

CURRICULUM VITAE

Dr. S. RAMASWAMY

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Post Graduate Department of Physics
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Personal:

Date of Birth : 15th April 1962
Specialization : Crystallography, Material Science
& Spectroscopy
Teaching Experience : 36 years



Educational Qualifications:

Examination passed	Month & Year of passing	Grade	Name of the University or College Studied
S.S.L.C.	Mar. 1978	First Class	Board of Secondary Education
P.U.C.	Mar. 1979	First Class	Sri S.R. Naidu College, Sattur, (Madurai Kamaraj University)
B.Sc., (Physics)	Apr. 1982	First Class	NMSSVN College, Madurai, (Madurai Kamaraj University)
M.Sc., (Physics)	Apr. 1984	MKU First Rank (Gold Medallist)	ANJA College, Sivakasi, (Madurai Kamaraj University)
B.Ed., (Education)	Jan. 1986	First Class	Annamalai University, India.
M.Phil., (Physics)	Dec. 1989	First Class	Madurai Kamaraj University, Madurai, India.
M.Ed., (Education)	Apr. 1991	Second Class	Madurai Kamaraj University, Madurai, India.
P.G.D.C.A. (Computer Applications)	June 1991	First Class	The American College, Madurai, (Madurai Kamaraj University)
Ph.D., (Physics)	Aug. 2005	-	Madurai Kamaraj University, Madurai, India.

Thesis / Dissertation:

- Ph.D., Thesis** : “Spectroscopic and Crystallographic Studies on Amino acid Complexes”
- M.Phil., Dissertation** : “Finite Element Method for the Solution of an Electrostatic Potential Problem”
- M.Ed., Dissertation** : “Attitude of College Students towards ‘*Each One – Teach One*’ Programme”

Teaching Experience:

- (i) **Assistant Professor** (Management Staff) in the Department of Physics, NMSSVN College, Madurai from **July 1984 to August 1985**.
- (ii) Joined in the regular vacancy as **Assistant Professor of Physics** from **5th September 1985 (05.09.1985)** in NMSSVN College, Madurai.
- (iii) Serving as **Head of the Post Graduate Department of Physics** in Mannar Thirumalai Naicker College, Madurai from **July 2021**.
- (iv) **Total Teaching Experience : 36 Years**

Research Guidance:

Ph.D., Scholars	-	07
M.Phil., Scholars	-	18

Projects Guided:

M.Sc., Projects	-	40
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Research Publications in:

1. National Journals	-	01
2. International Journals	-	44
3. Seminar Proceedings	-	02

Conferences and Seminars:

1. No. of Papers presented in Conferences & Seminars : 31
2. No. of International / National Conferences / Seminars participated : 28

3. No. of State Level Seminars / Workshops attended : 45
 4. No. of National Conferences convened (as Convenor) : 02

Other Publications:

- ◆ Text book on “**Programming in C**” published through *SCITECH PUBLICATIONS (INDIA) PVT. LTD., Chennai* which is a **prescribed text book** for Under Graduate students of the Colleges affiliated to **Madurai Kamaraj University, Madurai.**
- ◆ Served as **Subject Expert** in the preparation of lesson materials for **B.Sc., (Physics), M.Sc., (Physics), M.Phil., (Physics)** and **Diploma in Astronomy & Astrophysics** (Non-semester) courses offered through **D.D.E., Madurai Kamaraj University.**

Prizes and Other Recognition:

- ◆ Obtained **University First Rank (Gold Medal) in M.Sc., (Physics), Madurai Kamaraj University, Madurai – 625 021, Tamil Nadu, India.**
- ◆ Undergone the Faculty Development Program of the **UGC, under Teacher Fellowship Scheme**, during the Nineth Plan period for two years from 31.03.2000 to 27.03.2002.
- ◆ Awarded “**நன்னெறி பேராசிரியர் விருது**” by Madurai Illakiya Mandram and Sri Arunnachala educational trust, Madurai in the year 2021.

Research Project:

- ◆ Minor Research Project (UGC) entitled “**Fabrication and characterization of W-LEDS using rare earth ions activated nano phosphor materials**” had been approved and sanctioned with the financial assistance of **Rs.2,00,000/-** and implemented in the academic years 2017-18 and 2018-19.

List of Ph.D Scholars:

S. No	Candidate Name	Title	Reg. No.	Reg. Date
1.	V.Nagarajan	Growth and Characterization of Organometallic Crystals	P3439	11-02-19 Awarded

S. No	Candidate Name	Title	Reg. No.	Reg. Date
2.	K.Paulraj	X- Ray crystallographic analysis of hetero cycles	P3442	22-01-14 Awarded
3.	P.Kavitha	Growth, Characterization, Crystal structure and DFT studies on some novel Semiorganic Crystals for NLO applications	P3443	22-01-14 Awarded
4.	S.Pangajavalli	X- Ray crystallographic and spectroscopic studies of novel organic compounds	P3444	22-01-14 Awarded
5.	T.Jeyakumaran	Synthesis and Characterization of Lead Free Multiferroic Nano Materials	F9557	07-09-15 Submitted
6.	R.Sindhan	Spectroscopic Studies of Gas-Phase Diatomic Molecules in Sunspot and Solar Atmosphere	P4255	19-12-15 Working
7.	N.Venkatesh Bharathi	Synthesis and Luminescence Investigation of some Phosphor Materials	F9958	09-03-18 Submitted

Other Activities (Additional Information):

- Served as **Member Senate**, Madurai Kamaraj University, Madurai for a period of three years from 04.12.2006.
- Served as **Member Academic Council**, Madurai Kamaraj University, Madurai for a period of three years from 29.08.2006.
- Served as a **Member** of the **CBCS Handbook Committee** in Madurai Kamaraj University, Madurai from 2009 to 2010.
- Served as **Subject Expert** in Selection Committee for recruiting College Teachers (Physics) in the affiliated Colleges of Madurai Kamaraj and Manonmanium Sundaranar Universities.
- Served as **DEAN** (Student Welfare) in MNSSVN College (Autonomous), Madurai for a period of two years from July 2, 2007.

- Served as **NSS Programme Officer** in NMSSVN College, Madurai for a period of five years from 2003 to 2007.
- Served as **Staff in-charge for Blood Donors' Club** in NMSSVN College, Madurai for a period of 5 years from February, 2005 and actively involved in organising many voluntary Blood Donation Camps.
- Served as **Hostel Warden** in NMSSVN College for a period of 7 years from 1984 to 1991.
- Served as **National Adult Education & Extension Programme Officer (NAEP)** in NMSSVN College, Madurai from 1989 to 1993 and launched campaigns on National Integration, Family Welfare, Peace, Socialism etc.,
- Had **co-authored** a text book on "**Programming in C**" which is a prescribed text book for Under Graduate students of the colleges affiliated to **Madurai Kamaraj University, Madurai.**
- Served as **Member** of the Board of Studies in PG Physics of **Manonmaniam Sundaranar University, Tirunelveli** from May 2012 to April 2014.
- Served as **Madurai Kamaraj University Nominee** in the Board of Studies of PG Physics, Devanga Arts College (Autonomous), Aruppukkottai, Viruthunagar District, in accordance with the revised guidelines of UGC on the scheme of Autonomous Colleges for a period of two years from 13.01.2012 to 12.01.2014.
- Participated as **Subject Reviewer** for Physics in Higher Secondary Syllabus revision meeting held on 30.01.2013 at Madurai Centre (OCPM Girls Higher Secondary School, Madurai) organised by Chief Educational Office, Madurai 625 002.
- Served as **President** of the Nagamalai Chapter of **Tamil Nadu Science Forum (TNSF)** and actively involved in organising the **National Children's Science Congress (NCSC)** every year in Madurai District.
- Served as **Subject Expert** in writing lessons for B.Sc., (Physics), M.Sc., (Physics), M.Phil., (Physics) and Diploma in Astronomy & Astrophysics (Non-semester) courses offered through Distance Education Programmes of Madurai Kamaraj University.
- Served as **Examiner** in MKU-DDE Non-Semester B.Sc., M.Sc., and M.Phil., Physics Courses from the inception of the programmes in Madurai Kamaraj University.
- Served as an **out-talent subject expert** in B.Ed., & M.Ed., Degree Programmes of Madurai Kamaraj University offered through Distance Education Programme.

