S.T. HINDU COLLEGE, NAGERCOIL

FACULTY PROFILE

Name : **Dr.M.Meena**

Designation : Assistant Professor

Vidwan ID : 239231

Dept Name : Physics

Address : 14/4/4-5/2 Brindhavan Nager
Sarakkalvillai, Kottar P.O
Nagercoil-629002

Phone No : 9566595468

E-Mail Id : meenaraj19@gmail.com

Subjects Taught : Quantum Mechanics, Atomic Physics, Numerical Methods , Digital Electronics

Area of Interest / Specialization : Crystal Growth, Polymer composites, Nano Materials.

Experience : 13 yr 8 months

Educational Qualifications : M.Sc.,Ph.D.,

Research Publications in Journals :

S.No	Paper Title	Journal Name	M&Y	Pgs	Vol-Issue	N/IN/R	DOI
1.	Influence of Co and Ni concentration on the structural, UV transparency and electrical behavior of ZnO nanorod	Materials Science and Engineering: B	Jan 2024	117213	302	IN	doi.org/10.1016/j.mseb.2024.117213

2.	PANI/Zn-Cu ferrite polymer composites as free-standing high dielectric materials	Polymers for Advanced Technology	Jan 2024	1 -15		IN	doi.org/10.1002/pat.6285
2.	Enhancement of electrical parameters of PANI—a conducting polymer with low concentration nanofiller for optoelectronic and electrical application	Journal of Applied Polymer Science	Jan 2024			IN	doi.org/10.1002/app.55157
3.	Impact of Er3+ Ions on the Structural and Dielectric Properties of TiO2 Nanomaterials	Journal of Electronic materials	Dec 2024	773-785	53	IN	doi.org/10.1007/s11664-023-10856-2
4.	Enhancing CIGS Solar Cell Performance with Erbium-Doped TiO2 Nanomaterial: Simulation Study	Indian Journal of Science and Technology	Oct 2024	3453–3461	16,40	N	/doi.org/10.17485/IJST/v16i40.1935
6.	Enhanced UV assisted photocatalytic activity of doped and co-doped SnO_2 nanostructured material	Particulate Science and Technology	July 2023	697-714	41(5)	IN	doi.org/10.1080/02726351.2022.
7	Isolation and characterization of agro-waste biomass sapodilla seeds as reinforcement in potential polymer composite applications	Heilyon	July 2023		9 e17760	IN	doi.org/10.1016/j.heliyon.2023.e17760
8.	Characterizations of AMPF Micro-Crystals for Photonic, Dielectric, Nano-Influx and Anti-diabetic Relevances	Acta Physica Polonica A	April 2024	277-344	Vol. 143 No. 4 (	IN	doi.org/10.12693/APhysPolA.143.309

9.	Copper Ferrite nanoparticles synthesised using a novel green synthesis route: Structural development and photocatalytic activity	Journal of Molecular Structure	April 2024	134807	1277	IN	doi.org/10.1016/j.molstruc.2022.134807
10.	Impact of metal doping and co-doping on the electrical and optical behavior of tin oxide nanoparticles	Nano materials and Energy	July20222	55-66	11(4)	IN	doi.org/10.1680/jnaen.23.00010
11.	Growth, structural, elemental, fluorescence and non linear optical analysis of inosine (IE) organic crystals	AIP Conference Proceedings	Nov 2022		2446(1)	IN	doi.org/10.1063/5.0108288
12	Growth, computational-structure, XRD data and biological studies of 2-amino-4-methylpyridinium 4-hydroxybenzoate (AMPHB) crystals	AIP Conference Proceedings	Nov 2022		2446(1)	IN	doi.org/10.1063/5.0108268
13.	A comparative analysis on electrical and nonlinear optical properties of pure and Co–Ni co-doped SnO_2 nanoparticles	Optical Materials	Aug 2022		130	IN	doi.org/10.1016/j.optmat.2022.112546
14.	Domestic microwave supported green synthesis of ZnO nanoparticles for electronic, mechano, rheological and frequency intensifying applications	Journal of Materials Science: Materials in Electronics	June 2022	14144-14158	33(17)	IN	doi.org/10.1007/s10854-022-08344-0
15.	Fabrication of TiO2 based Dye-Sensitized Solar Cell using Nerium oleander as a sensitizer	IOP Conference Series: Materials Science and Engineering	May 2022		1263	IN	10.1088/1757-899X/1263/1/012018

