Department of Physics, University of Jammu

Research Publications

Period: January 2022 – Dec, 2023

S.No.	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number	Link to the recognition in UGC enlistment of the Journal		
							Link to website of the Journal	Link to article/paper /abstract of the article	Is it listed in UGC Care list/Scopus/ Web of Science /other, mention
YEAR: 2022									
1.	Measurement of prompt D0, Λ_c^+, and $\Sigma_c^{0,++}(2455)$ production in pp collisions at $\sqrt{s}$=13TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	Phys. Rev. Lett.	2022	0031-9007		https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.128.012001	yes
2.	Charm-quark fragmentation fractions and production cross section at midrapidity	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE	Physics	*Phys.Rev.D*	2022	1550-7998		https://journals.aps.org/prd/abstract/	yes

	in pp collisions at the LHC	Collaboration)						10.1103/ PhysRevD.105.L011103pdf	
3.	Production of light (anti)nuclei in pp collisions at s√=13TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al.,(ALICE Collaboration)	Physics	*JHEP*	2022	1029-8479		https:// link.springer.com/ article/10.1007/ JHEP01(2022)106	yes
4.	Measurement of inclusive charged-particle b-jet production in pp and p-Pb collisions at sNN−− −√=5.02TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*JHEP*	*2022*	1029-8479		https:// inspirehep.net/ files/ 6acd0aa80e2d0d1fbe840113031f0b97https:// link.springer.com/ article/10.1007/ JHEP01(2022)178	yes
5.	Prompt D0, D+, and D ∗ +production in Pb-Pb collisions at sNN−−−√= 5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*JHEP*	*2022*	1029-8479		https:// link.springer.com/ article/10.1007/ JHEP01(2022)174	yes
6.	Nuclear modification factor of light neutral-meson	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni**	Physics	*Phys.Lett.B*	2022	0370-		https://	yes

	spectra up to high transverse momentum in p-Pb collisions at *s*NN−−−√= 8.16 TeV **Anju Bhasin,** **Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta** ……...et al.,(ALICE Collaboration)**Anju Bhasin,** **Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	**Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)				2693.		www.sciencedirect.com/science/article/pii/S0370269322000776?via%3Dihub	
7.	Measurement of prompt D+s-meson production and azimuthal anisotropy in Pb-Pb collisions at *s*NN−−−√=5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693.		https://www.sciencedirect.com/science/article/pii/S0370269322001204?via%3Dihubhttps://arxiv.org/pdf/2110.10006.pdf	yes
8.	Measurement of the groomed jet radius and momentum splitting fraction in pp and Pb–Pb collisions	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE	Physics	Phys. Rev. Lett.	2022	0031-9007		https://journals.aps.org/prl/abstract/10.1103/	yes

	at sNN−−−√=5.02TeV	Collaboration)Collaboration)						PhysRevLett.128.102001	
9.	Production of Λand K0Sin jets in p-Pb collisions at sNN−−−√=5.02TeV and pp collisions at s√=7TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693.		https://www.sciencedirect.com/science/article/pii/S0370269322001186?via%3Dihub	yes
10	Measurement of K ∗ (892)±production in inelastic pp collisions at the LHC	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693.		https://www.sciencedirect.com/science/article/pii/S0370269322001472?via%3Dihub	yes
11	Prompt and non-prompt J/ψproduction cross sections at midrapidity in proton-proton collisions at s√= 5.02 and 13 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	Journal of High Eneergy Physics (JHEP)	2022	1029-8479		https://link.springer.com/article/10.1007/JHEP03(2022)190	yes
12	Production of light (anti)nuclei in pp collisions at s√ = 5.02TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra**	Physics	*Eur.Phys.J.*	2022	1434-6052		https://link.springer.com/article/10.1140/	yes

		……...et al., (ALICE Collaboration)						epjc/s10052-022-10241-z	
13	Observation of a multiplicity dependence in the pT-differential charm baryon-to-meson ratios in proton-proton collisions at $s\sqrt{}$=13TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693.		https://www.sciencedirect.com/science/article/pii/S037026932200199X?via%3Dihub	yes
14	Investigating the role of strangeness in baryon−antibaryon annihilation at the LHC	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693.		https://www.sciencedirect.com/science/article/pii/S0370269322001940?via%3Dihub	yes
15	Investigating charm production and fragmentation via azimuthal correlations of prompt D mesons with charged particles in pp collisions at $s\sqrt{}$=13TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Eur.Phys.J*	2022	1434-6052		https://link.springer.com/article/10.1140/epjc/s10052-022-10267-3	yes

16	Polarization of Λand Λ¯¯¯hyperons along the beam direction in Pb-Pb collisions at*s*NN−−−√= 5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys. Rev. Lett.*	2022	0031-9007		https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.128.172005https://arxiv.org/pdf/2107.11183.pdf	yes
17	Measurements of the groomed and ungroomed jet angularities in pp collisions at *s*√=5.02TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*JHEP*	2022	1029-8479		https://link.springer.com/article/10.1007/JHEP05(2022)061	yes
18	Direct observation of the dead-cone effect in quantum chromodynamics	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Nature*	2022	1548-7091.		https://www.nature.com/articles/s41586-022-04572-w	yes
19	Inclusive, prompt and non-prompt J/*ψ*production at midrapidity in p−Pb collisions at *s*NN−−−√=5.02TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*JHEP*	2022	1029-8479		https://link.springer.com/article/10.1007/JHEP06(2022)011	yes

