RESEARCH PUBLICATIONS OF YEAR 2025

#	Publication Title	Journal Name	Impact Factor	Vol / Issue	Page No / Article No
1	High-Entropy Li-doped rock salt catalyst for low-Temperature ceramic fuel cells	Fuel	7.5	379	133044
2	Dual Interfacial Modification of Hematite Electron Transport Layer for Efficient and Stable Perovskite Solar Cells	Results in Engineering	7.9	25	103949
3	Fabrication of efficient composite anode based on SiC for direct carbon fuel cell	Materials Chemistry and Physics	4.7	333	130379
4	Enhancing thermo-physical properties of paraffin wax phase change material with MXene nanoflakes for improved energy storage and heat transfer applications.	Results in Engineering,	7.9	25	104557
5	ZnO/α-Fe2O3 nanocomposites as efficient photocatalysts for sustainable hydrogen generation	Next Materials	0.67	6	100486
6	Advanced optical reinforcement materials based on three-dimensional four-way weaving structure and metasurface technology	Applied Physics Laser	3.6	126	33503
7	Insight into the structural, magnetic and fluoride (F−1) adsorption properties of copper–manganese ferrite (Cu0·5Mn0·5Fe2O4) and Azadirachta Indica composites synthesized through hydrothermal method	Materials Chemistry and Physics	4.7	334	130415
8	Unveiling the potential surface coated electrolyte with elevated performance for low-temperature ceramic fuel cells	International Journal of Hydrogen Energy	8.3	100	1095-1106
9	Designing innovative Zn3 (VO) 4/BiVO4 heterojunction for enhanced photodegradation under solar irradiation	Ceramics International	5.6	51(13)	17536-17546
10	A novel ternary Ag@MnCo-NGO-PVP hybrid composite for high performance asymmetric supercapacitors	Journal of Energy Storage	9.8	112	115509
11	Structural and electronic properties of monolayers: Enhancing computational accuracy	Materials Letters	2.7	380	137661
12	Modified waste orange peels biomass residues for sustainable and promising As(V) removal: Insights into batch and column adsorption experiments and Box-behnken Design (BBD) analysis	Colloids and Surfaces A: Physicochemical and Engineering Aspects	5.4	711	136352
13	Flexible sodium alginate-gelatin hydrogel membrane incorporated with green synthesized bimetallic ZnO:CeO2 nanocomposite for antioxidant, antibacterial and biocompatibility studies	Reactive and Functional Polymers	5.1	212	106228
14	Ultrathin broadband terahertz metamaterial based on single-layer nested patterned graphene	Physics Letters A	2.6	534	130262

15	Photocatalytic breakdown of tetracycline via Z-scheme BiFeO3/Ag/ Cr2O3 nanocomposite under visible light irradiation: Degradation mechanism, toxicity evaluation and antibacterial activity	Surface & Interface	6.3	61	106151
16	Phonons in MoS2: Impact of strain, spin–orbit coupling, and supercell size	Materials Letters	2.7	389	138304
17	Theoretical Design of High-Performance Solid-State Electrolyte Na3La3Gd1Sm1Cl18	ACS Applied Energy Materials	5.6	8(6)	3963-392
18	Enhancing thermo-physical properties of paraffin wax phase change material with MXene nanoflakes for improved energy storage and heat transfer applications	Results in Engineering	7.9	25	104577
19	Insights into the Proton-Coupled Electron Transfer Mechanism in Fuel Cells	ACS Applied Materials and Interfaces	8.2	17(12)	18371-18382
20	Facile synthesis, structural, magnetic and enhanced Fluoride (F−1) adsorptive properties of magnesium ferrite and oryza sativa composites	Materials Chemistry and Physics	4.7	339	130686
21	Review on Ammonia-Powered SOFCs: Fundamentals, Thermodynamics, Degradation Mechanisms, and Future Perspectives	Energy and Fuels	5.3	39(13)	6097-6117
22	Synthesis, Characterization and Evaluation of NiFe2 O4 /Cr2 O3 Nano Composite as T1-T2 Contrast Agents for High-Field MRI	International Journal of Catalysis and Chemical Engineering	N/A	1(1)	1-9
23	High Proton Conductivity in xCuO/(1-x)CeO2 Electrolytes Induced by CuO Self-Nucleation and Electron-Ion Coupling	Advanced Science	14.1	12(22)	241721
24	Preparation of CeO_2@$La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_3$-δ Electrolyte and Semiconductor-Ionic Fuel Cell Performance	Journal of Chemical Industry and Engineering (China)	3.7	76(03)	1353-1362
