

# Dr. K. ANITHA

ASSISTANT PROFESSOR & HEAD i/c

Department of Physics

School of Physics



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## Educational Qualifications

: MSc., MPhil., Ph.D

## Professional Experience

: 13 Years

## FIELD OF SPECIALIZATION

- Solid State Physics
- Statistical Mechanics
- Molecular Physics
- Mathematical Physics

## RESEARCH SPECIALIZATION

- X-Ray Crystallography
- Crystal Growth of Organic Materials
- Nanomaterials Synthesis for Photocatalytic and Sensor Applications

### Research Supervision:

Program	Completed	Ongoing
Ph.D	6 + 1 (Co-Guide)	2
M.Phil	22	Nil

## PROFESSIONAL EXPERIENCE

No	Institution	Position	From (date)	To (date)	Duration
	Department of Physics, School of Physics, Madurai Kamaraj University, Madurai.	Assistant Professor	18.03. 2010	Till date	9.11 Yrs
	Department of Physics, Arulmigu Palaniandavar college of Arts &Culture, Palani.	Lecturer	13.02. 2009	17.03. 2010	1.1 Yrs
	Research and PG Department of Physics, Loyola College, Chennai. (Self-Finance)	Lecturer	16.06 2008	21.01. 2009	0.7 Yr
	PG Department of Physics, Women's Christian College, Chennai. (Self-Finance)	Lecturer	16.11 2007	30.04. 2008	0.6 Yr

## RESEARCH COLLABORATION (BOTH NATIONAL & INTERNATIONAL)

Name of the Collaborator	Institute	Collaboration Details	Collaboration Output ( Papers/ Patents/Research/Online)
Dr. P. Packiyaraj	Department of Physics, National Taiwan University, Taipei 10617, Taiwan, Republic of China	International	Research papers
Prof. P. Ramasamy	SSN Research Centre, SSN College of Engineering, Chennai, 603110, Tamil Nadu, India	National	Research papers
Dr. B. Sridhar	Laboratory of X-ray Crystallography, Indian Institute of	National	Research papers

	Chemical Technology, Hyderabad-500 007, India.		
Dr. TC. Sabari Girisun	School of Physics, Bharathidasan University, Tiruchirappalli 620024, India	National	Research papers
Dr. S. Athimoolam	Department of Physics, University College of Engineering, Anna University, Nagercoil-629 004, Taminadu, India.	National	Research papers
Dr. J. Chandrasekaran	Department of Physics, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore, 641020, Tamilnadu, India	National	Research papers
Dr. J. Rajesh	Chemistry Research Centre, Mohamed Sathak Engineering College, Kilakarai 623 806, Tamilnadu, India	National	Research papers
Dr. V. Shanmugaiah	School of Biological Sciences, Madurai Kamaraj University, Madurai, 625 021, India	National	Research papers
Dr. J. Mayandi	Department of Materials Science, School of Chemistry Madurai Kamaraj University Madurai - 625 021, Tamil Nadu, India	National	Research papers

## COMPLETED RESEARCH PROJECT

No	Title of the Project	Funding Agency	Total Grant	Year
1	Raman Spectroscopic study of grapheme synthesize by direct exfoliation of graphite (Co-PI)	CSIR	23.10 Lakhs	2014-17

## ON-GOING RESEARCH PROJECT

No	Title of the Project	Funding Agency	Total Grant	Year
1	Growth of Pure and doped Organic single Crystals for Scintillator Applications (Co-PI)	DAE-BRNS	34.62	2018-2021

## HONORS/AWARDS/RECOGNITIONS

- Awarded INSA-Visiting Scientist Fellowship for the year 2017-18 by Indian National Science Academy, Delhi.
- Awarded Out Standing Reviewer from Journal of Molecular Structure by Elsevier in 2016.
- Nominated as Head i/c in Department of Physics, School of Physics, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (17.08.2016 – till date).
- Nominated as Programme Coordinator, DST-FIST(2009), School of Physics, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (23.01.2012 – 22.01.2013).
- Nominated as DST-SERB PI for the project 'Raman Studies.....', for doing administrative work in Department of Laser Studies, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (14.02.2014 – 31.01.2015).
- Nominated as Student Adviser for School of Physics, Madurai Kamaraj University, Madurai-625021, Tamil Nadu. (2019).
- Nominated as Students Counselor and Teacher Counselor of School of Physics, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (2019).
- Member of Inspection Commission for the affiliation of BSc Physics in Ramasamy Naidu College, Sathur, Tamil Nadu (2019).
- Member of Inspection Commission for the affiliation of BSc Physics in PSR Arts and Science College, Sivakasi, Tamil Nadu (2018).
- Selection Committee Member-Assistant Professor Selection in Department of Physics, SFR College, Sivakasi, Tamil Nadu (2018).