20	Forward rapidity J/ψproduction as a function of charged-particle multiplicity in pp collisions at $s\sqrt{}$=5.02 and 13 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*JHEP*	2022	1029-8497		https://link.springer.com/article/10.1007/JHEP06(2022)015	yes
21	Multiplicity dependence of charged-particle jet production in pp collisions at $s\sqrt{}$=13 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Eur.Phys.J*	2022	1434-6052		https://link.springer.com/article/10.1140/epjc/s10052-022-10405-x	yes
22	Neutral to charged kaon yield fluctuations in Pb−Pb collisions at sNN−−−√= 2.76TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693		https://www.sciencedirect.com/science/article/pii/S0370269322003768?via%3Dihub	yes

23	Hypertriton production in p-Pb collisions at s_{NN} = 5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys. Rev. Lett.*	2022	0031-9007		https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.128.252003	yes
24	Exploring the NΛ-NΣcoupled system with high precision correlation techniques at the LHC	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693		https://www.sciencedirect.com/science/article/pii/S0370269322004063?via%3Dihub	yes
25	General balance functions of identified charged hadron pairs of (π,K,p)in Pb–Pb collisions at s_{NN} = 2.76TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693		https://www.sciencedirect.com/science/article/pii/S0370269322004725?via%3Dihub	yes
26	K0S K0S and K0S K± femtoscopy in pp collisions at $\sqrt{s}$ = 5.02 and 13 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693		https://www.sciencedirect.com/science/article/pii/S0370269322004695?via%3Dihub	yes

27	Study of very forward energy and its correlation with particle production at midrapidity in pp and p-Pb collisions at the LHC	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*JHEP*	2022	1029-8497		https://link.springer.com/article/10.1007/JHEP08(2022)086	yes
28	Characterizing the initial conditions of heavy-ion collisions at the LHC with mean transverse momentum and anisotropic flow correlations	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Lett.B*	2022	0370-2693		https://www.sciencedirect.com/science/article/pii/S037026932200527 5?via%3Dihub	yes
29	Production of K ∗ (892)0 and φ(1020) in pp and Pb-Pb collisions at sNN−− −√=5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Rev.C*	2022	24699985		https://journals.aps.org/prc/abstract/10.1103/PhysRevC.106.034 907	yes

30	First study of the two-body scattering involving charm hadrons	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Rev.D*	2022	1550-7998		https://journals.aps.org/prd/abstract/10.1103/PhysRevD.106.052010	yes
31	Measurement of of $^{3}\overline{He}$ nuclei absorption in matter and impact on their propagation in the galaxy	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Nature Phys*	2022	1745-2473.		https://inspirehep.net/files/77629009d708894ddcd0ae29ccab5697	yes
32	Measurement of beauty production via non-prompt D0 mesons in Pb-Pb collisions at sNN= 5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*JHEP*	2022	1029-8497		https://link.springer.com/article/10.1007/JHEP12(2022)126	yes
33	Triaxial projected shell model study of γ-bands in even even $^{104-122}$Cd nuclei	Manvi Rajput, Suram Singh, Preeti Verma, Veerta Rani, **Arun Bharti,** G.H. Bhat, J.A. Sheikh	Physics	*Nuclear Physics A*	*2022*	0375-9474		https://www.sciencedirect.com/science/article/abs/pii/S0375947422000021	yes

34	Theoretical study of nuclear structure properties of positive parity states of odd mass 103−117Ag nuclei	Manvi Rajput, Suram Singh, Veerta Rani, Preeti Verma, **Arun Bharti,** G.H. Bhat, J.A. Sheikh	Physics	*The European Physical Journal A*	*2022*	1434-6001		https://link.springer.com/article/10.1140/epja/s10050-022-00802-x	yes
35	Structural evolution and shape transitions of even-even $^{140-150}$Ba nuclei using triaxial projected shell model	Ridham Bakshi, Rajat Gupta, Amit Kumar, Suram Singh, **Arun Bharti,** G.H. Bhat, J.A. Sheikh	Physics	*The European Physical Journal A*	*2022*	1434-6001		https://link.springer.com/article/10.1140/epja/s10050-022-00902-8	yes
36	Microscopic insights into the nuclear structure of $^{98-106}$Ru nuclei	Ridham Bakshi, Surbhi Gupta, Rajat Gupta, Amit Kumar, Suram Singh, **Arun Bharti,** G.H. Bhat, J.A. Sheikh	Physics	*The European Physical Journal A*	*2022*	1434-6001		https://link.springer.com/article/10.1140/epja/s10050-022-00734-6	yes
37	"Cu(II) complex based on lemofloxacin and N,N-donor ligand: Synthesis, crystal structure, DFT calculations, and in vitro antimicrobial evaluation "	Joshua Ayoola Obaleye, Misitura Lawal, Rajendrasinh N. Jadeja, **Vivek K. Gupta**, Ginikachukwu Grace Nnabuike, Mercy Oluwaseyi	Physics	***Journal of Molecular Structure, 1249 (2022) 131542.***	*2022*	**ISSN 0 022-2860.**		https://www.sciencedirect.com/science/article/abs/pii/S0022286021016707	yes

