



PROFILE

Name: Dr. K.S. Joseph Wilson			
Department	PG & Research Department of Physics		
Designation	Associate Professor & Head		
Email	wilsonpra@yahoo.co.in		
Teaching Experience	UG:30	PG:15	

Recognised Educational Qualifications

S.No.	QUALIFICATION	INSTITUTION	BOARD/UNIVERSITY	YEAR OF PASSING
1	B.Sc.	S.T Hindu College, Nagarkovil	Madurai Kamaraj University	1984
2	M.Sc.	National College. Trichy	Bharathidasan University, Trichy	1986
3	PGDCA	Alagappa University, Karaikudi	Alagappa University, Karaikudi	1991
4	Ph.D.	Madurai Kamaraj University	Madurai Kamaraj University	2007

Work Experience Publications

S.No	Name of the Institution/Organisation	Designation	Nature of Work	Period
	Arul Anandar College (Autonomous)	Associate Professor & Head	Solid State Physics and Photonics	30 years

Title of the Paper	Name of the Journal/Book/Proceedings	Whether Journal/Book/Proceedings	Volume and No	Year of publication	Page Nos	ISSN/ISBN No	Publisher and Place
Efficiency enhancement of Silicon Solar cell using Effective Interface Face Method in Antireflective Coating layers	International Journal of Modern Physics C		31,05	2020	2050076	0217-9792	World Scientific and Singapore
Functionalization effect of HAp with copper (Cu) having excellent dielectric applications	Surfaces and Interfaces		19	2020	100474	2468-0230	Elsevier and Amsterdam, Netherlands
Structural and magnetic properties of cobalt doped ZnO thin films deposited by cost effective nebulizer spray pyrolysis technique	Materials Research Express		7	2020	026405	2468-0230	IOP
Effect of ZnS nanowire ARC on CZTS/CdS thin film solar cell by Nebulizer Spray Pyrolysis Technique	Materials Research Express		7(1)	2020	015510	2053-1591	IOP
Investigation on photonic band gap of a magneto photonic crystal	Optik		208	2019	164092	0030-4026	Elsevier
Phonon polariton dispersion of dielectric superlattice at various pressures in low dimensional	Optik			2019	163749	0030-4026	Elsevier & Amsterdam, Netherlands

systems							
Effect of metal nanoparticles on polariton dispersion in low dimensional systems	Materials Research Express			2019	6(11)	2468-0230	IOP
Amalgamation and characterization of porous hydroxyapatite bio ceramics at two various temperatures	Materials Science in Semiconductor Processing		100	2019	255-261	1369-8001	Elsevier's & Amsterdam, Netherlands
Investigations on Structural and Optical parameters of ZnO Dye-sensitized solar Cell	International Journal of Scientific Research and Reviews		8(1)	2019	3378-3379	2279–0543	IJSRR Editorial Board & India
Temperature Effect on Polariton Dispersion in Low Dimensional Systems	International Journal of Scientific Research and Reviews		8(1)	2019	1855-1860	2279–0543	IJSRR Editorial Board & India
Antireflection coating application of zinc sulfide thin films by nebulizer spray pyrolysis technique	DAE SOLID STATE PHYSICS SYMPOSIUM 2018		2115(1)	2019	030327	1551-7616	American Institute of Physics (United States)
Hydrothermal synthesis and characterization of iron/copper/nickel doped lithium niobate particles toward optoelectronic applications	DAE SOLID STATE PHYSICS SYMPOSIUM 2018		2115(1)	2019	030174	1551-7616	American Institute of Physics (United States)
Phonon Polariton Dispersion in Metal-Doped Nanocomposite	Journal of Optical Communications			2019		1943-0620	Walter de Gruyter GmbH

Superlattice System							
Analysis of properties of metamaterial-based composite system	International Journal of Modern Physics B		33(15)	2019	1950154	0217-9792	World Scientific Singapore
Growth, solvent effect, optical and electrical properties of sodium 4-hydroxybenzenesulfonate dihydrate	Materials Science-Poland			2019		2083-134X	Walter de Gruyter GmbH & Germany
Properties of ternary photonic crystal consisting of dielectric/plasma/dielectric as a lattice period	Optik		185	2019	784-793	0030-4026	Elsevier & Amsterdam, Netherlands
Role of Multilayer Antireflective Coating in ZnO based Dye Sensitized Solar Cell	Vacuum		165	2019	58-61	0042-207X -	Elsevier & New York
Effect Of Temperature And Diamagnetic Susceptibility On Impurity Binding Energy Of A Spherical Quantum Dot	Sparkling International Journal of Multidisciplinary Research Studies		1,1	2019		:2581-7574	
Metamaterial Inspired Dual Band Antenna	International Journal of Scientific Research in Physics and Applied Sciences		6,6	2018	129-133	2348-3423	
Nonlinear	OPTIK		176	2018		0030-4026	Elsevier &

