

Curriculum Vitae

Dr. S. RAFI AHAMED, M.Sc., M.Phil., Ph.D.,
ASSOCIATE PROFESSOR,
DEPARTMENT OF PHYSICS



Objective:

To work with a reputed institution as Associate Professor in the department of Physics with more responsibilities, that will provide me a good platform to utilize my teaching, research and administration experiences and will help me to grow in my career with the institution growth.

Trainer: INDoS No: 20ZN9703 - “Vertical Integration Course for Trainers” approved by Director General of shipping, Ministry of Shipping, Government of India.

Patent Filing Details: Design Application – Application No: 348621-001 Cbr No: 206936, dated on 30/08/2021.

Research work:

- Synthesis, growth and characterization of new organic and inorganic non-linear optical crystals with large transparency in UV–VIS region, optical susceptibilities, inherent ultrafast responses times, high optical threshold for laser power and good conversion efficiency for second harmonic generation (SHG) application.
- Preparation, synthesis, characterization and applications of TiO₂ nanotube based dye sensitized solar cells.
- Design, Synthesis, Sensor, Biological activity and DFT studies on novel conjugated heterocyclic compounds as sensor for heavy metals.

1. Employment Profile

Job Title	Employer	From	To
Assistant Professor/Physics	Krishnasamy College of Engineering and Technology, Cuddalore 607001	Nov.2005	April 2019.
Associate Professor/Physics	AMET University, Kanathur, Chennai	June 2019	Till date

AMET(Academy of Maritime Education and Training)
(A de novo category, Deemed to be University, Under Section of UGC act 1956)
Kanathur 603112, Chennai
Email: rafiamed81@ametuniv.ac.in, arfoz.rafi@gmail.com
Phone: 9698753162 & 9087748493

2. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.,	Anna University- Chennai	2017	Commended	Physics, Materials Science
M.Phil.,	Pondicherry University- Pondicherry	2005	7.85 CGPA	Physics
M.Sc.,	Bharathidasan University- Tiruchirappalli	2003	67% First Class	Physics
B.Sc.,	University of Madras- Chennai	2001	60%, First Class	Physics
HSC.,	John Dewey Matriculation Hr. Sec School, Villupuram	1998	70% First Class	State Board
SSLC.,	Railway Mixed High School Villupuram	1996	64% First Class	Anglo Indian

3. Academic/Administrative Responsibilities within the University/Institutions:

Position	Faculty/Department/Centre/Institution	From	To
Physics Laboratory Head In-charge	Department of Physics, AMET	July 2019	Till date
Board of Studies (BOS) member	Department of Physics, AMET	July 2019	Till date
NAAC and criterion in- charge	NBA-Criterion 9: Student Support System & NAAC- Criterion - 4	Nov 2019	Till date
CO-PO Mapping- Support Staff	Department of Physics, AMET	Nov 2019	Till date
Discipline Committee & student Mentor –mentees Member	AMET University	July 2019	Till date
NSS Programme Officer	Krishnasamy College of Engineering & Technology, Cuddalore	2017	2019 (For Academic year)
Press/Media/Invitation/ Head In-charge	Krishnasamy College of Engineering & Technology, Cuddalore	2009	2019

4. Details of Seed Money - R&D Projects:

Title of Project	Funding Agency	Duration		Cost(Rs)	Status
		From	To		Ongoing/ Completed
Novel conjugated heterocyclic compounds as sensor for heavy metals	AMET University	Sep 2019	Sep 2020	50,000	Completed
Studies on the effect of Azolla on CEC and Physicochemical property Analysis of Grahite added saline soil.	AMET University	Oct 2019	Oct 2020	50,000	Completed
Bio-sensing application for metal ion embedded nanocomposite glass	AMET University	July 2021		50,000	Ongoingr

5. Appreciation / Recognition:

Record of Achievement on emerging respiratory viruses, including COVID-19: methods for detection, prevention, response and control, from department of Health Emergencies, World Health Organisation (WHO) on 26th April 2020.

6. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	Organic & Metal-organic Single Crystals – For Physicochemical Property	Rafi Ahamed Sheik Ibrahim & P.Srinivasan	Lambert Academic Publishing	ISBN no: 978- 613-9-83703-8 (2018)
2	Advanced Materials Science	Rafi Ahamed Sheik Ibrahim & P.Manikandan	Lambert Academic Publishing	ISBN no: 978- 620-2-66871-2 (2020)
3	Engineering Physics	Rafi Ahamed Sheik Ibrahim & P.Manikandan	Charulatha Publications	ISBN no: 978- 93-88335-05-8 (2017)

7. Research Details:

Titles: STUDIES ON THE GROWTH AND PHYSICOCHEMICAL PROPERTIES OF SOME ORGANIC AND METALORGANIC SINGLE CRYSTALS

My Supervisor Recog. Anna University Chennai: New Recog. No. : 3370021

8. Academic Membership: LIFE TIME MEMBERSHIP

- **Membership** : International Society for Research and Development (ISRD)- **Id:** SM3140904776
- **Membership** : STRA - **Id-**M191031
- **Membership** : IACG - **Id-**65-2019
- **Membership** : IAENG- **Id-** 253529
- **Membership** : IAPT - **Id-** 13526*2105

9. Subjects Handled:

- Engineering Physics I &II,
- Materials Science,
- Physics for Civil Engg. Electronics Engg. & Information Technology.
- Engineering Physics I & II Laboratory.
- Nautical Physics
- Engineering Marine Physics
- Space Science- Open Elective Course

10. Certificate Course:

- **Computer - cum - Internet Literacy Programme** conducted by the Directorate of Collegiate Education, Department of Higher Education of Government of Tamil Nadu in the year **December 2001** and placed in **Third Class [Duration: One Year]**.
- **Certificate of Completion for Elemental of AI for completed 2 ECTS credits online MOOCS course from University of Helsinki.**
- **Certificate of Completion for E-Content Development for 15 hours 1 ECTS credit online course conducted from International Institute of Organized Research (I2OR).**

11. National / International Journal Publications:

S. No	Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal
1	Rafi Ahamed.S, Srinivasan P, Balaji J, Gokul Raj S & Mohan S	Structural, spectral, thermal, micro hardness, dielectric and etching studies of third order nonlinear optical material Cesium Sulfamate.	Journal of Alloys and Compounds (Elsevier) http://dx.doi.org/10.1016/j.jallcom.2017.01.158	701	822- 827	2017	3.77
2	Rafi Ahamed S, Srinivasan P & Balaji J	Growth and Characterization of Organometallic NLO material: Cesium Hydrogen Tartrate	Materials Research Innovations (Taylor and Francis). http://dx.doi.org/10.1080/14328917.2017.1320837	22(5)	294-301	2017	0.83
3	D.Gopinath, S.Rafi Ahamed & P.Srinivasan	Synthesis, growth and characterization of the metal coordinated complex: 2-aminopyridine copper acetate single crystal.	International of Advanced Research (IJAR) http://dx.doi.org/10.21474/IJAR.01/4758	5(7)	600-608	2017	ISSN: 2320-5407
4	S.Rafi Ahamed , C. Balakrishnan , P. Srinivasan and G. Vinitha	Structural, theoretical and third-order nonlinear optical investigations of N ⁺ -(E)- (4-bromophenyl)(phenyl)methylidene] -4- methylbenzenesulfonylhydrazide	Molecular Crystals and Liquid Crystals (Taylor and Francis). https://doi.org/10.1080/15421406.2018.1490083	665	194-206	2018	0.56
5	M, Manonmani, C, Balakrishnan, S, Rafi Ahamed, G. Vinitha.	Cocrystallization of Paracetamol-Picric acid: Hirshfeld surface analysis, supramolecular architecture and third-order nonlinear optical properties	Journal of Molecular Structure (Elsevier). https://doi.org/10.1016/j.molstruc.2019.04.010	1190	1-10	2019	2.1
6	C.Balakrishnan, N.Manonmani, S.Rafi Ahamed, G.Vinitha	Multiple strong hydrogen bonded supramolecular cocrystals of 18-crown-6 with 5-nitroisophthalic acid: solvent effect and optical nonlinearities	Journal of Molecular Structure (Elsevier). https://doi.org/10.1016/j.molstruc.2019.127158	1201	127158	2019	2.1
7	C, Mathalai Sundaram, S. Kalpana, S. Rafi Ahamed, V. Sivaganesan, E.Nandhakumar,	“Studies on catalytic activity of paddy like-CuO/TiO ₂ /ZnO ternary nanocomposites prepared via one step hydrothermal green approach”	Materials Research Express .(IOP). https://doi.org/10.1088/2053-1591/ab57d9	6	125043	2019	1.449
8	C.Balakrishnan, N.Manonmani S.Rafi Ahamed, G. Vinitha.	Structural characterization, optical nonlinearities of Two cocrystals of 18-crown-6 with isophthalic acid derivatives, 5-hydroxyisophthalic acid (SHIPA) and trimesic acid (TMA)	Acta Crystallographica Section B (IUCr) https://doi.org/10.1107/S2052520620001821	76 (2)	241-251	2020	6.732

