

Full List of Publication

Publications in SCI Journals:

1. "Effect of BaO Addition on Magnesium Lanthanum Alumino Borosilicate-Based Glass-Ceramic Sealant for Anode-Supported Solid Oxide Fuel Cell", Saswati Ghosh, **A. Das Sharma**, A.K. Mukhopadhyay, P. Kundu and R.N. Basu, *Int. J. Hydrogen Energy*, 35 (2010) 272 - 283.
2. "Ball mill assisted synthesis of Ni-YSZ cermet anode by electroless technique and their characterization", Madhumita Mukhopadhyay, J. Mukhopadhyay, **A. Das Sharma** and R.N. Basu, *Mater. Sc & Engg B*, 163 (2009) 120 -127
3. "Glass-based Sealants for Application in Planar Solid Oxide Fuel Cell Stack" Saswati Ghosh, **A. Das Sharma**, P. Kundu, and R.N. Basu, *Transactions of the Indian Ceramic Society*, 67 [4] (2008), 161-182. - Review Article
4. "Processing of High Performance Anode-supported Planar Solid Oxide Fuel Cell", R.N. Basu, **A. Das Sharma**, A. Dutta and J. Mukhopadhyay, *Int. J. Hydrogen Energy* 33[20] (2008) 5748-5754.
5. "Development and Characterizations of BaO-CaO-Al₂O₃-SiO₂ Glass-ceramic Sealants for Intermediate Temperature Solid Oxide Fuel Cell Application", Saswati Ghosh, **A. Das Sharma**, P. Kundu, S. Mahanty and R.N. Basu, *J. Non-crystalline Solids* 354, 34 (2008) 4081-4088.
6. "Novel Glass-ceramic Sealants for Planar IT-SOFC: A Bi-layered Approach for Joining Electrolyte and Metallic Interconnect", Saswati Ghosh, **A. Das Sharma**, P. Kundu, R.N. Basu, *J. Electrochem. Soc.*, 155, 5 (2008) B473-B478.
7. "Microstructure and Property Evaluation of Barium Aluminosilicate Glass Ceramic Sealant for Anode-supported Solid Oxide Fuel Cell", Saswati Ghosh, P. Kundu, **A. Das Sharma**, R.N. Basu and H.S. Maiti; *J European Soc.*, 28 (2008) 69-76.
8. "Influence of B-site Substituents on Lanthanum Calcium Chromite Nanocrystalline Materials for Solid Oxide Fuel Cell", Saswati Ghosh, **A. Das Sharma**, R.N. Basu and H.S. Maiti, *J American Ceramic Soc.*, 2007 *J. Am. Ceram. Soc.*, 90 [12] 3741–3747 (2007).
9. "Properties of Ni/YSZ Porous Cermets Prepared by Electroless Coating Technique for SOFC Anode Application", Swadesh K. Pratihar, **A. Das Sharma**, H.S. Maiti; *J. Mater. Sc.* 42 [7] (2007) 7220 – 7226
10. "Synthesis of La_{0.7}Ca_{0.3}CrO₃ SOFC Interconnect Using a Novel Chromoum Source", Saswati Ghosh, **A. Das Sharma**, R.N. Basu and H.S. Maiti, *Electrochemical and Solid State Letters*, 9 [11] (2006) A516 –A519