		Bamigboye, Hetal Roy, Olaniyi Kamil Yusuff, Abdulrafiu T. Raji							
38	Synthesis, spectroscopic characterization, crystal structure, theoretical (DFT) studies and molecular docking analysis of biologically potent isopropyl 5-chloro-2-hydroxy-3-oxo-2,3- dihydrobenzofuran-2-carboxylate	Varun Sharma, Indrajit Karmakar, Goutam Brahmachari, **Vivek K.Gupta**	Physics	*Molecular Crystals and Liquid Crystals, (Published online, 07 Jan 2022)*	*2022*			*DOI:10.1080/1542 1406.2021.2024041*	yes
39	Synthesis, characterization and Hirshfeld surface analysis of 2-aminobenzothiazol with 4-fluorobenzoic acid co-crystal"	Bubun Banerjee, Varun Sharma, Aditi Sharma, Gurpreet Kaur, **Vivek K. Gupta**	Physics	*European Journal of Chemistry, 13 (2) (2022) 206-213.*	*2022*	ISSN: 215 3-2257 Electronic		https:// www.eurjchem.com /index.php/ eurjchem/article/ view/2234	yes

40	"X-ray crystal structure analysis of *N*'-acetyl-*N*'-phenyl-2-naphthohydrazide"	Varun Sharma, Indrajit Karmakar, Goutam Brahmachari, **Vivek K. Gupta**	Physics	*European Journal of Chemistry, 13 (3) (2022) 253-258*	*2022*	ISSN: 2153-2257 Electronic		https://www.eurjchem.com/index.php/eurjchem/article/view/2235/0	yes
41	A General Method for the Synthesis of 11H-Indeno[1,2-B]Quinoxalin-11-Ones and 6H-Indeno[1,2-B]Pyrido[3,2-E]Pyrazin-6-One Derivatives Using Mandelic Acid as an Efficient Organo-catalyst at Room Temperature"	Aditi Sharma, Gurpreet Kaur, Diksha Singh, **Vivek K. Gupta**, Bubun Banerjee	Physics	*Current Organocatalysis, 9 (2022) 53-61.*	*2022*	ISSN: 2213-3380 (Online) ISSN: 2213-3372 (Print)		https://www.ingentaconnect.com/content/ben/cocat/2022/00000009/00000001/art00009 https://doi.org/10.2174/2213337208666210825112301	yes
42	Synthesis, in vitro and theoretical studies on newly synthesized deep blue emitting 4-(p-methylphenylsulfonyl-5-aryl/alkyl)oxazole analogues for biological and optoelectronic applications	Pavankumar Prabhala, Suraj M. Sutar, M.R. Manjunatha, G. M. Pawashe, **Vivek K. Gupta**, Lohit Naik, Rajesh G. Kalkhambkar	Physics	*Journal of Molecular Liquids, 360 (2022) 119520.*	*2022*	ISSN 0167-7322.		https://www.sciencedirect.com/science/article/abs/pii/S0167732220105833	yes

43	Trisodium citrate dihydrate catalyzed one-pot pseudo fourcomponentsynthesis of fully functionalized pyridine derivatives"	Aditi Sharma, Arvind Singh, Anu Priya, Manmeet Kaur, **Vivek K. Gupta,** Vikas Jaitak & Bubun Banerjee	Physics	*Synthetic Communications (2022)*	*2022*	ISSN 0039-7911		*DOI:10.1080/00397911.2022.2101378*	yes
44	Dereplication approach for the first time isolation of tatarinowin a and pentadecanoic acid from *Acorus calamus* L. by using GC-MS"	Chetan Kumar, Sabiyah Akhter, Naresh Kumar Satti, **Vivek K. Gupta**, Siya Ram Meena, Ram Vishwakarma, Qazi Parvaiz Hassan & Mahendra Kumar Verma	Physics	*Natural Product Research*	*2022*	ISSN 14786427, 14786419		*DOI: 10.1080/14786419.2022.2061482* (2022)	yes
45	Synthesis, characterization, Hirshfeld surface analysis and molecular docking studies of 3-(cyclohexylthio)-4-hydroxy-6-methyl-2*H*-chromen-2-one"	Varun Sharma, A. Bhowmick, Indrajit Karmakar, G.Brahmachari, **Vivek K. Gupta**	Physics	*Molecular Crystals and Liquid Crystals (2022)*	*2022*	ISSN 15421406, 15635287		https://www.tandfonline.com/doi/abs/10.1080/15421406.2022.2132031 https://doi.org/10.1080/15421406.2022.2132031	yes
46	Synthesis, Crystal structure, Hirshfeld surface, Nonlinear optical properties and Computational studies of Schiff based (*E*)-*N*′-(2,4-	V. Saraswathi, S. Agilan, N. Muthukumarasamy, Vivek K. Gupta, M. Suresh, P.	Physics	Optical and Quantum Electronics	*2022*	Electronic ISSN 1572-817X		https://link.springer.com/article/10.1007/s11082-022-04105-	yes