25	Insight of potentials for perovskite cathode materials for solid oxide fuel cell and semiconductor membrane fuel cells	Ceramics International	5.6	51(19)	28477-28503
26	Impact of rare earth cerium (Ce) substitution on structural, magnetic and electrochemical properties of lithium ferrites: A comprehensive study	Materials Chemistry and Physics	4.7	340	130792
27	Mass spectrum, root-mean-square radii, form factors, and charge radii of mesons	Journal of the Korean Physical Scoiety	0.9	86(11)	1037-1047
28	Fabrication of 3D cyclodextrin-based metal–organic framework bioelectrode for label free aptasensing of ochratoxin A	Microchemical Journal	5.1	213	113631

29	Photo-assisted synthesis of protonated oxides for fuel cells	Communications Chemsitry	6.2	08(120)	1 - 13
30	Effect of cobalt substitution on electromagnetic response of Manganese-Zinc spinel ferrite composite	Materials Science and Engineering: B	4.6	319	118344
31	Electrodeposition of fabricated tin sulfide nanoparticles on graphene oxide and natural fibers based robust freestanding electrodes for flexible energy storage devices	Journal of Electroceramics	2.6	53	393 - 403
32	Absorptivity and magentodielectric evaluations of rare earths (Gd3+, Pr3+, Ho3+) and transition element (Bi3+) doped Cd-Ni-Zn ferrite meta surface absorbers: Modeling and simulations	Surface & Interface	6.3	68	106698
33	Unusual structural and electrical properties of CeO2-Al2O3 heterostructure electrolytes for fuel cells	Renewable Energy	9.1	252	123542
34	Electrochemical investigation of bismuth doped anode materials for low-temperature solid oxide fuel cell with boosted voltage using DC-DC voltage converter	Nanotechnology Review	6.1	14(01)	20250148
35	Structural and electrochemical analysis of enhanced ionic conductivity and oxygen permeability in La0.60Bi0.15 Cr0.05Fe0.20O3-δ nanocomposites for high-performance ceramic fuel cells	Ceramics International	5.6	51(22)	37179 - 37188
36	The development of strontium cobalt perovskite co-doped with bismuth and gallium cathode materials for low-temperature solid oxide fuel cell	Ceramics International	5.6	51(22)	37923 - 37930
37	Energy band gap tuning of Co-Zn cubic ferrite by Sm3+ ion substitution (0.00≤ x≤ 0.075) to improve spectral, structural, optical and dielectric properties	Ceramics International	5.6	51(16)	21354 - 21376
38	Nonlinear plasma wave excitation in cylindrical semiconductor waveguides	Chinese Journal of Physics	4.6	96	678-689
39	Current Progress of Metal Sulfides/Metal–Organic Frameworks Composite Materials for Photocatalytic H2 Production	Energy Today	3.6	13(11)	2402357
40	Tetracycline (TC-HCl) antibiotic photodegradation using MgFe2O4/MXene/NiO nanocomposites as potent photocatalysts for environmental remediation	Materials Letter	2.7	399	139032
41	Graphene oxide incorporated sodium alginate-gelatin composite hydrogel loaded with Moringa oleifera leaf extract for bifunctional tissue regeneration and anticancer applications	Reactive and Functional Polymers	5.1	216	106406
42	A high-performance solid-state electrolyte Na4ZrF8 with exceptional ionic conductivity and electrochemical and interfacial stability	Journal of Materials Chemistry A	9.5	339(13)	27260-27268
43	Role of Calcium Doping to Improve the Performance of Titanate-Based Cathode for Low-Temperature Solid Oxide Fuel Cell	Russian Journal of Physical Chemistry A	0.8	99	1943-1953
44	Physiochemical Characterization and Electrochemical Impedance Spectroscopic Analysis of NASICON-Based M1+xAlxTi2−x(PO4)3 Electrolytes for Solid-State Batteries	Energy Storage	4	7(5)	70245

45	Photo-radical induced protonation of superionic conducting oxide for high-performance protonic ceramic fuel cells	Journal of Power Sources	7.9	657	238081
46	High capacitive rare-earth co-doped transition metal/graphene oxide composites as effective electrode material for supercapacitors	Journal of Rare Earths	7.2	43(09)	1909-1919
47	Solid State Synthesis and Material Characterizations of Heat-Sensitive Nanocrystalline Sm3+ Doped NaLi2PO4 for Thermoluminescent Dosimetric Investigations	Journal of Cluster Science	3.6	36	178(1-17)
48	ZnO and Carbon Nanotubes based Freestanding Paper Electrodes for Environmentally Safe and Bendable Energy Storage Devices	Ionics	2.6	31	11229-11241
