

PRESENTATIONS

INVITED PRESENTATIONS/SEMINARS

A Study of Thin-Film and Near-Surface Effects using Transmission Electron Microscopy, read at: AT&T Bell Laboratories, Murray Hill New Jersey (1990)

Heteroepitaxy of Thin Film Superconductors, read in: Interfaces in High Temperature Superconducting Systems, Materials Research Society Symposium Spring Meeting (1991)

Growth of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films—Nucleation, Heteroepitaxy, and Interfaces, read in: Scanning Microscopy Annual Meeting (1992)

The Influence of Contact Angle, Wettability, and Reactivity on the Development of Indirect-Bonded Metallizations for Aluminum Nitride, paper read in: Symposium on Contact Angle, Wettability and Adhesion held in honor of Professor Robert J. Good, American Chemical Society Meeting (1992)

Growth of Ceramic Thin Films by Pulsed-Laser Ablation, read at Battelle Pacific Northwest Laboratories (1992)

Growth of Ceramic Thin Films by Pulsed-Laser Ablation, read at Joint Physics and Material Science Department Colloquium, Washington State University (1992)

Growth of Ceramic Thin Films by Pulsed-Laser Deposition, read at Department of Chemical Engineering, Washington State University (1992)

Indirect-Bonded Metallization of Aluminum Nitride, paper read in: Joining and Adhesion of Advanced Inorganic Materials, Materials Research Society Symposium Spring Meeting (1993)

Electron Microscopy of Ceramic Superconductors, paper read in: Microscopy of Ceramics, Microscopy Society of America 51st. Annual Meeting (1993)

Transmission Electron Microscopy of Materials, read at: Institute for Materials and Advanced Processes, University of Idaho, Moscow Idaho (1994)

Oxide Thin Films for Electronic Applications, read at: ASM International Inland Empire Chapter Meeting, Spokane Washington (1995)

Noble Gas Inclusions in Ceramics, read at: the Neils Bohr Institute, University of Copenhagen, Denmark (1995)

Noble Gas Inclusions in Ceramics, read at the Danish Technical University, Lyngby, Denmark (1995)

Identification and Behavior of Noble Gas Inclusions in Ceramics, read at the National Center for Electron Microscopy, Lawrence Berkeley Laboratory, The University of California at Berkeley (1996)

Nanosprings: Their Growth, Structure, and Properties, read at the ASM International Central Florida Chapter Meeting, Orlando, Florida (2003)

Nanowires, Nanosprings, Nanoparticles: Their Growth, Structure, and Possible Applications, read at the Department of Materials Science and Engineering, University of Connecticut (2005)

A General Education Course in Materials, read in: Symposium on Education in Materials Science, Engineering, and Technology, International Conference on Materials for Advanced Technologies, Singapore (2005)

Refereed Conference Proceedings:

- C1. Q.M. Reynolds and M.G. Norton, 'Thick Film Platinum Temperature Sensors', *Proceedings of Test and Transducer*, (1985)
- C2. M.G. Norton, B.C.H. Steele and C.A. Leach, 'Characterisation and Metallisation of AlN Ceramics', *Science of Ceramics*, **14**, 545 (1987)
- C3. M.G. Norton, B.C.H. Steele and C.A. Leach, 'Metallisation of AlN Substrates', *British Ceramic Society Proceedings*, **41**,69 (1989)
- C4. H.G. Burckhardt, H. Vavra, and M.G. Norton, 'Investigation of the Reactions and Thick Film Metallisation of AlN Substrates', *Proceedings of the 7th. European Hybrid Microelectronics Conference*, (1989)
- C5. M.G. Norton, L.A. Tietz, S.R. Summerfelt and C.B. Carter, 'Direct Observation by Transmission Electron Microscopy of the Early Stages of Growth of Superconducting Thin Films', in *High Temperature Superconductors: Fundamental Properties and Novel Materials Processing*, edited by J. Narayan, C.W. Chu, L.F. Schneemeyer, and D.K. Christen *Materials Research Society Symposium Proceedings*, **169**, 509 (1990)
- C6. M.G. Norton, L.A. Tietz, C.B. Carter, B.H. Moeckly, S.E. Russek and R.A. Buhrman, 'Grain Boundaries in YBa₂Cu₃O_{7-δ} Thin Films', in *High Temperature Superconductors: Fundamental Properties and Novel Materials Processing*, edited by J. Narayan, C.W. Chu, L.F. Schneemeyer, and D.K. Christen *Materials Research Society Symposium Proceedings*, **169**, 513 (1990)
- C7. S.E. Russek, B.H. Moeckly, R.A. Buhrman, J.T. McWhirter, A.J. Sievers, M.G. Norton, L.A. Tietz and C.B. Carter, 'Pulsed Laser Deposition of High-Tc Superconducting Thin Films', in *High Temperature Superconductors: Fundamental*