- Delivered special guest **lectures / talks** in the Physics Association Meetings of various colleges affiliated to Madurai Kamaraj University.
- Served as Chief Guest and delivered the inaugural address in the inaugural function of the **Extra Curricular Activities** in S.B.O.A. Matric and Higher Secondary School, Nagamalai, Madurai on 1st July 2010.
- Served as **Chief Guest and delivered Special Address** in the School Annual Day celebration on 1st September 2018, at G.R. Varatharaju Higher Secondary School, Mayiladumparai, Theni District.
- Involving actively in **Radio talks / Radio Serial Programmes** on various Themes in Science broadcast in All India Radio, Madurai.
- Served as **Subject Expert** in the Board of Studies of M.Sc., (Physics) of Sri. S. Ramasamy Naidu Memorial College (Autonomous), Sattur, Virudhunagar District for two years with effect from 10.07.2012 to 09.07.2014.
- Served as **Member** of the Board of Studies in PG Physics of Saraswathi Narayanan College (Autonomous), Madurai from March, 2012 to February, 2014.
- Served as **Member** of Board of Studies in UG and PG Physics Departments of Jayaraj Annapackiam College for Women (Autonomous), Periyakulam, Theni District, for a period of two years from December, 2011.
- Served as **Member** of Board of Studies in UG and PG Physics Departments of Thiagarajar College (Autonomous), Madurai from April, 2011.
- Served as **Member** of Board of Studies in UG Physics Department of Devanga Arts College (Autonomous), Aruppukkottai, Viruthunagar District for the period 2007 to 2009.
- Served as **Member** of Board of Studies in PG Physics Department of Devanga Arts College (Autonomous), Aruppukkottai, Viruthunagar District for the period 2009 to 2011.
- Served as **Member** of Board of Studies in UG and PG Physics Departments of Saraswathi Narayanan College (Autonomous), Madurai for the period 2007 to 2009.
- Nominated as **Subject Expert** to the Board of Studies of Physics (UG & PG) of Thiagarajar College, Madurai – 625 009 for a period of two years from 2013 to 2015.
- Served as **Subject Expert** to the Board of Studies of Physics (PG), Sri Meenakshi Government Arts College for women, Madurai – 625 002, for a period of two years from 2013 to 2015

- Served as **Member** of Board of Studies for M.Phil., Physics of Devanga Arts College, Aruppukottai for a period of two years with effect from 17.07.2014 to 16.07.2016.
- Served as **Subject Expert** in the Board of Studies of UG & PG Physics Departments of Saraswathi Narayanan College (Autonomous), Madurai in the academic year 2014 – 2016.
- Served as **Subject Expert** in the Board Studies of UG Physics of E.M. Gopalakrishna Kone Yadava Women’s College, Madurai – 625 014 during the period 2017 – 2019.
- Nominated as one of the **Subject Experts (Principal’s Nominee)** of the PG Board of Studies in Physics of H.K.R.H. College, Uthamapalayam – 626 533, for a period of two years, from 23/09/2017 to 22/09/2019.
- Served as **Subject Reviewer** for the newly designed syllabi of B.Sc., M.Sc., and M.Phil., (Physics) Courses offered at Sri S.R.N.M. College, Sattur, to be implemented from the academic year 2020 – 2021.

Research Publications:

1. Finite Element Analysis in a Two-dimensional potential problem, **Ramaswamy, S.**, and Sethuraman, J., Bulletin of IAPT, January 1993, pp.8-10.
2. L-Argininiumdinitrate, **Ramaswamy, S.**, Sridhar, B., Ramarishnan, V., and Rajaram, R.K., Acta Cryst. E57, (2001), o872-o874.
3. D-Phenylglycinium perchlorate, **Ramaswamy, S.**, Sridhar, B., Ramakrishnan, V., and Rajaram, R.K., Acta Cryst. E57, (2001), o1149-o1151.
4. L-Ornithine nitrate, **Ramaswamy, S.**, Sridhar, B., Ramakrishnan, V., and Rajaram, R.K., Acta Cryst. E58, (2002), o646-o648.
5. Raman and IR spectral studies of D-phenylglycinium perchlorate, **Ramaswamy, S.**, Rajaram, R.K. and Ramakrishnan, V., Journal of Raman Spectroscopy, 2002; 33: 689-698.
6. Vibrational spectroscopic studies of L-argininium dinitrate, **Ramaswamy, S.**, Rajaram, R.K., and Ramakrishnan, V., Journal of Raman Spectroscopy, 2003; 34: 50-56.
7. Infrared and Raman spectral studies of L-ornithine nitrate, **Ramaswamy, S.**, Rajaram, R.K., and Ramakrishnan, V., Journal of Raman Spectroscopy, 2003; 34: 806-812.
8. Bis(L-ornithinium) chloride nitrate sulphate, **Ramaswamy, S.**, Sridhar, B., Ramakrishnan, V., and Rajaram, R.K., Acta Cryst. E60 (2004), 0768.

