

**DEPARTMENT OF PHYSICS
KAKATIYA UNIVERSITY, WARANGAL**

Books/Research Publications in International/national Journals of the Faculty (2017 to 2022)

Name of the Teacher	Title of the Book/Article	Publication Details	UGC-CARE/ SCOPUS/ WoS/Refereed
Prof. B. Venkatram Reddy	1)Barrier potential, Structure (monomer & dimer), Inter- & Intra-molecular interactions, Vibrational analysis, Fukui functions, MESP, NBO, UV and NMR analysis of pyridine-3-carboxylic acid using Spectroscopic and DFT approach	Polycyclic Aromatic Compounds (Accepted) 2022 (Taylor & Francis)	
	2)Theoretical (DFT) and experimental (FT-IR & FT Raman) approach to investigate the molecular geometry and vibrational properties of 2,5- and 2,6-dihydroxytoluenes	J. of Molecular Structure 1240 (2021) 130617 (Elsevier Publishers)	UGC-CARE, SCOPUS & WoS I.F 3.196
	3) Synthesis, single-crystal X-ray diffraction, NLO and DFT studies of centrosymmetric 4-amino-3,5-dimethyl-1 <i>H</i> -pyrazolium citrate monohydrate salt	Molecular Physics doi.org/10.1080/00268976.2021.2022797 (Taylor & Francis)	UGC-CARE, SCOPUS & WoS IF : 1.704
	4)Synthesis, evaluation of molecular structure from torsional scans, study of vibrational and molecular characteristics using spectroscopic and DFT methods of some thiosemicarbazones and investigation of their anticancer activity	Chemical Papers doi.org/10.1007/s11696-021-01595-x (Springer)	UGC-CARE, SCOPUS & WoS I.F 2.095
	5) Synthesis, antimicrobial activity and DFT studies of 4,5-dihydro-9- methoxy-4-(5-methylisoxazol-3-yl)benzo[f][1,4]oxazepin-3(2H)-one	Materials Today: Proceedings doi.org/10.1016/j.matpr.2021.08.219 (Elsevier Publishers)	UGC-CARE, SCOPUS & WoS IF : 1.24

	6) Synthesis of Sr _{1-x} Ba _x Bi ₂ B ₂ O ₇ glass ceramics: A study for structure and characterization using experimental techniques and DFT method	J. of Molecular Structure 1220 (2020) 128660 (Elsevier Publishers)	UGC-CARE, SCOPUS & WoS
	7) Theoretical and experimental study of torsional potentials, molecular structure (monomer and dimer), vibrational analysis and molecular characteristics of some dimethyl bipyridine	J. of Molecular Structure 1200 (2020) 127089 (Elsevier Publishers)	UGC-CARE, SCOPUS & WoS I.F : 3.196
	8) NMR & Electronic Spectra, NLO, FMO, NBO and Thermodynamic Properties of Pentachlorophenol: An Experimental and Theoretical Investigation	Asian J. of Chemistry 32(12) (2020) 3057-3062 (Asian Publication Corp.)	UGC-CARE I.F : 0.54
	9) Investigation of torsional potentials, hindered rotation, molecular structure and vibrational properties of some biphenyl-carboxaldehydes using spectroscopic techniques and density functional formalism	J. of Molecular Structure 1196 (2019) 139-161 IF : 2.46	UGC-CARE, SCOPUS & WoS
	10) Barrier potentials, molecular structure, force field calculations and quantum chemical studies of some bipyridine dicarboxylic acids using the experimental and theoretical using (DFT, IVP) approach	Molecular Simulation doi.org/10.1080/08927022.2019 .1634807 IF : 1.45	UGC-CARE, SCOPUS & WoS
	11) Synthesis, crystal and molecular structure, and characterization of 2-((2-aminopyridin-3-yl)methylene)-N-ethylhydrazinecarbothioamide using spectroscopic (¹ H and ¹³ C NMR, FT-IR, FT-Raman, UV-Vis) and DFT methods and	J. of Molecular Structure 1184 (2019) 405-417 IF : 2.46	UGC-CARE, SCOPUS & WoS