polarization in metal nanocomposite system based Photonic crystals							Amsterdam, Netherlands
cancer detection using metamaterial biosensor in the terahertz regime	Review Of Research		7,10	2018		ISSN: 2249-894X	
Enhanced sensitivity of cancer cell using one dimensional nano composite material coated photonic crystal	Springer			2018		0198-8794	Springer & United States
Analysis of Polariton Dispersion in Metal Nanocomposite Based Novel Superlattice System	Results in Physics		9	2018	1425-1427	0030-4026	Elsevier & Amsterdam, Netherlands
Analysis of photonic band gap in novel piezoelectric photonic crystal	Modern Physics Letters B		32(08)	2018	1850024	0217-9792	World Scientific Singapore
Effect of electric field, dielectric screening and conduction band nonparabolicity of donor in a quantum dot	International Journal of Modern Physics B		2(10)	2018	1850122	0217-9792	World Scientific Singapore
Substrate and DLARC Layers Selection for High Efficiency Solar Cell	International Journal of Nanoscience		17,3	2017	1850012	0219-581X	World Scientific Singapore
2-Amino-1-methyl-4-oxo-4,5-	IUCrData		2(11)	2017		2414-3146	International Union of

dihydro-1 H -imidazol-3-ium 3-carboxy-4-hydroxybenzenesulfonate monohydrate							Crystallography & United Kingdom
analysis of circular microstrip patch antenna to detect strain using metamaterial	INTERNATIONAL JOURNAL OF SCIENTIFIC AND ENGINEERING RESEARCH		8(11)	2017	1193-1200	2229-5518	International journal of scientific & engineering research
Growth aspects, structure determination and third order nonlinear optical properties of a novel organic material: 2-phenylethylammonium 5-sulfosalicylate	Material Research Innovations			2017		1432-8917	taylor and francis & United Kingdom
Magneto optical properties of silver doped magnetic nanocomposite material	Sensing and Bio-Sensing Research		16	2017	37-40	2214-1804	Elsevier & Amsterdam, Netherlands
Studies on the Crystal growth and Optical properties of novel organic material: O-Phenylenediammonium bis-hydrogen phosphonate	Materials Letters		209	2017	167–170.	0167-577X	Elsevier & Amsterdam, Netherlands
Effect of external perturbations on phonon-polariton modes and photonic band gap	Optics Communications		386	2016		0030-4018	Elsevier & Amsterdam, Netherlands

in piezoelectric crystal							
temperature dependence tuning of photonic band gap of a BaTiO ₃ /air photonic crystal	International seminar on Nanoscience and Technology		3,1	2016	27-32	2394 739X	International seminar on Nanoscience and Technology -conference proceedings
analysis of magneto optical properties in novel magnetic superlattice SYSTEM	International seminar on Nanoscience and Technology		3,1	2016	8-10	2394 739X	International seminar on Nanoscience and Technology -conference proceedings
Optical properties of silver nanocomposites and photonic band gap – Pressure dependence	Optics Communications		368	2016	174-179	0030-4018	Elsevier & Amsterdam, Netherlands
Polaronic effects on diamagnetic susceptibility of a hydrogenic donor in nanostructures	Indian Journal of Physics		90(7)	2016	805–809	0973-1458	Springer & India
Properties of one Dimensional Photonic Crystals with Defects Thickness and Temperature Dependence	Materials today		2(3)	2015	959-964	22147853.	Elsevier Ltd.& United Kingdom
Effect of Hydrostatic Pressure on the Optical Properties of a Donor in a Spherical Quantum Dot	Materials today		2(3)	2015	1002-1006	22147853	Elsevier Ltd.& United Kingdom