11. "Electrical Behavior of Nickel Coated YSZ Cermet Prepared by Electroless Coating Technique", Swadesh K. Pratihar, **A. Das Sharma**, H.S. Maiti; *Mater. Chem & Phys.* 96[2-3] (2006) 388 – 395
12. "Processing Microstructure Property Correlation of Porous Ni-YSZ Cermets Anode for SOFC Application"; Swadesh K. Pratihar, **A. Das Sharma**, H.S. Maiti, *Mater. Res. Bull.* 40 [11] (2005) 1936 – 1944
13. "A Novel Spray – Pyrolysis Technique to Produce Nano-crystalline Lanthanum Strontium Manganite Powder"; Abhoy Kumar, Parukuttyamma Sujatha Devi, **Abhijit Das Sharma** and Himadri Sekhar Maiti; *J. Am. Ceram. Soc.*, 88[4] (2005) 971 973
14. "Preparation of Nickel Coated YSZ Powder for Application as an Anode for Solid Oxide Fuel Cells"; Swadesh K. Pratihar, **A. Das Sharma**, R.N. Basu, H.S. Maiti; *J. Power Sources*, 129 (2004) 138 – 142.
15. "Solid Oxide Fuel Cell Materials: A Review"; P. Sujatha Devi, **A. Das Sharma** and H.S. Maiti; *Trans. Ind. Ceram. Soc.*, 63 [2] (2004) 75 – 98.
16. "Influence of Ambient Temperature on the Rheological Properties of Alumina Tape Slurry", A. Seal, D. Chattopadhyay, **A. Das Sharma**, A. Sen and H.S. Maiti; *J. Euro. Ceram. Soc.*, 24 (2004) 2275-2283
17. "Preparation of Bixbyte Phase (Mn_xFe_{1-x})₂O₃ For NTC Thermistor Applications", Dipika Saha, **A. Das Sharma**, A. Sen and H.S. Maiti; *Mater. Lett.*, 55 (2002) 403-406
18. "Preparation of Low – Temperature Sinterable BaCe_{0.8}Sm_{0.2}O₃ Powder by Autoignition Technique"; Amitava Chakroborty, **A. Das Sharma**, B. Maiti, H.S. Maiti; *Mater Lett.*, 57 (2002) 862 - 867.
19. "Correlation Between Slurry Rheology, Green Density and Sintered Density of Tape Cast Yttria Stabilized Zirconia"; Amit Mukherjee, B. Maiti, **A. Das Sharma**, R.N. Basu, H.S. Maiti; *Ceram. Int.*, 27 (2001) 731.
20. "Effect Of Sintering Atmosphere on The Dielectric Properties of Barium Titanate Based Capacitors", N. Halder, D. Chattopadhyay, **A. Das Sharma**, Dipika Saha, A. Sen and H.S. Maiti; *Mater. Res. Bull.*, 36 (2001) 905-913
21. "Effect of Silver Addition on The Dielectric Properties of Barium Titanate Based Low Temperature Processed Capacitors", N. Halder, **A. Das Sharma**, S.K. Khan, A. Sen and H.S. Maiti; *Mater. Res. Bull.*, 34 (1999) 545-550
22. "Effect of Lithium Borate Flux Composition on The Dielectric Properties of BaTiO₃-Based Capacitor Formulations" **A. Das Sharma**, N. Halder, S.K. Khan, A. Sen and H.S. Maiti; *J Mater Sc Lett*, 17 (1998) 1577-1579
23. "Critical-Current In Electrophoretically Deposited Thick-Films of YBCO Superconductor", D. Bhattacharya, S.N. Roy, R.N. Basu, **A. Das Sharma** and H.S. Maiti; *Mater Lett.*, 16 (1993) 337-341

24. "Synthesis of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Powder by Autoignition of Citrate-Nitrata Gel", S. Roy, **A. Das Sharma**, S.N. Roy and H.S. Maiti; *J. Mater. Res.*, 8 (1993) 2761-2766
25. "Effectiveness of Various Suspension Media for Electrophoretic Deposition of YBCO Superconductor Powder", **A. Das Sharma**, A. Sen and H.S. Maiti; *Ceram. Int.*, 19 (1993) 65-70
26. "Control of Cation Stoichiometry During Preparation of $\text{YBa}_2\text{Cu}_3\text{O}_x$ Superconductor By The Oxalate Precipitation Technique", **A. Das Sharma**, R.N. Basu and H.S. Maiti; *J Mater Sc Lett.*, 11 (1992) 122-124
27. "Important In Current-Density of Bulk Bi-Sr-Ca-Cu-O Superconductors Through A Modified Preparation Condition", A. Sen, **A. Das Sharma** and H.S. Maiti; *Solid St. Commun.*, 70 (1989) 657-660
28. "Creep of CuO-BaO Melts Along The Container Wall", A. Sen, **A. Das Sharma** and H.S. Maiti; *Mater Lett.*, 7 (1989) 433-436
29. "Effect of Preparation Conditions on The Orientation of Y-Ba-Cu Oxide Powders During X-Ray Diffractometry", R.N. Basu, A. Sen, **A. Das Sharma** and H.S. Maiti; *Mater Lett.*, 7 (1988) 75-77

Conference Proceedings

A. Peer reviewed

1. "Development of Anode-Supported Planar SOFC Using Inexpensive and Simple Processing Technique", R.N. Basu, **A. Das Sharma**, A. Dutta, J. Mukhopadhyay and H.S. Maiti, *Electrochemical Society Transactions*, 7 (2007) 227 -234.
2. "Tailor-made BaO-CaO- Al_2O_3 - SiO_2 -based Glass Sealant for Anode-Supported Planar SOFC", Saswati Ghosh, **A. Das Sharma**, P. Kundu, R.N. Basu and H.S. Maiti, *Electrochemical Society Transactions*, 7 (2007) 2443 -2452.
3. "Development of Functional SOFC Anode", J. Mukhopadhyay, M. Banerjee, **A. Das Sharma**, R.N. Basu and H.S. Maiti, *Electrochemical Society Transactions*, 7 (2007) 1563 - 1572.
4. "Low temperature sintering of zirconia electrolyte through transition metal ion addition", T. Dey, Atanu Dutta, **A. Das Sharma** and R.N. Basu, Proceedings of the International Conference of 8th European SOFC Forum, held at Lucerne, Switzerland, 30 June-4 July 2008.
5. "Use of Electroless Anode Active Layer in Anode-supported Planar SOFC", Madhumita Mukhopadhyay, J. Mukhopadhyay, **A. Das Sharma** and R.N. Basu, *Electrochemical*

