

LIST OF PUBLICATIONS

Peer reviewed

1. Dang, Y.Y.; Bhuiyan, M.S.; Paranthaman, M.P. Zirconium Oxide Nanostructures by Anodic Oxidation, *Journal of Undergraduate Research*, Published by US DOE, Office of Science, 2008, Vol. VIII, 48-53.
2. Paranthaman, M.P.; Bhuiyan, M.S.; Sathyamurthy, S.; Heathenry, L.; Cantoni, C.; Goyal, A. Improved textured La₂Zr₂O₇ buffer on La₃TaO₇ seed for all-MOD Buffer/YBCO coated conductors, *Physica C* 2008, 468, 1587- 1590.
3. M.S. Bhuiyan, B. J. Taylor, M. Paranthaman, J.R. Thompson, and J. Sinclair: microstructure and magnetic properties of electrodeposited cobalt film, *Journal of Materials Science*. (2008), 43, 1644-1649.
4. M.S. BHUIYAN, S. SATHYAMURTHY, M. PARANTHAMAN, DEVELOPMENT OF MODIFIED MOD-TFA APPROACH FOR YBCO FILM GROWTH; *IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY* 17 (2007) 3557.
5. M.P. Paranthaman, S. Sathyamurthy, T. Aytug, M.S. Bhuiyan, A. Goyal, T. Kodenkandath, X. Li, M.W. Rupich, MOD Buffer/YBCO Approach to Fabricate Low-Cost Second Generation HTS Wires; *IEEE Transactions on Applied Superconductivity* 17 (2007) 3332.
6. R.C. Duckworth, P.M. Paranthaman, F.A. List, M.S. Bhuiyan and M.J. Gouge, AC losses in YBCO coated conductors with inkjet filaments; *IEEE Transactions on Applied Superconductivity* 17 (2007) 3159.
7. S Sathyamurthy, K.J. Leonard, M.S. Bhuiyan, T Aytug, M Paranthaman, Low-cost approaches for flux-pinning enhancements in YBCO films using solution processing; *IEEE Transactions on Applied Superconductivity* 17 (2007) 3668.
8. M. S. Bhuiyan, M. Paranthaman, and S. Sathyamurthy, Improved textured oxide films growth on metal substrates for HTS coated conductors, *Journal of Electronic Materials* (2007) 36, 1270-1274.
9. M.S. Bhuiyan, M. Paranthaman, A. Goyal, Lee Heatherly and D.B. Beach:
Deposition of Rare Earth Tantalate Buffers on Textured Ni-W Substrates for YBCO Coated Conductor Using Chemical Solution Deposition Approach. *J. Mat. Res.* 21 (2006) 767.
10. E. Stewart, M.S. Bhuiyan, S. Sathyamurthy, and M. Paranthaman, Studies of Solution Deposited Cerium Oxide Thin Films on Textured Ni-Alloy Substrates for YBCO Superconductor. *Mat. Res. Bulletin* 3241 (2006) 1.
11. M.S. Bhuiyan, M. Paranthaman and K. Salama, Solution Derived Epitaxial Oxide Thin Films - A Review. *Supercond. Sci. Technol.* 19 (2006) R1-R21.