9. Raman and infrared spectral studies of DL-theronimnium dihydrogen phosphate, Ravikumar B, **Ramaswamy, S.**, Rajaram, R.K., and Ramakrishnan, V., Journal of Raman Spectroscopy, 2004; 35: 847-853.
10. Vibrational spectra of bis(L-ornithinium) chloride nitrate sulphate, **Ramaswamy, S.**, Rajaram, R.K., and Ramakrishnan, V., Journal of Raman Spectroscopy, 2005; 36: 12-17.
11. Bis(DL-methioninium) sulphate", **Ramaswamy, S.**, Sridhar, B., Ramakrishnan, V., and Rajaram, R.K., Acta Cryst. E60 (2004), 01691.
12. Infrared and laser Raman spectra of bis(DL-Methioninium) sulphate", **Ramaswamy, S.**, Rajaram, R.K., and Ramakrishnan, V., Journal of Raman Spectroscopy, 2005; 36: 840-847.
13. FTIR and laser Raman spectral analysis of crystalline DL-valinium dihydrogen phosphate", B.Ravikumar, **S.Ramaswamy*** and S.Pandiarajan, International Journal of Engineering Science and Technology, (2012) Vol.4, No.4, pp.1658-1666.
14. Vibrational Spectroscopic Studies of Crystalline L-Ornithinium Sulfate Monohydrate", B.Ravikumar, **S.Ramaswamy*** and S.Pandiarajan, International Journal of Advances in Science and Technology, (2012), Vol.4, No.4, pp.45-53.
15. 1-Methyl-1'-(4-methylphenyl)-2',3',5',6',7',7a'-hexahydro-1'H-dispiro-[piperidine-3,2'-pyrrolizine-3',3"-indoline]-4,2"-dione, **S.Ramaswamy**, R. Sribala, N. Srinivasan, R.V. Krishnakumar and R. Ranjith Kumar, Acta Cryst. (2012). E68, o2772–o2773.
16. 5-(4-Fluorobenzylidene)-4'-(4-fluorophenyl)-1,1'-dimethyl-dispiro[piperidine-3,3'-pyrrolidine-2',3"-indoline]-4,2"-dione, V. Rajni Swamy, **S. Ramaswamy**, N.Srinivasan, R. Ranjith Kumar and R.V. Krishnakumar, Acta Cryst. (2012). E68, o2839–o2840.
17. Fabrication of Ag₂SeTe thin film by thermal evaporation, C. Vijayan, M. Pandiaraman, N. Soundararajan, R. Chandramohan and **S.Ramaswamy**, Surface Engineering, DOI:10.1179/1743294414, Y-0000000353.
18. The effect of heating rate on the phase transition and crystallization kinetics of Ag₂Se_{0.2}Te_{0.8} alloy, C.Vijayan, N.Soundarajan, R.Chandramohan, **S.Ramaswamy**, P.Gnanadurai, Journal of Thermal Analysis and Calorimetry, October 2014.
19. Presence of C₂ Molecular Lines in Sunspot Umbral Spectra, P.Sriramachandran, R.Sindhan, **S.Ramaswamy***, R.Shanmugavel, New Astronomy, 48, 16-23, 2016.
20. Vibrational Analysis of 5'-Methyl-6b,7,9,11a-Tetrahydrospiro [chromeno[3',4':3,4] pyrrolo [1,2-c] Thiazole-11,3'-Indoline]-2',6(6aH)-dione, S. Pangajavalli,

R.Ranjithkumar and **S.Ramaswamy***, International Journal of Advanced Technology in Engineering and Science (ISSN 2348-7550), Vol. No. 5, Issue 02, February 2017.

21. Hirshfeld and Vibrational analysis of 5-Benzyl-7a-hydroxy-1-methyl-2,3,5,6,7,7a-hexahydro-1H-3a,7-methanoindeno[2,1-d] pyrrolo[3,2-c]azepine-12,13(4H) - dione, S. Pangajavalli, R. Ranjithkumar, B. Sridhar and **S. Ramaswamy***, *Journal of Mechanics, Materials Science and Engineering*, 2017, 12., ISSN 2412-5954.
22. Synthesis and Characterization of $Zn_3V_2O_8$ Yellow Emitting Nano Phosphor by Sol-gel Method, T. Jeyakumaran, P. Sriramachandran, R. Shanmugavel, **S. Ramaswamy***, AIP Conference Proceedings, Vol. 1832, 2017, 0501051-3.
23. Spectroscopic Analysis of Gas Phase Astrophysicist Molecules: Beryllium Monofluoride, R.Sindhan, P.Sriramachandran, R.Shanmugavel, **S.Ramaswamy***, Mechanics, Materials Science & Engineering, 1-6, April 2017. ISSN 2412-5954.
24. Investigations onto the role of transition metal oxide dopants in anthracene crystals, V.Nagarajan, A.Nithin Ananth, **S.Ramaswamy***, Materials Research Express, Vol. 4(12), 2017, 1-11, ISSN: 125102. DOI: 10.1088/2053-1591/aa9c29/meta
25. Investigations on the growth, optical, mechanical, thermal and nonlinear behavior of transition metals doped anthracene crystals, V.Nagarajan, A.Nithin Ananth, **S.Ramaswamy***, P.Kavitha & T.Arokia Doss, Material Research Innovations, 2017, 1-5, ISSN: 1432-8917. DOI: 10.1080/14328917.2017.1337607.
26. Remarkable Enhancement on Optical Properties of Alkali Metals Doped Anthracene Crystals, Vairakani Nagarajan, Ananth Jayakumar Nitthin Ananth, and **Seenivasan Ramaswamy***, Crystal Research & Technology, 2017, 1700217(1-8). DOI: 10.1002/crat.201700217.
27. Effect of ZnO and co-doped ZnO additive in the growth, structural, optical and mechanical properties of glycine single crystals, P. Kavitha, N. Venkatesh Bharathi, V. Nagarajan, **S. Ramaswamy***, International Journal of Advance Engineering and Research Development, 2018, Vol. 5(7), 1-6, e-ISSN (O): 2348-4470, p-ISSN (P): 2348-6406.
28. Investigation on the effect of nano Fe_2O_3 - doped anthracene single crystal, V.Nagarajan, A.Nithin Ananth, T.Arokia Doss, **S.Ramaswamy***, Material Research Innovations, Vol. 22, 2018, 13-21. DOI: 10.1080/14328917.2016.1265251.

29. Crystal structures of 6a,6b,7,11a-tetrahydro-6 H ,9 H –spiro [chromeno[300,400:3,4] pyrrolo[1,2-c]-thiazole-11,300-indoline]-200,6-dione and 500-methyl-6a,6b,7,11a-tetrahydro-6 H, 9 H-spiro[chromeno-[300,400:3,4]pyrrolo[1,2- c]thiazole-11,300-indoline]-200,6-dione, S. Pangajavalli, R. Ranjithkumar, N. Srinivasan, **S. Ramaswamy*** and S. Selvanayagam, Crystallographic communications Acta cryst E, 2019, E-75, 246-250, ISSN 2056-9890. DOI: 10.1107/S2056989019000045.
30. Synthesis and characterization of self-activated Ba₂V₂O₇ nanophosphor: A Potential Material for W-LED Applications, N. Venkatesh Bharathi, T. Jeyakumaran, **S.Ramaswamy***, S.S. Jayabalakrishnan, Material Research Express, 2019, Vol. 6(10). DOI: 10.1088/2053-1591/ab3c1d/meta.
31. Facile synthesis, vibrational, optical and improved luminescence properties analysis of Ca₂KZn₂V₃O₁₂ phosphor, T. Jeyakumaran, N. Venkatesh Bharathi, P. Sriramachandran, R. Shanmugavel and **S. Ramaswamy***, Material Research Express, 2019, Vol. 6(11). DOI: 10.1088/2053-1591/ab51b8/meta.
32. Effect of ZnO with alkali metals as an additive in the growth, structural, optical, electrical and mechanical properties of glycine single crystals, P. Kavitha, N. Venkatesh Bharathi, and **S. Ramaswamy***, AIP Conference Proceedings, 2019, 2162, 020046. DOI: 10.1063/1.5130256.
33. Investigation on nebulizer spray deposited Gd-doped PbS thin films for photo sensing applications, K. Paulraj, **S. Ramaswamy**, A. M. S. Arulanantham, S. Valanarasu, Mohd Shkir, V. Ganesh, S. AlFaify, Hyun-Seok Kim and A. Kathalingam, Journal of Materials Science: Materials in Electronics, 2019, Vol. 30. DOI: 10.1007/s10854-019-02242-8.
34. Structural, Hirshfeld, spectroscopic, quantum chemical and molecular docking studies on 6b',7',8', 9'-Tetrahydro-2H,6'H-spiro[acenaphthylene-1,11'-chromeno [3,4-a]pyrrolizine]-2,6'(6a'H,11a'H)-dione, S.Pangajavalli, R.Ranjithkumar and **S. Ramaswamy***, Journal of Molecular Structure, 2020, Vol. 1209. DOI: 10.1016/j.molstruc.2020.127921.
35. Analysis of neodymium rare earth element doping in PbS films for opto-electronics applications, K. Paulraj, **S. Ramaswamy***, Mohd Shkir, I. S. Yahia, Mohamed S. Hamdy and S. AlFaify, Journal of Materials Science: Materials in Electronics, 2020, Vol. 31. DOI: 10.1007/s10854-019-02698-8.
36. A comprehensive study on nebulizer spray pyrolyzed Eu doped PbS thin films for opto-electronic applications, K. Paulraj, **S. Ramaswamy**, Mohd Shkir, Aslam Khan, Physica