- Properties and Novel Materials Processing*, edited by J. Narayan, C.W. Chu, L.F. Schneemeyer, and D.K. Christen *Materials Research Society Symposium Proceedings*, **169**, 455 (1990)
- C8. M.G. Norton and B.C.H. Steele, 'Thick Film Metallization of Aluminum Nitride', in *Advanced Electronic Packaging Materials*, edited by C-Y Li, J.P. Partridge, C.J. Chen and A. Barfknecht *Materials Research Society Symposium Proceedings*, **167**, 283 (1989)
- C9. M.G. Norton, J.M. Kajda and B.C.H. Steele, 'A Technique for Brazing Aluminum Nitride Substrates', *Advanced Electronic Packaging Materials*, edited by C-Y Li, J.P. Partridge, C.J. Chen and A. Barfknecht *Materials Research Society Symposium Proceedings*, **167**, 289 (1989)
- C10. C.B. Carter, S.R. Summerfelt, L.A. Tietz, M.G. Norton and D.W. Susnitzky, 'Epitactic and Topotactic Growth Using Thin Films', *Institute of Physics Conference Series*, **98**, 415 (1989)
- C11. J.M. Kajda, M.G. Norton and B.C.H. Steele, 'A Technique for Brazing AlN Substrates', *Proceedings of European Conference on Advanced Materials and Processes*, (1989)
- C12. M.G. Norton, C.B. Carter, B.H. Moeckly, S.E. Russek and R.A. Buhrman, 'Optimizing Process Parameters for the Growth of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films', in *Laser Ablation for Materials Synthesis*, edited by D.C. Paine and J.C. Bravman, *Materials Research Society Symposium Proceedings*, **191**, 141 (1990)
- C13. M.G. Norton and C.B. Carter, 'Effect of Substrate on the Early Stages of Growth of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films', in *Laser Ablation for Materials Synthesis*, edited by D.C. Paine and J.C. Bravman, *Materials Research Society Symposium Proceedings*, **191**, 165 (1990)
- C14. M.G. Norton, G.R. English and C.B. Carter, 'Early Stages of Growth of BaTiO_3 Thin Films', in *Ferroelectric Thin Films*, edited by A.I. Kingon and E.R. Myers, *Materials Research Society Symposium Proceedings*, **200**, 237 (1990)
- C15. S. McKernan, M.G. Norton and C.B. Carter, 'High Resolution Electron Microscopy of Planar Defects in AlN', in *High Resolution Electron Microscopy of Defects in Materials*, edited by R. Sinclair, U. Dahmen and D.J. Smith, *Materials Research Society Symposium Proceedings*, **183** (1990)
- C16. M.G. Norton, C.B. Carter, B.H. Moeckly, S.E. Russek and R.A. Buhrman, 'Microstructure Development in Thin Film Superconductors', *Science and*

