

Center of Excellence in Materials for Advanced Technologies (CeMAT)

All Publications

1. Susikumar, T., P. Justin Jesuraj, M. Navaneethan, A. Dennyson Savariraj, Chang Min Lee, and Seung Yoon Ryu. "Promoting Nickel-Iron layered double hydroxide via In-situ sulfur doping for efficient bifunctional electrocatalysis and energy storage applications." *Surfaces and Interfaces* (2024): 105448. A.D- 13-11-2024 A.O- 15-11-2024 [I.F-5.7] Q1
2. Susikumar, T., M. Navaneethan, and P. Justin Jesuraj. "Insights over the in-situ grown copper sulfide/NiFe-LDH composites for alkaline and urea water electrolysis." *Inorganic Chemistry Communications* (2024): 113523.A.D-2-11-2024 A.O-10-11-2024 [I.F-4.4]
3. John, G., T. Susikumar, M. Navaneethan, and P. Justin Jesuraj. "Intercalation of g-C₃N₄/Ag₂S heterostructure on Boronized Ni-MOF for enhanced water splitting and energy storage applications." *Electrochimica Acta* (2024): 145258. A.D: 18-08-2024 AO: 20-08-2024 [I.F-5.5] – Q1
4. Kumar, D. Kanchan, P. Bharathi, J. Archana, M. Navaneethan, and S. Harish. "Optimizing NO₂ gas sensor performance: Investigating the influence of cobalt doping on WO₃ recovery kinetics for enhanced gas sensing application." *Sensors and Actuators B: Chemical* 421 (2024): 136477. A.D: 15-08-2024 AO: 21-08-2024 [I.F-8.0] – Q1
5. Mathew, Tony, Vijay Vaiyapuri, M. Navaneethan* and Ponnusamy Suruttaiya Udaiyar. "Tailoring the lattice thermal conductivity of Al-incorporated Ag₂Se for near room temperature waste heat recovery." *ChemNanoMat*: e202400298. AO:24-07-2024 [IF-2.1]-Q2
6. Manikandan, V. S., Kesiya George, Arun Thirumurugan, T. Govindaraj, S. Harish, J. Archana, and M. Navaneethan*. "A Bi₂Te₃ topological insulator/carbon nanotubes hybrid composites as a new counter electrode material for DSSC and NIR photodetector application." *Journal of Colloid and Interface Science* 678 (2025): 549-559. A.D: 13-08-2024 AO: 14-08-2024 [IF-9.4]-Q1
7. Parveen, R. Aysha, E. Vinoth, K. Hara, J. Archana, S. Ponnusamy, and M. Navaneethan*. "Fe-Mediated Tweaking of Band Bending and Activation Energy in α -MoO₃ Nano Lamella for Enhanced NO₂ Gas Detection Under Low Operating Temperature." *Small methods*: e2401214. AO:23.09.2024 [IF-10.7]-Q1
8. Kumar, D. Kanchan, P. Bharathi, J. Archana, M. Navaneethan*, and S. Harish. "Optimizing NO₂ gas sensor performance: Investigating the influence of cobalt doping on WO₃ recovery kinetics for enhanced gas sensing application." *Sensors and Actuators B: Chemical* 421 (2024): 136477. A.D:15-08-2024 AO:21-08-2024 [IF-8.0]- Q1
9. Syamsai, Ravuri, Vaiyapuri Vijay, and Senthil Kumar Easwaran M. Navaneethan*. "Evaluation of 2D Tantalum Carbide MXene for Room to Mid-temperature Thermoelectric Applications." *ChemNanoMat*: e202400391. AO:28-09-2024 [IF-2.1]-Q2
10. Patrick, D. Simon, J. Archana, M. Navaneethan*, and M. Krishna Mohan. "Boosting the response characteristics towards rapid detection of NO₂ gas molecules utilizing 2D-WS₂/rGO hybrid nanocomposites in ambient environment." *Journal of Environmental*