	dimethoxybenzylidene) benzohydrazide single crystals for optoelectronic applications	Peulakumari, DhayalanVelauthapillai		*(2022) (Accepted)*		Print ISSN 0306-8919		9	
47	"Mandelic acid catalyzed one-pot pseudo three-component synthesis of various trisubstituted methane derivatives at room temperature"	Bubun Banerjee, Arvind Singh , Aditi Sharma, Anu Priya, Manmeet Kaur , Gurpreet Kaur, Vivek **Kumar Gupta** and Vikas Jaitak	Physics	Arkivoc 2022, part ix, 100-118	*2022*	ISSN: 1551-7012 (online ed.), ISSN: 1551-7004		doi.org/10.24820/ark.5550190.p011.895	yes
48	Synthesis, crystal feature and spectral characterization of paeonol derived Schiff base ligands and their Cu(II) complexes with antimicrobial activity"	J.H. Pandya, Maitrey Travadi, R.N. Jadeja, R.N. Patel, **Vivek K. Gupta**	Physics	*Journal of the Indian Chemical Society, 99 (2022) 100403.*	*2022*	Online ISSN: 2667-2847		https://www.sciencedirect.com/science/article/abs/pii/S0019452222000656?dgcid=rss_sd_all	yes
49	Blue fluorescent Zinc(II) complexes bearing schiff base ligand for solution-processed Organic light-emitting diodes with $CIE_y \leq 0.09$	Jaydip D.Solanki, Iram Siddiqui, PrakalpGautam, **Vivek K.Gupta**, Jwo-HueiJou, K.R.Surati	Physics	*Optical Materials 134(B) (2022) 113222.*	*2022*	Online ISSN: 1873-1252 Print ISSN: 0925-3467		https://www.sciencedirect.com/science/article/abs/pii/S0925346722012617	yes

50	Sodium Dodecyl Sulphate Catalyzed One-Pot Three-Component Synthesis of Structurally Diverse 2-Amino-3cyano Substituted Tetrahydrobenzo[b]pyrans and Spiropyrans in Water at Room Temperature	Babun Banerjee, Anu Priya, Manmeet Kaur, Aditi Sharma, Arvind Singh, **Vivek Kumar Gupta,** Vikas Jaitak	Physics	Catalysis Letters, 16 Jan, 2022	2022			https://doi.org/10.1007/s10562-022-04256-0	yes
51	Glycine Catalyzed One-Pot Three-Component Synthesis of Structurally Diverse 2-Amino Substituted Pyran Annulated Heterocycles in Aqueous Ethanol under Refluxed Conditions	Babun Banerjee, Anu Priya, Manmeet Kaur, Aditi Sharma, Arvind Singh, **Vivek Kumar Gupta**, Vikas Jaitak	Physics	Current Gree Chemistry, 2022 9, 162-173	2022	ISSN (Print): 2213-3461 ISSN (Online): 2213-347X		http://dx.doi.org/10.2174/2213346110666221212152202	yes
52	**Synthesis, crystal structure, molecular docking, lattice energy and Hirshfeld surface analysis of an antituberculosis drug of (E)-2- methoxy-5-(((6-methoxypyridin-3yl)imino)methyl)phenol**	**Gopal Sharma, Sumati Anthal, P. Akhileshwari, H. M. Vinusha, S. Bindya, M. A. Sridhar, Muneera Begum, Ravikumar Chandrasekaran, Saminathan Murugavel and RAJNI KANT ***	**Physics**	**Molecular Crystal Liquid Crystal 737 (1) (2022) 65-80**	***2022***	**Print ISSN: 1542-1406 Online ISSN: 1563-5287**		**https://www.tandfonline.com/doi/full/10.1080/15421406.2021.2005749**	**yes**
53	**Synthesis, crystal structure, Hirshfeld surface, crystal voids,**	**Ruchika Sharma, Mulveer Singh, Kamal, Nitin G.**	**Physics**	**Advanced Journal of Chemistry**	***2022***	**Online ISSN: 2716-**		**https://www.ajchem-**	**yes**

	energy frameworks, DFT and molecular docking analysis of (2,6-dimethoxyphenyl)acetic acid	**Ghatpande, Mahidansha M. Shaikh, Jagannath S. Jadhav, Saminathan Murugavel and RAJNI KANT ***		**Section B 4(1) (2022) 1-16**		**9634**		**b.com/ article_145346.html**	
54	**Indium(III) and organotin(IV) 2(methoxycarbonyl)benzenethiolates: Synthesis, structure and properties**	**Krishna Kumar, Priyanka Tiwaria, Srikanta Moharana, RAJNI KANT, Subrato Bhattacharya**	**Physics**	**Journal of Molecular Structure 1260 (2022) 132801**	***2022***	**Online ISSN: 1872-8014 Print ISSN: 0022-2860**		**https://doi.org/ 10.1016/ j.molstruc.2022.132801**	**yes**
55	**Optimized structure, in silico interaction and molecular docking analysis of two benzimidazole-2-thione Derivatives**	**Mulveer Singh, Saminathan Murugavel, Ravikumar Chandrasekaran and RAJNI KANT ***	**Physics**	**Mat. Sci. Res. Ind. 19(1) (2022) 1-16**	***2022***	**Print: 0973-3469, Online: 2394-0565**		**http:// dx.doi.org/ 10.13005/msri/ 190101**	**yes**
56	**Synthesis, X-ray crystal structure, DFT, Hirshfeld surfaces, energy frameworks and molecular docking analysis of a bicyclic ortho-aminocarbonitrile derivative**	**Ruchika Sharma, S. A. Sankpal, Pradeep J. Patil, S. Murugavel, Sonachalam Sundramoorthy, RAJNI KANT ***	**Physics**	**European Journal of Chemistry 13 (2) (2022) 135-144**	***2022***	**ISSN: 2153-2249 Print ISSN: 2153-2257 Electroni**		**https://doi.org/ 10.5155/ eurjchem.13.2.135-144.2225**	**yes**