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Phone: 9698753162 & 9087748493

9	S.Rafi Ahamed , S.Kalpana and N.Maheswari, T.S. Senthil	Physical and mechanical properties on novel conjugated heterocyclic compounds dicyandiamide and 4-(difluoromethoxy)-2-hydroxybenzaldehyde 2-cyanoguanidine as sensor for heavy metals	Intr. Journal of Scientific and Technology Research (IJSTR)	09	03	2020	ISSN 2277-8616
10	N.Maheswari, R.Nithya, S.Kalpana and S. Rafi Ahamed	Hydrothermal Synthesis Of Copper Oxide/Cobalt Oxide Nanoparticles For Supercapacitor Applications	Intr. Journal of Scientific and Technology Research (IJSRT)	09	04	2020	ISSN 2277-8616
11	N.Maheswari, R.Nithya, S.Kalpana and S. Rafi Ahamed	Pseudo-capacitive Properties of CuO/Co ₃ O ₄ Nanoparticles Synthesized Via Hydrothermal Method	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	09	04	2020	ISSN 2278-3075
12	Manonmani m, Balakrishnan c, Dhanalakshmi m, Rafi ahamed s , Vinitha.G	Synthesis, structure, third-order nonlinear optical properties and Hirshfeld surface analysis of tetrakis(azepanium) hexachlorostannate(IV) dichloride and tetrakis(azepanium) hexabromostannate(IV) dibromide	Journal of Molecular Structure	1227	129515	2021	2.463
13	S. Mohamed Nizar, S. Rafi Ahamed , E. Priyanka, R. Jayasri and B. Kesavaraman	Comparison of Different Photonic Crystal Fiber Structure: A Review	Journal of Physics: Conference Series	1717	012048	2021	0.55
14	C.Balakrishnan, N.Manonmani S.Rafi Ahamed , G. Vinitha	Metal-organic hybrids of tin(IV): Synthesis, crystal structure, third-order nonlinear optical properties and Hirshfeld surface analysis of bis(1,2,3,4-tetrahydroquinolinium) hexahalostannate(IV)	Journal of Molecular Structure	1237	130421	2021	2.463
15	S.Rafi Ahamed , P.Srinivasan and P.Manikandan	Optical, Electrical, Magnetic and third order nonlinearity studies on Heterocyclic Compounds 1E, 3E-1,3-bis 4-(Difluoromethoxy)-2-Hydroxybenzaldehyde 2-Cyanoguanidine Crystal.	SpectroChemical Acta A	-	-	July 2020	Submitted

12. Conference / Seminar / Workshop/Webinars:

Webinars/FDP/Conferences- [During Lockdown Periods: After 15th March 2020]

Webinars:

1. Participated and successfully completed **Two days online course on “Elemental Arts: Evolution of Modern Periodic Table”** organized by Department of Science and Humanities (Chemistry), Sri Krishna College of Engineering and Technology, Coimbatore-641008 on **1st -2nd May 2020**.
2. Participated in the **Webinar** on **“Conceptual and Applied Physics”** jointly organized by Department of Physics, School of Science, R.K University and Department of Nanoscience and Advanced Materials, Saurashtra University, Rajkot during **5th - 8th May 2020**.
3. Participated in the **Webinar** on **“Crystallography and its Applications”** organized by Department of Science & Humanities, Er. Perumal Manimekalai college of Engineering, Hosur - 635117 on **8th May 2020**.
4. Participated in the **webinar** on **“Micro and Nanotechnology and its Applications”** organized by department of Physics, G.T.N Arts College (Autonomous), Dindigul on **14th May 2020**.
5. Participated in the **webinar** on **“How to write a Research Papers?”** organized by department of Physics, Erode Sengunthar Engineering College, Perundurai on **15th May 2020**.
6. Participated in the **International level COVID-19 Pandemic webinar** on **“Functional Novel Materials for Electrochemical Sensors and Energy Storage Devices ”** organized by Thiagarajar College, Madurai on **15th May 2020**.
7. Participated in the Special **Webinar** on **“International Day of Light”** organized by Sri Venkateswaraa College of Engineering, Sriperumbattur on **16th May 2020**.
8. Participated in the **webinar** on **“The crux of online Teaching for Low Bandwidth”** organized by department of HRDC & IQAC of AMET (Deemed to be University), Chennai on **24th May 2020**.