- Technology of Thin Film Superconductors 2*, edited by R.D. McConnell and R. Noufi, Plenum Press, New York, 379 (1991)
- C17. M.G. Norton and C.B. Carter, 'Microstructure of Thin $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Films', *Proceedings of the XII International Congress for Electron Microscopy*, 8 (1990)
- C18. M.G. Norton and C.B. Carter, 'Nucleation and Heteroepitaxy of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films', *Proceedings of the XII International Congress for Electron Microscopy*, 88 (1990)
- C19. S. McKernan, M.G. Norton and C.B. Carter, 'Low Energy Surfaces and Interfaces in Aluminum Nitride', *Proceedings of the XII International Congress for Electron Microscopy*, 350 (1990)
- C20. M.G. Norton, G.R. English, C. Scarfone and C.B. Carter, 'Early Stages of Growth of BaTiO_3 Thin Films studied by Transmission Electron Microscopy', *Proceedings of the XII International Congress for Electron Microscopy*, 706 (1990)
- C21. M.G. Norton, E.L. Fleischer, W. Hertl, J.W. Mayer and C.B. Carter, 'Direct Observation of Microstructural Changes in Ion-Beam-Modified Ceramics', *Proceedings of the XII International Congress for Electron Microscopy*, 1048 (1990)
- C22. M.G. Norton, C.B. Carter, B.H. Moeckly, S.E. Russek and R.A. Buhrman, 'Interfaces in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films', *Proceedings of the 2nd. International Conference on Electronic Materials*, 129 (1990)
- C23. B.H. Moeckly, D.K. Lathrop, S.E. Russek, R.A. Buhrman, M.G. Norton and C.B. Carter, 'Growth and Properties of $\text{YBa}_2\text{Cu}_3\text{O}_7$ Thin Films on Non-Lattice-Matched and Polycrystalline Substrates' *IEEE Transactions on Magnetics* **27**, 1017 (1991)
- C24. C. Scarfone, M.G. Norton, C.B. Carter, J. Li and J.W. Mayer, 'Characterization of Barium Titanate Thin Films Deposited by Pulsed-Laser Ablation', in *Surface Chemistry and Beam-Solid Interactions*, edited by H. Atwater, F.A. Houle and D. Lowndes *Materials Research Society Symposium Proceedings*, **201**, (1990)
- C25. S. McKernan, M.G. Norton and C.B. Carter, 'Grain Boundaries in High Thermal Conductivity Aluminum Nitride', in *Electronic Packaging Materials Science*, edited by E.D. Lillie, R.J. Jaccodine, P. Ho and K. Jackson *Materials Research Society Symposium Proceedings*, **203**, (1990)
- C26. M.G. Norton, T.K.A. Yang, P. Kotula, K.L. Rugg, S. McKernan and C.B. Carter, 'Modification and Surface Reactions of Aluminum Nitride Surfaces', in *Electronic*

- Packaging Materials Science*, edited by E.D. Lillie, R.J. Jaccodine, P. Ho and K. Jackson *Materials Research Society Symposium Proceedings*, **203**, (1990)
- C27. M.G. Norton, K.P.B. Cracknell, C. Scarfone, C.B. Carter, J. Li and J.W. Mayer, 'Heteroepitactic Growth of BaTiO₃ on MgO by Pulsed-Laser Ablation', in *Heteroepitaxy of Dissimilar Materials*, edited by J.P. Harbison, A. Zangwill, R.F.C. Farrow and P.S. Peercy *Materials Research Society Symposium Proceedings*, **221** (1991)
- C28. M.G. Norton, P.G. Kotula, J. Li, S. McKernan, K.P.B. Cracknell, C.B. Carter and J.W. Mayer, 'Growth and Microstructure of Aluminum Nitride Thin Films', in *Mechanical Behavior of Materials and Structures in Microelectronics*, edited by E. Suhir, R.C. Cammarata and D.D.L. Chung *Materials Research Society Symposium Proceedings*, **226** (1991)
- C29. M.G. Norton, S. McKernan and C.B. Carter, 'A Technique for the Examination of Surface Effects in Aluminum Nitride Ceramics', in *Materials Reliability Issues in Microelectronics*, edited by J.R. Lloyd, P.S. Ho, C.T. Sah and F. Yost *Materials Research Society Symposium Proceedings*, **225** (1991)
- C30. M.G. Norton and C.B. Carter, 'Observations of the Growth of YBa₂Cu₃O_{7-δ} Thin Films on MgO by Pulsed-Laser Ablation', *Proceedings of the 49th. Annual Meeting of the Electron Microscopy Society of America* edited by G.W. Bailey and E.L. Hall, 1068 (1991)
- C31. M.G. Norton, P.G. Kotula, and C.B. Carter, 'Growth and Characterization of Aluminum Nitride Thin Films', *Proceedings of the 49th. Annual Meeting of the Electron Microscopy Society of America* edited by G.W. Bailey and E.L. Hall, 952 (1991)
- C32. I.M. Anderson, M.G. Norton, and C.B. Carter, 'TEM Study of Thin Iron Oxide Films Deposited by Pulsed-Laser Ablation', *Proceedings of the 49th. Annual Meeting of the Electron Microscopy Society of America* edited by G.W. Bailey and E.L. Hall, 780 (1991)
- C33. M.G. Norton, E.S. Hellman, E.H. Hartford, Jr., and C.B. Carter, 'Observations on the Growth of Barium Bismuth Oxide Thin Films', *Proceedings of the 50th. Annual Meeting of the Electron Microscopy Society of America* 76 (1992)
- C34. M.G. Norton and C.B. Carter, 'Analysis of Moire Patterns in Images of Thin YBa₂Cu₃O_{7-δ} Films on MgO', *Proceedings of the 50th. Annual Meeting of the Electron Microscopy Society of America* 236 (1992)
- C35. W. Jiang, M.G. Norton, and J.T. Dickinson, 'Surface Modification of Polytetrafluoroethylene and the Deposition of Copper Films', to be published in