	evaluation of its anticancer activity		
	12)Structural and vibrational properties of pentabromophenol and pentafluorophenol: A spectroscopic investigation using density functional theory	J. of Molecular Structure 1180 (2019) 665-675 IF : 2.46	UGC-CARE, SCOPUS & WoS
	13)Experimental and theoretical determination of structural and vibrational properties of pentachlorophenol and pentachlorothiophenol	J. of Molecular Structure 1178 (2019) 142-154 IF : 2.46	UGC-CARE, SCOPUS & WoS
	14)Synthesis, spectroscopic, and DFT quantum chemical studies of 3- and 4- pyridyl-acetonitriles	J. of Molecular Structure 1176 (2019) 447-460 IF : 2.46	UGC-CARE, SCOPUS & WoS
	15)Vibrational spectroscopic (FT-IR, FT-Raman), anti-inflammatory, docking and molecular characteristic studies of Ni(II) complex of 2-aminonicotinaldehyde using theoretical and experimental methods	J. of Molecular Structure 1175 (2019) 769-781 IF : 2.46	UGC-CARE, SCOPUS & WoS
	16)Study on structure, vibrational analysis and molecular characteristics of some halogen substituted azido-phenylethanones using FTIR spectra and DFT	J. of Molecular Structure 1155 (2018) 582-597 (Elsevier Publishers)	
	17)Spectroscopic investigation on structure (monomer and dimer), molecular characteristics and comparative study on vibrational analysis of picolinic and isonicotinic acids using experimental and theoretical (DFT & IVP) methods	J. of Molecular Structure 1160 (2018) 271-292 (Elsevier Publishers)	
	18)Synthesis, Structural, Biological Evaluation,	Appl Organometal Chem. 2018; e4415 (Wiley)	

	Molecular Docking and DFT Studies of Co(II), Ni(II), Cu(II), Zn(II), Cd(II) and Hg(II) Complexes bearing Heterocyclic Thiosemicarbazone ligand	https://doi.org/10.1002/aoc.4415	
	19)Molecular structure, vibrational analysis, hyperpolarizability and NBO analysis of 3-methyl-picolinic acid using SQM calculations	J. of Structural Chemistry Vol. 59, No.5 (2018) 1022-1031 (Springer Publishers)	
	20)Molecular structure and vibrational analysis of 2,5-pyridinedicarboxylic acid using experimental and theoretical methods	Materials Science and Engineering 360 (2018) 012028 (IOP Conf. Series)	
	21)Synthesis, structural, spectroscopic, anti-cancer and molecular docking studies on novel 2-[(Anthracene-9-ylmethylene)amino]-2-methylpropane-1,3-diol using XRD, FTIR, NMR, UV-Vis spectra and DFT.	J. of Molecular Structure 1147 (2017) 406-426 (Elsevier Publishers)	

Books Published

2018	Basic Electronics (Editor)	Telugu Akademi, Hyderabad	
2020	Physics of Semiconductor Devices (Author & Editor)	Telugu Akademi, Hyderabad	
2022	Basic Instrumentation (Author & Editor)	Telugu Akademi, Hyderabad	

Prof.C.J.Sreelatha	1)Designing Low cost Arduino powered spin coater for thin film deposition	Advanced materials Research ISSN1662-8985TRANS TECH PUBLICATIONS,2022	UGC APPROVED
	2) Luminance and chrominance parameters through image analysis in ferroelectric liquid crystals	Liquid Crystals https://doi.org/10.1080/02678292.2022.2037764 Taylor & Francis group	Scopus
	2)The effect of solution pH on structural,surface morphological, and optical characterization of ZNO thin films synthesized by the chemical bath deposition technique	Materials Today Proceedings ELSVIER https://doi.org/10.1016/j.matpr.2021.10.093	Scopus IF 1.24
	3) Fabrication and the impact of Fe and Al substitution on structural, morphological, vibrational and optical properties of Fe: Al co doping zinc oxide nanostructured thin films developed by Arduino based spin coating device	Materials Today Proceedings ELSVIER https://doi.org/10.1016/j.matpr.2021.12.215	Scopus
	4)Study on structural, morphological, optical, and luminescence properties of nickel oxide thin film synthesized by dip-coating technique	Materials Today Proceedings ELSVIER https://doi.org/10.1016/j.matpr.2021.11.378	Scopus
	5)Unusual Red-Shift and Enhanced photoluminescence of BaMgAl10O17:Eu2+ Phosphor Under Ultraviolet A Excitation for Modern Lighting Systems	Journal of Nanoscience and Nanotechnology Vol. 20, 1–5, 2020 ASP http://doi.org/10.1166/jnn.2020.17507	Scopus
	6) Synthesis and characterization of BaMgAl10O17: Eu2+ phosphor for efficient	In <i>AIP Conference Proceedings</i> (Vol. 2317, No. 1, p. 030017). AIP Publishing LLC. (2021)	Scopus

