

List of Publications

(* , Non-ISI Journal/Conference Proceedings)

1. First-principles study of strain dependent properties of LiCF_3SO_3 doped PVA, PVDF polymer composites. H. Verma, M. K. Tripathi, K.H. Mahmoud, A.S.A. Alsubaie, **R. K. Gupta**, M. L. Verma, Chemical Physics Letters 863 (2025) 141873. DOI: 10.1016/j.cplett.2025.141873
2. *Sustainable and Ecological Materials: Sodium-Ion Conducting Solid Electrolytes for Solid-State Rechargeable Batteries. **R. K. Gupta**. In: Mansour, Y., Subramaniam, U., Mustaffa, Z., Abdelhadi, A., Al-Atroush, M., Abowardah, E. (eds) Proceedings of the ICSDI 2024, Vol. 2, Lecture Notes in Civil Engineering (Vol. 557), Springer, Singapore, 2025, pp 448–457. DOI: 10.1007/978-981-97-8348-9_55
3. Effect of Light Sources on Transmittance of Commercially Available Contact Lenses. **R. K. Gupta**, M. A. Alzayed, A. A. Aba Alkhayl, T. S. Bedaiwi, Cureus 16(6) (2024) e62093. DOI: 10.7759/cureus.62093
4. Anionic Effect on Electrical Transport Properties of Solid $\text{Co}^{2+/3+}$ Redox Mediators. **R. K. Gupta**, A. Imran, A. Khan, Polymers 16(10) (2024) 1436. DOI: 10.3390/polym16101436.
5. SPEEK-Protic Ionic Liquid-Based Anhydrous Proton-Conducting Composite Polymer Electrolyte Membranes for High-Temperature Fuel Cell Applications. A. Anis, M. Alam, **R. K. Gupta**, A. Alhamidi, H. Shaikh, A. M. Poulouse, M. A. Alam, S. M. Al-Zahrani, Journal of King Saud University – Science 36 (2024) 103215. DOI:10.1016/j.jksus.2024.103215
6. Electrical Transport Properties of [(1-x)Succinonitrile: xPoly(Ethylene Oxide)]- LiCF_3SO_3 - $\text{Co}[\text{tris}-(2,2'\text{-bipyridine})]_3(\text{TFSI})_2$ - $\text{Co}[\text{tris}-(2,2'\text{-bipyridine})]_3(\text{TFSI})_3$ Solid Redox Mediators. **R. K. Gupta**, H. Shaikh, A. Imran, I. Bedja, A. F. Ajaj, A. S. Aldwayyan, A. Khan, R. Ayub, RSC Advances 14(1) (2024) 539-547. DOI: 10.1039/d3ra07314a.
7. Studies on Polybenzimidazole and Methanesulfonate Protic-Ionic-Liquids-Based Composite Polymer Electrolyte Membranes. A. Anis, M. Alam, A. Alhamidi, **R. K. Gupta**, M. Tariq, S. M. Al-Zahrani, Polymers 15 (2023) 2821 DOI: 10.3390/polym15132821
8. *Electrical Transport Properties of [Succinonitrile–Poly(Ethylene Oxide)]– LiX – $\text{Co}(\text{bpy})_3(\text{TFSI})_2$ – $\text{Co}(\text{bpy})_3(\text{TFSI})_3$ Solid Redox Mediators, Where X = TFSI or Triflate, **R. K. Gupta**, H. Shaikh, A. Imran, I. Bedja, A. F. Ajaj, A. S. Aldwayyan, in “Proceedings of the International Conference and Exhibition for Science (ICES 2023),” Riyadh, Saudi Arabia, Feb. 6-8, 2023, Advances in Science, Technology & Innovation (ASTI), Springer, Germany.
Accepted
9. Dyeing Non-Recyclable Polyethylene Plastic with Photoacid Phycocyanobilin from Spirulina Algae: Ultrafast Photoluminescence Studies. M. Alhefeiti, F. Chandra, **R.K. Gupta**, N. Saleh, Polymers 14 (2022) 4811 DOI: 10.3390/polym14224811
10. Structural, Thermal, and Electrical Properties of Poly(Ethylene Oxide)-Tetramethyl Succinonitrile Blend for Redox Mediators. **R.K. Gupta**, H. Shaikh, A. Imran, I. Bedja, A.S. Aldwayyan, Polymers 14 (2022) 3728 DOI: 10.3390/polym14183728
11. Tuning the Frölich interactions in bismuth modified lead sulfide quantum dots to minimize the excitonic carrier energy dissipation. M. Shkir, S. M. Mariappan, A. Khan, E. Vinoth, H. Algarni, A.M. El-Toni, A. A. Ansari, A. Aldalbahi, **R.K. Gupta**, S. AlFaify, International Journal of Energy Research 46 (2022) 11914. DOI: 10.1002/er.7961
12. Electrical Transport, Structural, Optical and Thermal Properties of [(1-x)Succinonitrile: xPEO]- LiTFSI - $\text{Co}(\text{bpy})_3(\text{TFSI})_2$ - $\text{Co}(\text{bpy})_3(\text{TFSI})_3$ Solid Redox Mediators, **R. K. Gupta**, H. Shaikh, A. Imran, I. Bedja, A. F. Ajaj, A. S. Aldwayyan, Polymers 14 (2022) 1870. DOI: 10.3390/polym14091870
13. Characterization of Thermal, Ionic Conductivity and Electrochemical Properties of some p-Tosylate Anions Based Protic Ionic Compounds. A. Anis, M. Alam, A. Alhamidi, M. A. Alam, **R. K. Gupta**, M. Tariq, H. M. Shaikh, A. M. Poulouse, S. M. Al-Zahrani, Crystals 12 (2022) 507. DOI: 10.3390/cryst12040507
14. Tetramethyl succinonitrile as a solid plasticizer in a poly(ethylene oxide)₈- LiI - I_2 solid polymer electrolyte. **R.K. Gupta**, H. Shaikh, A. Imran, I. Bedja, A.S. Aldwayyan, Macromolecular Rapid Communications 43 (2022) 2100764. DOI: 10.1002/marc.202100764
15. Insight into Al doping effect on photodetector performance of CdS and CdS: Mg films prepared by self-controlled nebulizer spray technique. K. D. A. Kumar, P. Mele, S. Golovynskyi A. Khan, A. M. El-Toni, A.A. Ansari, **R. K. Gupta**, H. Ghaithan, S. AlFaify, P. Murahari, Journal of Alloys and Compounds 892 (2022) 160801. DOI: 10.1016/j.jallcom.2021.160801
16. Zinc influence on nanostructured tin oxide (SnO_2) films as ammonia sensor at room temperature, M. Boomashri, P. Perumal, A. Khan, A. M. El-Toni, A. A. Ansari, **R. K. Gupta**, P. Murahari, K. D. A. Kumar, Surfaces and Interfaces 25 (2021) 101195. DOI: 10.1016/j.surfin.2021.101195
17. Effect of Iaponite nanoclay dispersion on electrical, structural, and photovoltaic properties of dispersed [poly(ethylene oxide)-succinonitrile]- LiI - I_2 solid polymer electrolyte, **R.K. Gupta**, H.-W. Rhee, I. Bedja, A. N. AlHaza, A. Khan, Journal of Power Sources 490 (2021) 229509, DOI: 10.1016/j.jpowsour.2021.229509.