- Polymer/Inorganic Interfaces*, edited by R.L. Opila, A.W. Czanderna, and F.J. Boerio, *Materials Research Society Symposium Proceedings*, **304** (1993)
- C36. M.G. Norton, 'Indirect-Bonded Metallization of Aluminum Nitride', in *Joining and Adhesion of Advanced Inorganic Materials*, edited by A.H. Carim, D.S. Schwartz, and R.S. Silbergliitt, *Materials Research Society Symposium Proceedings*, **314**, 223 (1993).
- C37. M.G. Norton and C.B. Carter, 'Electron Microscopy of Ceramic Superconductors', in *Proceedings of the 51st. Annual Meeting of the Microscopy Society of America* 934 (1993).
- C38. M.G. Norton, R.R. Biggers, I. Maartense, E.K. Moser, and J.L. Brown, 'Examination of Particles and Outgrowths on the Surface of Epitaxial YBa₂Cu₃O₇ Thin Films', to appear in *Epitaxial Oxide Thin Films and Heterostructures*, edited by D.K. Fork, R. Ramesh, J.M. Phillips, and R.M. Wolf, *Materials Research Society Symposium Proceedings*, **341**, 183 (1994).
- C39. M.G. Norton, R.R. Biggers, I. Maartense, E.K. Moser, and J.L. Brown, 'Electron and Scanning Probe Microscopies in the Study of YBa₂Cu₃O₇ Thin Film Growth', in *Proceedings of the 52nd. Annual Meeting of the Microscopy Society of America* , edited by G.W. Bailey and A.J. Garratt-Reed, 810, (1994).
- C40. R.R. Biggers, M.G. Norton, I. Maartense, T.L. Peterson, E.K. Moser, D. Dempsey, M.A. Capano, J. Talvacchio, J.L. Brown, and J.D. Wolf, 'Microstructure and Properties of YBa₂Cu₃O₇ Thin Films Grown on Vicinal LaAlO₃ Substrates', *IEEE Transactions on Applied Superconductivity* (1995).
- C41. R.R. Biggers, M.G. Norton, I. Maartense, E.K. Moser, D. Dempsey, T.L. Peterson, and J.L. Brown, 'Observations of the Growth of YBa₂Cu₃O₇ Thin Films at Very High Laser Fluences', in: *Film Synthesis and Growth Using Energetic Beams*, edited by H.A. Atwater, J.T. Dickinson, D.H. Lowndes, and A. Polman, *Materials Research Society Symposium Proceedings*, **388**, 67 (1995).
- C42. M.G. Norton, W. Jiang, and J.T. Dickinson, 'The Morphology of Polytetrafluoroethylene (PTFE) Thin Films Formed by Pulsed-Laser Deposition', in: *Polymer/Inorganic Interfaces II*, edited by L. Drzal, N.A. Peppas, R.L. Opila, and C. Schutte, *Materials Research Society Symposium Proceedings* **385** (1995).
- C43. W. Jiang, M.G. Norton, J.T. Dickinson, and N.D. Evans, 'Pulsed-Laser Deposition of Inorganic Nitrides', in: *Film Synthesis and Growth Using Energetic Beams*, edited by H.A. Atwater, J.T. Dickinson, D.H. Lowndes, and A. Polman, *Materials Research Society Symposium Proceedings*, **388**, 103 (1995).
- C44. M.G. Norton, 'Teaching Materials Science Within an Electrical Engineering Curriculum', *ASEE Annual Meeting Proceedings* 1939 (1995).