B: Physics of Condensed Matter, 2020, Vol. 49, 5439 – 5448, DOI: 10.1007/s11664-020-08267-8.

37. Investigation on samarium doped PbS thin films fabricated using nebulizer spray technique for photosensing applications, K. Paulraj, **S. Ramaswamy**, N. Chidhambaram, H. Algarni, S. AlFaify, Thin Solid Films, 2020, Vol. 148, 106723 DOI: 10.1016/j.spmi.2020.106723
38. Praseodymium doped PbS thin films for optoelectronic applications, prepared by nebulizer spray pyrolysis, K. Paulraj, **S. Ramaswamy**, I. S. Yahia, A.M. Alshehri, H.H. Somaily, Hyun-Seok Kim, A. Kathalingam, Journal of Applied physics A, 2020, Vol. 126, DOI: 10.1007/s00339-020-03686-0.
39. On the Effective Temperature of Aluminium Carbide Molecular Lines in Sunspot Umbral Spectra, R. Sindhan, P. Sriramachandran, R. Shanmugavel and **S. Ramaswamy***, Astrophysics and Space Science, 2020, Vol. 365, DOI: 10.1007/s10509-020-03866-7.
40. Synthesis and luminescence investigation of Eu^{3+} doped $\text{Ca}_2\text{KZn}_2\text{V}_3\text{O}_{12}$ phosphors: a potential material for WLEDs applications, T. Jeyakumaran, N. Venkatesh Bharathi, P. Sriramachandran, R. Shanmugavel and **S. Ramaswamy***, 2021, Vol. 31, 674 – 682, DOI: 10.1007/s10904-020-01696-2.
41. Synthesis and characterization of Eu^{3+} activated $\text{Ba}_{2-x}\text{V}_2\text{O}_7:x\text{Eu}^{3+}$ phosphor by hydrothermal method: A Potential material for near-UV-WLED applications, N. Venkatesh Bharathi, T. Jeyakumaran, **S. Ramaswamy***, S.S. Jayabalakrishnan, Wiley – Luminescence, 2021, Vol. 36(4), 849-859. DOI: 10.1002/bio.4031.
42. Structural, Vibrational, Optical and Improved Photoluminescence Properties of Dy^{3+} Doped $\text{Ca}_2\text{KZn}_2\text{V}_3\text{O}_{12}$ Phosphors, T. Jeyakumaran, N. Venkatesh Bharathi, P. Sriramachandran, R. Shanmugavel, **S. Ramaswamy***, Journal of Inorganic and Organometallic Polymers and Materials, 2021, Vol. 31, 695–703. DOI: 10.1007/s10904-020-01766-5.
43. Synthesis and characterization of a novel $\text{Ba}_{2-x}\text{V}_2\text{O}_7:x\text{Dy}^{3+}$ phosphor by hydrothermal method for WLED applications, N. Venkatesh Bharathi, T. Jeyakumaran, **S. Ramaswamy***, S.S. Jayabalakrishnan, AIP Conference Proceedings, 2021, Vol. 2352(1), 020052, DO: 10.1063/5.0052421.

44. Structural, Hirshfeld, spectroscopic, quantum chemical and molecular docking studies of N'-(4-(4-Chlorophenyl)-1,3-dicyano-5,6,7,8,9,10-hexahydrobenzo[8]annulen-2-yl) N,N-dimethylformimidamide as CCR2 inhibitors, S. Pangajavalli, R. Ranjithkumar, **S. Ramaswamy***, Journal of Molecular Structure, 2021, Vol. 1239, 130503, DOI: 10.1016/j.molstruc.2021.130503.
45. Enhanced Second and Third Harmonic Generation in Centro Symmetric α -Glycine Single Crystal: The Growth, Characterizations and Quantum Chemical Calculations, P. Kavitha, N. Venkatesh Bharathi, and **S. Ramaswamy***, J. Optics & Laser Technology (Communicated).
46. The Crystal Structure and DFT Studies on a Semiorganic Crystal of Zinc oxide additive Glycine for Nonlinear Optical Applications, P. Kavitha, N. Venkatesh Bharathi, and **S. Ramaswamy***, J. Electronic Materials Letters (Communicated).
47. The Growth, Characterization and Quantum Chemical Calculations of Zinc Oxide added α -Glycine Single Crystal for NLO Devices, P. Kavitha, N. Venkatesh Bharathi, and **S. Ramaswamy***, J. Molecular Structure (Communicated).
48. Spectroscopic Analysis of AIH Molecular Lines in Sunspot Umbra, R. Sindhan, P. Sriramachandran, R. Shanmugavel and **S. Ramaswamy***, Serb. Astron. J. (Under review).
49. The Growth, Characterizations, Optical nonlinearities and Quantum Chemical Calculations of α - Glycine Single Crystal with zinc oxide as an additive, P. Kavitha, N. Venkatesh Bharathi, and **S. Ramaswamy***, J. Optical Materials (Communicated).
50. The Growth, Characterization and Quantum Chemical Calculations of Zinc Oxide added α -Glycine Single Crystal for NLO Devices, P. Kavitha, N. Venkatesh Bharathi, and **S. Ramaswamy***, J. Materials Research Express (Communicated).

List of Papers Presented in Conferences / Seminars:

1. **S. Ramaswamy**, V. Ramakrishnan, B. Sridhar, R.K. Rajaram: “Crystal Structure of Diprotonated L-Arginine Nitrate”, XXXI National Seminar on Crystallography, BARC, Mumbai, June 1-22, 2001.
2. M. Karuppasamy, M. Umadevi, **S. Ramaswamy**, N. Mathivanan and V. Ramakrishnan, “Laser Excited Studies on Optical Properties of a few Semiconducting Materials”,

National Seminar on Solid State Spectroscopy held at Sri Venkateswara University, Tirupati – 517 502, August 29-31, 2001.