49	Graphitic Carbon Nitride, Synthesis Strategies, Characteristics and Application as an Electrode for Advanced Rechargeable Battery Systems	Renewable and Sustainable Energy Technology 1	16.3	13	2509001231
50	Photo-activated proton-incorporation into Nd-aluminum for superionic conductors	Chemical Engineering Journal	13.2	523	168407
51	Eco-friendly synthesis of N-doped carbon quantum dots from Bombax ceiba stem: A photophysical study with exploratory sensing of Fe3+/Cd2+ and dye degradation	Journal of Water Process Engineering	6.7	78	108704
52	Thermoluminescent response of low-Z and heat-sensitive nanocrystalline NaLi2PO4: Dy3+ produced by solid state reaction method for gamma dosimetry	The European Physical Journal Plus	2.9	140	745(1-19)
53	PHYSICS EDUCATION IN THE DIGITAL AGE: THE EFFECTIVENESS OF GAMIFICATION AND INTERACTIVE TECHNOLOGIES	International Journal of Innovation Studies	5.3	9(1)	1737-1740
54	Models for differential cross section in proton-proton scattering and their implications at ISR and LHC energies	The Europeon Physical Journal Plus	2.9	140	945(1-23)
55	Green synthesized Ag-doped ZrO_2 decorated rGO nanocomposite using Dalbergia sissoo leaf extract: A multifunctional material for anticancer activity and visible light driven pollutant degradation	Diamond and Related Materials	5.1	159(B)	112920
56	Influence of Cu doping on magnetic properties of HfSe2 grown by chemical vapor transport technique	Materials Science and Engineering: B	4.6	323	118837
57	Synthesis, DFT calculations, magnetic, and high-frequency dielectric properties of nickel ferrite (NiFe2O4)	J Mater Sci: Mater Electron	3.2	36	1869
58	Superionic conduction electrolyte through in situ structural transformation in electrochemical cell	Communications Materials	9.6	6	233(1-9)
59	One-step Synthesis of Ag@Sm-codoped ZnO Nanobullets as a Novel Matrix for Photovoltaic Applications	Journal of Electronic Materials	2.5	55	460-467
60	Synergy of Mesoporous Oxygenated MXene Mo2CTx Nanosheets Grafted CoBDC Nanorods for Supercapacitor Applications	Advanced Sustainable Systems	6.1	9(12)	e00968
61	Electron Beam Excites Multiscale Instabilities in Piezoelectric Semiconductor Plasmas	Journal of Experimental and Theoretical Physics	0.8	141(4-6)	176-187
62	Ferrite-Based Hierarchical Nanostructures for Electrochemical Sensing: Synthesis, Interface Engineering, and Performance Insights	Open Journal of NANO	1.8	10(1&2)	14-26

63	Effect of Annealing Temperature on Gamma-Induced Thermoluminescence in NaLi2PO4–Na3Ce(PO4)2: Insights for Radiation Dosimetric Applications	physica status solidi	1.9	222(24)	202500627
64	Enhanced fluoride adsorption using NiO/Solanum tuberosum peels nanocomposites, insight into Box-behnken design (BBD) analysis and application in water defluoridation	Inorganic Chemistry Communications	6.3	183(Part 2)	115877
65	Investigating the Proton Conduction in Co–Nd Co-Doped Amorphous Alumina-Based Electrolyte for Ceramic Fuel Cell	ACS Applied Energy Materials	6.4	24	17871–17888
66	Swelling-resistant conductive nanocellulose network for aqueous zinc-ion batteries	Materialstoday Energy	8.6	55	102156
67	Optical and structural properties of phosphotellurite glasses containing ZnTe and Te quantum dots	Ceramics International	5.6	51(30)	66318-74325
68	A theoretical and experimental study of silicon carbide for fuel cell applications	Zeitschrift für Physikalische Chemie	3.2	15	0470
69	Mechanistic approach to enhance oxygen ion conductivity and fuel cell performance in Tb doped Bi3YO6 oxide ion conductor for low temperature solid oxide fuel cells	Ceramics International	5.6	52(01)	1050-1059
70	Depleted Nd–Al-Perovskites for High Proton Conducting Electrolyte Fuel Cells	ACS Applied Energy Materials	6.4	1(9)	302–318
71	ZnO and carbon nanotubes-based freestanding binder-free paper electrodes for environmentally safe energy storage devices	Ionics	2.6	31	11229–11241
72	Exploring the impact of particle stability, size, and morphology on nanofluid thermal conductivity: A comprehensive review for energy applications	Advances in Colloid and Interface Science	16	341	103495
73	Synthesis of HfSe2 and CuHfSe2 crystalline materials using the chemical vapor transport method and their applications in supercapacitor energy storage devices	Nanotechnology Reviews	6.1	14	0198
