



Dr. S. Sudhahar
Assistant Professor

Contact

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Alagappa University
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Tamil Nadu, INDIA

Employee Number : 11505

Date of Birth : 11-04-1985

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Academic Qualifications: M.Sc./M.Ed./Ph.D.

Teaching Experience: 07 Years

Research Experience: 12 Years

Areas of Research

- **Crystal Growth (Nonlinear and Ferroelectric Materials)**
- **Thin Films and**
- **Nanomaterials (Supercapacitor and Biomedical applications)**

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	04	04
	M.Phil.	11	Xx
Project	PG	30	06
	UG / Others	Xx	Xx

Ph.D Completed: 04

Department of Physics, Alagappa University, Karaikudi-630003			Awarded
S. No.	Students Name	Title of the Thesis	
01	G. PARVATHY (R20161810)	Investigations on the synthesis, growth, physicochemical and quantum chemical calculations of 5-chloro-2-hydroxybenzoic acid derivative single crystals for nonlinear optical applications.	13 th April 2022
02	R. KALIAMMAL (R20161943)	Investigations on the synthesis, growth, physicochemical and quantum chemical calculations of 2-amino-6-methylpyridine derivative single crystals for nonlinear optical applications.	17 th June 2022
03	K. VELSANKAR (R20162024)	A comprehensive exploration on green synthesized metal oxide nanoparticles using panicoidae (edible grass-millet crops) subfamily grains extract for emerging biological applications.	15 th September 2022
04	G. MAHESHWARAN (R20162343)	Investigation on two dimensional layered bismuthene nanosheets and its composites for supercapacitor applications.	20 th January 2023

Ph.D Ongoing: 04

Department of Physics, Alagappa University, Karaikudi-630003			Awarde/ Ongoing
S. No.	Students Name	Title of the Thesis	
01	A. NIVEDHITHA BHARATHI (R20162678)	Functional and fabrication of layered two dimensional transition metal based electrode materials for high performance supercapacitor applications.	Ongoing
02	V. KOUSALYA DEVI (R20162771)	Investigations on the synthesis, growth, physicochemical and quantum chemical calculations on creatinine derivative single	Ongoing

		crystals for nonlinear optical applications.	
03	S. SUGANYA (R20162827)	Development of ternary metal oxide nanostructured electrode materials for the fabrication of high performance hybrid supercapacitors.	Ongoing
04	F. KOUSI (R20162977)	Investigations on the synthesis, growth, physicochemical and quantum chemical calculations on p-toulenesulphonic acid based single crystals for non linear optical applications.	Ongoing

M.Phil Completed: 11

Department of Physics, Alagappa University, Karaikudi-630003			Awarded
S. No.	Students Name	Title of the Thesis	
01	R. ERNEST AMALA (R2016581005)	Crystal growth and characterization of 2-aminopyridinium salicylate organic nonlinear optical single crystal	July 2017
02	A. SAVARI RAJEEV (R2016581014)	Synthesis, growth and characterization of 2-amino 6-methylpyridinium 6-aminocaproate nonlinear optical single crystal	July 2017
03	U. KARUPPASAMY (R2016582008)	Synthesis, growth and characterization of 8-hydroxyquinolinium 6-aminocaproate organic nonlinear optical single crystal	October 2017
04	S. SHARAVANAN (R2016582017)	Synthesis, growth and characterization of 8-hydroxyquinolinium salicylate organic nonlinear optical single crystal	October 2017
05	R. ARCHANA (R2017581002)	Growth and characterization of 8-hydroxyquinolinium 3,4-dimethoxybenzoate and p-toluidinium picrate organic single crystals for nonlinear optical applications	July 2018
06	J. SAHAYA MELBA (R2017581009)	Synthesis, growth and characterization of 2-amino-6-methylpyridinium 5-chlorosalicylate and l-alaninium 5-chlorosalicylate organic nonlinear optical single crystals	July 2018
07	B. BHUVANA MARIDHASAN (R2017582003)	Synthesis, growth and non-linear optical properties of 2-amino 6-methylpyridinium 3,4-dimethoxybenzoate single crystal	April 2019
08	R. MUTHU KARUPPASAMY (R2017582013)	Growth and structural, spectral, optical, thermal properties of l-alaninium 3,5-dinitrobenzoate NLO single crystal	April 2019

09	S. SUMATHY (R2017582018)	Synthesis, growth and characterization of l-alaninium p-hydroxybenzoate non-linear optical single crystal	April 2019
10	G. MAHESHWARAN (R2018581002)	Mechanical, thermal and optical properties of piperazinium orthophthalate non-centrosymmetric single crystal	August 2019
11	V. VINOTHINI (R2019581009)	Green synthesis of silver nanoparticles using zephyranthes candida flower extract for biomedical application	June 2020