Temperature dependence of optical parameters of a nanocomposite system	Indian Journal of Physics		89(11)	2015		0973-1458	Springer & India
Effect of hydrostatic pressure and polaronic mass of the binding energy in a spherical quantum dot	Chinese Physics B		24(11)	2015	110303	1674-1056	IOPscience
Effect of hydrostatic pressure on the optical properties of a donor in a spherical quantum dot	Materials Today: Proceedings		2	2015	1002 – 1006	2147853	Elsevier Ltd. & United Kingdom
Generation of higher odd harmonics in a defective photonic crystal	AIP Conference Proceedings 1		1665	2015	140027	1551-7616	American Institute of Physics & United States
Polariton dispersion of a quantum wire superlattice system	AIP Conference Proceedings 1		1665	2015	090037	1551-7616	American Institute of Physics & United States
Polariton dispersion in nanocomposite materials	AIP Conference Proceedings 1		1665	2015	090021	1551-7616	American Institute of Physics & United States
Effect of Temperature and Conduction Band Non-parabolicity on Electronic States in a	Indian Journal of Advances in Chemical Science		3(2)	2015	185-191	2320-0898	Indian Journal of Advances in Chemical Science

Spherical Quantum Dot							
Effect of hydrostatic pressure and polaronic mass of the confined energy in a spherical quantum dot	Indian Journal of Pure and Applied Physics		54	2015	431-438	09751041	National Institute of Science Communication (NISCAIR) & India
Effect of temperature on nanocomposite of metal nanoparticles in photonic crystals	Progress In Electromagnetics Research M		41	2015	105–114	1559-8985	Electromagnetics Academy & United States
Tunable polariton bandgap in quantum wire superlattice system	International Journal of ChemTech Research		7(3)	2015	1526-1528	2455-9555	Sphinx Knowledge House & INDIA
Confined energy of two electrons in a spherical quantum dot with interaction effects	Indian J Phys		88(10)	2014	1031–1036	0973-1458	Springer Science+Business Media & India
Effects of Temperature and Hydrostatic Pressure on Binding Energy of an Exciton in a Spherical Quantum Dot	e-Journal of Surface Science and Nanotechnology		12	2014	358-362	1348-0391	The Surface Science Society of Japan & Japan
Investigations On Nonlinear Polariton Dispersion In	Annual International Conferenc			2014			

Ferroelectric Superlattice System	e on Optoelectronics, Photonics & Applied Physics						
Phonon polariton modes in Al doped ZnO nanoparticles	International Journal of ChemTech Research		7(3)	2014	1154-1157	2455-9555	Sphinx Knowledge House & INDIA
Analysis of polariton dispersion in dielectric-ferroelectric superlattices	International Journal of ChemTech Research		7(3)	2014		2455-9555	Sphinx Knowledge House & INDIA
Effect of Temperature and Pressure on Correlation Energy in a Triplet State of a Two Electron Spherical Quantum Dot	Journal of Nanostructures		3	2013	347-357	22517871	University of Kashan & Iran
Investigation of Photonic Band Gap in Si-Based One-Dimensional Photonic Crystal	Optics and Photonics Journal,		3	2013	365-368	2160-889X	Scientific Research
Non-linear Effects on Polariton Modes in Superlattice Systems	Asian Journal of Chemistry		25	2013	S199-S201	0970-7077	International Journal & India
Polariton Dispersion of Ferroelectric Super Lattices at Various Temperatures	Asian Journal of Chemistry		25	2013	S150-S152	0970-7077	International Journal & India

Effect Of Nonlinear Interactions On Phonon Polariton Modes In Optoelectronic Crystals	International Journal of Modern Physics B		25, 12	2011	1681–1688	0217-9792	World Scientific Singapore
Phonon–polariton in a piezoelectric superlattice	Physica E Low-dimensional Systems and Nanostructures		31(2)	2006	209-212	13869477	Elsevier & Amsterdam, Netherlands
Phonon polariton modes in porous III–V semiconductors	physica status solidi		242(12)	2005	2515 - 2521	1862-6351	Wiley &Germany
On the Phonon Polariton Modes in Semiconductor Superlattices	Modern Physics Letters B		19(09-10)	2005	425-433	0217-9792	World Scientific & Singapore
Phonon Polariton Modes In Quantum Dot Superlattices	Modern Physics Letters B		18(2 & 3)	2004	105–112	0217-9792	World Scientific & Singapore

Projects Completed

Title of the Project	Principal Investigator/Co investigator	Funding Agency	Duration	Amount
Investigation of nonlinear interactions in nanostructures	Principal Investigator	University Grand Commission India,	3 years	Rs.13,26,800/-
Design, fabrication and analysis of the nanocomposite based microstrip patch antenna	Principal Investigator	Tamilnadu State Council for Science and Technology DST,INDIA	2 years	Rs.3,60,000/-

Reviewer Details

Name of the Journals	Date
International Conference on Photonics 2010	

57 th DAE Solid State Physics symposium	December 2012
59 th DAE Solid State Physics symposium	December 2014
63 th DAE Solid State Physics symposium	December 2018
Sensors & Actuators: A.Physical –Elsevier	January (2017)
Optik- Elsevier	May (2017)
Journal of Physics and Chemistry of Solids	February(2019)