3. B.Ravikumar, B.Sridhar, **S.Ramaswamy**, V.Ramakrishnan and R.K.Rajaram, “*Crystal Structural Determination of DL-Valinium Dihydrogen Phosphate*”, 32nd National Seminar on Crystallography held at University of Jammu, Jammu Tawi, Oct.24-26, 2002.
4. S.Pandiarajan, B.Sridhar, **S.Ramaswamy**, V.Ramakrishnan and R.K.Rajaram, “*Crystal Structural Determination of Bis (L-Proline) H⁺ Nitrate*”, 32nd National Seminar on Crystallography held at University of Jammu, Jammu Tawi, October 24-26, 2002.
5. **S.Ramaswamy** and V.Ramakrishnan, “*Vibrational spectrum of L-ornithine nitrate*”, UGC Sponsored National Seminar on Emerging Trends in Molecular Physics held at Annamalai University, Tamil Nadu, on 8th and 9th March, 2004.
6. C.Vijayan, **S.Ramaswamy**, M.Pandiaraman, N.Soundarajan, and R.Chandramohan, “*Micro-Raman Studies on Ag₂SeTe nano thin films prepared by thermal evaporation*”, UGC sponsored National Seminar on POLYCAP’11 Polymers: Synthesis, Characterisation and Applications, held at Mannar Thirumalai Naicker College, Madurai, on 21st and 22nd October, 2011.
7. S.Pangajavalli, R.Ranjithkumar, **S.Ramaswamy**, *Crystal structure of 5'-Methyl-6b,7,9,11a Tetrahydrospiro[chromeno [3',4':3,4] pyrrolo [1,2-c] Thiazole-11,3'-Indoline]-2', 6 (6aH) - dione*, International Conference on Recent Trends in Materials, held at Devanga Arts College, Aruppukottai, on 22nd and 23rd December, 2014.
8. K.Paulraj, S.Priyadarsini, **S.Ramaswamy**, R.Ranjithkumar, N.Srinivasan, R.V.Krishnakumar, *X- Ray crystallographic analysis of hetero cycles*, International Conference on Recent Trends in Materials, held at Devanga Arts College, Aruppukottai, December 22nd and 23rd 2014.
9. V.Nagarajan, T.Arokia Doss, **S.Ramaswamy**, *Synthesis, growth, linear and nonlinear optical properties of Fe₂O₃-anthracene single crystals*, International Conference on Nanomaterials and Molecular Research, held at St.Joseph’s College of Arts & Science (Autonomous) Cuddalore, December 9th & 10th , 2016.
10. V.Nagarajan, T.Arokia Doss, **S.Ramaswamy**, *Effect of halides codoped on anthracene single crystals: Synthesis, growth and optical properties*, International Conference on

Materials Processing and Applications, held at VIT University, Vellore, December 14th to 16th 2016.

11. S.Pangajavalli, R.Ranjithkumar, **S.Ramaswamy**, XRD, *Hirshfeld analysis and Vibrational Spectral Studies of pyrrolo [3,2-c] azepine-12,13(4H)-dione*, International Conference on Materials Processing and Applications, held at VIT University, Vellore, December 14th to 16th 2016.
12. T.Jeyakumaran, P.Sriramachandran, R.Shanmugavel, **S.Ramaswamy**, *Synthesis and Characterization of Zinc Vanadate Nano Phosphor*, International Conference on Materials Processing and Applications, held at VIT University, Vellore, December 14th to 16th 2016.
13. K.Paulraj, D.Silambarasan, **S.Ramaswamy**, *Effect of temperature on the crystallinity of WO₃ thin film*, Recent trends in materials science and applications, held at Sri Meenakshi govt Arts College for women (autonomous) Madurai, January 6th 2017.
14. S.Pangajavalli, R.Ranjithkumar, **S.Ramaswamy**, *Crystal Structure and Hirshfeld Analysis of 6a,6b,7,11a-Tetrahydro-6H, 9H-spiro [chromeno [3',4':3,4] pyrrolo [1,2-c] thiazole-11,3'-indoline]-2',6-dione*, National Seminar on Recent Advances in Chemical Research held at Virudhunagar Hindu Nadar's Senthikumaranadar College, Virudhunagar January 24th & 25th 2017.
15. S.Pangajavalli, R.Ranjithkumar, **S.Ramaswamy**, *Vibrational, Analysis of 5'-Methyl-6b,7,9,11a-Tetrahydrospiro[chromeno[3',4':3,4] pyrrolo[1,2-c] Thiazole-11,3'-Indoline]-2',6(6aH)-dione*, International Conference on Recent Trends in Engineering Science, Humanities and Management, held at Sri S.Ramasamy Naidu Memorial College, Sattur, on 2nd & 3rd February 2017.
16. V.Nagarajan, **S.Ramaswamy**, *Influence of potassium on anthracene crystals: Growth, Optical and Thermal Properties*, UGC Sponsored National Conference on Advanced Materials and its Applications held at SFR College for Womens (Autonomous), Sivakasi, July 6th & 7th 2017.
17. T.Jeyakumaran, P.Kavitha, P.Sriramachandran, R.Shanmugavel, **S.Ramaswamy**, *Solid State Synthesis and Characterization of Rare Earth Free Phosphor*, UGC Sponsored National Conference on Advanced Materials and its Applications held at SFR College for Womens (Autonomous), Sivakasi, July 6th & 7th 2017.
18. R.Sindhan, **S.Ramaswamy**, R.Shanmugavel, P.Sriramachandran, *Aluminum Carbide Molecular Lines in Sunspot Spectrum*, UGC Sponsored National Conference on

Advanced Materials and its Applications held at SFR College for Womens (Autonomous), Sivakasi, July 6th & 7th 2017.

19. P. Kavitha, N. Venkatesh Bharathi, V. Nagarajan, **S. Ramaswamy**, *Effect of ZnO Additive in the Growth, Optical and Mechanical Properties of a Glycine Single Crystals*, 2nd International Conference on Materials and Technology-Synthesis, Processing and Applications (ICMAT-SPA) 2018 held at SRNM College (Autonomous), Sattur, February 20th & 21st 2018.
20. P. Kavitha, N. Venkatesh Bharathi, V. Nagarajan, **S. Ramaswamy**, *Effect of ZnO and co-doped ZnO additive in the growth, structural, optical and mechanical properties of glycine single crystals*, International Conference on Momentous role of Nanomaterials in Renewable Energy devices (IC MNRE-2018), Alagappa University, Karaikudi, March 1st & 2nd 2018.
21. N. Venkatesh Bharathi, T. Jeyakumaran, P. Kavitha, **S. Ramaswamy**, *Synthesize and characterization of CdS (0 0 2) and ZnS nano particles using hydrothermal method*, 4th National Seminar on Technologically Important Crystalline and Amorphous Solids (TICAS-2018) held at Kalasalingam University, Krishnankovil, March 2nd & 3rd 2018.
22. P. Kavitha, N. Venkatesh Bharathi, V. Nagarajan, **S. Ramaswamy**, *Growth and characterization of ZnO doped and co-doped glycine single a Crystals*, National Seminar on New Materials Research and Nanotechnology (NSNMRN 2018), The Sethupathy Government Arts College, Ramanathapuram, March 19th & 21st 2018.
23. P. Kavitha, N. Venkatesh Bharathi, **S. Ramaswamy**, *Effect of ZnO with alkali metals as an additive in the growth, structural, optical, electrical and mechanical properties of glycine single crystals*, International Conference on Advanced Materials (ICAM-2019), Nirmalagiri College, Kannur, Kerala, June 12-14, 2019.
24. Venkatesh Bharathi, Nagarajan, Jeyakumaran Thavamany, **Ramaswamy Seenivasan**, *Synthesis and Characterization of Self-activated Ba₂V₂O₇ Nano Phosphor: A Potential Material for W-LEDs Applications*, 5th International Conference on Nanoscience and Nanotechnology (**ICONN-2019**) held at SRM University, Chennai, January 28th to 30th 2019.
25. Jeyakumaran Thavamany, Ponraj Muthuvel, Ganesh Sankaran, Sriramachandran Ponsamy, Shanmugavel Ramachandran, **Ramaswamy Seenivasan**, *Photoluminescence Investigation of Novel Red Emitting Ca₁₄Al_{9.85}Zn₆O₃₅:0.15Mn⁴⁺ Nano Phosphor*, 5th