M.Sc Completed: 30

Department of Physics, Alagappa University, Karaikudi-630003			Awarded
S. No.	Students Name	Title of the Thesis	
01	S. ANUSIYA (R2015521002)	Synthesis, growth, structural and optical properties of 8-hydroxyquinolinium 4-hydroxybenzoate NLO single crystal	April 2017
02	R. KRISHNA (R2015521018)	Synthesis, growth, structural, optical, thermal properties of 2-aminopyridinium copper acetate single crystal	April 2017
03	G. PARVATHY (R2015521024)	Synthesis, growth, spectral, and optical properties of piperazinium p-hydroxybenzoate nonlinear optical single crystal	April 2017
04	M. PERIYANAYAKI (R2015521025)	Synthesis, crystal growth, structural, spectral, thermal and optical properties of piperidinium p-hydroxybenzoate NLO single crystal	April 2017
05	S. SIVARANJANI (R2015521038)	Synthesis, crystal growth, structural, spectral and optical properties of 2-aminopyridinium p-chlorobenzoate NLO single crystal	April 2017
06	A. CAROLIN AMALA (R2016521004)	Synthesis, growth, spectral and optical properties of 2-aminopyridinium succinate and vanillinium 2-chlorobenzoate nonlinear optical single crystals	April 2018
07	P. ISWARYA (R2016521009)	Synthesis, growth and characterization of piperazinium benzilate NLO single crystal	April 2018
08	M. MUNEESWARI (R2016521017)	Synthesis, growth and characterization of 4-aminopyridinium p-chlorobenzoate and 8-hydroxyquinolinium sebaciate nonlinear optical single crystal	April 2018
09	M. VALLIKKODI (R2016521040)	Synthesis, growth and characterization of piperazinium p-aminobenzoate and piperazinium p-chlorobenzoate nonlinear	April 2018

		optical single crystals	
10	K. VELSANKAR (R2016521041)	Synthesis, growth, structural, spectral and optical studies on piperazinium salicylate and vanillinium 3,4-dimethoxybenzoate single crystal	April 2018
11	V. ATCHAYA (R2017521006)	Crystal growth and characterization of vanillium succinate and 2-aminopyridinium 3,5-dinitrobenzoate organic nonlinear optical single crystals	April 2019
12	M. KARTHIKA (R2017521019)	Synthesis, growth and characterization of benzilate 2-amino 6-methyl pyridium and 5-chlorosalicylate 2-amino pyridinium nonlinear optical single crystal	April 2019
13	R. MANGALA BHARATHI (R2017521023)	Synthesis, crystal growth, structural, spectral and optical properties of nicotinamide 8-hydroxy quinoline and 2-amino 6-methylpyridinium myristate NLO single crystal	April 2019
14	K. RAJIYA BEGAM (R2017521033)	Synthesis, structural and optical properties of MnFe ₂ O ₄ nanoparticles	April 2019
15	V. VINOTHINI (R2017521047)	Synthesis, structural and optical properties of pure and copper doped ZnS nanocrystals	April 2019
16	R.M. ASWIN KUMAR (R2018521006)	Green synthesis of copper oxide nanoparticles using tamarindus Indica pulp extract and its antibacterial activity	June 2020
17	M. MALAISELVI (R2018521019)	Green synthesis of lanthanum oxide nanoparticles using moringa oleifera leaves extract with its antioxidant, anti-inflammatory and antidiabetic activities	June 2020
18	A. NIVEDHITHA BHARATHI (R2018521026)	Green synthesis of silver nanoparticles via zeephyranthes roses flower extract for antibacterial and anti-inflammatory application	June 2020
19	R. PREETHI (R2018521030)	Green synthesis of silver nanoparticles via allium sativum flower extract for antimicrobial and anti-inflammatory application	June 2020
20	R. SELVA MUNEESWARI (R2018521039)	Eco friendly synthesis of lanthanum oxide nanoparticles using eucalyptus globules leaves extract for biomedical application	June 2020
21	S. ARCHANA (R2019521003)	A novel 2D-Sb/rGO nanocomposites as a potential electrode material for high performance supercapacitor application	April 2021
22	P. MUTHUMARI (R2019521017)	Green synthesis of ZnO nanoparticles via erythrina indica leaf extract for antimicrobial	April 2021

		application	
23	G. SEETHALAKSHMI (R2019521031)	Development of high performance electrode based on $\text{Cr}_2\text{O}_3\text{-Co}_3\text{O}_4$ nanocomposite in aqueous electrolyte	April 2021
24	C. SELVI (R2019521032)	Exploration of $\text{Cr}_2\text{O}_3\text{-NiO}$ nanocomposites as a superior electrode material for supercapacitor application	April 2021
25	S. SUGANYA (R2019521038)	Green synthesis CuO nanoparticles via capsicum frutescens leaf extract for antibacterial application	April 2021
26	S. ABDULKAJINA (R2020521001)	Synergistic effect of two dimensional $\text{MoS}_2\text{-Cr}_2\text{O}_3$ nanocomposite based electrode material for high performance supercapacitor applications	May 2022
27	C. DEEPIKA (R2020521007)	Hybridization of carbon sphere-graphitic carbon nitride based nano composite for high performance supercapacitor application	May 2022
28	C. NITHYASHREE (R2020521029)	Fabrication of multilayered $\text{MoO}_3\text{-Sb}$ nanocomposite based electrode for electrochemical supercapacitor	May 2022
29	S. PUSHPA (R2020521034)	Exploration of two dimensional antimony@rGO nanocomposite for high performance of supercapacitor	May 2022
30	M. THENMOZHI (R2020521044)	Investigation on two dimensional layered $\text{MoO}_3\text{-La}_2\text{O}_3$ nanocomposite for supercapacitor application	May 2022