	displays.		
	7)Luminescence studies of high temperature phase of $\text{Ba}_{0.99}\text{MgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}_{0.01}$ nanophosphor synthesized at low temperature.	Material Science & Enng B (Elsevier),	Scopus [I.F. = 4.706]
	8)Influence of MCCA on Structure and photoluminescence of Eu^{2+} doped $\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}$ nanophosphor for use in active displays.	Chemical Physics Letters (Elsevier)	Scopus [I.F. = 2.029]
	9)Gossamer-like V_2O_5 thin films for the detection of toxic volatile organic compounds	Journal of Scientific Research	SCI JOURNAL I F 4.004
	10)Effect of annealing temperature on micro-structural, optical and electrical characterization of nanostructured V_2O_5 thin films prepared by spray pyrolysis technique	Physica B: Condensed Matter 572 (Aug 2019) 220–224 ELSEVIER http://doi.org/10.1016/j.physb.2019.08.004	Scopus
	11)Thickness-dependent structural, spectral, linear, nonlinear and z-scan optical studies of V_2O_5 thin films prepared by a low-cost solgel spin coating technique	Mater. Res. Express 6 (Jun 2019) 096403 IOP http://doi.org/10.1088/2053-1591/ab2992	Scopus
	12)Effect of deposition temperature on key optoelectronic properties of electrodeposited cuprous oxide thin films	Optical and Quantum Electronics (2018) 50:281 https://doi.org/10.1007/s11082-018-1531-z Springer	

	13)Evaluation of the structural, optical and electrical properties of AZO thin films prepared by chemical bath deposition for optoelectronics	Solid State Sciences 78 (2018) 58e68 ELSEVIER	
	14)Luminance Parameters Through Image Analysis Technique in Supramolecule PyB14A: <i>n</i> FA Mesogens	International Journal of Modern Engineering and Research Technology volume 5, Issue 4, October 2018	
	15)Application of Image Analysis Technique to Supramolecule PyB14A: <i>n</i> FA Liquid Crystals through Hydrogen Bond	International Journal of Innovative Research in Science, Engineering and Technology Vol. 7, Issue 10, October 2018	
	16)Phase Transition Temperatures Through Statistical Parameters By Image Analysis OnPy14BA: <i>n</i> FA Mesogens	International Journal of Innovative Research in Science, Engineering and Technology Vol. 7, Issue 9, September 2018	
	17)Study on Physical Properties of Binary mixtures of Ceto staryl Alcohol of ortho phorphonic and showing lyo tropic meromorphism	IOSR journal of applied physics Eissn-2278-4861 volume:8 Pp:35-37	
Dr.G. Manjula	1)Comparative study of the absorption coefficient of Nb metal and its compound	Materials Today: Proceedings 43, 2411-2421(2021)	UGC-CARE
	2)Trace elemental analysis of Anti-Jaundice	Materials Today:	UGC-CARE

	medicinal plants of Telangana using EDXRF technique	Proceedings(2021) 43, 1526-1533	
	3)Computational screening of trace elemental concentrations in Hemidesmus indicus L. A potential herbal plant used against skin diseases by ED-XRF-Technique	Materials Today: Proceedings (2021)	UGC-CARE
	4)Determination x-ray mass attenuation coefficients for NbO ₂ compound by SR source	AIP Conference Proceedings 2317 (1), 020005 (2021)	UGC-CARE
	5)Investigation of qualitative trace elemental analysis of anti-cancer medicinal plant of Catharanthus roseus from Telangana by EDXRF and PIXE	AIP Conference Proceedings 2317 (1), 050016 (2021)	UGC-CARE
	6)Measurement of mass attenuation coefficient of ZIRCONIUM (Zr), Zirconium Chloride (ZrCl ₄) and Zirconium Silicate (ZrSiO ₄) near the K-edge using synchrotron radiation	Materials Today: Proceedings 38, 2927-2934(2021)	UGC-CARE
	7)Estimation of trace elemental concentration in Azadirachta indica and Withania somnifera anti-cancer medicinal plants of Telangana using EDXRF technique	Materials Today: Proceedings 43, 2383-2388(2021)	UGC-CARE
	8)Investigation of structural and	Materials Today: Proceedings 43, 2123-2126(2021)	UGC-CARE

