

EVALUATIVE REPORT OF THE DEPARTMENT



Department of Physics



1. **Name of the Department: Physics**
2. **Year of establishment** : Department of physics was established in the year 1993 in St.Peter's Engineering College which later declared as Deemed to be University in 2008.
3. **Is the department part of a School/ Faculty of the university**
Department of the University
4. **Names of programmes offered (UG, PG, Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt etc.):**
 - M.Sc.
 - M Phil.
 - Ph.D.
5. **Interdisciplinary programmes and departments involved**
Nil
6. **Courses in collaboration with other universities, industries, foreign institutions.**
Nil
7. **Details of programmes discontinued, if any.**
Does not arise
8. **Examination system with: Annual/Semester/Trimester/Choice Based credit system.**
Choice Based Credit System (CBCS)
9. **Participation of the department in the courses offered by other departments(B.E./B.Tech.)**

S. No.	Interdisciplinary courses	Year/ Sem	Departments
1	113PHT03- Engineering Physics I	I/I	CSE,ECE,EEE,BME, Aero, Auto, IT, Civil, BioTech, Chemical, Mech,
	213PHT03- Engineering Physics II	I/II	
	113PCP03- Physics Lab I	I/I	
	213PCP02- Physics Lab II	I/II	
2	Architectural Acoustics	III/VI	B. Architecture

10. Number of Teaching posts sanctioned, Filled

	Sanctioned	Filled	Actual (including CAS &MPS)
Professors	1+1	2	2
Associate professors	-	-	-
Asst. Professors	3+3	6	6

11. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

S. No	Name of the faculty	Qualification	Designation	Specialization	No. of years of Experience	No. of Ph.D/M. Phil students under guidance
1.	Dr. S. Gunasekaran	M.Sc., Ph.D., D. Sc.	Dean (R&D)	Materials Science Medical Physics Molecular Dynamics Spectroscopy	37	Ph.D:8 M.Phil:10 Successfully completed 60 Ph.D Scholars
2.	Dr.S. Stella Mary	M.Sc., M.Phil., Ph.D.	Professor & Head	Materials Science & Crystal Growth	22	Ph.D :1 M.Phil: 35
3.	Mr. R.B. Mani	M.Sc., M.Phil.	Senior Professor	Electronics	39	M.Phil:20
4.	Mrs.R. Ramalakshmi	M.Sc., M.Phil.	Assistant Professor	Material Science	4	-
5.	Ms. R. Girija	M.Sc., M.Phil.	Assistant Professor	Crystallography	2	-
6.	Mrs.Jeethu Johny	M.Sc., M.Phil.	Assistant Professor	Material Science	2	-
7.	Mr. Bubendar	M.Sc., M.Phil.	Assistant Professor	Material Science	1	-
8.	Reshmi S Rao	M.Sc., M.Phil.	Assistant Professor	Material Science	1	-

12. List of senior visiting faculty :

Nil

13. Percentage of classes taken by temporary faculty-programme –wise information

M.Sc : 0%

M.Phil : 0%

14. Programme-wise Student Teacher Ratio

S.No	Program	Sanctioned strength	Student Teacher
1	M.Sc.	12	12:1
2	M.Phil.	40	5: 1

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

	Sanctioned	Filled	Actual (incl. CAS &MPS)
Support Staff (Technical)	1	1	1
Administrative Staff	Nil	Nil	Nil

16. Research thrust areas as recognized by major funding agencies.

- Materials Science
- Spectroscopy
- Molecular Dynamics
- Medical Physics
- Crystal Growth & Crystallography

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

a) National Funding Agencies:

S. No	Name of the Investigator	Funding Agency	Title	Total Grant	Status
1	Dr. S. Stella Mary	Department of Science & Technology(S EED Division)	Women Technology Park	Rs 105.05 lakhs	Result Awaited
2	Dr. S. Gunasekaran	Science and Engineering Research Council – DST	Spectroscopic Methods in Analysing Living Organisms: Laser Induced Fluorescence And Spectroscopic Studies In Human Tissues”	Rs. 39.38 lakhs	Presentati on is over
3	Dr. S. Gunasekaran	Jawaharlal Nehru Overseas Science Fellowship, Department of Science & Technology	Spectroscopic Techniques : Molecular Confirmation al Studies and Therapeutic Effects of some Pharmaceutic al Formulations	Rs. 65,50,000	Result Awaited

b) **International Funding Agencies** : Nil

c) **Total Grants Received** : NIL

18. Inter-institutional collaborative projects and associated grants received

- a) **National Collaboration** - Nil
- b) **International Collaboration** - Nil

19. Departmental projects funded by DST-FIST; DBT, ICSSR, AICTE etc; total grants received.

Nil

20. Research facility/centre with

- State recognition - Nil
- National recognition - Nil
- International recognition - Nil
- Others