M.Sc Ongoing: 06

Department of Physics, Alagappa University, Karaikudi-630003			Awarded / Ongoing
S. No.	Students Name	Title of the Thesis	
01	S. ABITHA BHANU (R2021521003)	Investigation of $\text{MoO}_3\text{-Fe}_2\text{O}_3$ nanocomposite based electrode for supercapacitor applications.	Ongoing
02	C. ASHWIN (R2021521009)	Exploration of two dimensional layered hexagonal boron nitride for the fabrication of high performance hybrid supercapacitor	Ongoing
03	P. DIVYARANI (R2021521018)	Fabrication of $\text{Y}_2\text{O}_3\text{-CoO}_3$ nanocomposites and analysing their electrochemical properties for supercapacitor applications.	Ongoing
04	J. JEYAPRATHA (R2021521024)	Exploration of electrochemical properties of SrO-NiO as an effective electrode for	Ongoing

		supercapacitor	
05	S. RAMYA (R2021521034)	Preparation of MnFe ₂ O ₄ -gC ₃ N ₄ nanocomposites for high performance supercapacitor applications.	Ongoing
06	V. YOGA THARSHINI (R2021521045)	Synthesis, crystal growth and optical properties of 8-Hydroxyquinolinium 3,5-Dinitrobenzoate for NLO applications.	Ongoing

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized:

1. Active Member of Organising Committee, NATIONAL SEMINOR on RECENT ADVANCES in PHYSICS, March 7-8, 2014.
2. Organizing Committee member National Seminar on Recent Advancements in Frontier Areas of Materials Science, 23-24, March, 2016.
3. Active Member of Organizing Committee, National Seminar on Advanced Materials Research, Alagappa University, 19th January, 2017.
4. Active Member of Organizing Committee, Business Oriented Hands-on Training on Analytical Instrumentation, 2-3rd March, 2017.
5. Active Member of Organizing Committee, National Conference on Futuristic Materials, 27-28th March, 2017.
6. Organizing Committee member International Conference on Momentum Role of Nanomaterials in Renewable Energy Devices, 1-2, March, 2018.
7. Organizing Committee member National conference on advanced materials for sustainable energy and sensors (NCAMSES), 20-22, March, 2019.
8. Organizing Secretary International Conference on Advanced materials for sustainable energy and sensors (INCAMSES – 2019), 16-17, September 2019.
9. Organizing Secretary World Standards Day-2019, October 2019.
10. Organizing Secretary Act NExT 2020, February 2021.

Membership in

Professional Bodies

1. Life Member: Indian Physics Association, Life Membership No. GEN/LM/13173
2. Life Member: Indian Laser Association.
3. Life Member: Society for Advancement of Electrochemical Science and Technology.

Awards

1. Promising Researcher Award (cash) - 2022
2. Vallal Alagappan Research Recognition Award - 2020

Academic Bodies (such as Board of studies etc.,)

1. Member: Board of studies to frame M.Sc (Physics), M.Phil (Physics), Syllabi, Alagappa University.
2. Swatchh Bharath Supervisor since 2018 to till date.
3. Rotary Club Coordinator since September-2019 to till date.

Department Developmental Activity

1. NSS Coordinator since 2016 to till date
2. Student Welfare Coordinator since 2016 to till date
3. Swatchh Bharath Coordinator since 2016 to till date.

Resource persons in various capacities

Number of invited / Special Lectures delivered: 04

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
104	15	05	39	Xx

Cumulative Impact Factor (as per JCR) :	379.153
Highest Impact Factor :	19.069
CCDC Filed :	12
h-index :	17
i10 index :	33
Total Citations :	1119

Papers Presented International Conferences

1. R. Kaliammal, G. Parvathy, G. Maheswaran, **S. Sudhahar**, Crystal growth and characterization of 2-amino 6-methylpyridinium 3,4 -dimethoxybenzoate organic nonlinear optical single crystal, Participated and presented a poster in International symposium on modelling crystal growth processing and devices (MCGPD 2019) held at SSN institute of technology Chennai on 26-28 February 2019.

2. G. Parvathy, R. Kaliammal, K. Velsankar, **S. Sudhahar**, Synthesis, growth, spectral and optical properties of L-alaninium p-hydroxybenzoate nonlinear optical single crystal, Participated and presented a poster in International symposium on modelling crystal growth processing and devices (MCGPD 2019) held at SSN institute of technology Chennai on 26-28 February 2019.
3. A. Carolin Amala, P. Iswarya, M. Krishnakumar, **S. Sudhahar**, 'Synthesis, growth, structural and optical properties of 8-hydroxyquinolinium 6-aminocaproate nonlinear optical single crystal', Participated and presented a poster in IC MNRE 2018 held at Alagappa University, Karaikudi, March 1-2, 2018.
4. G. Parvathy, S. Muniyasamy, R. Kaliammal, **S. Sudhahar**, 'Synthesis, growth, spectral and optical properties of 2-aminopyridinium p-aminobenzoate nonlinear optical single crystal', Participated and presented an Oral in IC MNRE 2018 held at Alagappa University, Karaikudi, March 1-2, 2018.
5. S. Sahaya Melba, R. Archana, A. Thirunavukkarasu, **S. Sudhahar**, 'Growth and characterization of nonlinear optical 4-dimethylamino pyridinium 4-aminobenzoate dihydrate single crystal', Participated and presented a poster in IC MNRE 2018 held at Alagappa University, Karaikudi, March 1-2, 2018.
6. R. Archana, S. Sahaya Melba, A. Thirunavukkarasu, **S. Sudhahar**, 'Growth and third harmonic properties of bis-benzotriazole trichloro acetate nonlinear optical single crystal', Participated and presented a poster in IC MNRE 2018 held at Alagappa University, Karaikudi, March 1-2, 2018.
7. R. Kaliammal, G. Parvathy, R. Mohan Kumar, **S. Sudhahar**, 'Crystal growth and characterization of 2-aminopyridinium salicylate organic nonlinear optical single crystal', Participated and presented an Oral in IC MNRE 2018 held at Alagappa University, Karaikudi, March 1-2, 2018.
8. R. Velsankar, M. Muneeswari, R. Vallikkodi, **S. Sudhahar**, 'Synthesis, growth and characterization of piperazinium salicylate nonlinear optical single crystal', Participated and presented a poster in IC MNRE 2018 held at Alagappa University, Karaikudi, March 1-2, 2018.
9. S. Muniyasamy, R. Kaliammal, G. Parvathy, **S. Sudhahar**, 'Synthesis, growth and characterization of 2-amino 6-methylpyridinium 6-aminocaproate nonlinear optical single crystal', Participated and presented a poster in IC MNRE 2018 held at Alagappa University, Karaikudi, March 1-2, 2018
10. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Investigation on Spectral, Thermal and Dielectric Properties of DAST Crystal', Participated and presented a poster in International Conference Recent Trends in Applied Physics & Materials Science (RAM 2013) held at Govt. College of Engineering and Technology, Bikaner, Rajasthan, Feb 01-02, 2013.
11. **S. Sudhahar**, M. Krishna Kumar, R. Mohan Kumar, 'Studies on structural, spectral and optical properties of organic nonlinear optical single crystal: 2-amino-4,6-dimethylpyrimidinium p-hydroxybenzoate', Participated and presented an Oral in International conference on Research, Perspectives and Procedures organized by SDNB Vaishnav College for Women, Chennai-44, during August 23-24, 2012.

12. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Crystal growth, X-ray diffraction, spectroscopic, Optical studies on 4-bromo-4'-N'-methylstilbazolium tosylate single crystals', Participated and presented an Oral in International conference: Research: Perspectives & Procedures held at SDNB Vaishnav college for Women, Chennai 23-24 August 2012.
13. **S. Sudhahar**, M. Krishna Kumar, R. Mohan Kumar, 'Effect of Sm³⁺ ion on structural, thermal, mechanical, linear and nonlinear optical properties of potassium hydrogen phthalate single crystals', Participated and presented a poster in International Conference on Materials Science and Technology (ICMST-2012) held at St. Thomas College, Pala, Kerala, during June 10-14, 2012.
14. **S. Sudhahar**, M. Krishna Kumar, P. Pandi, R. Mohan Kumar, 'Investigation on rare earth doped nonlinear optical potassium hydrogen phthalate single crystals', Participated and presented a poster in International conference on Recent Trends in Advanced Materials (ICRAM-2012) held at VIT University, Vellore, during February 20-22, 2012.
15. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Growth and characterization of inorganic nonlinear optical Lithium sodium Sulfate hydrate single crystals', Participated and presented a poster in International Conference on Advanced Materials ICAM 2012 held at Department of Physics, Loyola College, Chennai, January, 5-7, 2012.

Papers Presented National Conferences

1. G. Parvathy, R. Kaliammal, G. Maheshwaran, **S. Sudhahar**, Studies on the spectral and optical properties of organic non-linear optical L-alaninium 3,5 dinitrobenzoate (LADN) single crystal, Participated and presented a poster in National conference on Advanced materials for sustainable energy and sensors (NCAMSES) at Alagappa University, Karaikudi on 20-22nd March, 2019.
2. R. Kaliammal, G. Parvathy, **S. Sudhahar**, Synthesis, growth, spectral and optical properties of 2-amino 6-methylpyridinium benzilate organic nonlinear optical single crystal, Participated and presented a poster in National conference on Advanced materials for sustainable energy and sensors (NCAMSES) at Alagappa University, Karaikudi on 20-22nd March 2019.
3. K. Velsankar, V. Muthulakshmi, G. Maheshwaran, **S. Sudhahar**, Second order nonlinear optical characterization of vanilium 3,4- Dimethoxybenzoate organic single crystal, Participated and presented an Oral in National conference on Advanced materials for sustainable energy and sensors (NCAMSES) at Alagappa University, Karaikudi on 20-22nd March 2019.
4. G. Maheswaran, U. Karuppasamy, K. Velsankar, **S. Sudhahar**, Structural and nonlinear optical properties of 8-hydroxyquinolium 6- aminocaproate non – centrosymmetric single crystal, Participated and presented a poster in National conference on Advanced materials for sustainable energy and sensors (NCAMSES) at Alagappa University, Karaikudi on 20-22nd March 2019.