## PUBLICATIONS

- Supramolecular self-assembly of a novel 2-aminopyrazinium hydrogen tartrate single crystal through hydrogen bonds: Experimental analyses and theoretical investigations M. Tamil Elakkiya, S. Suresh Kumar, M. Sathiyendran, A. Harshavardhini, **K. Anitha**, Journal of Molecular Structure 1206 (2020) 127684.
- Design and growth of novel organic molecular quinoline 4-nitrophenol (QNP) single crystals:for nonlinear optical (NLO)applications, P. Karuppasamy, T. Kamalesh, K. Anitha, M. Senthil Pandian, P. Ramasamy, Sunil Verma, Journal of Molecular Structure 1210 (2020) 128036. **IF: 2.120**
- Anisotropic nonlinear optical and optical limiting studies of an ethylenediamminium picrate crystal with femtosecond excitation, C. Indhumathi, S. Alfred Cecil Raj, S. Venugopal Rao, K. Anitha, T. C. Sabari Girisun, Chemistry Select, (2020), 5, 2119-2129. **IF: 1.811**
- Growth, spectroscopic, electrical and mechanical studies on hexamethylenetetramine succinate crystal: a new third harmonic generation material, S. Balaprabhakaran, J. Chandrasekaran, B. Babu, R. Thirumurugan and **K. Anitha**, Materials Science - Poland, <http://www.materialsscience.pwr.wroc.pl/> DOI: 10.2478/msp-2019-0086.
- Study of electrical conductivity and photoelectric response of liquid phase exfoliated graphene thin film prepared via spray pyrolysis route, Vasanthi, V., Logu, T., Ramakrishnan, V., Anitha, K., Sethuraman, K. Carbon Letter (2019). <https://doi.org/10.1007/s42823-019-00111-2>
- Structural, spectral, computational and thermal studies on a new organic NLO crystal: 2-aminopyrazinium 5-nitro-2-hydroxybenzoate, M. Tamil Elakkiya, S. Suresh Kumar, S. Premkumar K. Anitha, Materials Science: Materials in Electronics, <https://doi.org/10.1007/s10854-019-01989-4>.
- Enhanced piezoelectric, optical, mechanical and laser damage threshold studies on creatinine doped glycine single crystals, P. Justin, K. Anitha, Materials Science: Materials in Electronics (2019)30:9735-9741.
- Reinforced Photocatalytic Reduction of SnO<sub>2</sub> Nanoparticle by La Incorporation for Efficient Photodegradation under Visible Light Irradiation, Jayapandi S, Premkumar S, Lakshmi D, Packiyaraj P, Kamatchirajan Balaji vishwanath, Sivaraj P, Anitha K. Journal of Materials Science: Materials in Electronics (2019)30: 8479-8492.
- Experimental and theoretical spectroscopic studies and chemical reactivity of ferrous fumarate, K. Anitha, R. Niranjana devi, P. Justin, Canadian Journal of Physics, 97 (2019) 308-316.
- The Effect of Malonic acid on the Physico-Chemical Characterisation of 4-Hydroxy Pyridine : A

New Third order NLO single crystal, M. Subha and K. Anitha, Journal of Molecular Structure -1179 (2019) 469-476.

