. Yamamoto, M.P. Brady, Z.P. Lu, P.J. Maziasz, C.T. Liu, B.A. Pint, K.L. More, H.M. Meyer, and E.A. Payzant, “Creep-resistant, Al2O3-forming Austenitic Stainless Steels,” *Science* **316** 433-436 (2007). 268 citations
57. J. Xie, D.L. Wood, K.L. More, P. Atanassov, and R.L. Borup, “Microstructural Changes of Membrane Electrode Assemblies during PEFC Durability Testing at High Humidity Conditions,” *Journal of The Electrochemical Society* **152**[5] A1011-A1020 (2005). 309 citations
58. K.L. More, E. Lara-Curzio, P.F. Tortorelli, T.M. Brummett, and A. Szweda, “The High Temperature Stability of an Oxide/Oxide Composite at High Water-vapor Pressure,” Proceedings of the ASME Turbo Expo 2005 **1** 369-374 (2005).
59. H. Wang, M.P. Brady, K.L. More, H.M. Meyer, and J.A. Turner, “Thermally Nitrided Stainless Steels for PEM Fuel Cell Bipolar Plates: Part II: Beneficial Modification of Passive Layer on AISI446,” *Journal of Power Sources* **138**[1-2] 79-85 (2004). 114 citations
60. M.P. Brady, K. Weisbrod, I. Paulauskas, K.L. More, H. Wang, M. Wilson, F. Garzon, and L.R. Walker, “Preferential Thermal Nitridation to Form Pinhole Free Cr-nitrides to Protect PEM Fuel Cell Metallic Bipolar Plates,” *Scripta Materialia* **50**[7] 1017-1022 (2004). 168 citations
61. J. Xie, K.L. More, T.A. Zawodzinski, and W.H. Smith, “Porosimetry of MEAs Made by “Thin Film Decal” Method and its Effect on the Performance of PEFCs,” *Journal of The Electrochemical Society* **151**[11] A1841-A1846 (2004). 116 citations
62. P.F. Tortorelli and K.L. More, “Effects of High Water-vapor Pressure on Oxidation of SiC at 1200°C,” *Journal of the American Ceramic Society* **86**[8] 1249-1255 (2003).
63. K.L. More, P.F. Tortorelli, L.R. Walker, N. Miriyala, J.R. Price, and M. van Roode, “High-temperature Stability of SiC-based Composites in High-water-vapor-pressure Environments,” *Journal of the American Ceramic Society* **86**[8] 1272-1281 (2003).
64. K.L. More, P.F. Tortorelli, L.R. Walker, J. Hryn, and G. Krumdick, “Microstructural Evaluation of Dross Formation on Mg- and Non-Mg-containing Alloys from Industrial Furnaces,” *Materials at High Temperatures* **20**[3] 453-460 (2003).
65. J.A. Haynes, B.A. Pint, K.L. More, Y. Zhang, and I.G. Wright, “Influence of Sulfur, Platinum, and Hafnium on the Oxidation Behavior of CVD NiAl Bond Coatings,” *Oxidation of Metals* **58**[5-6] 513-544 (2002). 163 citations
66. K.L. More, P.F. Tortorelli, M.K. Ferber, L.R. Walker, J.R. Keiser, N. Miriyala, W.D. Brentnall, and J.R. Price, “Exposure of Ceramics and Ceramic Matrix Composites in Simulated and Actual Combustor Environments,” *Journal of Engineering for Gas Turbines and Power* **122**[2] 212-218 (2000).
67. K.L. More, P.F. Tortorelli, M.K. Ferber, and J.R. Keiser, “Observations of Accelerated SiC Recession by Oxidation at High Water-vapor Pressures,” *Journal of the American Ceramic Society* **83**[1] 211-213 (2000). 125 citations
68. K.L. More, K.S. Ailey, R.A. Lowden, and H.T. Lin, “Evaluating the Effect of Oxygen Content in BN Interfacial Coatings on the Stability of SiC/BN/SiC Composites,” *Composites Part A – Applied Science and Manufacturing* **30**[4] 463-470 (1999).
69. P.F. Becher, H.T. Lin, and K.L. More, “Lifetime-applied Stress Response in Air of a SiC-based Nicalon Fiber-reinforced Composite with a Carbon Interfacial Layer: Effects of Temperature (300-1150°C),” *Journal of the American Ceramic Society* **81**[7] 1919-1925 (1998).
70. C.E. Hori, H. Permana, K.Y. S. Ng, A. Brenner, K.L. More, K.M. Rahmoeller, and D. Belton, “Thermal Stability of Oxygen Storage Properties in a Mixed CeO2-ZrO2 System,” *Applied Catalysis B – Environmental* **16**[2] 105-117 (1998). 494 citations
71. W.Y. Lee, E. Lara-Curzio, and K.L. More, “Multilayered Oxide Interphase Concept for Ceramic-matrix Composites,” *Journal of the American Ceramic Society* **81**[3] 717-720 (1998).