16.	Synthesis, experimental and computational characterizations of 8, 9-dimethoxybenzo [b] naphtho [2, 3-d] thiophene (DBNT) crystals for electro-mechano utilities	Inorganic Chemistry Communications	April 2022		138	IN	doi.org/10.1016/j.inoche.2022.109249
17.	Enhancement on the electrical and optical behaviour of $ZnFe_2O_4$ nano particles via transition metal substitution	Materials today proceedings	April 2022	1671-1678	64(part 5)	IN	doi.org/10.1016/j.matpr.2022.05.351
19	Synthesis, theoretical structural explication, super cell configuration, Hardness, tribological data and void space illustration of Creatininium hydrogen maleate - CHM crystal by softwares and by experimental techniques	Materials today proceedings	Jan 2022	962-966	66(part 3)	IN	doi.org/10.1016/j.matpr.2022.04.768
20	Albumen Assisted Synthesis of Nanocrystalline Nickel Ferrite Photocatalys	Jordan Journal of Physics	2022	437-444	15-1	IN	doi.org/10.47011/14.5.5
21	Synthesis, growth, XRD, NLO, CHNSO, structure by theoretical approach, dielectric, absorbance, photoconductivity and bio studies of 4-(4-Acetyl-5-Methyl-1H-1, 2, 3-Triazol-1-yl) Benzonitrile crystals for optical, opto-electronic, and photonics utilities	Journal of Materials Science: Materials in Electronics	April 2021	13850-13858	32	IN	doi.org/10.1007/s10854-021-05960-0
22	Dielectric and magnetic properties of Allium cepa and Raphanus sativus extracts biogenic ZnO nanoparticles	Journal of Materials Science: Materials in Electronics	Jan 2021	590-603	32	IN	doi.org/10.1007/s10854-020-04841-2

23	Dielectric, fluorescence, filter, nano tribological and photoconductivity studies of 4-(4-chlorophenyl)-7, 7-dimethyl-7, 8-dihydro-4H-1-benzopyran-2, 5 (3H, 6H)-dione		Aug 2020	16907-16917	31	IN	doi.org/10.1007/s10854-020-04246-1
24	Hydrothermal Synthesis and Characterization of Tin Oxide Nanoparticles	J. Environ. Nanotechnoly	2020	15-19	9,2	IN	doi.org/10.13074/jent.2020.06.202408
25	A comparative analysis on the dye degradation efficiency of pure, Co, Ni and Mn-doped CuO nanoparticles	Journal of Materials Science: Materials in Electronics	Oct 2019	19043-19059	40	IN	doi.org/10.1007/s10854-019-02262-4
26	Albumen assisted green synthesis of NiFe2O4 nanoparticles	Materials Today: Proceedings	2019	528-34	9(part 3)	IN	doi.org/10.1016/j.matpr.2018.10.372
27	Green synthesis of MgFe2O4 nanoparticles using albumen as fuel and their physicochemical properties	Int. J. Sci. Res. Phys. Appl. Sci	Apr 2019	71-74	7	IN	
28	Antibacterial activity of nickel and magnesium substituted ferrite nanoparticles synthesized via self-combustion method	Materials today proceedings	2019	169 - 175	8, part 1	IN	doi.org/10.1016/j.matpr.2019.02.096
29	Two step synthesis of ZnO/Ag and ZnO/Au core/shell nanocomposites: structural, optical and electrical property analysis	Journal of Alloys and Compounds	Jun 2018	171-181	750	IN	doi.org/10.1016/j.jallcom.2018.03.348

30	Synthesis of ZnO nanorods by one step microwave-assisted hydrothermal route for electronic device applications	Journal of Materials Science: Materials in Electronics	Nov 2017	2927-2938	29	IN	doi.org/10.1007/s10854-017-8223-5
31	Effect of Added Impurities on the Properties of LAHCL Single Crystals	International Journal of Macro and Nano Physics	2016	12-18		IN	doi:10.18831/djphys.org/2016011002
32	Structural, optical and electrical characterization of Mn2+ and Cd2+ doped/co-doped PbS nanocrystals	Journal of Alloys and Compounds	Apr 2015	69-77	627	IN	doi.org/10.1016/j.jallcom.2014.12.008
33	Growth and dielectric properties of L-arginine acetate and L-arginine oxalate single crystals	Materials letters	Aug 2008	3742-3744	62(21-22)	IN	/doi.org/10.1016/j.matlet.2008.04.047
34	Growth and electrical characterization of L- arginine added KDP and ADP single crystals	Crystal Research and Technology: Journal of Experimental and Industrial Crystallography	2008	166-172	43	IN	https://doi.org/10.1002/crat.200711064