- Growth, structural, thermal, mechanical, optical and third order nonlinear optical studies of 3-hydroxy 2-nitro pyridine single crystal, P. Justin, K. Anitha, Optical Materials 86 (2018) 562-570.
- Structural investigation, spectral characterization, thermal and antibacterial activity on an organic crystal: 2-aminopyrazin-1-ium3-carboxypicolinate, M.Tamil Elakkiya, K. Anitha, Materials Letters, 235 (2019) 202–206.
- Structure Elucidation, Biological Evaluation and Molecular Docking Studies on a new organic salt: 2-aminobenzimidazolium 5-nitro-2-hydroxybenzoate, K. Saiadali Fathima, M. Sathiyendran, K. Anitha, Journal of Molecular Structure (2019), 1177, 457-468.
- Structure Elucidation, Biological Evaluation and Molecular Docking Studies of 3-aminoquinolinium 2-carboxy benzoate- A Proton Transferred Molecular Complex, K. Saiadali Fathima, M. Sathiyendran, K. Anitha, Journal of Molecular Structure (2019) 1176, 238-248.
- Synthesis, Crystal growth, Structural, Optical, thermal, laser damage threshold and Z-scan technique on 2-Amino 4,6-Dimethyl Pyrimidine 4-Nitrophenol Single Crystal, P. Karuppasamy, T. Kamalesh, K. Anitha, M. Senthil Pandian, P. Ramasamy, Sunil Verma, Optical Materials (2018), 84, 475-489.
- Structural, spectral, computational, thermal and antibacterial studies on a co-crystal: 2-aminopyrazine phthalic acid, M Tamil Elakkiya, S Premkumar, M. Sathiyendran, P. Suresh, V Shanmugaiah and K. Anitha, Journal of Molecular Structure (2018), 1173, 635-646.
- Structural Investigation and Molecular Docking Studies of 2- Amino-1H-benzimidazolium 2-hydroxybenzoate and 2- Amino-1H-benzimidazolium pyridine 2-carboxylate Single Crystals, K. Saiadali Fathima, M. Sathiyendran, K. Anitha, Materials Science & Engineering C, 91 (2018) 103-114.
- Yellow emitting Cd doped SnO<sub>2</sub> nanophosphor for phosphor converted white LED application, V Vasanthi, M Kottaisamy, K Anitha, V Ramakrishnan, Material Science in Semiconductor processing; (2018) 85, 141-149.
- Augmented photocatalytic and electrochemical activities of Ag tailored LaCoO<sub>3</sub> perovskite semiconductor, S. Jayapandi, Lakshmi, S. Premkumar, P. Packiyaraj, K. Anitha, Materials Letter, 218 (2018) 2015-2018.
- Creatininium 4-nitrobenzoate - A phase matchable organic nonlinear optical material with large laser-induced damage threshold value for optoelectronics applications, R. Thirumurugan, B. Babu, K. Anitha, J. Chandrasekaran, Optics and Laser Technology, 105 (2018) 106-113.
- Synthesis, Growth and Characterization of L-Phenylalaninium Methanesulfonate (LPA-MS) Nonlinear Optical Single Crystal, K. Mangaiyarkarasi, T. Ravichandran, K. Anitha, A. Manivel, Journal of Molecular Structure (2018) 1155, 758-764.
- Impact of formic acid on ferroelectric, dielectric, optical properties of Glycine single crystal- A nonlinear material for electro-optic applications, P. Justin, K. Anitha, Materials Research Express (2017) 4, 115101.
- Dipicolinate salt of imidazole: Discovering its structure and properties using different experimental methodologies and quantum chemical investigations, R. Thirumurugan, K. Anitha, Journal of Molecular Structure (2018), 1155, 267-277.