9. Participated in the **webinar** on “**Outcome Based Education Road-Map to E-Learning & Accreditation**” organized by Informatics publishing Limited, Bangalore in association with Quilkrn Private Limited, Bangalore on **29^h May 2020**.
10. Participated in the **International Webinar** on “**Advanced Materials- (IWAM 2020)**”, organized by department of Physics, LRG Govt. Arts College Tirupur on **3rd June 2020**.
11. Participated in the **National Webinar** on “**Creative Writing on Research Proposal and Articles**”, organized by department of Physics, Adikavi Nannaya University Rajamahendravaram on **4th June 2020**.
12. Participated in the **National Webinar** on “**Nanostructured Materials for Controlling the flow of Light**”, organized by department of Physics & department of Electronics in association with IQAC, Sri Y N College (Autonomous) , Andra Pradesh on **5th June 2020**.
13. Participated in the **National Webinar** on “**Nanomaterials for solar cell Applications**”, organized by department of Physics AMET University Chennai on **10th June 2020**.
14. Participated in the **National Webinar** on “**Nanostructured metal oxides for Supercapacitor Applications**”, organized by department of Physics TRINITY college for womens, Namakkal on **12th June 2020**.
15. Participated in the **National Webinar** on “**Effective Teaching Learning process in Education**”, organized by Rashtriya Madhyamik Shiksha Abhiyan , MP on **19th June 2020**.
16. Participated in the **National Webinar** on “**Industrial Applications on Robust Design**”, organized by Department of Mechanical Engineering, Francis Xavier Engineering College, Tirunelveli on **19th June 2020**
17. Participated in the **National Webinar** on “**Flutter**”, conducted by Krishnasamy college of Engineering and Technology, Cuddalore on **20th June 2020**
18. Participated in the **National Webinar** on “**Smart Manufacturing**”, organized by Department of Mechanical Engineering, Francis Xavier Engineering College, Tirunelveli on **21st June 2020**

19. Participated in the **National Webinar** on “**Mind, Body Excerise and Life Style Management in Changing Environment**”, organized by Department of Mechanical Engineering, Francis Xavier Engineering College, Tirunelveli on **21st June 2020**
20. Participated in the **National Webinar** on “**Development of Low cost solar Air Collectors**”, organized by Department of YOGA and NSS Unit, Midnapore college , West Bengal on **21st June 2020**
21. Participated in the **National Webinar** on “**Development of Low cost solar Air Collectors**”, organized by Department of Mechanical Engineering, Francis Xavier Engineering College, Tirunelveli on **22nd June 2020**
22. Participated in the **International Webinar** on “**Thin film Deposition Techniques and its Applications**” organized by the PG & Research Department of Physics jointly with Internal Quality Assurance Cell (IQAC) of The Madurai Diraviyam Thayumanavar Hindu College, Tirunelveli, Tamil Nadu, India on **25th June 2020**
23. Participated in the **National Webinar** on “**Advances and Current trends in Aerospace research with Current Samples**”, organized by Department of Mechanical Engineering, Francis Xavier Engineering College, Tirunelveli **27th June 2020**.
24. Participated in the **National Webinar** on “**Wireless Sensors**”, organized by Department of EEE, Francis Xavier Engineering College, Tirunelveli **29th June 2020**.
25. Participated in the two days **National Conference** on **Recent advancement in Nanoscale Research** organized by Division of Physics, Anna University, Chennai, Madurai Region, Madurai during 24-25th August 2012.
26. Participated in the **two days Staff orientation programme** organized by Krishnasamy College of Engineering and Technology, Cuddalore on 2-3rd July 2013.
27. Participated in the two days **National Seminar** on **Spectroscopic Techniques and its Applications for Materials Characterization** held at the Department of Optoelectronic, University of Kerala, Kariavattom, Thiruvananthapuram during 3-4th October 2013.
28. Participated in the two days **National Level Workshop** on **Recent Advancement in materials Characterization** held at the Department of Physics, National Institution of Technology, Tiruchirappalli, during November 2014.
29. Participated in the two days **Staff Orientation Programme** on **Mind mapping and**

Creativity organized by ICTACT Chennai held at Krishnasamy College of Engineering and Technology, Cuddalore on 28- 29th July 2015.