B. Others

1. **A. Das Sharma**, Saswati Ghosh, R.N. Basu and H.S. Maiti, Development of lanthanum chromite based nano crystalline SOFC ceramic interconnect material by autocombustion technique, Proceedings of the 8th International conference on nanostructured materials, IISc, Bangalore, 20-25 August 2006.
2. S. Nag, **A. Das Sharma**, S. Mahanty, Sourav Ghosh, R.N. Basu and H.S. Maiti, Development of Functionally Graded Ni-YSZ Cermet Anode for Solid Oxide Fuel Cell, Proceedings of the 8th International conference on nanostructured materials, IISc, Bangalore, 20-25 August 2006.
3. S. Nag, **A. Das Sharma**, S. Ghosh, R.N. Basu and H.S. Maiti, Effect of processing conditions on the properties of Ni-YSZ cermet anode prepared by electroless technique, 7th National conference on Solid State Ionics, 6–8 June, 2006, Coimbatore.
4. Atanu Dutta, J. Mukhopadhyay, P. Pal, **A. Das Sharma**, R.N. Basu and H.S. Maiti, Effect of Functional Layers on the Electrochemical Performance of Anode-Supported Planar SOFC, Proceedings for International Symposium on Materials Chemistry–2006, 4– 8 December 2006 at BARC, Mumbai.
5. Saswati Ghosh, P. Kundu, **A. Das sharma**, R.N. Basu and H.S. Maiti, Development of BaO-Al₂O₃-SiO₂ (BAS)-based Glass Sealant for Intermediate Temperature Solid Oxide Fuel Cell, Proceedings for International Symposium on Materials Chemistry–2006, 4– 8 December 2006, BARC, Mumbai
6. T. Dey, A. Dutta, S. Basu, **A. Das Sharma** and R. N. Basu, Effect of Transition Metal Ion Dopants on Sinterability and Electrical Properties of Zirconia Electrolyte for Solid Oxide Fuel Cell, Millennium Energy Summit – 2007, held in Kolkata, India, September 27-29, 2007.
7. Saswati Ghosh, P. Kundu, **A. Das Sharma**, S. Mahanty, R.N. Basu and H.S.Maiti, Performance of Barium Calcium Aluminosilicate-based Glass-Ceramics Sealants for Intermediate Temperature Solid Oxide Fuel Cell, IUMRS-ICAM 2007, held in Bangalore, India, October 8-13, 2007.
8. **A. Das Sharma**, Saswati Ghosh, P. Kundu and R.N. Basu, Thermal and shrinkage behavior of glass sealants for application in intermediate temperature anode-supported solid oxide fuel cell, National Symposium on Science &Technology of Glass and Glass-Ceramics (NSGC-08), held at BARC, Mumbai, 15 – 17 October, 2008
9. Saswati Ghosh, **A. Das Sharma**, S. Mahanty, P. Kundu and R.N. Basu, BaO-MgO-SiO₂-based Glass-ceramic Sealant for Anode-supported Solid Oxide Fuel Cell Application,

National Symposium on Science & Technology of Glass and Glass-Ceramics (NSGC-08), held at BARC, Mumbai, 15 – 17 October, 2008

10. **A. Das Sharma**, Swagata Bose, J. Mukhopadhyay and R.N. Basu, Synthesis and characterization of nanocrystalline Mn-Co-O-based protective coating for solid oxide fuel cell application, International Conference on Electroceramics (ICE-2009), held at University of Delhi, 13-17 December 2009.
11. S.Nag, J. Mukhopadhyay, **A. Das Sharma** and R.N. Basu, Synthesis and characterization of Ca-doped lanthanum zirconate-based ionic conductors for gas separation application, International Conference on Electroceramics (ICE-2009), held at University of Delhi, 13-17 December 2009.
12. M. Mukhopadhyay, J. Mukhopadhyay, **A. Das Sharma** and R.N. Basu, High performance solid oxide fuel cell using electroless Ni-YSZ anode, International Conference on Electroceramics (ICE-2009), held at University of Delhi, 13-17 December 2009.