- Synthesize, growth, Characterization and quantum chemical investigations of a promising organic nonlinear optical material- Thiourea-glutaric acid, R. Thirumurugan and K. Anitha, *Journal of molecular structure* (2018), 1171, 915-925.
- Synthetic Method Dependent Physicochemical Properties and Electrochemical Performance of Ni-Doped ZnO, Abinaya Chandrasekaran, Thibeorchews Prasankumar, Dr. Sujin P Jose, Dr. Kandasamy Anitha, Craig Ekstrum, Dr. Joshua M. Pearce, Dr. Jeyanthinath Mayandi, *Materials Science inc. Nanomaterials & Polymers in Chemistry Select* (2017), DOI: 10.1002/slct.201701584. 2 (28), 9014-9023.
- Synthesis of penta- and tetra-cyclic cage-like compounds and dispiro heterocycles through microwave-assisted solvent-free multi-component domino reactions, Seeni Maharani, Sundaravel Vivek Kumar, Abdulrahman I. Almansour, Raju Suresh Kumar, Anitha Kandasamy and Raju Ranjith Kumar, *New Journal of Chemistry*, (2017), **41**, 11009-11015.
- Reversible NIR Fluorescent probes for Cu<sup>2+</sup> ions detection and its Living cell imaging, Gujuluva Gangatharan Vinoth Kumar, Mookkandi Palsamy Kesavan, Gandhi Sivaraman, Jamespandi Annaraj, Kandasamy Anitha, Arunachalam Tamilselvi, Shenmuganarayanan Athimoolam, Balasubramaniyam Sridhar, Jegathalaprathaban Rajesh, *Sensors and Actuators B: Chemical* (2017), <http://dx.doi.org/10.1016/j.snb.2017.09.150>
- Structural, optical, thermal, dielectric, laser damage threshold and Z-scan studies on fumarate salt of creatinine: A promising third order nonlinear optical material, R. Thirumurugan, K. Anitha, *Materials Letters*, 206 (2017)30-33.
- Natural alkaloid Luotonin A and its affixed acceptor molecules: Serum albumin binding studies, Mookkandi Palsamy Kesavan, Gujuluva Gangatharan Vinoth Kumar, Anitha Kandasamy, Lokesh Ravi, Dhaveethu Raja Jeyaraj, Rajagopal Gurusamy G Jegathalaprathaban Rajesh, *Journal of Photochemistry & Photobiology, B: Biology* 173 (2017) 499–507.
- Experimental and density functional theory (DFT): A dual approach to probe the key properties of creatininium L-tartrate monohydrate single crystal for nonlinear optical applications, R. Thirumurugan, B. Babu, K. Anitha and J. Chandrasekaran, *Journal of Molecular structure* (2017), 1149, 48-57.
- Experimental and computational studies on creatininium 4-nitrobenzoate- an organic proton transfer complex, R. Thirumurugan and K. Anitha, *Journal of Molecular Structure* 1146 (2017) 273-284.
- Exfoliation of high-quality graphene in volatile and non-volatile solvents, V. Vasanthi, K. Anitha, V.Ramakrishnan, *Graphene Technology*, 2:29–40. DOI 10.1007/s41127-017-0006-5.
- Synthesis, crystal growth and characterization of bioactive material: 2- Amino-1H-benzimidazolium pyridine-3-carboxylate single crystal- a proton transfer molecular complex, K. Saiadali Fathima, P. Kavitha, K. Anitha, *Journal of Molecular Structure*, 1143 (2017) 444-451.
- 2-Amino-6-methylpyridinium 4-nitrobenzoate: A phase matchable organic single crystal for optoelectronics device applications, B. Babu, J. Chandrasekaran, R. Thirumurugan, K. Anitha, M. Saravanabhavan, *J Mater Sci: Mater Electron* (2017), 28: 13, 9704-9716.
- Influence of pH in La-doped SnO<sub>2</sub> nanoparticles towards sensor applications S. Jayapandi, P. Packiyaraj, S. Premkumar, J. Mayandi, K. Anitha, *Ionics* (2017) 23: 2909-2917.
- Growth, structural, physical and computational perspectives of trans-4-hydroxy-L-proline: A promising organic nonlinear optical material with large laser-induced damage threshold, Ramaiah Thirumurugan and Kandasamy Anitha, *Mater. Res. Express* 4 (2017) 056202.
- Structural, thermal, optical and nonlinear optical properties of ethylenediaminium picrate single

crystals, Indumathi C., Sabari Girisun T.C., Anitha K., Alfred Cecil Raj S., *Journal of Physics and Chemistry of Solids* 106 (2017) 37–43.