5. V. Atchaya, K. Velsankar, K. Rajiyabegam, **S. Sudhahar**, Crystal growth and characterization of a succinate vanillium organic nonlinear optical single crystal, Participated and presented a poster in National conference on Advanced materials for sustainable energy and sensors (NCAMSES) at Alagappa University, Karaikudi on 20-22nd March 2019.
6. M. Karthika, G. Parvathy, G. Maheswaran, **S. Sudhahar**, Synthesis, growth, structural and optical properties of 5-chlorosalicylate 2-aminopyridinium nonlinear optical single crystal, Participated and presented a poster in National conference on Advanced materials for sustainable energy and sensors (NCAMSES) at Alagappa University, Karaikudi on 20-22nd March 2019.
7. K. Rajiyabegam, R. Kaliammal, G. Parvathy, **S. Sudhahar**, Synthesis, growth, optical and second harmonic generation studies of 2-amino 6-methylpyridinium barbutriate organic nonlinear optical single crystal, Participated and presented a poster in National conference on Advanced materials for sustainable energy and sensors (NCAMSES) at Alagappa University, Karaikudi on 20-22nd March 2019
8. R. Mangala Bharathi, V. Vinothini, **S. Sudhahar**, Synthesis, crystal growth, structural and optical properties of 2-amino 6-methylpyridinium myristate nonlinear optical single crystal, Participated and presented a poster in National conference on Advanced materials for sustainable energy and sensors (NCAMSES) at Alagappa University, Karaikudi on 20-22nd March 2019.
9. G. parvathy, R.Kaliammal, K.Velsankar, **S. Sudhahar**, Synthesis, Growth and characterization of piperazinium p-hydroxybenzoate nonlinear optical single crystal, Participated and presented an Oral in National seminar on recent advanced materials and applications (RAMA 2019) at Theivanaiammal college for women Viluppuram on 6th February 2019.
10. R. Kaliammal, G. parvathy, G.Maheswaran, **S. Sudhahar**, Synthesis, growth, structural and optical properties of 2-amino 6-methylpyridinium 6-aminocaproate nonlinear optical single crystal, Participated and presented an Oral in National seminar on recent advanced materials and applications (RAMA 2019) at Theivanaiammal college for women Viluppuram on 6th February 2019.
11. S. Anusiya, G. Parvathy, M. Periyanyaki, A. Savari Rajeev, **S. Sudhahar**, 'Synthesis, growth, structural and optical properties of 8-Hydroxyquinolinium p-hydroxybenzoate nonlinear optical single crystal', participated and presented in national conference on futuristic materials, held at Department of Physics, Aalagappa University, Karaikudi, March 27-28, 2017.
12. R. Krishna, S. Sivaranjani, S. Muniyasamy, **S. Sudhahar**, 'Synthesis, growth, spectral, thermal, mechanical and optical properties of piperidinium p-chlorobenzoate nonlinear optical single crystal', participated and presented in national conference on futuristic materials, held at Department of Physics, Alagappa University, Karaikudi, March 27-28, 2017.
13. G. Parvathy, M. Periyanyaki, S. Anusiya, S. Muniyasamy, **S. Sudhahar**, 'Synthesis, growth, spectral and optical properties of piperazinium p-hydroxybenzoate nonlinear optical single crystal', participated and presented in national conference

- on futuristic materials, held at Department of Physics, Alagappa University, Karaikudi, March 27-28, 2017.
14. M. Periyanyaki, S. Anusiya, G. Parvathy, A. Savari Rajeev, **S. Sudhahar**, 'Synthesis, crystal growth, structural, spectral, thermal and optical properties of 8-Hydroxyquinolinium 5-chlorosalicylate nonlinear optical single crystal', participated and presented in national conference on futuristic materials, held at Department of Physics, Alagappa University, Karaikudi, March 27-28, 2017.
 15. S. Sivaranjani, S. Muniyasamy, R. Krishna, A. Savari Rajeev, **S. Sudhahar**, 'Synthesis, growth, spectral, thermal, mechanical and optical properties of 2-Aminopyridinium p-chlorobenzoate nonlinear optical single crystal', participated and presented in national conference on futuristic materials, held at Department of Physics, Alagappa University, Karaikudi, March 27-28, 2017.
 16. A. Savari Rajeev, R. Ernast Amala, S. Anusiya, **S. Sudhahar**, 'Third Harmonic Properties Of 2-Phenylethylaminium p-Nitrophenolate Monohydrate Nonlinear Optical Single Crystals', Participated and presented in National Seminar on Advanced Materials Research (AMR) held at Department of Physics, Alagappa University, Karaikudi, January 19, 2017.
 17. S. Muniyasamy, M. Periyanyaki, **S. Sudhahar**, 'Effect of rare earth Yttrium doped triglycine sulphate single crystals and its characterization', Participated and presented in National Seminar on Advanced Materials Research (AMR) held at Department of Physics, Alagappa University, Karaikudi, January 19, 2017.
 18. G. Parvathy, R. Krishna, S. Sivaranjani, **S. Sudhahar**, 'Synthesis, growth, structural, thermal and third order nonlinear optical studies of 2-phenyl-ethanaminium 3-carboxyprop-2-enoate single crystals', participated and presented in national seminar on advanced materials research (AMR) held at Department of Physics, Alagappa University, Karaikudi, January 19, 2017.
 19. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Crystal growth and optical studies of 4-hydroxy-4'-N'- methylstilbazolium tosylate single crystals for nonlinear optical applications', Participated and presented in 22nd DAE-BRNS National Laser Symposium held at MIT, Manipal University, Manipal, Karnataka, Jan 7-11, 2014.
 20. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Synthesis, Crystal growth and optical studies of Urea 2-hydroxy 5- sulfobenzoate single crystal', Participated and presented in XVIII National Seminar on Crystal Growth held at Centre for Crystal Growth, SSN College of Engineering, Chennai, 24-26, February 2014.
 21. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Synthesis, crystal growth and characterization of pi-conjugated stilbazolium 4-hydroxy-3-methoxy-4'- N'- methylstilbzolium tosylate monohydrate crystals', Participated and presented in National Seminar on Recent Advances in Physics held at Department of Physics, Presidency College, Chennai, 7-8, March 2014.
 22. **S. Sudhahar**, M. Krishna Kumar, R. Mohan Kumar, '2-Phenylethylammonium p-hydroxybenzoate: Growth, structural, spectral, thermal, optical and mechanical