72. T.B. Jackson, A.V. Virkar, K.L. More, R.B. Dinwiddie, and R.A. Cutler, “High Thermal Conductivity AlN Ceramics: The Effect of Thermodynamic, Kinetic, and Microstructural Features,” *Journal of the American Ceramic Society* **80**[6] 1421-1435 (1997). 224 citations
73. W.J. Lackey, S. Vaidyaraman, and K.L. More, “Laminated C-SiC Matrix Composites Produced by CVI,” *Journal of the American Ceramic Society* **80**[1] 113-116 (1997).
74. C.G. Cofer, J. Economy, Y.R. Xu, A. Zangvil, E. Lara-Curzio, M.K. Ferber, and K.L. More, “Characterization of Fiber/Matrix Interfaces in Composites with a BN Matrix,” *Composites Science and Technology* **56**[8] 967-975 (1996).
75. W.Y. Lee, Y.W. Bae, and K.L. More, “Synthesis of Functionally Graded Metal-Ceramic Microstructures by CVD,” *Journal of Materials Research* **10**[12] 3000-3002 (1995).
76. W.Y. Lee and K.L. More, “Crystal Orientation and Near-interface Structure of CVD MoS2 Films,” *Journal of Materials Research* **10**[1] 49-53 (1995).
77. A.A. Wereszczak, A. Parvizimajidi, M.K. Ferber, and K.L. More, “High-resolution Electron Microscopy of SiC Whisker-reinforced Alumina Composite Interfaces in Specimens Subjected to Elevated Temperatures,” *Journal of the American Ceramic Society* **76**[9] 2397-2400 (1993).
78. D.J. Kester, K.S. Ailey, R.F. Davis, and K.L. More, “Phase Evolution in BN Thin Films,” *Journal of Materials Research* **8**[6] 1213-1216 (1993). 191 citations
79. K.L. More, D.A. Koester, and R.F. Davis, “Microstructural Characterization of a Creep-deformed SiC Whisker-reinforced Silicon Nitride,” *Ultramicroscopy* **37**[1-4] 263-278 (1991).
80. K.L. More, H.S. Kong, J.T. Glass, and R.F. Davis, “Electron Microscopy of Defects in Epitaxial -SiC Thin Films Grown on Silicon and Carbon [0001] Faces of a-SiC Substrates,” *Journal of the American Ceramic Society* **73**[5] 1289-1296 (1990).
81. Y.C. Wang, H.S. Kong, J.T. Glass, R.F. Davis, and K.L. More, “Effect of Substrate Orientation on Interfacial and Bulk Character of CVD Monocrystalline SiC Thin Films,” *Journal of the American Ceramic Society* **73**[5] 1289-1296 (1990).
82. H.S. Kong, B.L. Jiang, J.T. Glass, G.A. Rozgonyi, and K.L. More, “An Examination of Double Positioning Boundaries and Interface Misfit in -SiC Films on -SiC Substrates,” *Journal of Applied Physics* **63**[8] 2645-2650 (1988).
83. J.A. Edmond, R.F. Davis, S.P. Withrow, and K.L. More, “Ion-implantation in a-SiC – Effect of Channeling Direction and Critical Energy for Amorphization,” *Journal of Materials Research* **3**[2] 321-328 (1988).
84. K.L. More, J. Bentley, C.H. Carter, Jr., and R.F. Davis, “Analytical Electron Microscopy Characterization of Boron in Sintered a-SiC,” Proceedings of Analytical Electron Microscopy – 1987 299-300 (1987).
85. K.L. More, C.H. Carter, J. Bentley, W.H. Wadlin, L. Lavanier, and R.F. Davis, “Occurrence and Distribution of Boron-containing Phases in Sintered a-SiC,” *Journal of the American Ceramic Society* **69**[9] 695-698 (1986).
86. K.L. More and R.F. Davis, “Non-equilibrium Surface Conditions and Microstructural Changes Following Pulsed Laser Irradiation and Ion Beam Mixing of Ni Overlayers on Sintered a-SiC,” Materials Science Research – Tailoring Multiphase and Composite Ceramics **20** 195-206 (1086).
87. K.L. More, J. Ryu, C.H. Carter, J. Bentley, and R.F. Davis, “Defects in SiC – Their Electrical and Physical Consequences,” Crystal Lattice Defects and Amorphous Materials **12**[1-4] 243-270 (1985).
88. R.F. Davis, J.E. Lane, J. Bentley, W.H. Wadlin, D.P. Griffis, R.W. Linton, and K.L. More, “Microanalytical and Microstructural Analyses of Boron and Aluminum Regions in Sintered a-SiC,” *Scanning Electron Microscopy* **Part 3** 1161-1167 (1985).