- 2-Amino 4-methylpyridinium 3-chlorobenzoate – A phase matchable organic nonlinear optical material for optoelectronics device applications B. Babu , J. Chandrasekaran, R. Thirumurugan, K. Anitha, M. Saravanabhavan , *Optics and Laser Technology* 94 (2017) 253–260.
- Near UV excitable yellow light emitting Zn doped MgO for WLED application V.Vasanthi, M.Kottaisamy, K. Anitha and V.Ramakrishnan, *Superlattices and Microstructures* (2017), 106, 174-183.
- DNA interaction, antimicrobial, antioxidant and anticancer studies on Cu(II) complexes of Luotonin A, M.P. Kesavan, G.G. Vinoth Kumar, J. Dhaveethu Raja, **K. Anitha**, S. Karthikeyan, J. Rajesh, *Journal of Photochemistry & Photobiology, B: Biology* (2017) 167, 20–28.
- Experimental and theoretical investigation on 2-amino 5- bromopyridinium L- tartrate- A new organic charge-transfer crystal for optoelectronics device applications, J. Chandrasekaran, B. Babu, R. Thirumurugan and **K. Anitha** *Journal of Materials Science: Materials in Electronic* (2017), 28: 1124-1135.
- Structural, optical, thermal, mechanical, dielectric and laser damage threshold studies of a succinate salt of creatinine for nonlinear optical applications, R. Thirumurugan and **K. Anitha** *Materials Letters*, 185 (2016) 214-217.
- Elucidation of two photon absorption of ethylenediaminium (2,4-dinitrophenolate) crystals, C. Indumathi, TC. Sabari Girisun, **K. Anitha**, S. Alfred Cecil Raj, *Optical Materials*, (2016) 60, 214-220.
- Experimental and Computational Perspectives on Bis(Creatininium) Succinate: An Efficient Organic Nonlinear Optical Material, Ramaiah Thirumurugan, Balraj Babu, Kandasamy Anitha and Joseph Chandrasekaran, *Z. Phys. Chem.* 2017; aop, DOI 10.1515/zpch-2016-0896.
- Synthesis, structural analysis and cytotoxic effect of copper (II)-thiosemicarbazone complexes having heterocyclic bases: A selective naked eye sensor for F- and CN-, S. Mathan Kumar, K. Dhahagani, J. Rajesh, **K. Anitha**, G. Chakkaravarthi, M. Marappan, G. Rajagopal, *Tetrahedron* 85 (2015) 830-840.
- Growth and physiochemical characterization of new organic crystal: L-ornithinium dipicrate (LODP), S. Balaprabhakaran, J. Chandrasekaran, B. Babu, R. Thirumurugan and **K. Anitha**, *Spectrochimica Acta Part A Molecular Spectroscopy* ,136 (2015) 700-706.
- Investigation on Growth, Structure and Characterization of Succinate salt of 8-hydroxyquinoline- An organic NLO Crystal R. Thirumurugan, B. Babu, **K. Anitha**, J. Chandrasekaran, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 140 (2015) 44-53.
- Influence of Composites of Carbon Nano Cones and Disc on Photocatalytic Degradation Properties of Fluorinated TiO<sub>2</sub> Nanoparticles, M. Sangari, M. Umadevi, J. Mayandi, **K. Anitha** and Jean Patrick Pinheiro, *Materials Science in Semiconductor Processing*, 31 (2015) 543-550.
- Synthesis, characterization, crystal structure and cytotoxic properties of thiosemicarbazide Ni(II) and Zn(II) complexes, S. Mathan Kumar, J. Rajesh, **K. Anitha**, K. Dhahagani, M. Marappan, N. Indra Gandhi, G. Rajagopal. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 142 (2015) 292-302.
- Synthesis and spectral characterization of Schiff base complexes of Cu(II), Co(II), Zn(II) and VO(IV) containing 4-(4-aminophenyl) morpholine derivatives: Antimicrobial evaluation and Anticancer studies, K. Dhahagani, S. Mathan kumar, G. Chakkaravarthi, **K. Anitha**, J. Rajesh and G. Rajagopal. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 117 (2014) 87-



94.

- Synthesis, characterization, DNA-binding and cleavage studies of polypyridyl copper (II) complexes Ammavasi Gubendran, Jegathalaprathaban Rajesh, **Kandasamy Anitha** and Periyakaruppan Athappan, Journal of Molecular structure, 1075 (2014) 419-429.
- X-ray, vibrational spectra and quantum chemical studies on a new semiorganic crystal: 4-Chloroanilinium Perchlorate, R. Anitha, S. Athimoolam, M. Gunasekaran and **K. Anitha**, Journal of Molecular structure, 1076 (2014) 115-125.
- Synthesis, growth, spectral and thermal properties of a new organic crystal: 2-carboxypyridin-1-ium tri chloroacetate, S. Gowri, **K. Anitha**, A. Suresh, T. Umadevi, S. Selvanayagam, D. Sajan, A. Chandramohan, N. Lawrence. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 95 (2012) 73-79.
- Synthesis, Structure and elucidation and spectroscopic analysis of 3a,8b-dihydroxy-4-oxo-1H,2H,3H,3aH,4H,8bH-indenol[1,2-d]imidazolidin-2-iminium chloride, T. Uma Devi, S. Priya, R. S. Selvanayagam, K. Ravikumar **K. Anitha**. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 97 (2012) 1063-1071.

## PAPER PRESENTED IN CONFERENCE/SEMINAR/WORKSHOP

Name of the Conference	Date	Place	Title	Author(s)
4th International Conference on Recent Trends in Applied Science and Technology (Online) (ICRTAST-2020)	26-29 December 2020	Department of Physics, Bharathidasan University, Trichy.	Structural and Nonlinear Optical Studies of 2,4,6-triaminopyrimidine-1,3-dium L-tartrate	K. Anitha and R. Thirumurugan
National conference on design and applications of emerging materials (NCD AEM-2020) (Best Poster Award)	19 <sup>th</sup> February, 2020	NMSSVN College, Madurai-19.	Structural investigations on 4-bromoaniline oxalic acid monohydrate	P. Yogeswari, M. Tamil Elakkiya, S. Suresh Kumar and K. Anitha
24 <sup>th</sup> National Seminar on Crystal Growth and Applications (NSCGA – 2020)	3-5 February, 2020	Department of Physics, Periyar University, Salem – 636011, Tamil Nadu	Studies on bioactive single crystal 2,4,6-Triaminopyrimidinium Nitrobenzoate	M. Tamil Elakkiya, K. Anitha
24 <sup>th</sup> National Seminar on Crystal Growth and Applications (NSCGA – 2020)	3-5 February, 2020	Department of Physics, Periyar University, Salem – 636011, Tamil Nadu	Structural, optical, thermal and SHG studies on new organic NLO co-crystal: 4-pyridone succinic acid	M. Subha, K. Anitha