The Department of Physics is availing the facilities of Sophisticated Analytical Instrumentation Facility (SAIF-SPU) for materials characterization. The highly sophisticated spectrometers housed in SAIF-SPU are (i) FTIR- ATR (ii) UV-Visible DRS/DTS and (iii) Photo-Luminescence Spectrophotometers.

S.No.	Equipments available in SAIF SPU
1	FTIR Spectrophotometer with ATR Technique.
2	UV-Visible Spectrophotometer with DRS/DTS Techniques.
3	Photo-Luminescence Spectrophotometer.

S.No.	Equipments available in the Department
1	Ultrasonic Interferometer with operating Frequency of 2MHz
2	Hall Effect Kit
3	Energy Gap-Four probe Kit
4	Expremental Setup for Quinke's Method
5	GM Counter with radiation sources and GM tube
6	Laser Kit

21. Special research laboratories sponsored by / created by industry or corporate bodies.

Nil

22. Publications

**a) No. of paper published in peer reviewed journals
(National/International)**

Year	International Journal	National Journal	International Conference	National Conference	Total
2015	19	-	-	39	56
2014	31	-	17	64	113
2013	4	-	-	2	7
2012	-	-	-	-	-

2011	-	-	-	2	2
2010					
2009					
2008	6	-	-	-	6
Total	60	-	17	107	184

PUBLICATIONS IN INTERNATIONAL JOURNAL

2015	
1.	N. Swarnalatha, S. Gunasekaran , S. Muthu, M. Nagarajan, "Molecular structure analysis and spectroscopic characterization of 9-methoxy-2H-furo [3,2-g] chromen – 2 – one with experimental (FT-IR and FT-Raman) techniques and quantum chemical calculations", Spectrochim.Acta Part A, 137, 721–729, 2015. (I.F – 2.163)
2.	N. Swarnalatha, S. Gunasekaran , M. Nagarajan, S. Srinivasan, G. Sankari, G. R. Ram Kumaar, "Vibrational, UV spectra, NBO, first order hyperpolarizability and Homo-Lumo analysis of carvediol", Spectrochim.Acta Part A, 136, 567–578, 2015. (I.F – 2.163)
3.	M. Boopathy, P. Udayakala, T. V. Rajendiran, S. Gunasekaran , "A theoretical evaluation of electronic structure analysis of 5-(4-chlorophenyl)-1h-tetrazole using DFT method", Indian Journal of Science, 12(35), 73-77, 2015. (IF – 0.7)
4.	M. Kumar, R. Kanagadurai, G. Mani, S. Gunasekaran , S. Kumaresan, "Synthesis, growth, molecular structure and spectral studies of 1,3diglycinyln thiourea by density functional method", Optik, 126, 1117-1122, 2015. (IF – 0.769)
5.	R. K. Raj, S. Gunasekaran , T. Gnanasambandan, S. Seshadri, "Spectroscopic and Theoretical studies of 4-cloro-3-formyl-6-methylcoumarin (4C3F6MC)", Int.J.Curr.Res.Aca.Rev.,3(3),110-129,2015.
6.	S. Gunasekaran , T. Gnanasambandan, S. Seshadri, R.K. Raj, "Structural, Spectroscopic (FTIR, FT Raman & UV-Vis) and Theoretical Studies of 4,6-Dichloro-3-formyl coumarin" Int.J.Curr.Res.Aca.Rev.,3(3),130-149,2015.
7.	B. Latha, S. Gunasekaran , S. Srinivasan, G. R. Ram Kumaar, "Spectroscopic and Computational insights into the structure of Chlorthalidone using HF and DFT methods," Indian Journal of Science, 13(36), 7-18, 2015. (IF – 0.7)
8.	A. Chinnamal Janaki, E. Sailatha, S. Gunasekaran "Synthesis, characteristics and antimicrobial activity of ZnO nanoparticles," Spectrochim.Acta Part A, 144, 17-22, 2015. (IF – 2.163)