International Conference on Nanoscience and Nanotechnology (**ICONN-2019**) held at SRM University, Chennai, January 28th to 30th 2019.

26. K. Paulraj, **S. Ramaswamy**, S. Valanarasu, Studies on spray deposited undoped and Gd-doped PbS thin films for photo sensing applications, 4th National Conference on Recent Advances in Nanotechnology (**RAIN-2019**) held at AVVM Pushpam College, Poondi, Thanjavur, August 17th 2019.
27. R.Sindhan, P. Sriramachandran, R. Shanmugavel, **S. Ramaswamy**, Spectroscopic Analysis of $A^2\Pi_y - X^2\Sigma^+$ System of Gas Phase Astrophysical Molecule: Beryllium monofluoride, in the International Conference on Materials Processing and Applications (**ICMPA-2016**) held at VIT University, Vellore during 14-12-2016 to 16-12-2016.
28. R. Sindhan, **S. Ramaswamy**, R. Shanmugavel, P. Sriramachandran, Aluminum Carbide Molecular Lines in Sunspot Spectrum, in the National Conference on Advanced Materials and its Applications (**NCAMA-2017**) held at SFR College, Sivakasi during 06-07-2017 to 07-07-2017.
29. R. Sindhan, P. Sriramachandran, R. Shanmugavel, **S. Ramaswamy**, Computation of Radiative Transition Parameters for the $A^1\Pi - X^1\Sigma^+$ Transition of Aluminium Hydride, in the International Conference on Advanced Functional Materials for Energy, Environment and Biomedical Applications (**AFMEEB-2017**) held at Madurai Kamaraj University, Madurai during 11-12-2017 to 12-12-2017.
30. N. Venkatesh Bharathi, T. Jeyakumaran, **S. Ramaswamy**, Synthesis and characterization of europium doped barium vanadate phosphor for wled applications, National Conference on Recent Developments in Effective Materials (**REDEEMS '20**) held at Sarah Tucker College, Thirunelveli, February 7th 2020.
31. N. Venkatesh Bharathi, T. Jeyakumaran, **S. Ramaswamy**, Synthesis, characterization and WLED device fabrication of Eu^{3+} activated $\text{Ba}_2\text{V}_2\text{O}_7$ phosphor: A potential material for solid state lighting application, International Conference on Advanced Materials (**ICAM-2020**) held at Arul Anandar College, Karumathur, Madurai, February 11th and 12th 2020.

International / National Conferences & Seminars Participated:

1. Participated in the **National Conference on Fundamentals of Crystal Growth** held at Crystal Growth Centre, Anna University, Madras – 25, during January 29-30, 1996.

2. Participated in the **National Seminar on Optoelectronics and Applications** organised by the Department of Optoelectronics, University of Kerala, Thiruvananthapuram on 19th and 20th of March 1999.
3. Attended the **National level Symposium on Fundamentals of Crystal Growth** held at Crystal Growth Centre, Anna University, Chennai from 6th to 7th November, 2000.
4. Attended the **National Conference on Recent Advances in Materials Science (NCMS-2000)** held at Nehru Memorial College, Puthanampatti – 621 007, Tiruchirappalli, during September 29 – 30, 2000.
5. Participated in the UGC sponsored “**Workshop on Nonlinear Optics**” organized by the International School of Photonics, Cochin University of Science and Technology, from 27th to 28th February 2001.
6. Participated in the **XXXI National Seminar on Crystallography (NSC-2011)**, organised by National Committee for Crystallography (INSA) and National Facility for Macromolecular Crystallography (BARC), held at BARC, Mumbai – 400 094, during June 19 –22, 2001.
7. Attended and actively participated in the scientific deliberations of the **National Seminar on Solid State Spectroscopy**, organised by the Department of Physics, Sri Venkateswara University, Tirupati – 517 502, during August 29 -31, 2001.
8. Participated in the Fourth Meeting of the **Asian Crystallographic Association (AsCA ‘01)** held at I.I.Sc., Bangalore, from November 18 - 21, 2001.
9. Participated in the **National Workshop on Fibre Optics and its Applications** held at International School of Photonics, Cochin University of Science and Technology, Cochin, during February 27-28, 2002.
10. Attended the **National Commemorative Conference on Tsunami** conducted by the School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai from 26th to 29th December 2005.
11. Attended the **International Conference on Nano Technology – Materials and Methods (CIT-NANOTECH 2006)** organised by the Department of Chemical Engineering, Coimbatore Institute of Technology, Coimbatore – 641 014 from 23rd to 25th June 2006.
12. Participated in the UGC sponsored **National Level Seminar on Characterization Techniques for Semiconducting Materials** organised by the Department of Physics, NMSSVN College, Madurai on 16th December 2010.

13. Participated and acted as **Chair-Person** in the **UGC Sponsored National Seminar on Polymers: Synthesis, Characterisation and Applications** held at Mannar Thirumalai Naicker College, Madurai from 21st to 22nd October 2011.
14. Participated in the **One Day National Level Conference on “Application of Irradiation Techniques in Science, Engineering and Medicine Fields” (AITSEM 2K12)** sponsored by **BRNS, Mumbai**, organised by the Department of Polymer Technology at Kamaraj College of Engineering and Technology, Virudhunagar held on 29.02.2012.
15. Participated in the **UGC Sponsored One Day National Seminar on Intricacies of Inorganic Chemistry and Power Storage – 2012** held at NMSSVN College, Madurai on 6th March 2012.
16. Participated in the **UGC Sponsored One Day National Level Workshop on Computational Methods in Physics** conducted by the Department of Physics, NMSSVN College, Madurai on 16th March 2012.
17. Participated in the **National Seminar on Materials of Importance “MATPHY-12”** organized by the Department of Physics in collaboration with National Physical Laboratory, New Delhi, on 13th September 2012, at Mannar Thirumalai Naicker College, Madurai.
18. Participated in the **National Seminar on “Current Trends in Crystal Growth and Solar Energy”** organized by the Department of Physics, Sri Meenakshi Government College for Women, Madurai, under the UGC Autonomy grant on 22nd January, 2013.
19. Participated in the one-day **National Level Seminar on “Recent Trends in Novel Materials” (REM 2010)** conducted by the Research Department of Physics, NMSSVN College, Madurai under UGC Autonomy Grant on 28th Feb 2013.
20. Participated in the **UGC Sponsored National Seminar on “Structural Investigations on Crystals”** held at Department of Physics, Devanga Arts College, Aruppukottai, on 26th December 2013.
21. Participated in the one day **National Level Seminar on “X-Ray Crystallography”** conducted by the Department of Physics, NMSSVN College, Madurai, under the UGC Autonomy Grant on 14th February 2014.
22. Participated in the **“National Level Workshop on Computational Physics using Gaussian”** organised by the PG and Research Department of Physics, NMSSVN College, Madurai, on 13th February, 2015.