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57	**Quantum, Hirshfeld surface, crystal voids, energy framework and molecular docking analysis of two halogen containing benzimidazole-2-thione structures**	**Mulveer Singh, Saminathan Murugavel, Ravikumar Chandrasekaran and RAJNI KANT ***	**Physics**	**Molecular Crystal Liquid Crystal 739 (1) (2022) 127-141**	***2022***	**ISSN: 1058-725X**	●	**https://doi.org/10.1080/15421406.2022.2031449**	**yes**
58	**Novel supramolecular co-crystal of 3-aminobenzoic acid with 4-acetyl-pyridine: Synthesis, X-ray structure, DFT and Hirshfeld surface analysis**	**Mulveer Singh, Sumati Anthal P. J. Srijana, , B. Narayana, B. K. Sarojini, U. Likhitha, Kamal, RAJNI KANT ***	**Physics**	**Journal of Molecular Structure 1262 (2022) 133061**	***2022***	**Online ISSN: 1872-8014 Print ISSN: 0022-2860**	●	**https://doi.org/10.1016/j.molstruc.2022.133061**	**yes**
59	**Cambridge Structure Database analysis of molecular interactions energies in bromine-substituted coumarin structures**	**Jigmat Stondus and RAJNI KANT ***	**Physics**	**Rasayan J Chem 15 (2) (2022) 991-1008**	***2022***	**ISSN: 0974-1496(Print) ISSN: 0976-0083(Online)**	●	**http://doi.org/10.31788/RJC.2022.1526853**	**yes**

60	**DFT, Lattice Energy and Hirshfield Surface Analysis of Some 6-Chloro-Coumarin Structures**	**Jigmat Stondus and RAJNI KANT ***	**Physics**	**Molecular Crystal Liquid Crystal 746(1) 93-109 (2022) 93-109**	***2022***	**ISSN: 1058-725X**	● ●	**https://doi.org/10.1080/15421406.2022.2078569**	
61	**Crystallographic, DFT, Lattice Energy and Hirshfeld Surface Analysis of Some CSD-Based 6-Chloropurines**	**Jigmat Stondus and RAJNI KANT ***	**Physics**	**Chemical and Pharamaceutical Research 4(2) (2022) 1-14**	***2022***	**ISSN 2689-1050**	●	**DOI:10.33425/2689-1050.1039**	**yes**
62	**Synthesis and structural characterization of Cd(II) complexes based on acetylene dicarboxylate: A 1-D polymer as a precursor to CdO nanoparticles**	**Neha Sareena, Krishna Kumar, RAJNI KANT, Somenath Garai, Subrato Bhattacharya**	**Physics**	**Journal of Molecular Structure 1267 (2022) 133653**	***2022***	**Online ISSN: 1872-8014 Print ISSN: 0022-2860**	●	**https://doi.org/10.1016/j.molstruc.2022.133653**	**yes**
63	**Co-crystallisation of 4-amino pyridine with succinic acid (1:1): spectroscopic, thermal, crystal structure, DFT/HF calculation and Hirshfeld surface analysis**	**P. J. Srijana, Mulveer Singh, B. Narayana, B. K. Sarojini, U. Likhitha, RAJNI KANT ***	**Physics**	**Molecular Physics (2022) VOL. 120, NO. 14, e2096143**	***2022***	**0026-8976 ISSN(online): 1362-3028**	● ●	**https://doi.org/10.1080/00268976.2022.2096143**	**yes**

64	**Expeditious synthesis of isolated steroids-fluorine prodrugs, their single crystal X-ray crystallography, DF studies and mathematical modeling**	**Arun Sethi, Amandeep, R.P Singh, Rachana Pathak, Rohit Prakash, Sonia Sharma, RAJNI KANT**	**Physics**	**Ind. J Chem. Sec B 61 (2022) 831-841**	***2022***	**ISSN: 0975-0983 (Online) ISSN: 0376-4699 (Print)**	●	**DOI: 10.56042/ijc.v61i8.65025**	
65	**Synthesis, structure, Hirshfeld surface, crystal voids, energy framework and DFT analysis of 1H-Benzo[d]imidazole-2(3H)-thione"**	**M Singh, S Anthal, Kamal, M B Deshmukh, RAJNI KANT ***	**Physics**	**Ind J Chem. Sec B 61 (2022) 528-536**	***2022***	**ISSN: 0975-0983 (Online) ISSN: 0376-4699 (Print)**	●		
66	**Supramolecular co-crystal of 4-dimethyl aminopyridine with Picric acid (4DMAP:PA): Synthesis, single crystal investigation, HF/DFT inspection, Hirshfeld surface and antifungal activity**	**Ruchika Sharma, P.J.Srijana, M.Singh, Kamal, B.Narayana, B.K.Sarojini, U.Lalitha, S.Murugavel, J. Mohanraj, RAJNI KANT***	**Physics**	**Journal of Molecular Structure 1270 (2022) 133921**	***20200***	**Online ISSN: 1872-8014 Print ISSN: 0022-2860**	●	**https://doi.org/10.1016/j.molstruc.2022.133921**	
67	**Synthesis of a Few Novel Cu(I) Methylthiosalycylate Complexes and their**	**Krishna Kumar, Priyanka Tiwari, RAJNI KANT and S. Bhattacharya**	**Physics**	**New J of Chem. 46 (2022) 17854-**	***2022***	**ISSN: 1144-0546 (print); 1369-**		**https://doi.org/10.1039/D2NJ02722D**	