9.	N. Kanagathara, M. K. Marchewka, M. Drozd, S. Gunasekaran , P. R. Raja Kumar, G. Anbalagan, "Structural and vibrational spectroscopic studies on charge transfer and ionic hydrogen bonding interactions of melaminium benzoate dehydrate", <i>Spectrochim.Acta Part A</i> , 145, 394–409, 2015. (IF – 2.163)
10.	R. R. Saravanan, S. Seshadri, S. Gunasekaran , R. Mendoza Merono, S. Gracia- Granda, "Conformational analysis, X-ray crystallographic, FT-IR, FT-Raman, DFT, MEP and molecular docking studies on 1-(1-(3-methoxyphenyl) ethylidene) thiosemicarbazide", <i>Spectrochim.Acta Part A</i> , 139, 321–328, 2015. (IF – 2.163)
11.	R.K. Raj, S. Gunasekaran , T. Gnanasambandan, S. Seshadri, "Combined spectroscopic and DFT studies on 6-bromo-4-chloro-3-formyl coumarin", <i>Spectrochim.Acta Part A</i> , 139, 505–514, 2015. (IF – 2.163)
12.	A.R. Prabakaran, S. Srinivasan, S. Gunasekaran , M.Prabhakaran, "Density functional theory studies on molecular structure, vibrational spectra and electronic properties of cyanuric acid", <i>Spectrochim.Acta Part A</i> , 138, 711-722, 2015. (IF – 2.163).
13.	S. Suresh, S. Gunasekaran , S. Srinivasan, "Vibrational spectra (FT-IR, FT-Raman), frontier molecular orbital, first hyperpolarizability, NBO analysis and thermodynamics properties of Piroxicam by HF and DFT methods", <i>Spectrochim.Acta Part A</i> , 138, 447-459, 2015. (IF – 2.163)
14.	Rajesh, S. Gunasekaran , T. Gnanasambandan, S. Seshadri, "Experimental, quantum chemical and NBO/NLMO investigations of pantoprazole", <i>PSpectrochim Acta Part A</i> , 136, 247-255, 2015. (IF – 2.163)
15.	M.Prabhakaran, A.R. Prabakaran, S. Gunasekaran , S. Srinivasan, "DFT studies on vibrational spectra, HOMO-LUMO, NBO and thermodynamic function analysis of cyanuric fluoride", <i>Spectrochim.Acta Part A</i> , 136, 494-503, 2015. (IF – 2.163)
16.	P. P. Moorthi, S. Gunasekaran , S. Swaminathan, G. R. Ram Kumar, "Quantum chemical density functional theory studies on the molecular structure and vibrational spectra of mannitol", <i>Spectrochimica Acta Part A</i> , Vol. 137, pp. 412–422, 2015. (IF- 2.163).
17.	P. Govindasamy, S. Gunasekaran , "Quantum mechanical calculations and spectroscopic (FT-IR, FT-Raman and UV) investigations, molecular orbital, NLO, NBO, NLMO and MESP analysis of 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzene-1-sulfonamide", <i>Spectrochimica Acta Part A</i> , Vol. 1081, pp. 96–109, 2015. (IF- 2.163).