Ph.D Guideship Details

Subject	University	Guideship Id No	No of Scholars pursuing	No of Scholars Completed	AOI
Physics	Madurai Kamaraj University	1216	6	5	Submitted 3
Physics	Manonmaniamsundaranar University		NIL	2	Submitted 1

Resource Person

Whether Speaker/Moderator/Panelists	Title of the Presentation	Title of the Seminar/Conference/Workshop	Organising institution and Place	Date
Invite Speaker		Inservice training programme for secondary grade science teachers	JayarajAnnapackiam College for women, Periyakulam	(2009).
Invite Speaker	Photonics		Yadava College, Madurai	(2009).
Invite Speaker	OWRSST		Arul Anandar College, Karumathur	(2010)
Invite Speaker	Recent trends in Physics		Arul Anandar College, Karumathur	2011
Invite Speaker	NATIONAL SCIENCE MELA 2012		Arul Anandar college, Karumathur	
Invite Speaker	Effect of Nonlinear		MelurGoverment Arts College, Melur	2013

	interaction on optical phonons			
Invite Speaker	Photonics		Holy Cross College, Nagercoil	(2014).
Invite Speaker	Photonics		AnnaiVelankanni College, Tholayavattam	2015
Speaker	Photonics		K.L.N college of engineering, pottapalayam	2016
Speaker	Analysis of third order nonlinear susceptibility of metal nanocomposite systems	International Multidisciplinary Research Foundation	Chonburi, Thailand	2016
Invite Speaker	Nanophotonics		Birla Institute of Applied Sciences, Bhimtal, Uttarakhand	(2017
Invite Speaker	Nanocomposite		Mahatma Gandhi University, Kottayam, Kerala	
Invite Speaker	Optical properties of piezoelectric superlattice in photonic crystal		Jyoti Nivas College Autonomous Bangalore, Karnataka.	
Invite Speaker	IEEE workshop on recent advances in photonics		Department of physics , IIT Guwathi	2019

Visits Abroad: -

Countries Visited	Purpose	Dates of Visit
Singapore	Paper presentation international conference Photonics	2012
Thailand	Invited speaker IMRF on Photonics	2017

Academic Positions held

Post	Institution	Period
YRC Coordinator	Arul Anandar College	2009-2011
Consumer Club	Arul Anandar College	2009-2011
Vice Principal	Arul Anandar College	2011-2014
Chief Superintendent of Examination	Arul Anandar College	2011-2014
Controller of Examination	Arul Anandar College	2014-2017
Head of the Department	Arul Anandar College	2018-till date

E Content Created

Title of the Content	Type of Content	Link	AOI
Phonons	PPT	https://drive.google.com/file/d/1ZMQ5Cmec9iTCp-jOiIE0kodLzVz7HNur/view?usp=sharing	Solid State Physics - I
Solid State Physics	PPT	https://drive.google.com/file/d/1ECH0OfLON8Ogj8MPh2GuGR25ZFka0vpV/view?usp=sharing	Solid State Physics - I
Crystal Structure	PPT	https://drive.google.com/file/d/1SE-QjbZhfiKVfgD1oqOKzzrW-N3NEG47/view?usp=sharing	Solid State Physics - I
Fuel Cell	PPT	https://drive.google.com/file/d/1J1_zn6UhO8keVoPk19wu3DN4XfoGdLkU/view?usp=sharing	Energy Physics
Application of Physics in Medicine	PPT	https://drive.google.com/file/d/1XBQhQwBfsMGERcOS4HEaJ79CNbEDSq-S/view?usp=sharing	Energy Physics
Nuclear Power Plant	PPT	https://drive.google.com/file/d/1_EoKI7YLVjCfWDHgtRPysGjbbUZRg0ca/view?usp=sharing	Energy Physics
Nuclear Power Plant in India	PPT	https://drive.google.com/file/d/1gtCkhCT0ilsF63O_R7GKhbe6dBhrTrWX/view?usp=sharing	Energy Physics

Thermal Power Plant	PPT	https://drive.google.com/file/d/1QNeCD0zRJGT5VYQ_n8yDR39B3Syi-dHs/view?usp=sharing	Energy Physics
Regions of Electromagnetic Spectrum	PPT	https://drive.google.com/file/d/1qwj7RsYxqUhFMkUtvYzyZdwx2XNKp_3v/view?usp=sharing	Optics & Spectroscopy