	Application for the Synthesis of Vinyl Sulfide via Thiol-Yne Click Reaction			**17864**		**9261 (web)**	●		
68	**Structure, Quantum Chemical and In Silico Molecular Docking Analysis of some Di-Ortho-Substituted Halogenated Biphenyls**	**Neha Kumari, R. Sharma, M.Singh, J. Mohan Raj, S.Murugavel, S. Sundramoorthy, RAJNI KANT ***	**Physics**	**Chemical and Pharmaceutical Research Vol 4 (3) (2022) 1-9**	***2022***	**ISSN 2689-1050**	●	**DOI:10.33425/2689-1050.1043**	
69	Structural, morphological, optical and electrical properties of yttrium-doped calcium strontium titanate prepared by solid-state reaction technique	Kumari Kanika Bhadwal, Bindu Raina, Sonali Thakur, **K. K. Bamzai**	Department of Physics, University of Jammu	Indian Journal of Physics	June 2022	Online:0974-9845 Print: 0973-1458	https://www.springer.com/journal/12648	https://link.springer.com/article/10.1007/s12648-022-02383-3	Yes
70	Investigations on structural, spectroscopic and magnetic properties of yttrium barium orthoferrite and nickel doped strontium hexaferrite composites	Sonali Thakur, Bindu Raina, **K. K. Bamzai**	Department of Physics, University of Jammu	Applied Physics A	March 2022	Online:1432-0630 Print: 0947-8396	https://www.springer.com/journal/339	https://link.springer.com/article/10.1007/s00339-022-05399-y	Yes

71	Magnesium and yttrium doped superparamagnetic manganese ferrite nanoparticles for magnetic and microwave applications	● Yaseen Ahmad, Bindu Raina, Sonali Thakur, **K. K.Bamzai**	Department of Physics, University of Jammu	Journal of Magnetism and Magnetic Materials	February 2022	Online: 1873-4766 Print: 0304-8853	https://www.sciencedirect.com/journal/journal-of-magnetism-and-magnetic-materials	https://www.sciencedirect.com/science/article/abs/pii/S0304885322001421	Yes
72	Organic coordinated SnS and SnS1-xSex crystals: synthesis, characteristics and optical behaviour for photonic applications	Arun Banotra, **Naresh Padha**	Department of Physics, University of Jammu	Optical and Quantum Electronics	April 2022	ISSN 0306-8919		https://doi.org/10.1007/s11082-022-03739-z	Yes
73	Growth Dynamics of SnSe Thin Films on Annealing of Precursor Layers Stacked by Multisource Sequential Elemental Layer Deposition	Arun Banotra & **Naresh Padha**	Department of Physics, University of Jammu	Integrated Ferroelectrics	June 2022	ISSN 1607-8489		https://doi.org/10.1080/10584587.2022.2102805	Yes

74	Sequentially evaporated layer deposition stack of CuxS thin films for photonics applications	Padma Dolma, Arun Banotra , **Naresh Padha**, Ajit Khosla	Department of Physics, University of Jammu	journal of materials research and technology	August 2022	ISSN 2214-0697		https://doi.org/10.1016/j.jmrt.2022.08.097	Yes
75	Impact of annealing on the growth dynamics of indium sulphide buffer layers	Shafiq Ahmed, **Naresh Padha**, Arun Banotra, Ajit Khosla	Department of Physics, University of Jammu	journal of materials research and technology	Sept. 2022	ISSN 2214-0697		https://doi.org/10.1016/j.jmrt.2022.09.094	Yes
76	Effect of substrate and annealing temperature on the physical properties of the thin films of SnSe2-SnSe alloy	Shammi Kumar Arun Banotra, **Naresh Padha**, Shafiq Ahmed a	Department of Physics, University of Jammu	Optical Materials	Sept. 2022	ISSN 0925-3467		https://doi.org/10.1016/j.optmat.2022.113078	Yes
77	UV–vis spectroscopic method for detection and removal of heavy metal ions in water using Ag doped ZnO nanoparticles	A Ahmed, A Singh, B Padha, AK Sundramoorthy, A Tomar, S Arya	Physics	Chemosphere	2022	1879-1298		https://doi.org/10.1016/j.chemosphere.2022.135208	Yes