18. Tailoring the structure-morphology-vibrational-optical-dielectric and electrical characteristics of Ce@NiO NPs produced by facile combustion route for optoelectronics. M. Shkir, K.V. Chandekar, A. Khan, T. Alshahrani, A.M. El-Toni, M.A. Sayed, A.K. Singh, A.A. Ansari, M.R. Muthumareeswaran, A. Aldalbahi, **R.K. Gupta**, S. AlFaify, Materials Science in Semiconductor Processing 126 (2021) 105647. DOI: 10.1016/j.mssp.2020.105647
19. One-pot flash combustion synthesis of Fe@NiO nanocomposites for supercapacitor applications. A. Khan, M. Shkir, S.A. Ansari, N. Parveen, S. AlFaify, A. M. El-Toni, **R.K. Gupta**, S.F. Adil, Ceramics International 47 (2021) 9024-9033. DOI: 10.1016/j.ceramint.2020.12.025
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22. Electrical, structural, and thermal properties of succinonitrile-LiI-I₂ redox-mediator, **R.K. Gupta**, I. Bedja, A. Islam, H. Shaikh, Solid State Ionics 326 (2018) 166-172. DOI: 10.1016/j.ssi.2018.10.008
23. Cationic effect on dye-sensitized solar cell properties using electrochemical impedance and transient absorption spectroscopy techniques, **R.K. Gupta**, I. Bedja, Journal of Physics D-Applied Physics 50 (2017) 245501. DOI: 10.1088/1361-6463/aa6fa3
24. Heteroleptic Ru(II) cyclometallated complexes derived from benzimidazole-phenyl carbene ligands for dye-sensitized solar cells: an experimental and theoretical approach, T. Jella, M. Srikanth, Y. Soujanya, S. P. Singh, L. Giribabu, A. Islam, L. Han, I. Bedja, **R.K. Gupta**, Materials Chemistry Frontiers 1 (2017) 947-957. DOI: 10.1039/C6QM00264A
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26. Effect of spacer and anchoring group of extended π -conjugated tetrathiafulvalene based sensitizers on the performance of dye sensitized solar cells, L. Giribabu, N. Duvva, S.P. Singh, L. Han, I. M. Bedja, **R.K. Gupta**, A. Islam, Sustainable Energy & Fuels 1 (2017) 345-353. DOI: 10.1039/C6SE00014B
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38. *Electrical, structural, optical and thermal properties of (1-x)Blend: xLi[(CF₃SO₂)₂N] solid polymer electrolyte system, **R. K. Gupta**, H.-W. Rhee, in "Proceedings of the 14th Asian Conference on Solid State Ionics", 2014, p. 179-186. DOI: 10.3850/978-981-09-1137-9_162
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