12. Tolga Aytug, M Paranthaman, K.J. Leonard, H.Y. Zhai, M.S. Bhuiyan, E.A. Payzant, A Goyal, S Sathyamurthy, D.B. Beach, P.M. Martin, D.K. Christen, H.E. Smith, T Haugan, P.N. Barnes, M.W. Rupich, Assessment of chemical solution synthesis and properties of $Gd_2Zr_2O_7$ thin films as buffer layers for second generation high-temperature superconductor wires. *J. Mat. Res.* 20 (2005) 2988.
13. M.S. Bhuiyan, M. Paranthaman, S. Sathyamurthy, A. Goyal and K. Salama:
Growth of Rare Earth Niobate Based Pyrochlores on Textured Ni-W Substrates with Ionic Radii Dependency. *J. Mat. Res.* 20 (2005) 904.
14. M.S. Bhuiyan, M. Paranthaman, S. Sathyamurthy, and D.B. Beach, Development of Rare Earth Niobate Buffer Layer for YBCO Coated Conductor Using Chemical Solution Deposition Approach. (*Mat. Res. Soc. Symp. Proc.* 2005).
15. M. Paranthaman, M.S. Bhuiyan, S. Sathyamurthy, H.Y. Zhai, A. Goyal, and K. Salama: Epitaxial growth of solution based rare earth niobate, RE_3NbO_7 films on biaxially textured Ni-W substrates. *J. Mat. Res.* 20, (2005) 6.
16. S. Sathyamurthy, M. Paranthaman, D.F. Lee, A. Goyal and M.S. Bhuiyan: Solution deposition approach for high Je coated conductor fabrication. *IEEE Transactions on Applied Superconductivity*, 15 (2005) 2974.
17. Paranthaman, M.P. ; Sathyamurthy, S.; Bhuiyan, M.S.; Goyal, A.; Kodenkandath, T.; Li, X.; Zhang, W.; Thieme, C.L.H.; Schoop, U.; Verebelyi, D.T.; Rupich, M.W. Improved YBCO coated conductors using alternate buffer architectures. *IEEE Transactions on Applied Superconductivity*, 15 (2005) 2632.
18. M.S. Bhuiyan, M. Paranthaman, S. Kang, D. F. Lee, and K. Salama: Growth of Epitaxial Y_2O_3 Buffer Layers on Biaxially Textured Ni-W Substrates for YBCO Coated Conductors by MOD Approach. *Physica C* 422 (2005) 95.
19. M.S. Bhuiyan, M. Paranthaman, S. Sathyamurthy, T. Aytug, S. Kang, D.F. Lee, A.Goyal, E.A. Payzant and K. Salama, Growth of Epitaxial Y_2O_3 Film on Biaxially Textured Ni-W Substrates, edited by V. Matias, J. Talvacchio, X. Xi, Z. Han, and H.W. Neumuller, (*Mat. Res. Soc. Symp. Proc.* EXS-3, Warrendale, PA, 2004), p. 57.
20. M.S. Bhuiyan, M. Paranthaman, D. Beach, L. Heatherly, A. Goyal, E.A. Payzant and K Salama: Epitaxial Growth of Eu_3NbO_7 buffer layers on Biaxially Textured Ni-W Substrates. *Ceramic Transactions* 160, (2004) 35.
21. S. Sathyamurthy, M. Paranthaman, H-Y.Zhai, S.Kang, C.Cantoni, S.Cook, L. Heatherly, A. Goyal, H.M.Christen, M.S. Bhuiyan, and K. Salama: Solution buffer layers for YBCO coated conductor. *Ceramic Transactions*, Volume 149, Pages 3-8, 2004.

22. M.S. BHUIYAN, M. PARANTHAMAN, S. SATHYAMURTHY, T. AYTUG, S. KANG, D.F. LEE, A.GOYAL, E.A. PAYZANT AND K. SALAMA: MOD APPROACH FOR THE GROWTH OF EPITAXIAL CeO_2 BUFFER LAYERS ON BIAXIALY TEXTURED NI-W SUBSTRATES FOR YBCO COATED CONDUCTORS. *SUPERCOND. SCI. TECHNOL.* 16, 1305 (2003).
23. Y X Zhou, M S Bhuiyan, S Scruggs, H Fang, M Mironova and K Salama: Strontium titanate buffer layers deposited on rolled Ni substrates with metal organic deposition. *Supercond. Sci. Technol.* 16 901 (2003).
24. Y.X. Zhou, M.S. Bhuiyan, H. Fang and K. Salama: Chemically coated buffer layers deposited on rolled Ni substrates for HTS coated conductors, *Ceramic Transactions*, 149 (2003) 51.
25. Y X Zhou, M S Bhuiyan, S Scruggs, H Fang and K Salama: Role of mechanical deformation in the texturing of coated conductor composites. *Supercond. Sci. Technol.* 16 (2003) 1077.