- C45. M.G. Norton, J. Bentley, and R.R. Biggers, 'In Situ Electron Microscopy Study of Structural Transformations in Single Crystal Lanthanum Aluminate, *Proceedings Microscopy and Microanalysis 1995*, edited by G.W. Bailey, M.H. Ellisman, R.A. Hennigar, and N.J. Zaluzec 238 (1995).
- C46. M.G. Norton, R.R. Biggers, E.K. Moser, T.L. Peterson, and I. Maartense, 'Scanning Probe Microscopy Study of the Growth of YBa₂Cu₃O₇ Thin Films ' *Proceedings Microscopy and Microanalysis 1995*, edited by G.W. Bailey, M.H. Ellisman, R.A. Hennigar, and N.J. Zaluzec 380 (1995).
- C47. W. Jiang, M.G. Norton, and D.B. Poker, 'Surface Morphology of Xenon Implanted Magnesium Oxide Observed by Atomic Force Microscopy' *Proceedings Microscopy and Microanalysis 1995*, edited by G.W. Bailey, M.H. Ellisman, R.A. Hennigar, and N.J. Zaluzec 356 (1995).
- C48. S. McKernan and M.G. Norton, 'The Detection of Xe Gas Bubbles in MgO High-Resolution Lattice Images' *Proceedings Microscopy and Microanalysis 1995*, edited by G.W. Bailey, M.H. Ellisman, R.A. Hennigar, and N.J. Zaluzec 632 (1995).
- C49. D. Zhang, B.G. Kempton, D.N. McIlroy, Y. Geng, and M.G. Norton, 'Synthesis of Boron Carbide Nanowires and Nanocrystal Arrays by Plasma Enhanced Chemical Vapor Deposition', in: *Carbon Nanotubes, Fullerenes, and Related Carbon Materials*, edited by Y. Achiba, P. Eklund, M. Green, R. Haddon, and S. Iijima, *Materials Research Society Symposium Proceedings 536*, 323 (1999).
- C50. D.P. Eakin, M.G. Norton, and D.F. Bahr, 'Phase Transformations in Sol-Gel PZT Thin Films', in: *Materials Science of Novel Oxide Based Electronics, Materials Research Society Symposium Proceedings 623*, 185-190 (2000).
- C51. M. Pang, D.E. Eakins, M.G. Norton, and D.F. Bahr, 'Relationships Between Film Chemistry, Structure, and Mechanical Properties in Titanium Oxides', in: *Materials Research Society Symposium Proceedings* (2000).
- C52. M.G. Norton and D.F. Bahr, 'An Upper-Division General Education Course on Materials for Non-Engineering Students', *Proceedings of the 2002 American Society for Engineering Education Annual Conference & Exposition*, Montréal, Canada (2002). Winner **Best Paper Award**.
- C53. D.N. McIlroy, D. Zhang, Y. Kranov, H. Han, A. Alkhateeb, and M.G. Norton, 'The Effects of Crystallinity and Catalyst Dynamics on Nanospring Formation', *Materials Research Society Fall Meeting* (in press 2002)
- C54. L.M.R. Eakins, D.E. Eakins, C.D. Richards, M.G. Norton, R.F. Richards, and D.F. Bahr, 'Influence of Structure and Chemistry on Piezoelectric Properties of PZT in a MEMs Power Generation Application,' in: *Structure-Property Relationships of*