	Fabric-based wearable self-powered asymmetric supercapacitor comprising lead-free perovskite piezoelectrodes	B Padha, S Verma, S Arya	Physics	Advanced Materials Technologies		2365-709X		https://doi.org/10.1002/admt.202200079	
	Highly selective and efficient electrochemical sensing of ascorbic acid via CuO/rGO nanocomposites deposited on conductive fabric	A Singh, A Sharma, A Ahmed, S Arya		Applied Physics A		1432-0630		https://doi.org/10.1007/s00339-022-05436-w	
	Review of current progress in hole-transporting materials for perovskite solar cells	P Mahajan, B Padha, S Verma, V Gupta, R Datt, WC Tsoi, S Satapathi, S Arya		Journal of Energy Chemistry		2096-885X		https://doi.org/10.1016/j.jechem.2021.12.003	

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1	Inclusive quarkonium production in pp collisions at $s\sqrt{}$=5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Eur.Phys.J*	2023	1434-6052		https://link.springer.com/article/10.1140/epjc/s10052-022-10896-8	yes
2	Constraining the K¯¯¯Ncoupled channel dynamics using femtoscopic correlations at the LHC	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Eur.Phys.J*	2023	1434-6052		https://link.springer.com/article/10.1140/epjc/s10052-023-11476-0	yes
3	Σ(1385)± resonance production in Pb-Pb collisions at sNN−−−√=5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Eur.Phys.J*	2023	1434-6052		https://link.springer.com/article/10.1140/epjc/s10052-023-11475-1	yes
4	Investigation of K+ K− interactions via femtoscopy in Pb− Pb collisions at sNN−−−√=2.76 TeV at the	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE	Physics	*Phys.Rev.C*	2023	24699985		https://journals.aps.org/prc/abstract/10.1103/	yes

	LHC	Collaboration)						PhysRevC.107.054904	
5	W± -boson production in p–Pb collisions at s_{NN}−−− −√=8.16 TeV and PbPb collisions at s_{NN}−−− −√=5.02 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*JHEP*	2023	1029-8497		https://link.springer.com/article/10.1007/JHEP05(2023)036	yes
6	K ∗ (892)0 and φ(1020) production in p-Pb collisions at sNN−− −√= 8.16 TeV	**Anju Bhasin, Sanjeev S. Sambyal, Anik Gupta, Ramni Gupta, R.N. Patra** ……...et al., (ALICE Collaboration)	Physics	*Phys.Rev.C*	2023	24699985		https://journals.aps.org/prc/abstract/10.1103/PhysRevC.107.055201	yes
7	DFT stimulation and experimental insights of chiral Cu(II)–salen scaffold within the pocket of MWW-zeolite and its catalytic study”	Pratikkumar Lakhani, Darshil Chodvadiya, Prafulla K. Jha, **Vivek K. Gupta**, Damian Trzybin ´ski, Krzysztof Wozniak, Krzysztof Kurzydłowski, U. K. Goutam, Himanshu Srivastavag and Chetan K. Modi	Physics	*Phys. Chem. Chem. Phys., 25 (2023) 14374.*	2023	ISSN 1463-9076 (Print)			yes

8	Structural Engineering and Electronic Properties of Halide-Specific Supramolecular Architectures: Effective for Stabilizing $H_5O_2^+$ and Fabricating Semiconducting Photoresponsive Diodes	Santanu Majumdar, Arka Dey, Arkamita Bandyopadhyay, Gerald Lepcha, Ranjan Kumar Mondal, **Vivek K. Gupta**, Partha Pratim Ray, and Biswajit Dey	Physics	J. Phys. Chem. C 2023, 127, 3417−3431	2023	ISSN 1932-7455 (Online)			yes
9	Synthesis, characterization, quantum chemical calculation, Hirshfeld surface analysis and antibacteriaL activity of a co-crystal of 4-aminopyridine: p-hydroxybenzoic acid with a water molecule	Ruchika Sharma; Mulveer Singh; Palthad Jayarama Srijana; Kamal ;Badiadka Narayana; Balladka Kunhanna Sarojini; Ullal Likhitha; Saminathan Murugavel; Jayakumar Mohan Raj, **RAJNI KANT** *	Physics	**Journal of Molecular Structure 1284 (2023) 135309**	2023	Online ISSN: 1872-8014 Print ISSN: 0022-2860		https://doi.org/10.1016/j.molstruc.2023.135309	yes
10	Synthesis, XRD, DFT/HF andMolecular docking investigations of 4-(tert-butyl)-4-methoxy-1,1-biphenyl	Neha Kumari, R. Sharma, A.A. Yadav, S.A. Sankpal, J. Mohan Raj, S. Murugavel, **RAJNI KANT ***	Physics	**Rasayan J Chem 16(2) 2023**	2023	ISSN: 0974-1496(Print) ISSN: 0976-0083(Online)			yes