30. Presented paper in **one day seminar** on “**Innovative Trends in Physics (ITP 2016)**” on 29th February 2016 at Department of Physics, Shanmuga Industries Arts & Science College, Tiruvannamalai.
31. Presented paper in **one day National Level Seminar** entitled "Formal and Advanced Research in Materials” on 24th February 2017 at Department of Physics, Shanmuga Industries Arts & Science College, Tiruvannamalai.
32. Presented two research paper in two days **International conference** on Recent Trends in on Engineering Materials and Renewable Energy (ICEMRE- 2018) on 04 and 05th January 2018 at Department of Chemistry , University College of Engineering Villupuram, Villupuram 605103.proceedingNo:ISBN:978-86638-55-7.Certificate:z AUC/CCC/UCEV/Conference/2017-18.

FDP:

- Participated in two days **FDP** programme on Smart Micro Grids and Energy storage using Homer and PV system, on 19th and 20th September 2019, Department of EEE, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai-603112, Tamil Nadu.
- Participated in one day **FDP** programme on Renewable and Biodegradable Nanocomposites, on 16th October 2019, Department of Chemistry, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai-603112, Tamil Nadu.
- Participated in one days **FDP** programme on Teaching the concepts of Materials science and their applications, on 18th November 2019, Department of Physics, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai-603112, Tamil Nadu.

- Attended 6 days **FDP** programme on Novel Strategies and Applications in Materials Science from 26-31st, 2019 at Dr.R.K Shanmugun Arts and Science College, Kallakurichi, Tamil Nadu.
- Participated in one days **FDP** programme on Teaching the concepts of Materials science and their applications, on 18th November 2019, Department of Physics, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai-603112, Tamil Nadu.
- Presented paper in **International conference** on Recent advancements in materials science (NewPhy 2020) at The New College, Chennai on 21st January 2020.
- Presented paper in 8th **National conference** on Hierarchically structured materials (NCHSM 2020) at SRM University (Ramapuram Campus), Chennai on 21st and 22nd February 2020.ISBN No: 9788189843564.
- Faculty Development Programme (**FDP**) on Recent Trends in Smart Materials and Their Applications, 10 February 2020, Department of Physics, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai-603112, Tamil Nadu.
- Vertical Integration **Course for trainers (VICT)** from 22nd Jan 2020 to 03rd Feb 2020 at AMET city College Chennai.

13. Program Organized:

- Organised one day seminar on teaching the concepts of Materials science and their applications, on 18th November 2019, Department of Physics, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai-603112, Tamil Nadu.
- Organized Extension Activities on **Dengue Awareness Programme** at Panchayat union public school Kanathur Chennai on 04-10-2019
- Organized **NSS 7 days Camp** at Karamanikuppum Village Cuddalore from 21-12-2018 to 27-12-2018

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Phone: 9698753162 & 9087748493

- Organized two days virtual National Webinar on Research Methodology dated on 28-29 May 2021, Department of Physics, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai-603112, Tamil Nadu.
- Organized two days virtual National Webinar on The significance of Entrepreneurship dated on 21-22 June 2021, Department of Physics, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai-603112, Tamil Nadu.

14. Scopus ID/ Orchid ID/ Google scholar citations/ Research Gate

Scopus ID	57193099503
Orchid ID	http://orcid.org/0000-0003-0896-5395
Google scholar citations	-FsPpzoAAAAJ&hl=en
Research Gate	AAD-4482-2020

15. Personal Information:

- ❖ **Name** : **Dr S Rafi Ahamed**
- ❖ **Father's Name** : **S Sheik Ibrahim**
- ❖ **Mother's Name** : **S Badurunesa**
- ❖ **Spouse Name** : **R Shahitha Begam**
- ❖ **Date of Birth** : **11-05-1981**
- ❖ **Nationality** : **Indian**
- ❖ **Passport Details** :

Number: Z6241951
Date of issue: 11-10-2021
Date of expiry: 10-10-2021

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16. Declaration:

I hereby certify that the above given details are correct to the best of knowledge and belief.



(Signature of the Candidate)