24 <sup>th</sup> National Seminar on Crystal Growth and Applications (NSCGA – 2020)	3-5 February, 2020	Department of Physics, Periyar University, Salem – 636011, Tamil Nadu	Experimental investigations on Bromoanilinium Malonate	P. Yogeswari, M. Tamil Elakkiya, S. Suresh Kumar and K. Anitha
23 <sup>rd</sup> National Seminar on Crystal Growth and Applications	28-30, January 2019	Department of Physics, Bharathiar University, Coimbatore.	Vibrational spectroscopic, Structural, quantum chemical studies and bioactivity on 2-aminopyrazinium 3-carboxy picolinate single crystal	M. Tamil Elakkiya and K. Anitha
23 <sup>rd</sup> National Seminar on Crystal Growth and Applications	28-30, January 2019	Department of Physics, Bharathiar University, Coimbatore.	The effect of 2-hydroxy benzoic acid on the physico-chemical characterization of 3-hydroxy pyridine: a new second order NLO crystal	M. Subha and K. Anitha
International Conference on Advanced Materials and Nanotechnology ICAMN'18	15 <sup>th</sup> October, 2018	PG & Research Department of Physics Gonzaga College Of Arts & Science For Women (Affiliated to Periyar University, Salem) Kathampallam, Elathagiri 635 108, Krishnagiri District.	Growth and characterization of 4-aminopyridinium salicylate single crystal with DFT approach	P. Justin, W. Jenifer and K. Anitha
India-UK International Conference on Advanced Nanomaterials for Energy, Environment and Healthcare Applications	31 <sup>st</sup> August-1 <sup>st</sup> September, 2018	KSR College of Arts and Science for women	Photocatalytic activity of visible light induced (Nb, Co) co-doped SnO <sub>2</sub> nanoparticles for effective photodegradation	S. Jayapandi and K. Anitha

National seminar on Advanced Materials and Applications	February 15-16, 2018	Karpagam Academy of Higher Education (Deemed University), Coimbatore	Synthesis, Crystal growth, Structural elucidation and Hirshfeld surface analysis of 2-amino benzothiazolium 2-hydroxy benzoate single crystal	M. Subha and K. Anitha
International Conference on Functional Materials (ICFM 2017)	during Sep 7 <sup>th</sup> and 8 <sup>th</sup> 2017	PG and Research Department of Chemistry, Thiagarajar College, Madurai-625 009	Antibacterial activity and Optical studies for 2,4,6 <i>Trichloro S-Triazine</i> - an organic Single Crystal	M. Subha, K. Anitha
International Conference on Functional Materials (ICFM 2017)	during Sep 7 <sup>th</sup> and 8 <sup>th</sup> 2017	PG and Research Department of Chemistry, Thiagarajar College, Madurai-625 009	Single Crystal XRD, Vibrational Spectra and Optical Studies on an organic crystal: 2,4,6-Triamino pyrimidinium Malonate	M. Tamil Elakkiya and K. Anitha
International Conference on Functional Materials (ICFM 2017)	during Sep 7 <sup>th</sup> and 8 <sup>th</sup> 2017	PG and Research Department of Chemistry, Thiagarajar College, Madurai-625 009	Doping effect of formic acid on Growth, Spectral, Linear and Nonlinear optical properties of Glycine single crystal	P.Justin and K. Anitha
International Conference on Functional Materials (ICFM 2017)	during Sep 7 <sup>th</sup> and 8 <sup>th</sup> 2017	PG and Research Department of Chemistry, Thiagarajar College, Madurai-625 009	Synthesis, Crystal Growth and Characterization of Bioactive Material: 2-Amino-1H-Benzimidazolium Pyridine-3-Carboxylate Single Crystal-A Proton transfer molecular complex	K. Saiadali Fathima and K. Anitha
International conference on Advanced Materials Science and Technology (ICAMST-2017)	17-19 August, 2017	Department of Physics, Bannari Amman Institute of Technology, Sathyamang	Investigation on emission properties of Zn doped $\gamma$ Ga <sub>2</sub> O <sub>3</sub> nanoparticles towards pc-WLED application	V. Vasanthi, K. Anitha, M. Kottaisamy, V. Ramakrishnan