18.	P. Rajesh, S. Gunasekaran , T. Gnanasambandam, S. Seshadri, "Molecular structure and vibrational analysis of Trifluoperazine by FT-IR, FT-Raman and UV-Vis spectroscopies combined with DFT calculations", <i>Spectrochimica Acta Part A</i> , Vol. 137, pp. 1184–1193, 2015. (IF- 2.163).
19.	R. K. Raj, S. Gunasekaran , T. Gnanasambandam, S. Seshadri, "Structural and Spectroscopic Characterization of 4-Methylumbelliferone A Combined Experimental and Computational Study", <i>International Journal of Current Research</i> , Volume 7, Issue 05, pp. 16083-16092, May, 2015.
2014	
1.	V. Sangeetha, M. Govindarajan, N. Kanagathara, S. Gunasekaran , P.R. Raja Kumar, G. Anbalagan, "Crystal and molecular structure, conformational, vibrational properties and DFT calculations of melaminium bis (hydrogen oxalate)", <i>Journal of Molecular Structure</i> , 1067, 14–26, 2014. (IF – 1.602)
2.	V. Sangeetha, N. Kanagathara, M.K. Marchewka, S. Gunasekaran , G. Anbalagan, "Growth, Vibrational and Thermal Studies on Melaminium Phthalate Single Crystals", <i>Journal of Physical Science</i> , 25(1), 93–111, 2014.
3.	N. Kanagathara, M.K. Marchewka, S. Gunasekaran , G. Anbalagan, "Optical, mechanical and dielectric studies on bis (4-nitrophenol) - 2,4,6 -triamino 1, 3, 5- triazine monohydrate", <i>Journal of Optoelectronics and Advanced Materials</i> , 16, 1436 – 1441, 2014.
4.	N. Kanagathara, M.K. Marchewka, S. Gunasekaran , G. Anbalagan, "Kinetics and Mechanical Studies of Melaminium bis(trichloroacetate) dehydrate", <i>Acta Physica Polonica A</i> , 126, 827-832, 2014.
5.	P. Krishnan, K. Gayathri, N. Sivakumar, S. Gunasekaran , G. Anbalagan, "Nucleation kinetics, growth, crystalline perfection, mechanical, thermal, optical and electrical characterization of brucinium 2-carboxy-6-nitrophthalate dihydrate single crystal", <i>Journal of Crystal Growth</i> , 396, 85–94, 2014. (IF – 1.698)
6.	P. Krishnan, K. Gayathri, P. R. Rajakumar, V. Jayaramakrishnan, S. Gunasekaran , G. Anbalagan, "Studies on crystal growth, vibrational, optical, thermal and dielectric properties of new organic nonlinear optical crystal: Bis (2,3-dimethoxy- 10-oxostyrychnidinium) phthalate nonahydrate single crystal", <i>Spectrochim. Acta Part A: Mol. and Biomol. Spectroscopy</i> , 131, 114–124, 2014. (IF – 2.353)
7.	P. Krishnan, K. Gayathri, S. Gunasekaran , G. Anbalagan, "Optical, spectral and thermal properties of organic nonlinear optical single crystal: 2,3-Dimethoxy-10-oxostyrychnidinium hydrogenoxalate dehydrate", <i>Optik</i> , 125, 3852–3859, 2014. (IF – 0.667)

8.	P. Rajesh, S. Gunasekaran , S. Seshadri, T. Gnanasambandan, "DFT computational analysis of piracetam", <i>Spectrochimica Acta Part A</i> , Vol. 132, pp. 249–255, 2014. (IF- 2.163).
9.	V. Sangeetha, M. Govindarajan, N. Kanagathara, M.K. Marchewka, S. Gunasekaran , G. Anbalagan, "Structure and vibrational spectra of melaminium bis(trifluoroacetate) trihydrate: FT-IR, FT-Raman and quantum chemical calculations", <i>Spectrochimica Acta Part A</i> , Vol. 125, pp. 252–263, 2014. (IF- 2.163).
10.	T. Gnanasambandan, S. Gunasekaran , S. Seshadri, "FT-IR, FT-Raman, "UV–Vis spectral and normal coordinate analysis of chlorzoxazone", <i>Spectrochimica Acta Part A</i> , Vol. 1061, pp. 124–133, 2014. (IF- 2.163).
11.	K. Senthilkannan, S. Gunasekaran , "SEM CRAMS of Zinc Tris Thiourea Chloride Crystals", <i>International Journal of Frontiers In Science And Technology</i> , 2(3), 14-18, 2014.
12.	T. Gnanasambandan, S. Gunasekaran , S. Seshadri, "DFT computations and spectroscopic analysis of p-bromoacetanilide", <i>Spectrochimica Acta Part A</i> , Vol. 122, pp. 542–552, 2014. (IF- 2.163).
13.	M.Prabhakaran, A.R. Prabakaran, S. Srinivasan, S. Gunasekaran , "Experimental and theoretical spectroscopic analysis, HOMO – LUMO, and NBO studies of Cyanuric Chloride", <i>Spectrochimica Part A</i> , Vol.127, pp. 454 – 462, 2014. (IF- 2.163).
14.	G. R. Ram Kumar, M. Baby Shalini, S. Gunasekaran , S. Srinivasan, "Spectroscopic investigation on glutamic acid by Coulomb-attenuating and double hybrid density functional theory methods, Molecular Simulation", 10.1080/08927022.2014.886018, 2014. (IF – 1.056).
15.	P. P. Moorthi, S. Gunasekaran , G. R. Ram Kumar, "Vibrational spectroscopic studies of Isoleucine by quantum chemical calculations", <i>Spectrochimica Acta Part A</i> , Vol. 124, pp. 365–374, 2014. (IF- 2.163).
16.	P. Govindasamy, S. Gunasekaran , "Spectroscopic (FT-IR, FT-Raman and UV) investigation, NLO, NBO, molecular orbital and MESP analysis of 2-{2-[(2,6-dichlorophenyl)amino]phenyl}acetic acid", <i>Spectrochimica Acta Part A</i> , Vol.xxx, pp. xxx, 2014. (IF- 2.163).
17.	P. Govindasamy, S. Gunasekaran , G. R. Ram Kumar, "Natural bond orbital analysis, electronic structure and vibrational spectral analysis of N-(4-hydroxyl phenyl) acetamide: A density functional theory", <i>Spectrochimica Acta Part A</i> , Vol.130, pp. 621-633, 2014. (IF- 2.163).
18.	P. Govindasamy, S. Gunasekaran , S. Srinivasan, "Molecular geometry, conformational, vibrational spectroscopic, molecular orbital and Mulliken charge analysis of 2-acetoxybenzoic acid", <i>Spectrochimica Acta Part A</i> , Vol.130, pp. 329-336, 2014. (IF- 2.163).
19.	S. Gunasekaran , P. Kuppuraj, K. Priya, "Determine the Chemistry