23. Participated in the one day **National Seminar on “Nanoscience and Nanotechnology”** organised by the PG & Research Department of Physics, NMSSVN College, Madurai, on 19th February, 2016.
24. Participated in the **UGC sponsored “National Level Seminar on Recent Trends in Physics”** held at NMSSVN College, Nagamalai, Madurai on 27th March, 2017.
25. Participated in **“One day Seminar cum Workshop on the theme of India based Neutrino Observatory Project”** organized by INO Collaboration, Tata Institute of Fundamental Research, Mumbai & Department of Atomic Energy at IICHEP Transit Campus, Madurai on 15th July, 2018.
26. Organised and served as Co-Convener in the **National Symposium on Functional Nano Materials (NSFM - 2019)** held at School of Physics, Madurai Kamaraj University, Madurai during 4 & 5, January, 2019.
27. Participated in the **National Seminar on “Trends in Theoretical Physics”**, organized by the PG & Research Department of Physics (Under UGC Autonomy Grant), NMSSVN College, Madurai on 22nd February, 2019.
28. Organised and served as Convener for the **National Conference on “DESIGN AND APPLICATIONS OF EMERGING MATERIALS (NCDAEM – 2020)”** in PG and Research Department of Physics (Under UGC Autonomy Grant), NMSSVN College, Madurai on 19th February, 2020.

State Level Seminars / Workshops:

1. Participated in the **Two Day Inter-Collegiate Seminar on Education** held at NMSSVN College, Madurai on 28th February and 1st March 1986 sponsored by the Youth Welfare Department of Madurai Kamaraj University, Madurai.
2. Participated in the seminar on **“Applications of Microprocessors”** organised by NMSSVN College, Madurai and VI Micro systems, Madras from 1st to 3rd May 1989.
3. Attended the **Orientation Course** for Programme Officers of Adult Education and Extension Programme (NAEP) conducted at Madurai Kamaraj University, Madurai from 27th July to 30th July, 1989.
4. Attended the one week training course in **“Domestic Preservation of Fruits and Vegetables and Nutrition”** conducted at the Food and Nutrition Extension Centre, Madurai for one week from 15.01.1990.
5. Attended the District Level literacy Convention held on 01.03.1990 at Tholkappier Arangu, Madurai Kamaraj University, Madurai in connection with **“ARIVOLI IYAKKAM”** a programme for total literacy (Tamilnadu Literacy Mission) in Madurai District organized by Tamil Nadu Science Forum, Madurai Chapter, Madurai.
6. Participated in the seminar on **“Futurology”** organised by Futurology Department of Bharadhidasan University, Trichirappalli and Adult Continuing Education and Extension Programme of Madurai Kamaraj University, Madurai from 24th to 25th April 1990.
7. Attended the one day **Seminar and the Indian Academy of Sciences Endowment Lecture** on 20.09.1999 conducted by the School of Physics, Madurai Kamaraj University, Madurai.
8. Attended the UGC-DRS sponsored Seminar on **“Computer Simulation in Physics (SCSP-2002)”** at the School of Physics, Madurai Kamaraj University, Madurai during February 4 and 5, 2002.
9. Inaugurated the **M.Sc., Physics Association** meeting and delivered a special lecture on **“LASERS”** in the PG Department of Physics, V.V. Vanniaperumal College for Women, Virudhunagar, on 20th July 2002.
10. Participated in the one-day Inter-Collegiate Seminar on **“Solid State Physics”** organised by the Department of Physics, Devanga Arts College, Aruppukottai on 19th October 2002.

11. Participated in the UGC-COSIST sponsored “**Seminar on Lasers and Optics**” held at School of Physics, Madurai Kamaraj University, Madurai, jointly organised with International School of Photonics, Cochin University of Science and Technology, Cochin-22, during February 3-5, 2003.
12. Participated in the “**Three Day Training Programme on Preksha Dhyam and Non Violence**” organised by National Service Scheme (NSS) of Madurai Kamaraj University, Madurai from 22nd to 24th November 2003.
13. Delivered **Keynote Address** in the **One-Day Intercollegiate Students’ Seminar** titled “**Sub-atomic particles and Nanotechnology**” held on 29th September, 2004 at the PG and Research Department of Physics, Thiagarajar College, Madurai.
14. Participated in the “**Seminar on Photonics**” sponsored by TANSICHE and MKU held at School of Physics, Madurai Kamaraj University, Madurai during July 18 - 19, 2005.
15. Delivered an **invited lecture in the Regional Seminar** on “**Condensed Matter Physics**” held at the Department of Physics, Yadava College, Madurai – 625 014 from 22nd to 23rd February 2006.
16. Participated in the UGC Sponsored **State Level Seminar on “Nano materials**” organised by the Department of Physics, NMSSVN College from 6th to 7th March 2006.
17. Delivered a lecture on “**Laser and its applications**” in the seminar conducted on behalf of Bhabha Physics Association held on 25th September, 2006 at Sourashtra College, Madurai.
18. Inaugurated the Physics Association meeting and gave a special lecture on ‘**Laser and its applications**’ on 1st March 2007, in the Department of Physics, Saraswathi Narayanan College, Perungudi, Madurai – 625 022.
19. Participated and delivered a special lecture on “**LASER AND ITS APPLICATIONS**” on 11th February, 2008 in the intercollegiate seminar cum competition “**PHYSAAC – 2008**”, organized by the Department of Physics, Arul Anandar College, Karumathur, Madurai District.
20. Participated in the UGC sponsored State Level Seminar on “**Examination Reforms**” (Under UGC Autonomy Grant) conducted by NMSSVN College, Madurai on 16th February, 2008.