- characterization', Participated and presented in National Seminar on Recent Advances in Physics held at Department of Physics, Presidency College, Chennai, 7-8, March 2014.
23. **S. Sudhahar**, I. MD Zahid, M. Krishna Kumar, R. Mohan Kumar, 'Crystalline perfection, birefringence and laser damage threshold properties of piperidinium p-hydroxybenzoate', Participated and presented in 59th DAE-Solid State Physics Symposium held at VIT University, Vellore, 16-20, December 2014.
 24. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Crystal growth and optical properties of 4-hydroxy-3-methoxy-4'-N'-methylstilbazolium tosylate monohydrate crystals', Participated and presented in 21st DAE-BRNS National Laser Symposium (NLS-21) held at Bhabha Atomic Research Centre, Mumbai, February 06-09, 2013.
 25. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Growth and electrical properties on NLO crystal: 4-N,N-dimethylamino 4-N-methylstilbazolium iodide', Participated and presented in 58th DAE-BRNS Solid State Symposium held at Thapar University, Patiala, Punjab, Dec 17-21, 2013.
 26. **S. Sudhahar**, M. Krishna Kumar, R. Mohan Kumar, 'Synthesis, crystal growth, structural, spectral, thermal, optical and mechanical properties of solution grown 4-methylpyridinium 4-hydroxybenzoate single crystal', Participated and presented a poster in 21st DAE-BRNS National Laser Symposium (NLS-21), at Bhabha Atomic Research Centre, Mumbai-400 085, during February 06-09, 2013.
 27. **S. Sudhahar**, M. Krishna Kumar, R. Mohan Kumar, '2-phenylethylammonium p-hydroxybenzoate: Synthesis, structural, spectral, thermal, optical and mechanical characterization', Participated and presented a poster in Twenty Fourth National Seminar on Crystal Growth, organized by Crystal Growth Centre, Anna University, Chennai-25, during December 20-22, 2012.
 28. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Synthesis, Crystal Growth, Structural and optical studies of Third-Order Nonlinear Optical Crystal: 4-Methyl-4'-N'-Methylstilbazolium Tosylate', Participated and presented in Twenty Fourth National Seminar on Crystal Growth held at Crystal Growth Centre, Anna University, Chennai December 20-22, 2012.
 29. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Investigation on the growth and Optical Properties of the DAST crystal', Participated and presented in National conference on Spectrophysics 2012 held at Indian Spectrophysics Association, Chennai March 7-8, 2012.
 30. **S. Sudhahar**, M. Krishna Kumar, R. Mohan Kumar, 'Crystal growth, spectral, optical, thermal and mechanical properties of piperidinium p-hydroxybenzoate single crystal', Participated and presented a poster in National conference on Spectrophysics 2012, organized by Indian Spectrophysics Association, Chennai-30, during March 7-8, 2012.
 31. M. Krishna Kumar, **S. Sudhahar**, R. Mohan Kumar, 'Growth and characterization of Inorganic nonlinear optical lithium sodium sulfate hexahydrate single crystals',

Participated and presented in DAE-BRNS National Laser Symposium (NLS-20) held at Crystal Growth Centre, Anna University, Chennai January 9-12, 2012.

Short-Courses/ Workshops Participated

1. **S. Sudhahar**, Participated in seminar on 'Awareness workshop on nanoscience and nanotechnology', organized by Science city from 24th to 27th, August 2010 at the Science City, Chennai.
2. **S. Sudhahar**, Participated in 'One day Seminar on 50 years of Lasers', held at Department of Physics, RKM Vivekananda College, Chennai-600004 on 19th February 2011
3. **S. Sudhahar**, Participated in Short course on 'Crystal Growth and characterization of Laser Materials', Organised by Indian Laser Association, January 07-08, 2012 at Crystal Growth Centre, Anna University, Chennai.
4. **S. Sudhahar**, Participated in 20th DAE-BRNS National Laser Symposium (NLS-20), at Crystal Growth Centre, Anna University, Chennai-600025, during January 09-12, 2012.
5. **S. Sudhahar**, Participated in National conference on 'GREEN CHEMISTRY', held on 10th February 2012 at Department of Chemistry, Presidency College, Chennai.
6. **S. Sudhahar**, Participated in 'National Seminar on Emerging Trends in Physics', Organized by Department of Physics, Government Arts College, Nandanam, Chennai-600035 on 29th February 2012
7. **S. Sudhahar**, Participated in seminar on 'Higgs Boson and Neutrino', held on 7th December 2012 at Department of Nuclear Physics, University of Madras, Chennai-600025.
8. **S. Sudhahar**, Participated in Science Academies Lecture workshop on "Topics in Theoretical Physics", Organized by Department of Physics, Presidency College, Chennai-600005 on 10-11 March 2014