- Chemical Engineering* 12, no.5 (2024):113367. A.D:17-06-2024 AO:27-06-2024[IF-7.4] Q1
11. Gokulnaath, M., S. Athithya, V. S. Manikandan, M. Navaneethan, and J. Archana. "Investigating the effect of Y³⁺/La³⁺ co-dopant on Ba site of BaSnO₃ as an efficient photoanode for dye sensitized solar cell application." *Optical Materials* 156 (2024): 115952. A.D:08-08-2024 AO:17-08-2024 [IF-3.8]-Q1
 12. Arthi, G., J. Archana, M. Navaneethan, S. Ponnusamy, Y. Hayakawa, C. Muthamizhchelvan, and Sankar Ganesh Ramaraj. "TiO₂ nanoparticle seeds transformed into nanotubes for effective dye-sensitized solar cell application." *Materials Letters* 372 (2024): 136981. A.D:06-07-2024 AO:11-07-2024 [IF-2.7]-Q2
 13. Vinodhini, J., S. Harish, H. Ikeda, and M. Navaneethan*. "Flexible Ag₂Se/Ag₂S nanocomposite on carbon fabric optimized via interfaced engineered energy filtering effect for a textile based wearable thermoelectric generator." *Surfaces and Interfaces* (2024): 105105. A.D:12-09-2024 AO:19-09-2024 [IF-5.7]-Q1
 14. Yadav, Sandeep Kumar, Durga Prasad Pabba, Amutha Soosairaj, K. Divya, A. Alex Arunmozhi, Leo Rajesh Asirvatham, V. S. Manikandan, M. Navaneethan, and Arun Thirumurugan. "Study on the Structural, Magnetic, and Magnetodielectric Properties of M-type BaFe₁₂O₁₉ and SrFe₁₂O₁₉ Hexaferrite Nanoparticles." *Surfaces and Interfaces* (2024): 104956. A.D:14-08-2024 AO: 15-09-2024 [IF-5.7]-Q1
 15. Amuthan, R., Mohamed Jibri KP, M. Navaneethan*, Krishna Mohan M and J. Archana. "Approaching the low thermal conductivity in layered oxychalcogenide Bi_{2-x}Pr_xO₂Se (0 ≤ x ≤ 0.15) via mass and strain field fluctuation for thermoelectric application." *Surfaces and Interfaces* 52 (2024): 104706. A.D:28-06-2024 AO:04-07-2024 [IF-5.7]-Q1
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 17. Krishna, Parvathi, V. Vijay, Suru Ponnusamy, and M. Navaneethan*. "Mass and strain field mediated low thermal conductivity for enhanced thermoelectric properties in Zn substituted SnS." *CrystEngComm* (2024). A.D:28-08-2024 AO: 03-09-2024 [IF-2.6]-Q2
 18. Malathi, B., R. Aysha Parveen, P. Bharathi, A. Nakamura, J. Archana, M. Navaneethan, and S. Harish. "Interface engineering of 2D/2D MoS₂/In₂S₃ heterostructure for highly sensitive NO₂ detection at room temperature gas sensor." *Journal of Environmental Chemical Engineering* 12, no. 4 (2024): 113023. A.D:7-10-2024 AO:10-10-2024 [IF-7.4]-Q1
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 20. Abimaheshwari, R., R. Abinaya, J. Archana, M. Navaneethan*, and S. Harish. "Controlled growth of edge site enriched vertical SnS₂ nanoflakes for highly sensitive room temperature detection of NO₂ sensor." *Applied Surface Science* 661 (2024): 159991. A.D:25-03-2024 AO:25-03-2024 [IF-6.3]-Q1
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23. Saranya, V., S. Athithya, S. Muthu Mariappan, M. Navaneethan, and J. Archana. "Unravelling the catalytic activity of copper cobalt oxide-nickel cobalt oxide composites for efficient counter electrode performance in DSSCs." *Journal of Alloys and Compounds* 988 (2024): 173993. A.D:24-02-2024 AO: 08-03-2024 [IF-5.8]-Q 1
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33. Abimaheshwari, R., R. Abinaya, J. Archana, C. Muthamizhchelvan, M. Navaneethan*, and S. Harish. "In-situ growth of vertically stacked 2D SnS₂/SnS heterostructure for

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34. Prakash, T., M. Navaneethan, J. Archana, S. Ponnusamy, C. Muthamizhchelvan, and Y. Hayakawa. "Preparation and characterization of TiO₂ nanostructures by changing the parameters of trichloroaniline concentration, pH and annealing for dye-sensitized solar cell application." *Indian Journal of Physics* (2024): 1-9. A.D 29-04-2024 A.O 15-05-2024 [I.F-1.6] Q3
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