- Oxide Surfaces and Interfaces II*, edited by X. Pan, K.B. Alexander, C.B. Carter, R.W. Grimes, and T. Wood (Mater. Res. Soc. Symp. Proc. 751, Warrendale, PA, 2003) p. Z3.46.1
- C55. D.E. Eakins, J. LeBret, M.G. Norton, D.F. Bahr, and J. Dumm, ‘Electron Microscopy of Compound Oxide Laser Materials’ in: *Laser Crystals, Glasses, and Nonlinear Materials Growth and Characterization*, edited by Y.Y. Kalisky, *Proceedings of SPIE* Vol. 4970 (2003)
- C56. J.B. LeBret and M.G. Norton, “Tin Whiskers—A Recurring Industrial Problem Examined with Electron Microscopy,” *Microsc. Microanal.* 9 (Suppl 2) 806CD (2003)
- C57. D. E. Eakins, M. G. Norton, D.F. Bahr, J. Q. Dumm, “Application of Electron Microscopy to Solve Problems in the Growth of Laser Crystals,” *Microsc. Microanal.* 9 (Suppl 2) 1014CD (2003)
- C58. J. B. LeBret, D. E. Eakins, M. G. Norton, D. F. Bahr, X. Lei, “Defect Characterization in Next Generation Laser Crystals,” *Microsc. Microanal.* 9 (Suppl 2) 1016CD (2003)
- C59. M.G. Norton, M. J.F. Guinel, D. Rodriguez-Marek, D.F. Bahr, and R.B. Davis, “Extreme Service Packaging for Silicon Carbide Electronic Devices,” *Materials Research Society Spring Meeting* (in press 2004)
- C60. M.G. Norton and D.F. Bahr, “A General Education Course on Materials,” *Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, Utah, (2004).
- C61. M.G. Norton and D.F. Bahr, “How to Run a Successful Research Experience for Undergraduates (REU) Site,” *Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, Utah, (2004).
- C62. R.T. Frame, C. Pezeshki, and M.G. Norton, ‘Integrating PLM Methods into the Undergraduate Curriculum,’ *Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, Utah, (2004).
- C63. B. Humann, C. Pezeshki, and M.G. Norton, “Application of PLM to MEMS Devices in Education,” *Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, Utah, (2004).

Published Abstracts:

- A1. S.E. Russek, D.K. Lathrop, B.H. Moeckly, R.A. Buhrman, M.G. Norton, C.B. Carter, D.H. Shin, and J. Silcox, 'Effects of Growth Parameters and Substrate Surface Preparation on Microstructure and Electrical Properties of Laser Ablated $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films', *Bulletin of the American Physical Society* **35**, 582 (1990)
- A2. B.H. Moeckly, D. Chamberlin, D.K. Lathrop, R.A. Buhrman, M.G. Norton and C.B. Carter, 'Growth of $\text{YBa}_2\text{Cu}_3\text{O}_7$ Thin Films on Nonlattice Matched Substrates' *Bulletin of the American Physical Society* **36**, 425 (1991)
- A3. S.C. Langford, M.G. Norton, W. Jiang, L.C. Jensen, and J.T. Dickinson, 'Xenon Emission Accompanying Failure of Xe-Implanted Cubic Zircoina', *Bulletin of the American Physical Society* **38**, 790 (1993)
- A4. E.S. Hellman, E.H. Hartford, Jr., A. Kussmaul, S. Martin, and M.G. Norton, 'Atomic Layer-By-Layer Molecular Beam Epitaxy of Barium Bismuthate Films and Heterostructures', *Bulletin of the American Physical Society* **38**, 60 (1993)
- A5. J.T. Dickinson, M.G. Norton, J.-J. Shin, W. Jiang, and S.C. Langford, 'Laser Ablation of PTFE for Thin Film Growth', *Bulletin of the American Physical Society* **39**, 107 (1994)
- A6. The Effects of Catalyst Dynamics and Composition on Nanospring Formation, The American Physical Society, Austin, TX, March 6, 2003. Abdullah Alkhateeb, Daqing Zhang, David N. McIlroy, and M. Grant Norton, *Bulletin of the American Physical Society*, **48**, (2003)

Unpublished Conference Presentations:

- U1. M.G. Norton, C.B. Carter, B.H. Moeckly, S.E. Russek and R.A. Buhrman, 'Study of the Growth of Superconducting Thin Films using Transmission Electron Microscopy', *Paper read at the 92nd Meeting of the American Ceramic Society, Dallas TX* (1990)
- U2. M.G. Norton, G.R. English and C.B. Carter, 'Pulsed Laser Deposition of Epitactic BaTiO_3 Thin Films', *Paper read at the 92nd Meeting of the American Ceramic Society, Dallas TX* (1990)
- U3. S. McKernan, M.G. Norton and C.B. Carter, 'Microstructure and Reactions of Aluminum Nitride Ceramic Substrates', *Paper read at the 92nd Meeting of the American Ceramic Society, Dallas TX* (1990)
- U4. S.R. Summerfelt, M.G. Norton, G.R. English and C.B. Carter, 'Thin Film Growth of Ferrites and other Spinel', *Paper read at the 92nd Meeting of the American Ceramic Society, Dallas TX* (1990)

- U5. E.L. Fleischer, M.G. Norton, C.B. Carter, J.W. Mayer and W. Hertl, 'Microstructure of Ion Beam Modified Ceramics', *Paper read at the 92nd Meeting of the American Ceramic Society, Dallas TX* (1990)
- U6. M.G. Norton, C.B. Carter, B.H. Moeckly and R.A. Buhrman, 'Effect of Processing Variables on the Microstructure of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films' *Paper read in Materials Issues in Applications of Ceramic Superconductors, Materials Research Society Symposium*, (1990)
- U7. S. McKernan, M.G. Norton and C.B. Carter, 'High Resolution Electron Microscopy of Grain Boundaries in Laser Deposited $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films' *Paper read in Materials Issues in Applications of Ceramic Superconductors, Materials Research Society Symposium*, (1990)
- U8. M.G. Norton and C.B. Carter, 'Moiré Fringes, Misfit Dislocations and Heteroepitaxy of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films' *Paper read in Materials Issues in Applications of Ceramic Superconductors, Materials Research Society Symposium*, (1990)
- U9. M.G. Norton, C.B. Carter, B.H. Moeckly and R.A. Buhrman, 'Microstructure of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films Grown on Vicinal Surfaces' *Paper read in Materials Issues in Applications of Ceramic Superconductors, Materials Research Society Symposium*, (1990)
- U10. M.G. Norton, C.B. Carter, B.H. Moeckly, R.A. Buhrman, E.H. Hartford and E.S. Hellman, 'Heteroepitaxy of Thin Film Superconductors', *Paper read in Interfaces in High Temperature Superconducting Systems, Materials Research Society Symposium*, (1991)
- U11. S. McKernan, M.G. Norton, P.G. Kotula, J. Li, J.W. Mayer, and C.B. Carter, 'Microstructure of Aluminum Nitride Thin Films', *Paper read at the 93rd. Annual Meeting of the American Ceramic Society, Cincinnati OH*, (1991)
- U12. I.M. Anderson, M.G. Norton, U.M. Ko, and C.B. Carter, 'A Technique for the Study of the Microstructure Transformation of Very Thin Films: Iron Oxide', *Paper read at the 93rd. Annual Meeting of the American Ceramic Society, Cincinnati OH*, (1991)
- U13. M.G. Norton, E.S. Hellman, E.H. Hartford Jr. and C.B. Carter, 'Growth of Barium Bismuth Oxide Superconducting Thin Films by MBE', *Paper read in High-Temperature Superconductors: Materials Research for Emerging Technologies, Materials Research Society Symposium* (1991)
- U14. B. Morosin, M.G. Norton, C.B. Carter, E.L. Venturini, D.S. Ginley, and C.P. Tigges, 'Structural Studies on Tl-Ca-Ba-Cu-O Superconducting Thin Films', *Paper read in Defect Structures in Crystalline Electronic Oxides, Materials Research Society Symposium* (1992)

- U15 M.G. Norton and C.B. Carter, 'Factors Influencing the Growth of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films Deposited by Pulsed-Laser Ablation', *Paper read at the International Workshop on Superconductivity, Honolulu, Hawaii* (1992)
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