Recent Publications

2023 (07)		
109	G. Maheshwaran, M. Ramesh Prabhu, G. Ravi, K. Sankaranarayanan, S. Sudhahar	19.069
	Probing the energy conversion and storage process in two dimensional layered bismuthene-hexagonal boron nitride nanocomposite electrode and PVA-KOH-BaTiO ₃ piezoelectrolyte nanogenerators.	
	Nano Energy, 106 (2023) 108060	
108	S. Mohandoss, S. Ganesan, S. Palanisamy, S.G. You, K. Velsankar, S. Sudhahar , H.Mu Lo, Y.R. Lee	8.943
	Nitrogen, sulfur, and phosphorus Co-doped carbon dots-based ratiometric chemosensor for highly selective sequential detection of Al ³⁺ and Fe ³⁺ ions in logic gate, cell imaging, and real sample analysis	
	Chemosphere, 313 (2023) 137444.	
107	G. Vignesh, R. Ranjithkumar, P. Devendran, N. Nallamuthu, S. Sudhahar , M. Krishna Kumar	3.407
	Nitrogen doped reduced graphene oxide/ZnCo ₂ O ₄ nanocomposite electrode for hybrid supercapacitor application	
	Materials Science and Engineering B, 290 (2023) 116328	
106	M. Jeevaraj, S. Sudhahar , N. Nallamuthu, P. Devendran, S. Saravanakumar, D. Sivaganesh, M. Krishna Kumar	2.988
	Solution processed Mn ²⁺ doped Cs ₂ AgInCl ₆ lead free double perovskite as a potential light emitting material	
	Physica B: Condensed Matter, 15 (2023) 414679.	
105	G. Vignesh, R. Ranjithkumar, P. Devendran, N. Nallaperumal, S. Sudhahar , M. Krishna Kumar	2.307
	Structural, Spectral, and Electrochemical Investigations of a Nitrogen-Doped N-rGO/MgCo ₂ O ₄ Nanocomposite for Supercapacitor Applications	
	Chemistry Select, 8 (2023) e202203915	
104	M. Jeevaraj, P. Devendran, N. Nallamuthu, S. Sudhahar , M. Krishna Kumar	2.779
	Influence of Mn ²⁺ doping on the optical properties of Cs ₂ AgBiCl ₆ double perovskite luminescent phosphors	
	J Mater Sci: Mater Electron, 34 (2023) 65	
103	S. Mohandoss, G. Sivarasan, A. Singaravelu, J.K. Alagarasan, P. Subramanian, S.G. You, K. Velsankar, S. Sudhahar , H.M. Lo, Y.R. Lee	8.431
	Multiple heteroatom dopant carbon dots as a novel photoluminescent probe for the sensitive detection of Cu ²⁺ and Fe ³⁺ ions in living cells and environmental sample analysis	
	Environmental Research 219 (2023) 11510	
2022 (25)		

102	S. Suganya, G. Maheshwaran, M. Ramesh Prabhu, P. Devendran, M. Krishna Kumar, S. Sudhahar	8.907
	Enhanced electrochemical activity of ternary Co-Mn-Zn oxide for the fabrication of hybrid supercapacitor applications	
	Journal of Energy Storage, 56 (2022) 106057.	
101	G. Maheshwaran, P. Pandi, S. Suganya, B. Arjun Kumar, G. Ramalingam, M. Ramesh Prabhu, S. Sudhahar	8.907
	Fabrication of self charging supercapacitor based on two dimensional bismuthene-graphitic carbon nitride nanocomposite powered by dye sensitized solar cells	
	Journal of Energy Storage, 56 (2022) 105900.	
100	C. Sambathkumar, K.R. Nagavenkatesh, M. Krishna Kumar, N. Nallamuthu, S. Sudhahar , P. Devendran	8.907
	Electrochemical exploration on hexadecylamine capped copper sulfide nanocubes using single source precursor for enhanced supercapacitor devices	
	Journal of Energy Storage, 56 (2022) 105898.	
99	M. Jeevaraj, S. Sudhahar , P. Devendran, N. Nallamuthu, N.D. Jayram, M. Krishna Kumar	3.662
	Structural, optical and charge density investigations on lead free Mn ²⁺ doped Cs ₂ NaBiCl ₆ double perovskite microcrystals	
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98	R. Ranjithkumar, P. Lakshmanan, N. Palanisami, P. Devendran, N. Nallamuthu, S. Sudhahar , M. Krishna Kumar	3.151
	Facile, Morphology-Controlled and Mass Production of 0D-Ag/2D-g-C ₃ N ₄ /3D-TiO ₂ Nano composite Materials: Effect of Silver Morphology and Loading on the Electrochemical Performance	
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97	S. Mohandoss, S. Ganesan, K. Velsankar, S. Sudhahar , F.H. Alkallas, A.B.G. Trabelsi, F.V. Kusmartsev, H.Mu Lo, Y.R. Lee	3.682
	Fabrication and characterization of Ag nanoparticle-embedded κ -Carrageenan-Sodium alginate nanocomposite hydrogels with potential antibacterial and cytotoxic activities	
	Journal of Biomaterials Science, Polymer Edition, 6 (2022) 1-16	
96	G. Maheshwaran, A. Venkatesan, R. Kaliammal, M. Ramesh Prabhu, P. Devendran, M. Krishna Kumar, S. Sudhahar	4.654
	Two-Dimensional Layered Bismuthene/Antimonene Nanocomposite as a Potential Electrode Material for the Fabrication of High-Energy Density Hybrid Supercapacitors	
	Energy & Fuels, 36 (2022) 12299-12309	
95	Z. Mohamed Riyas, C. Priya, R. Premila, G. Maheshwaran, S. Sudhahar , M. Ramesh Prabhu	8.907
	Synergistic effect of La ₂ O ₃ -NiO nanocomposite based electrode for electrochemical high-performance asymmetric supercapacitor applications	