		alam, Erode-638 041.		
4 <sup>th</sup> International Conference on nanoscience and nanotechnology (ICONN)	August, 9-11, 2017	Department of Physics and NanoTechnology, SRM University, Kattankulathur, Chennai	A Novel Solvent For Liquid Phase Exfoliation of Few Layer Graphene Nanosheets	V. Vasanthi, K. Anitha, M. Kottaisamy, V. Ramakrishnan
One Day International Seminar on Materials Science and Technology (ISMST 2017)	Aug 4 <sup>th</sup> 2017	Mother Theresa university, Kodaikanal.	Optical and Antibacterial activity studies for 2(Pyridine-2-yl) an organic Single Crystal	M. Subha, K. Anitha
International Conference on Recent Trends in Materials Science and Applications	6 <sup>th</sup> January 2017	Sri Meenakshi Govt. Arts College for Women, Madurai	Experimental and computational approach to probe the key characteristics of creatininium 4-nitrobenzoate - An organic proton transfer complex for NLO applications	K. Anitha and R. Thirumurugan
International Conference on Recent Trends in Materials Science and Applications	6 <sup>th</sup> January 2017	Sri Meenakshi Govt. Arts College for Women, Madurai	Structure Based Drug Design towards Dengue Virus	R. Thirumurugan and K. Anitha
International Conference on Nanomaterials and Molecular Research	December, 9-10, 2016	St. Joseph's College, cuddalore.	Study of defect induced photoemission of Cd doped SnO <sub>2</sub> nanoparticles	V. Vasanthi, K. Anitha, M. Kottaisamy, V. Ramakrishnan
International Conference on Nanomaterials and Molecular Research	December, 9-10, 2016	St. Joseph's College, cuddalore.	Investigation on structural, morphologicla and optical properties of (Co, Nb) co-doped SnO <sub>2</sub> nanoparticles	S.Jayapandi, K.Anitha
44 <sup>th</sup> National Seminar on Crystallography	July10-13, 2016	IISER, Pune.	Synthesis, Growth and Characterzation of 2-((1H-	K. Saiadali Fathima and K. Anitha

			benzo[d]imidazol-2-yl)amino)-1-phenylethan-1-one(C <sub>15</sub> H <sub>13</sub> N <sub>3</sub> O) single crystal	
15 <sup>th</sup> Asian Conference on solid State Ionics	November, 27-30, 2016	IIT, Patna	Influence of pH in La <sup>3+</sup> doped SnO <sub>2</sub> nanoparticle preparation	S.Jayapandi, K.Anitha
National Conference on Advanced Materials for Energy and Environmental Applications (AMEEA 2015)	March,18 – 20, 2015	School of Physics, Bharathiar University, Coimbatore - 641046.	Growth and Characterization of an Organic Crystal: Trans-4-hydroxy-L-proline	R. Thirumurugan, K. Anitha
National Conference on Advanced Materials for Energy and Environmental Applications (AMEEA 2015)	March,18 – 20, 2015	School of Physics, Bharathiar University, Coimbatore - 641046.	Growth and Characterization of an Organic Crystal: Phenylurea	R. Thirumurugan, K. Anitha

### CONFERENCE/WORKSHOP/SEMINAR/TRAINING ORGANIZED

Type	Name	Date(s)	Place	Role Played	Funding Agency
National	Refresher Course in Physics – Recent Trends in Materials for Energy and Environment	13-26, February 2020	School of Physics, Madurai Kamaraj University, Madurai	Coordiantor	UGC-HRDC
International	A Two Day International Conference on Advanced Functional Materials On Energy, Environment And Biomedical Application (AFMEEB – 2017)	11 -12, December 2017	Madurai Kamaraj University, Madurai	Co-Convener	UGC, DST, IFE
National	National Seminar on X-ray Crystallography-NSXC (2014)	29, September – 01, October, 2014	School of Physics, Madurai Kamaraj University, Madurai	Convener	UGC

National	Recent Advances in Crystal growth and Crystallography” - RACC-2012	21-22 March, 2012	School of Physics, Madurai Kamaraj University, Madurai	Convener	UGC
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## REVIEWER FOR THE FOLLOWING JOURNALS