Papers Presented in Conference :

S.No	Paper Title	Seminar/conference	M&Y	N/IN/R
1	Green Route $CuFe_2O_4$ Nanoparticle Dispersed Conducting Film PANI for Electrical Application	National level Conference on Advanced Research Trends in Chemistry (ARTC-23)	29th September, 2023	N
2	Understanding The Role Of Eco Friendly Prepared Srtio3 Nanoparticles Dispersed PVC For Enhanced Electrical Applications	National level Conference on Advanced Research Trends in Chemistry (ARTC-23)	29-09-2023	IN

3	Nano Ferrites Dispersed Polyaniline Polymer Films as High Dielectric Material	International Conference on Energy Conversion and Storage	21 to 23 June, 2023	IN
4	Egg Albumen Assisted Green Mediated Synthesis of Bare and Lanthanum Doped Cobalt Oxide Nanoparticles for its Conceivable Electrical and Biological Applications.	International Conference on Conversion and Storage	21-06-2023 to 23-06-2023	IN
5	Green Route Prepared Strontium Titanate Dispersed PVC polymer films for Electrical Application	International Conference On "Energy Conversion and Storage"	21-06-2023 to 23-06-2023	IN
6	Cobalt Oxide Nanoparticles Synthesised via Green Route and the impact of Copper dopant on the Structural Optical Electrical and Photocatalytic activities	National Conference on Applied Physics over current Scenario-2023	11-05-2023 and 12-05-2023	N
7	Synthesis and characterization of copper doped Cobalt Oxide nanoparticles using green method	National Conference on Material Science	24-02-2023	N
8	A Study of structural and optical Changes in SnO_2 Nanoparticles by Doping	National Conference on Material Science	24-02-2023	N
9	Impact of copper dopant on the structural optical electrical and photocatalytic activities of cobalt oxide nanoparticles synthesized via green route for environmental remediation	National Conference on Advanced Materials and Manufacturing Technologies	23-02-2023	N
10	Reinforced PANI Polymer Thin Film With Copper Ferrite Nanoparticle Prepared Via Green Method For Electrical Application	International Conference on Advanced Nanomaterials for Energy and Environmental Applications	9 to 11 February, 2023	IN
11	Novel Green Synthesis of Strontium Titanate (SrTiO3) Nanoparticle – A Perovskite Material	International Conference on "Advanced Nanomaterials for Energy and Environmental Applications"	09-02-2023 To 11-02-2023	IN
12	Influence of Potassium on structural and Antibacterial activities	International Conference on Advanced Nanomaterials for Energy	09-02-2023	IN

	of Cobalt oxide Nanopartricles	and Environmental Applications	to 11-02-2023	
13	Effect of low precursor ratio on the different characteristics of Cobalt Oxide Nanoparticles	International Conference on Research in Advanced Materials and its Applications	29-09-2022 and 30-05-2022	IN
14	Study of Concentration of Precursor's influence on the crystallinity& Optical properties of Cobalt oxide Nanoparticles	National Conference on Multidisciplinary Research Perspectives on the Challenges of Sustainable Development	27-05-2022	N
15	Study of Concentration of Precursar's influence on the crystallinity and optical properties of cobalt oxide Nano-particles.	National Conference on "Multidisciplinary Research Perspectives on the Challenges of Sustainable Development"	27th May, 2022	N
16	Effect of Metal doping on the properties of SnO2 nanoparticles	National Conference on Advance Materials	March 26, 2022	N
17	Enhancement of Electrical and Optical Properties of PVA Film by Dispersing SnO2 Nano Particles	International Conference on Advances in Science and Engineering	24 & 25, March 2022	IN
18	Enhancement of optoelectricalBehaviour of Tin Oxide Nanoparticles by Metal Dopants	International Conference on Advances in Science and Engineering	24 & 25, March 2022	IN
19	Synthesis and Characterization of Tin Oxide Nanoparticles at Different Annealing Temperature	International Conference on Advances in Physics	27 & 28 July 2021	IN
20	Influence of Added Impurity on the Properties of CuO Nanoparticles	International E-Conference on Advances in Materials Science	24th to 26th March, 2021	IN
21	Effect of SnO2 Nanoparticle on the Properties of PVA Thin Film	National E-Conference on Advanced Research in Materials Science	22nd & 23rd February, 2021	N
22	Effect of Annealing Temperature On Structural Properties Of The Tin Oxide (SnO2) Nanoparticles	International conference on Recent Advancements in Material Science	January 21, 2020	IN