74	Vibrational spectroscopy of Breast Tumor Phantom: A Novel Approach to Radiation Dose Estimation.	Radiation Physics and Chemistry.	3.3	230	112556
75	Emergence of Self-sustaining States in the Two-Population Neural Field Model Triggered by a Comprehensive External Input.	Eur. Phys. J. Plus	2.9	140	147
76	Revolutionizing Micro-Scale Energy Storage by 0D Carbon Nanostructures: Synthesis, Integration, Performance Optimization Mechanisms and Sustainable Applications	Advanced Functional Materials.	19	35(13)	2418053
77	Wave function dependent Form Factors and Radii of Mesons	Journal of the Korean Physical Society	0.8	11	1001

78	Tuning of defect mediated charge transport in pristine AgBiS2 nanocrystals probed via temperature dependent photoluminescence (TDPL) emission spectroscopy	Materials Science in Semiconductor Processing	4.6	119	109351
79	Temperature-dependent photoluminescence of heteroatom-doped edge tuned amino-functionalized GQDs nanoshells conjugated with ZnSe QDs	Journal of Materials Science: Materials in Electronics	2.8	36	1942
80	Fabrication of 3D Flexible Electrode Derived from Biomass Material for Hybrid Supercapacitor via Electrospinning	JOM	2.1	77	4932–4942
81	Preparation of Biomass Base 3D Hybrid Flexible Electrode With Improved Super Capacitive Performance via In Situ Polymerization of Polyaniline	Journal of Applied polymer Sciences	2.8	143	57936
82	Hybrid Biochar-Graphitic Carbon Nitride (g-C3N4) composite Photocatalyst: A Facile Strategy for Enhanced degradation of Ciprofloxacin (CIP)	Materials Research Express	2.2	12	035503
83	MOF-808 Enhanced MXene Tribopositive Layer for High-Performance Triboelectric Nanogenerators	Energy Technolgy	3.6	13	2500041
84	Synthesis of HfSe2 and CuHfSe2 Crystalline Materials by using Chemical Vapor Transport Method and their Applications in Supercapacitor Energy Storage Devices	Nanotechnology Reviwes	6.1	14	0198
85	Dynamics of the universe in f(G,τ2) gravity via well-known cosmological bouncing	Physics of the Dark Universe	6.4	48	101832
86	Probing Thermodynamics of Einstein-Maxwell Scalar Black Holes Through Exponential Corrected Entropy	Physics of the Dark Universe	6.4	48	101875
87	Impact of 2019 Earthquakes on Shallow Aquifers in Northern sub-Himalayan, Pakistan: A Detailed Analysis of Mirpur and Surrounding Areas	Geofísica Internacional	0.8	64(3)	90
88	ZnFe2O4/Cr2O3/MXene nanocomposite photocatalyst stimulates tetracycline antibiotic degradation under visible light irradiation: Toxicity evaluation and degradation mechanism	Separation and Purification	9	354(13)	128866
89	Investigation of Strain Modulated Opto-Electronic Properties in Monolayer WX2 (X=Se and S):DFT and Beyond DFT Study	Journal of Inorganic and Organometallic Polymers & Materials	4.9	35	651-660
90	Performance improvement of MoS2/graphene heterostructures based FET by tuning mobility and threshold voltage using APTES	Materials Science and Engineering: B	4.6	311	117797
91	Cubic silicon carbide anode material for low-temperature solid oxide fuel cell	Journal of Solid State Electrochemistry	2.6	29(05)	1777-1785
92	Electrochemical study of Ag2O/MWCNTs composite electrode material for energy storage devices	Ionics	2.6	31(01)	201-216
93	Supercapacitors: Shaping the future energy storage landscape for flexible, implantable and wearable electronic devices	Science Talk	N/A	13	100411
94	Green-mediated sol-gel fabrication of CuO/ZnO nanoparticles from orange peel extract for environmental remediation: insights from x-ray diffraction analysis using various models	Physica Scripta	2.6	100(1)	15980
95	Optimizing the degradation of tetracycline antibiotics with an efficient rGO/Cu0.5Mn0.5Fe2O4/ZnO photocatalyst under visible light irradiation	Material Letters	2.7	382	137859
96	A novel Z-scheme visible light driven photocatalyst AgZnFe2O4/V2O5/RGO for boosting the degradation of tetracycline antibiotics: Gated Recurrent Unit (GRU) and Response Surface Methodology (RSM) models, toxicity and degradation pathways	Surface & Interface	6.3	56	105606
97	Promising study of NiCuCeO mixed ionic electronic conductor for moderate temperature conventional solid oxide fuel cells	Materials Chemistry and Physics Sustainability and Energy	4.7	2	100003