- Journal of Molecular Structure **IF: 1.753**
- Materials letters **IF:2.572**
- Journal of Physics and Chemistry of Solids **IF: 2.043**
- Journal of Materials science: Materials in Electronics **IF: 2.019**
- Materials Science: Poland **IF: 0.610**
- Journal of Molecular Crystals and Liquid Crystals **IF:0.571**
- Journal of Physics D: Applied Physics **IF: 2.373**
- Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy **IF: 2.880**
- Ceramics International **IF: 3.540**
- Desalination and Water treatment **IF: 1.234**

## MEMBERSHIP IN ACADEMIC BODIES

- External Member in Ph,D thesis evaluation board for Renu Jacob, Department of Physics, CMS College, Kottayam, Mahatma Gandhi University, Kerala (2017).
- External Member in Ph,D thesis evaluation board for Vinila, VS, Department of Physics, CMS College, Kottayam, Mahatma Gandhi University, Kerala (2019)
- University Nominee-MPhil-Board of Studies - Ramasamy Naidu College, Sathur (2019-2021)
- University Nominee-UG-Board of Studies, GTN College, Dindigul, Tamil Nadu (2016-2018)
- Member-Board of Studies-MKU-Electronics and Communication (UG & PG) (2017-2019)
- Member in Board of MPhil for framing syllabus and question setting in Department of Physics, Gandhigram Rural Institute, Deemed to be University, Dindigul, Tamil Nadu (2018-2019).
- Member in Board of MPhil of S. Anusha Department of Physics, Gandhigram Rural Institute, Deemed to be University, Dindigul, Tamil Nadu (11.04.2019 onwards)
- Member in MPhil thesis evaluation and Viva-voce examination board in Department of Physics, Gandhigram Rural Institute, Deemed to be University, Dindigul, Tamil Nadu
- External Member in Ph.D thesis evaluation and Viva-voce examination board for Mr. S. Suresh Kumar, Department of Physics, Anna University, Nagercoil-629004, Tamil Nadu (11.04.2019)
- Admission committee Member in School of Physics, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (2010-19)
- Course Adviser in School of Physics, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (2010-2017 & 2018-2019)
- Member in PG board of examinations in Madurai Kamaraj University for affiliated colleges (2012-2019)
- Member in PG board of Practical examination, DDE, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (2013).
- Trainer cum Examiner for MSc practical examination, DDE, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (2014, 2015).
- Member in MSc (Physics) examination valuation Board of DDE, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (2012, 2013, 2014, 2015).
- Member in board of MPhil (Physics) dissertation evaluation and Viva-voce examination, DDE, Madurai Kamaraj University, Madurai-625021, Tamil Nadu (2014, 2015, 2016).
- Member in board of MPhil dissertation evaluation in Department of Physics, Bharathiar University, Coimbatore, TamilNadu (2010, 2011, 2012, 2013, 2015, 2017, 2019).
- University Nominee-Board of Studies-MPhil-Physics- Sourastra College, Madurai from 20.05.2019 to 19.05.2021.
- University Nominee-Managing committee of Madurai Gandhi NMR Subbraman College for Women, Madurai from 01.04.2019 to 31.03.2021
- University Nominee- Board of Studies- MPhil-Physics for VHNSN College, Virudhunagar from 20.05.2019 to 19.05.2021.
- University nominee-PG Board of Studies-Saraswathi Narayanan College, Madurai from

08.02.2019 to 07.02.2021.

- Doctoral committee member for R. Ramakakshmi, Department of Physics, Gandhigram Rural Institute, Gandhigram, Tamilnadu 13.02.2020 onwards

#### **MEMBERSHIP IN PROFESSIONAL BODIES**

- Indian Crystallographic Association (ICA)
- Indian Association for Crystal Growth (IACG)

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## ADMINISTRATIVE EXPERIENCE

Role Played	Responsibilities	Period ( Month & Year)
Head i/c	Administrative work in the Department of Physics	17.08.2016 to Till date
Student Adviser	Helping in the academic activities of Students	July 2019 to Till date
Teacher Counselor	Sowing good values and mental health in students	August 2019 to Till date
Programme Coordinator, DST-FIST (2009)	Handling funds, Purchasing Equipments, Books and Chemicals	23.01.2012 to 22.01.2013
DST-SERB PI	Handling funds, Purchasing Equipments etc.,	14.02.2014 to 31.01.2015
Course Adviser	Preparing Time table, Internal and seminar Schedules, Arrangements of Seminars and Classes during absence of course teacher etc.,	2010-2017 & 2018-Till date

## CONTACT

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