23	Ovalbumin Assisted Synthesis of MgFe2O4 Nano Particles and their Structural , Optical and dielectric Properties	International Conference on frontiers in Analytical and clinical Techniques	24& 25 January 2019	IN
24	Egg white Mediated Synthesis and Magnetic Properties of Nickel - Magnesium Ferrite Nanoparticles	International Conference On Nanomaterials For Energy Storage Devices	27, August 2018	IN
25	Synthesis, Structural and Magnetic properties of Magnesium ferrite nanoparticles	National Conference on Energy materials	June 28-29, 2018	N
26	Albumen Assisted Green Synthess of NiFe2O4 nanoparticles and their Physico-Chemical Properties	International Conference on Green Methods for separation, purification and Nanomaterials Synthesis	24-25, April 2018	IN
27	Synthesis & Magnetic properties of nanocrystalline Magnesium Ferrite prepared via green synthesis route using egg white	National Seminar on Trends in Materials Science	09-03-2018	N
28	Antibacterial activity of transition metal substituted ferrites prepared via self-combustion method.	International Conference on Materials for Energy and Environment	22 & 23 feburary 2018	IN

BooksAuthored/BookVolume :

Chapters

1	Compression and Impact Properties of Vinyl Ester-Based Bio-Composites	Vinyl Ester based Bio Composites, CRC Press Book Chapter	Sep.2023	41	IN

No.of Conferences Organised : 1

ResearchGuidance :

Sl. No.	Student Name with Reg.No	Date of Joining	Name of University	Title of Thesis	Status	Date of Viva –voce
1.	P.Aji Udhaya		M.S.U	Studies on some Transition metal substituted spinnel	Completed	18.8.2022

	18123152132038	10.1.2018		ferrite nano particles		
2.	T.Regin Das 18223152131018	5.7.2018	M.S.U	Fabrication of metal oxide nano particles for electrical and magnetic device applications	submitted	-
3.	K.Tamilarasi 20213152132010	30.12.2020	M.S.U	Investigation on Zinc ferrite /Polyaniline nano composites	On going	-
4.	K.J.Arun 21213152131008	25.1.2022	M.S.U	Synthesis and modification on physio-chemical properties of PVC polymer by nano paeticle dispersion	On going	
5.	Beaulin Shoja	4.12.2023	M.S.U	Polymer hybrid composites for sustainable applications in different areas	On going	

Co-guidance

Sl. No.	Student Name with Reg.No	Date of Joining	Name of University	Title of Thesis	Status	Date of Viva –voce	Guide Name with College address
1.	A.Ajittha 19223152132007		M.S.U	Effect od doping on the Properties of Cobalt oxide Nano Particles	submitted	-	K.Seethalakshmi Assistant Professor Devi Kumari College, Kuzithurai

Research Projects : nil

Awards & Distinctions :

1. Having H-index 13.i-10 index -10
2. B.Sc Physics – M.S.university III rank holder – April 2003

3. Worked as Project Assistant in DRDO funded project at S.T.Hindu College during 2005-2008.
4. Reviewer in various Scopus and Sci Journals

Administrative Assignments Handled :

1. NSS Programme Officer - 2019-2023
2. TNEA Updation Officer – 2019-2023
3. PFMS college Data Operator – 2018- to date
4. Additional Nodal Co-ordinator for Virtual Lab -2024
5. Research Advisory Committee member for Various Ph.D scholars

Association with Professional Bodies :

Any other Achievements :

1. Keynote speaker for Polymer synthesis Workshop cum lecture - 2024 St.Mary's College, Thoothukudi
2. Acted as Key note Speaker in National Conference on "Advanced Research Trends in Chemistry" - 2023 T.D.M.N.S Kallikullam 3.
3. Keynote Speaker in the Seminar " POWDHIK FEST-2K23" - 2023 Infant Jesus College Of Arts And Science Mulagumoodu 4. Resource Person in " One day online workshop on Virtual Lab" - 2020 St.Mary's College, Thoothukudi
4. Resource person in "VIRTUAL LEARNING PLATFORM FOR EXPERIMENTAL SCIENCE - 2020 A.P.C Mahalaxmi College For Women, Thoothukudi .
5. Resource person for a webinar “Virtual Lab - A Way from concept to Reality” at .V.Vanniaperumal College for Women, GT Nagar, Virudhunagar, Tamil Nadu 626001 on August 2020.
6. Resource person for Young students Scientist Programme-2018,held at S.T.Hindu College , Nagercoil.