11	Synthesis, crystal structure, DFT/HF, Hirshfeld surface and molecular docking analysis of 4-(tert-butyl)-4-nitro-1,1-biphenyl (4TBNB).	Neha Kumari, R. Sharma, A.A. Yadav, S.A. Sankpal, J. Mohan Raj, S. Murugavel, **RAJNI KANT ***	Physics	**European J Chem (2023)**	2023	**ISSN:** 2153-2249 Print **ISSN:** 2153-2257 Electronic		DOI:10.5155/eurjchem.14.1.90-98.2386	yes
12	Synthesis, characterization, Hirshfeld surface analysis and molecular docking studies of 3-(cyclohexylthio)-4-hydroxy-6-methyl-2*H*-chromen-2-one	Varun Sharma, Anindita Bhowmick, Indrajit Karmakar, Goutam Brahmachari & Vivek Kumar Gupta	Physics	*Molecular Crystals and Liquid Crystals* Vol. 757, pp. 62-67	2023			https://doi.org/10.1080/15421406.2022.2132031	
13	Crystallographic structure, quantum and in silico interaction analysis of 3-(benzylthio)-4-hydroxy-2Hchromen-2-one	Varun Sharma, Anindita Bhowmick, Indrajit Karmakar, Goutam Brahmachari, and Vivek Kumar Gupta		*Molecular Crystals and Liquid Crystals*, Vol. 759, pp. 1-18	2023			https://doi.org/10.1080/15421406.2022.2159118	yes

14	Camphor sulfonic acid catalyzed one-pot pseudo three-component synthesis of a series of 1,8-dioxo-octahydroxanthenes and comparative crystal structures investigations and Hirshfeld surface analysis of five such derivatives	Bubun Banerjee, Manmeet Kaur, Varun Sharma, and Vivek Kumar Gupta		*Research on Chemical Intermediates*, 49, 4639-4670	2023			https://doi.org/10.1007/s11164-023-05064-w	yes
15	Synthesis, Structural Elucidation, Physico-chemical Quantum Properties and In Silico Interaction Analysis of 2-methyl-3-((4-nitrobenzyl)oxy)quinoxaline	Sheena Mahajan, Varun Sharma, RajneeshPaul Sharma, Yeshwinder Saini, Vivek Kumar Gupta, Kamal K. Kapoor		*Journal of Molecular Structure*, Vol. 1295 pp 136654	2023			https://doi.org/10.1016/j.molstruc.2023.136654	yes
16	Synthesis, Crystal Structures	Varun Sharma and		*Medicinal and*	2023				yes

	Investigations and Hirshfeld Surface Analysis of Novel Molecule 2, 5-Dihydro [2]Benzopyrano [3,4-c] Pyrazole-water (1/4)	Vivek Kumar Gupta		*Analytical Chemistry International Journal*, Vol. 7 Issue 2 pp 1-6				DOI: 10.23880/macij-16000180	
17	A simple and efficient method for the synthesis of benzo[3,4-a]phenazin-5-ols and benzo[f]pyrido[b]quinoxalin-5-ol derivatives using trisodium citrate dihydrate as an efficient organo-catalyst at room temperature	Bubun Banerjee*, Arvind Singh, Aditi Sharma, Anu Priya, Manmeet Kaur and Vivek Kumar Gupta		*Polycycl. Aromat. Compd*., 2023, in press. https://doi.org/10.1080/10406638.2023.2238869	2023	**ISSN: 1563-5333, IF 2.195**			yes
18	Sonochemical synthesis of benzylidene derivatives of enolizable carbonyls and their analogues in aqueous ethanol	Palak J. Patel, Hiren R. Chaudhary, Vivek K. Gupta, Divyang M. Patel		Research on Chemical Intermediates	2023			https://doi.org/10.1007/s11164-023-05168-3	yes

19	Theoretical analysis of shape transition and axial symmetry in even-even Yb isotopes	Arun Gupta, Surbhi Gupta, Ridham Bakshi, Suram Singh, **Arun Bharti**, G.H.Bhat and J.A.Sheikh	Physics	Eur. Phys. J.Plus Vol.138 (2023) 785	2023			https://doi.org/10.1140/epjp/s13360-023-04404-4	Yes
20	Theoretical perspectives of nuclear structure in 82-88Ge and 66-74Se isotopes	Simi Gupta, Ridham Bakshi, Surbhi Gupta, Suram Singh, A**run Bharti**, G.H.Bhat and J.A.Sheikh	Physics	Eur. Phys. J.A Vol.59 (2023) 258	2023			https://doi.org/10.1140/epja/s10050-023-01166-6	Yes
21	A Two-step Method to Grow ZnSe Thin Films and To Study their Characteristics	Zakir Hussain, **Naresh Padh**a, Shafiq Ahmad & Padma Dolma	Physics	Indian Journal of Pure & Applied Physics	August 2023	ISSN 0975-1041		https://doi.org/10.56042/ijpap.v61i9.3209	Yes
22	Processing of nanocrystalline thin films of selenium and formation of FTO/p-Se/n-CdS/In heterojunctions for photovoltaic response	Rajesh Niranjan , **Naresh Padha**	Physics	Results in Optics	Sept 2023	ISSN 2666-9501		https://doi.org/10.1016/j.rio.2023.100533	Yes

23	Growth of nano-polycrystalline CuIn1-xAlxSe2 thin films and its photovoltaic cell formation	Rajesh Niranjan , **Naresh Padha**	Physics	Results in Surfaces and Interfaces	January 2024	ISSN 2666-8459		https://doi.org/10.1016/j.rsurfi.2024.100186	Yes