

List of publications in SCI journals: 18

Conference proceedings: 28

1. Engineered $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$ (LLZO) for Pseudo-Solid-State Lithium Metal Batteries (SSLMBs): Tailor-Made Synthesis, Evolution of the Microstructure, Suppression of Dendritic Growth, and Enhanced Electrochemical Performance, Kuntal Ghosh and Mir Wasim Raja, ACS Appl. Energy Mater. 2023, 6, 7, 4035-4052
2. Advanced Sustainable Trilayer Cellulosic "Paper Separator" Functionalized with Nano- BaTiO_3 for Applications in Li-Ion Batteries and Supercapacitors, Mononita Das, Pradip Sekhar Das, Nimai Chand Pramanik, Rajendra Nath Basu, Mir Wasim Raja, ACS Omega 2023, 8, 23, 21315–21331
3. Paperator: The Paper-Based Ceramic Separator for Lithium-Ion Batteries and the Process Scale-Up Strategy, Raja MW, Basu RN, Pramanik NC, Das PS, Das M (2022). ACS Applied Energy Materials 5(5): 5841-5854.
4. Cellulose-ceramic composite flexible paper separator with improved wettability and flame retardant properties for lithium-ion batteries, Mononita Das, Pradip Sekhar Das, Rajendra Nath Basu, Mir Wasim Raja, Cellulose 2022, 29, 9899–9917.
5. Ga-Doped LLZO Solid-State Electrolyte with Unique "Plate-like" Morphology Derived from Water Hyacinth (*Eichhornia crassipes*) Aquatic Weed: Waste to Wealth Conversion, Kuntal Ghosh and Mir Wasim Raja, ACS Omega 2022, 7, 37, 33385-33396
6. Quazi Arif Islam, Mir Wasim Raja, Rajendra Nath Basu, Zr and Tb doped Barium Cerate based cermet membrane for hydrogen separation application, Journal of American Ceramic Society, 100(2017)1360.
7. Mir Wasim Raja, Quazi Arif Islam, Rajendra Nath Basu, Oxygen separation membrane derived from aquatic weed: A novel bio-inspired approach to synthesize $\text{BaBi}_{0.2}\text{Co}_{0.35}\text{Fe}_{0.45}\text{O}_{3-\delta}$ perovskite from Water Hyacinth (*Eichhornia Crassipes*), Journal of Membrane Science, 522(2017)168.
8. Quazi Arif Islam, Mir Wasim Raja, Rajendra Nath Basu, $\text{LaSr}_{1-x}\text{Co}_{0.35}\text{Bi}_{0.2}\text{Fe}_{0.45}\text{O}_{3-\delta}$ ($x = 0.5$ to 0.8): A new series of oxygen separation membrane, International Journal of Hydrogen Energy 41 (2016) 4682.
9. Quazi Arif Islam, Mir Wasim Raja, Rajendra Nath Basu, Filter paper derived cross-linked interconnected $\text{BaBi}_{0.2}\text{Co}_{0.35}\text{Fe}_{0.45}\text{O}_{3-\delta}$ morphology with enhanced oxygen permeation property, RSC Advances 6 (2016) 882.
10. Quazi Arif Islam, Mir Wasim Raja, Chiranjib Satra, Rajendra Nath Basu, Low temperature synthesis of nanocrystalline scandia stabilized zirconia by aqueous combustion method and its characterizations, Bulletin of Materials Science 38(6) (2015) 1473.
11. Quazi Arif Islam, Mir Wasim Raja, Rajendra Nath Basu, Synthesis of $\text{BaBi}_{0.2}\text{Co}_{0.35}\text{Fe}_{0.45}\text{O}_{3-\delta}$ by a novel aqueous soft chemical method and its characterizations, Journal of Alloys and Compounds 583 (2014) 7

12. Paromita Ghosh, S. Mahanty, M.W. Raja, R. N. Basu and H. S. Maiti, Structure and optical absorption of combustion synthesized nanocrystalline LiCoO_2 , J. Material Research, 22 (2007) 116.2
13. P. Pal, M.W. Raja, A. Dutta, S. Mahanty, R. N. Basu and H. S. Maiti, Alanine assisted low-temperature synthesis and characterization of nanocrystalline SOFC cathodes. Electrochemical Society Transaction, USA, 7 (2007) 1129.
14. M.W. Raja, S. Mahanty and R.N. Basu, Novel aqueous combustion synthesis of nanocrystalline $\text{Li}_4\text{Ti}_5\text{O}_{12}$ for lithium ion batteries, Journal of Alloys and Compounds, 468 (2008) 258.
15. M.W. Raja, S. Mahanty, Paromita Ghosh, R.N. Basu and H.S. Maiti, Alanine assisted Low-Temperature Combustion Synthesis of Nanocrystalline LiMn_2O_4 for Lithium-ion Batteries, Materials Research Bulletin, 42 (2007) 149.
16. M.W. Raja, S. Mahanty and R. N. Basu, Multi-faceted highly crystalline LiMn_2O_4 and $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ cathodes synthesized by a novel carbon exo-templating method, Solid State Ionics, 180 (2009) 1261.
17. M.W. Raja, S. Mahanty and R. N. Basu, Influence of S and Ni co-doping on the structure, band gap and electrochemical properties of lithium manganese oxide synthesized by soft chemical method, Journal of Power Sources, 192 (2009) 618.
18. M.W. Raja, S. Mahanty and R. N. Basu, Filter paper templated interconnected nanocrystalline LiMn_2O_4 with high Coulombic efficiency and rate capability, Journal of Material Chemistry, 19 (2009) 6161.