	Journal of Energy Storage, 53 (2022) 104988.	
94	K. Velsankar, G. Parvathy, S. Mohandoss, G. Ravi, S. Sudhahar	5.062
	Echinochloa frumentacea grains extract mediated synthesis and characterization of iron oxide nanoparticles: A greener nano drug for potential biomedical applications	
	Journal of Drug Delivery Science and Technology, 76 (2022) 103799	
93	V. Kousalya Devi, A. Venkatesan, A. Nivedhitha Bharathi, G. Parvathy, R. Kaliasammal, M. Krishna Kumar, S. Sudhahar	3.841
	Third Order Nonlinear Optical Properties of Bis (Creatininium 2, 4-Dichlorobenzoate) Monohydrate Organic New Single Crystal	
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	Two Dimensional Layered Bismuthene Nanosheets with Ultra-fast Charge Transfer Kinetics as a Superior Electrode Material for High Performance Asymmetric Supercapacitor	
	Electrochimica Acta, 426 (2022) 140838	
91	A. Nivedhitha Bharathi, G. Maheshwaran, V. Kousalya Devi, M. Krishna Kumar, S. Sudhahar	1.878
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90	C. Sambathkumar, N. Nallamuthu, M. Krishna Kumar, S. Sudhahar , P. Devendran	6.371
	Electrochemical exploration of cobalt sulfide nanoparticles synthesis using cobalt diethyldithiocarbamate as single source precursor for hybrid supercapacitor device	
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85	K. Velsankar, G. Parvathy, S. Mohandoss, R. Mohan Kumar, S. Sudhahar	3.869
	Green synthesis and characterization of CuO nanoparticles using <i>Panicum sumatrense</i> grains extract for biological applications	
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84	S.M. Fathima Khyrun, Z. Mohamed Riyas, V. Raja, S.S. Sarbudeen, V. Natesan, K. Velsankar, S. Sudhahar , M. Ramesh Prabhu, M. Govindarasu, M. Thiruvengadam, B. Venkidasamy, C. Janani, T. Selvaraj	3.111
	Environmental and biomedical applications in the synthesis and structural, optical, elemental characterizations of Mg doped ZnO nanoparticles using <i>Coleus aromaticus</i> leaf extract	
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83	R. Kalliammal, G. Parvathy, G. Ravi, V. Mohan Kumar, M. Krishna Kumar, S. Sudhahar	2.779
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79	R. Kalliammal, G. Parvathy, G. Maheshwaran, V. Kousalya Devi, M. Krishna Kumar, K. Sankaranarayanan, S. Sudhahar	3.841
	Experimental and theoretical studies on new 2-amino-6-methylpyridinium 2, 4-dihydroxybenzoate monohydrate organic single crystal for second order nonlinear optical applications	
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	Investigations on Electrochemical Performance of Hausmannite Manganese Oxide Nanoparticles in KOH and Na ₂ SO ₄ Electrolytes for Energy Storage Applications	
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74	K Velsankar, S Suganya, P Muthumari, S Mohandoss, S Sudhahar .	7.968
	Ecofriendly green synthesis, characterization and biomedical applications of CuO nanoparticles synthesized using leaf extract of Capsicum frutescens	
	Journal of Environmental Chemical Engineering, 9 (2021) 106299	
73	K. Velsankar, G. Parvathy, S. Mohandoss, M. Krishna Kumar, S. Sudhahar	8.000
	Celosia argentea leaves extract mediated green synthesized iron oxide nanoparticles for bio applications	
	Journal of Nanostructure in Chemistry (2021)	
72	C. Sampathkumar, V. Manirathinam, A. Manikandan, M. Krishna Kumar, S. Sudhahar , P. Devendran	2.779
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	J Mater Sci: Mater Electron (2021) 1-17	
71	R Kaliammal, G Parvathy, R Mohan Kumar, M Krishna Kumar, G Vinitha, S Sudhahar	3.957
	Physicochemical and quantum chemical calculations on new bis (2-amino-6-methylpyridinium 3,4-dimethoxybenzoate) dihydrate organic single crystal for third order nonlinear optical applications	
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	Green synthesis of lanthanum oxide nanoparticles using Moringa oleifera leaves extract and its biological activities	
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69	G Parvathy, R Kaliammal, K Velsankar, G Vinitha, K Sankaranarayanan, R Mohan Kumar, S Sudhahar	3.841
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68	M Jeevaraj, S Sudhahar , M Krishna Kumar	3.662
	Evolution of Stability Enhancement in Organo-Metallic Halide Perovskite Photovoltaics-A Review	
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67	G Rajasekar, G Maheshwaran, N Swarna Sowmya, A Bhaskaran, R Mohan Kumar, S Jayavijayan, M Krishna Kumar, S Sudhahar	3.841
	Studies of crystal growth, structural, spectral and optical properties of solution grown 2-phenylethylammonium p-nitrophenolate monohydrate single crystals for efficient nonlinear optical applications	
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	Investigations and fabrication of Ni(OH) ₂ encapsulated carbon nanotubes nanocomposites based asymmetrical hybrid electrochemical supercapacitor	

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59	A. Thirunavukkarsu, S. Sudhahar , G. Maheshwaran, T. Sujatha, P.R. Umarani, R. Mohan Kumar	1.878
	Synthesis, growth, structural, optical, thermal and mechanical properties of bis-benzotriazole trichloroacetic acid single crystals	
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	Green Synthesis of CuO nanoparticles via Plectranthus amboinicus leaves extract with its characterization on structural, morphological, and biological properties	

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	Green synthesis of Silver oxide nanoparticles using Zephyranthes Rosea flower extract and evaluation of biological activities	
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	Growth, experimental and theoretical investigations on 4-hydroxy-3-methoxybenzaldehyde 5-chloro-2-hydroxybenzoic acid: A new high second order nonlinear optical material	
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49	R. Archana, S. Sudhahar , S. Suresh, M. Faruq, P. Jiban	2.983
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	Synthesis, crystal growth, and characterization of piperazinedium bis (4-aminobenzoate) dihydrate - An efficient third-order nonlinear optical single crystal for opto-electronic applications	
	Chinese Journal of Physics, Vol.62, pp.223-239, 2019	
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	Synthesis, nucleation kinetics, growth and characterization of Bis (Thiourea) cadmium nitrate nonlinear optical single crystals	
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