21. Participated in the one-day regional seminar on “**Recent Trends in Physics**”, conducted by the Department of Physics, NMSSVN College, Madurai, under UGC Autonomy Grant, on 6th March, 2008.
22. Attended the “**Two-days Workshop on the Choice Based Credit System**” held on 5th & 6th August 2008 at Madurai Kamaraj University, Madurai, for the Chairpersons of all the UG/PG Boards of Studies and College Teachers in the Academic Council and the Senate.
23. Participated in the “**One-day Workshop on Preparation of Self Instructional Material (SIM)**” organised by the Directorate of Distance Education, Madurai Kamaraj University, Madurai on 25.09.2008.
24. Inaugurated the Physics Association meeting and delivered a special lecture on “**Laser Spectroscopy**” at N.P.R. Arts and Science College, NPR Nagar, Natham, Dindigul, on 29th December, 2008.
25. Attended UGC-DRS Sponsored two days **Seminar on “Experimental Physics**” held at School of Physics, Madurai Kamaraj University, on 5th and 6th January, 2009.
26. Attended the “**Orientation Programme for Science Faculty Members**” held at NMSSVN College, Madurai from 11th to 14th February 2009.
27. Attended the State Level Seminar on “**Recent Advances in Materials Science**” held at the Department of Physics, NMSSVN College, Madurai on 23rd February 2009.
28. Delivered a guest lecture on “**CRYSTAL BINDING**” to P.G. Physics students in the Department of Physics, Devanga Arts College, Aruppukottai, on 28th March, 2009.
29. Attended the UGC sponsored “**Workshop on Experimental Physics**” held at the Department of Physics, NMSSVN College, Madurai on 23rd and 24th March 2009.
30. Participated in the one-day state level Seminar on “**Thin Film Techniques and Characterization**” conducted by the Department of Physics, NMSSVN College, Madurai, under the UGC Autonomy Grant, on 11th February 2010.
31. Delivered a guest lecture on “**Elastic Properties of Solids**” to P.G. Physics students in the Department of Physics, Devanga Arts College, Aruppukottai, on 20th Feb. 2010.
32. Participated in the “**Astronomy Camp 2010**” sponsored by NCSTC, DST – Govt. of India and TNSCST - Govt. of Tamil Nadu conducted by the Department of Physics, NMSSVN College, Madurai from 25th to 27th March 2010.

33. Inaugurated the **“Raman Association”** and delivered a lecture on **“Laser Fundamentals and its Applications”** at M.T.N. College, Pasumalai, Madurai, on 14th Septemeber, 2010.
34. Participated in the UGC Sponsored State Level Seminar on **“New Perspectives on Choice Based Credit System (CBCS) in Tamilnadu”** held at V.O. Chidambaram College, Thoothukudi during MUTA First Academic Conference on 18th February, 2012.
35. Delivered Inaugural Address on **“Crystal Systems and Crystal Structure Determination”** in the Physics Association meeting held at Sri S. Ramaswamy Naidu Memorial College, Sattur on 25th July 2012.
36. Delivered the special lecture on **“Recent Trends in Physics”** organized by the Department of Physics, Sri Kaliswari College, Sivakasi, on 20th August, 2013.
37. Participated in the State level Seminar on **“Higher Education – Futuristic Perspective”** held at MTN College, Madurai during MUTA Second Academic Conference on 25th January, 2014.
38. Participated and acted as Jury for Paper presentation and Poster presentation in the **“State Level Physics Olympiad (SLPO) – 2015”** organised at Department of Physics, Devanga Arts College, Aruppukottai, on 23rd September 2015.
39. Participated in the **MUTA 3rd Academic Conference and Seminar on the theme “Contemporary Issues in Higher Education”** held on 26th September 2015 at Sree Ayyappa College for Women, Chunkankadai, Kanyakumari District.
40. Participated in the **State level Seminar on “Higher Education in New Education Policy – Challenges & Prospects”** on 3rd December, 2015, at Tamil Sangam Hall, Trichy – 2 organised by (JAC) Joint Action Council of College Teachers – Tamil Nadu.
41. Participated in the **MUTA IV Academic Conference and Seminar on the theme “Towards Democratic, Secular & Inclusive Higher Education”** held on 6th January 2018 at Angala Easwari Hall, Palani, Dindigul District.
42. Participated in the **MUTA XXIV General Conference and Seminar on the theme “Democratic, Secular and State Funded Higher Education”** held on 22nd and 23rd September 2018 at MDB Community Hall, Nagercoil, Kanyakumari District.
43. Delivered a special lecture on **“While LED: The Future Lamp”** in the State Level Intercollegiate Students’ Seminar organized by the PG and Research Department of Physics, Thiagarajar College, Madurai on 10th October 2019.

44. Participated in the **Workshop on “Outcome Based Education (OBE)”**, under UGC Autonomous Grants, on 3rd January 2020 at NMSSVN College, Madurai.

45. Delivered a lecture on **“Raman Spectroscopy”** in the seminar conducted on behalf of Bhabha Physics Association held on 28th February 2020 at Sourashtra College, Madurai.

Refresher Courses & Orientation Programme Participated:

Refresher Courses:

1. Participated in the Refresher Course in Physics on “Condensed Matter Physics – Theory and Experiment” conducted by the Academic Staff College of Madurai Kamaraj University from 05.04.1999 to 26.04.1999.
2. Participated in the Refresher Course in Physics on “Techniques in the Physics of Solids” conducted by the Academic Staff College of Madurai Kamaraj University from 01.02.2000 to 21.02.2000.
3. Participated in the UGC Refresher Course on “Recent Developments on Crystal Growth and Characterisation” held at Crystal Growth Centre, Anna University, Chennai – 600 025, from 28th May to 17th June 2001.
4. Participated in the UGC sponsored Refresher Course in Physics conducted by the Academic Staff College of University of Kerala, Kariavattom, Thiruvananthapuram from 08.11.2002 to 29.11.2002 and obtained Grade “A”.

Orientation Programme:

5. Participated in the UGC sponsored Orientation Programme conducted by the Academic Staff College of Madurai Kamaraj University from 07.07.2004 to 03.08.2004 and obtained Grade “A”.

Social Service:

- As the NSS programme officer for more than 5 years, I motivated the NSS volunteers to take part in the **social activities** like temple cleaning, traffic control, road laying and other needy help for the public in the rural areas.
- In 10 days NSS special camps, number of **Free Medical Camps** viz., Camps for Diabetics, Health Check-up Camps, Eye Camps, Siddha Medicine Camps, Veterinary

Camps etc., were organised for the poor rural people in different villages around Madurai and the students of NSS were encouraged to serve as volunteers.

- As the NSS programme officer, I was instrumental in planting nearly **1000 tree saplings** in various villages during 10 days NSS special camps.
- Organised many **rallies** involving NSS volunteers on various themes like “Eradication of Illiteracy”, “AIDS Awareness”, “Education for all”, “Run for water” etc.,
- As the National Adult Education Programme Officer, I organised **many camps exclusively for women** on “Domestic Preservation of Fruits and Vegetables”, “Food and Nutrition”, “Preparation of Bakery Products” etc., under the auspices of Population Education Club in collaboration with Food and Nutrition Centre, Madurai and Jayaram Bakery, Madurai.
- Under the auspices of Adult Education and Extension Programme, **Janasikshan Nilayam** (Public Library) was started and maintained at Nagamalai village for rural people to enrich their basic education.
- The NSS volunteers were encouraged to **donate blood** voluntarily in emergency situations for the poor and needy patients admitted in the Government Rajaji Hospital, Madurai.
- Organised many voluntary **Blood Donation Camps** for the needy and dying patients admitted in the Government Rajaji Hospital, Madurai.
- Organised **Science & Technology Exhibition** to school students and public with the help of Tamil Nadu Science Forum (TNSF) in NMSSVN College during NAAC peer team visit for first accreditation in 2005.
- Involved in organising **National Children’s Science Congress (NCSC)** every year in Madurai District, sponsored by NCSTC, Dept. of Science and Technology, Govt. of India in collaboration with the Tamil Nadu Science Forum.
- Involved in **free coaching** to the needy students of various competitive examinations.

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