

Journal Publications out of this thesis:

- [1] **Nandi, S.**, and Das, S. K. Al³⁺ ion storage in LiMnPO₄ for rechargeable aqueous aluminum-ion battery. (Under review, **2022**).
- [2] **Nandi, S.**, Yan, Y., Yuan, X., Wang, C., He, X., Li, Y., and Das, S. K. Investigation on reversible metal ion (Li⁺, Na⁺, Mg²⁺, Al³⁺) insertion in MoTe₂ for aqueous ion battery. (*Phys. Chem. Chem. Phys.*, Revision submitted, **2022**).
- [3] **Nandi, S.**, Yan, Y., Yuan, X., Wang, C., He, X., Li, Y., and Das, S. K. Vanadyl ethylene glycolate: a novel organic-inorganic electrode material for rechargeable aqueous aluminum-ion battery. *Solid State Ionics*, 389: 116085, 2023. DOI: 10.1016/j.ssi.2022.116085.
- [4] **Nandi, S.**, and Das, S. K. A simple strategy to improve the electrochemical performance of rechargeable aqueous Al-graphite battery. (*Mater. Letters.*, 301: 130263, 2021. DOI: 10.1016/j.matlet.2021.130263.
- [5] **Nandi, S.**, and Das, S. K. An electrochemical study on LiMn₂O₄ for Al³⁺ ion storage in aqueous electrolytes. *Phys. Chem. Chem. Phys.*, 23: 19150-19154, 2021. DOI: 10.1039/D1CP03012D.
- [6] **Nandi, S.**, and Das, S. K. Exploring the electrochemical activity of bismuth oxychloride for rechargeable aqueous aluminum-metal battery and a method for enhanced performance. *Bull Mater Sci.*, 44: 1-9, 2021. DOI: 10.1007/s12034-021-02530-2.
- [7] **Nandi, S.**, and Das, S. K. An electrochemical study on bismuth oxide (Bi₂O₃) as an electrode material for rechargeable aqueous aluminum-ion battery. *Solid State Ionics*, 347: 115228, 2020. DOI: 10.1016/j.ssi.2020.115228.
- [8] **Nandi, S.**, and Das, S. K. Realizing a low-cost and sustainable rechargeable aqueous aluminum-metal battery with exfoliated graphite cathode, *ACS Sustainable Chemistry & Engineering*, 7: 19839–19847, 2019. DOI: 10.1021/acssuschemeng.9b05185.

Book Chapters:

- [1] **Nandi, S.,** Arnab Dutta, S.K. Das, A Concept Note on Aqueous Type Graphite Dual-ion Battery: A Promising Low-Cost Electrical Energy Storage Technology (*Advances in Energy Technology. Advances in Sustainability Science and Technology. Springer, 2021*, ISBN: 978-981-15-8700-9).
- [2] **Nandi, S., and** S.K. Das, Water-in-salt electrolyte for aqueous batteries, (*Research Trends in Chemical Sciences, (Volume - 14), Akinik, 2021*)

Published in conferences/ proceedings:

- [1] Participated in International Web Conference on Recent Advances in Nanoscience & Nanotechnology for High-end Applications (IWCRANHA-2020) organized by Assam University, Silchar on 25th- 26th July, 2020.
- [2] Participated in Recent Advances in Nanoscience and It's Applications organized by Special Centre for Nano Sciences, JNU, New Delhi on 27th - 28th July, 2020.
- [3] Presented an oral presentation in ICRAPMS-2020 (International e-conference on Recent Advances in Physics and Materials Science) organized by Kurseong College, Darjeeling, West Bengal, India on 9th-10th July, 2020.
- [4] Participated in International Virtual Conference on "High-Performance Materials for Energy, Environment and Healthcare in the Digital Era" organized by VIT, Vellore on 30th June-1st July,2020.
- [5] Participated in the two weeks mentorship program for young research (Ph.D.) scholars in the area of experimental Condensed Matter Physics/Material science held at UGC-DAE Indore from 2nd March-13th March, 2020.
- [6] Presented an oral, poster and research demonstration in the Research conclave-2020 held at NIT Meghalaya on 28th February, 2020.
- [7] Presented a Poster in ICFM (International Conference on Functional Materials) held at IIT Kharagpur, West Bengal from 06th -08th January, 2020.