	luminescence properties of BaMgAl ₁₀ O ₁₇ : Eu ²⁺ phosphor synthesized using auto combustion method		
	9)X-ray Mass attenuation coefficient of Nb ₂ O ₅ over the energy range” 18.9132 keV-19.6882 keV,	IOP Publishing, Journal of Physics 1495 (2020) 012025.	UGC-CARE
	10)Qualitative elemental analysis of selected potential anti-asthmatic medicinal plant taxa using EDXRF technique,	Heliyon 6 (2020) e03260	UGC-CARE
	11) Determination of Trace elemental concentration in Datura metel and Catharanthus roses medicinal plants by EDXRF technique, 10(8), 2019.	Compliance Engineering Journal	UGC-CARE
Dr. G. Padmaja	1)Vibrational spectra and optical properties of Fe _{1-x} Cr _x VO ₄ solid solutions: with a group theory analysis.	Spectrochimica Acta Part A: Molecular and Bio molecular Spectroscopy 227(2020)17668	UGC-CARE, SCOPUS & WoS
	2)Synthesis of Sr _{1-x} Ba _x Bi ₂ B ₂ O ₇ glass ceramics: A study for structure and characterization using experimental techniques and DFT method	J. of Molecular Structure 1220 (2020) 128660 (Elsevier Publishers)	UGC-CARE, SCOPUS & WoS
	3)Rapid photodegradation of methylene blue dye by rGO- V ₂ O ₅ nano composite	Journal of Alloys and Compounds 842 (2020) 155746	UGC-CARE, SCOPUS & WoS
	4)Vibrational spectra and optical properties of Fe _{1-x} Cr _x VO ₄ solid solutions: with a group theory analysis.	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 227(2020)17668	UGC-CARE, SCOPUS & WoS
	5)Comparative electrochemical analysis of rGO-FeVO ₄ nanocomposite and	Applied Surface Science 488(2019) 221 -227	UGC-CARE, SCOPUS & WoS

	FeVO ₄ for supercapacitor application		
	6) Low temperature synthesis of FeVO ₄ through mechano milling assisted solid state reaction method.	AIP Conference Proceedings 2115(2019)030110	UGC-CARE,
	7) Study of image characteristics with coherent illuminated symmetrical trapezoid and bar targets	International Journal of Research and Analytical Reviews (IJRAR) February 2019, Volume 6, Issue 1	-
	8) Triclinic–monoclinic–orthorhombic (T–M–O) structural transitions in phase diagram of FeVO ₄ -CrVO ₄ solid solutions	Journal of Applied Physics 122, 115101 (2017); doi: 10.1063/1.4985793 (Published by the American Institute of Physics)	
Books published (Dr.G.Padmaja)			
2020	Physics of Semiconductor Devices (Author)	Telugu Akademi, Hyderabad	
2022	Basic Instrumentation (Author)	Telugu Akademi, Hyderabad	
Dr.N. Varalaxmi	1) Impedance Spectroscopic Studies of NiMgCuZn Ferrites.	Journal of Material Sciences & Engineering, Vol.8, Issue 3, (2019) pp.527	
	2) Review on the importance of material synthesis of NiCuZn-MgCuZn ferrite materials for various applications.	Int. J. of Materials Science and Engineering, Vol.1(2), (2019) pp.1-12.	
	3) Role of composite materials in the modern science and technology	J. Mechanics, Materials science & Engineering, Vol.16, (2018)	

Dr. T. Thirumal Rao	1) Micro hardness and Indentation size effect on different faces of TGS crystal	AIP Conf. Proc. 2115, 030308(2019), Pub. Online :12.07.2019	
Dr.S.Kalahasti	1) Effect of Composition, Radiation dose and post irradiation time on irradiation behaviour of acrylonitrile–Methacrylate (AM) copolymer	Research Journal of pharmaceutical, biological and chemical science 8 (5) 2017 ISSN:0975-8585.	
Dr.M. Narsimhulu	1)Synthesis, structure, optical, photoluminescence and magnetic properties of $K_2 [Co(C_2O_4)_2 (H_2O)_2] \cdot 4H_2O$	Results in Physics 9(2018)1016-1020	
	Synthesis, crystal structure, thermal, photoluminescent and magnetic properties of a new material: $Na_2 [Ni(C_2O_4)_2 (H_2O)_2] \cdot 6H_2O$	Journal of Molecular Structure 1178 (2018) 155-161.	
	3)XRD, FE-SEM, FT-IR and ESR studies of cation deficient potassium tris(oxalato)ferrate(III)trihydrate	IOP Conf. Series: Materials Science and Engineering 360 (2018) 012048.	
	4)A strong blue light-emitting material $K_2Ni(SO_4)_2 \cdot 6H_2O$: Photoluminescence and magnetic properties	Chemical Physics Letters 755 (2020) 137792-137797.	