Conference Abstract and Presentation

1. M.S. Bhuiyan: Chemically Deposited Buffer Layers for YBCO Coated Conductors. Materials Research Society Spring Meeting 2006, San Francisco, California, USA.
2. S. Sathyamurthy, K. Leonard, M.S. Bhuiyan, T. Aytug, and M. Paranthaman, Flux-pinning enhancements in YBCO films using solution processing for low cost coated conductor fabrication, Materials Research Society Spring Meeting 2006, San Francisco, California, USA.
3. M.S. Bhuiyan, M. Paranthaman, S. Sathyamurthy, D.F. Lee, S. Kang, A. Goyal, and K. Salama: Study of chemically deposited buffer layers for YBCO coated conductors, Materials Research Society Spring Meeting 2005, San Francisco, California, USA.
4. Manisha V Rane, Harry Efstathiadis, Hassa Bakhru, Frank Ramos, Pradeep Haldar, M.S. Bhuiyan, Amit Goyal and M. Parans Paranthaman: Chemical and Microstructural Evaluation of Europium Niobate Buffer Layers for YBCO Coated Conductors, Materials Research Society Spring Meeting 2005, San Francisco, California, USA.
5. M. Paranthaman, M.S. Bhuiyan, A. Goyal, T. Kodenkandath, X. Li, W. Zhang, C. Thieme, U. Schoop, D.T. Verebelyi and M. Rupich: Chemical solution deposition o functional buffers for YBCO coated conductors, Materials Research Society Spring Meeting 2005, San Francisco, California, USA.
6. M.P. Paranthaman, S. Sathyamurthy, A. Goyal, M.S. Bhuiyan, T. Kodenkandath, X. Li, W. Zhang, U. Schoop, C.L.H. Thieme, D.T. Verebelyi, and M.W. Rupich, Improved YBCO Coated Conductors Using Alternate Buffer Architectures, Applied Superconductivity Conference 2004 October 3-8, 2004 in Jacksonville, Florida, USA.
7. M.S. Bhuiyan, M. Paranthaman, D. Beach, L. Heatherly, A. Goyal, E.A. Payzant and K Salama: Epitaxial Growth of Eu_3NbO_7 buffer layers on Biaxially Textured Ni-W Substrates. 106th Annual Meeting & Exposition to The American Ceramic Society, April 10-13, 2004 , Baltimore, Maryland, USA.

8. S. Sathyamurthy, M. Paranthaman, E.A. Payzant, D.F. Lee, M.S. Bhuiyan, A. Goyal , X. Li, T. Kodenkandath, U. Schoop, and M. Rupich, Solution Deposition Approach to High Jc Coated Conductor Fabrication, Applied Superconductivity Conference 2004 October 3-8, 2004 in Jacksonville, Florida, USA.
9. S. Sathyamurthy, M. Paranthaman, H. Zhai, S. Kang, A. Goyal, M.S. Bhuiyan, and K. Salama: All solution coated conductor fabrication, Materials Research Society Fall Meeting 2003, Boston, Massachusetts, USA.
10. M. Paranthaman, M.S. Bhuiyan, T. Aytug, M.S. Bhuiyan, L. Heatherly, A. Goyal, D.K. Christen, D.M. Kroger, X. Li, U. Schoop, D.T. Verebelyi and M. Rupich: Alternative buffer layer architecture for YBCO coated conductors, Materials Research Society Fall Meeting 2003, Boston, Massachusetts, USA.
11. M.S. Bhuiyan, M. Paranthaman, S. Sathyamurthy, E.A. Payzant and K. Salama: MOD Approach to Growth Epitaxial CeO₂ Buffer Layers on Biaxially Textured Ni– W Substrates for YBCO Coated Conductors, Materials Research Society Fall Meeting 2003, Boston, Massachusetts, USA.
12. S. Sathyamurthy, M. Paranthaman, H-Y.Zhai, S.Kang, C.Cantoni, S.Cook, L. Heatherly, A. Goyal, H.M.Christen, M.S. Bhuiyan, and K. Salama: Solution buffer layers for YBCO coated conductor. 105th Annual Meeting & Exposition to The American Ceramic Society, April 27-30, 2003 , Nashville, Tennessee, USA.
13. Y.X. Zhou, M.S. Bhuiyan, H. Fang and K.Salama, “Chemically Coated Buffer Layers Deposited on Rolled Ni Substrates for HTS Coated Conductors”. 105th Annual Meeting & Exposition to The American Ceramic Society, April 27-30, 2003 , Nashville, Tennessee, USA.
14. M.P. Paranthaman, S. Sathyamurthy, A. Goyal, and M.S. Bhuiyan: Chemical Precursor Routes to All Solution YBCO Conductors, 204th Meeting of The Electrochemical Society, October 12-16, 2003, Orlando, Florida, USA.