	of Selected Steel by NDE Technique of Positive Material Identification (PMI)", International Journal of Science and Research, Vol. 3, pp. 662-666, 2014. (I.F – 3.358).
20.	T. Lawrence and S. Gunasekaran , "Spectroscopic Characterization of Pyrrolizidine Alkaloid – isolated from <i>Eupatorium glandulosum</i> - A Toda Tribal Medicinal Plant and Its Theoretical Comparison with Molecular Structural Estimation, FTIR, UV and MS Data", Journal of Chemical, Biological and Physical Sciences, Vol. 4, pp. 1437-1443, 2014. (I.F – 0.703).
21.	T. Lawrence and S. Gunasekaran , "Isolation, Molecular Structural Estimation and Characterized by FTIR, UV, Visible and GCMS Data of (9-Benzyl-9Hcarbazole-3, 6-diyl) bis (2, 1- ethynediyl-1, 5-cyclohexadien-1- yl-4-ylidene)-dimethanone Alkaloid from <i>Rubus ellipticus</i> and with Theoretical Conformational Analysis", Journal of Chemical, Biological and Physical Sciences, Vol. 4, pp. 2445-2453, 2014. (I.F – 0.703).
22.	T. Lawrence and S. Gunasekaran "Isolation, Molecular Structural Analysis of Berberine Alkaloid in <i>Mahonia Leschenaultii</i> - A Toda Medicinal Plant by using IR, UV and Ms Values and Theoretical Comparison", International Journal of Scientific & Engineering Research, Vol. 5, pp. 658-663, 2014. (I.F- 3.2).
23.	S. Gunasekaran , P. Rajesh, T. Gnanasambandam, A. Manikandan, S. Seshadri, "FT-IR, FT-Raman, UV-Vis Spectra and Quantum Chemical Studies on Aspartame", Inter. Journal of Science, technology and Humanities, 1, 18 -29, 2014.
24.	P. Kuppuraj, S. Gunasekaran , P. Puliayaran, "Plasma (Ion) Nitriding of Low Alloy steel (EN 19 grade) and Investigation of its Physico-Mechanical Properties", International Journal of Science, Technology and Humanities, 1, 93-98, 2014.
25.	K. Senthil Kannan, S. Gunasekaran , J. Gowtham Retwik Wagish,"UV, SEM, Powder XRD studies of Acetoacetanilide (AAC) Crystal", International Journal of ChemTech Research, 6(5), 3187-3190, 2014.
26.	K. Senthil Kannan, S. Gunasekaran , "Surface Morphological Behaviour of Semi Organic NLO crystal Zinc Tris Thoiurea Chloride (ZTTC)", International Journal of Frontiers in Science and Technology, 2(3), 38-42, 2014.
27.	K. Senthil Kannan, S. Gunasekaran , R. Ilango, "Photoluminescence Study of LAO – New NLO Material", International Journal of Frontiers in Science and Technology, 2(2), 15-17, 2014.
28.	K. Kalaimagal and S. Gunasekaran ,"FTIR Spectral study on Normal and Typhoid blood Samples", International Journal of Biology, Pharmacy and Allied Sciences, 4(4), 1708-1715, 2014.
29.	R. Ilango, E. Velappan, s. Jayalakshmi, K. Senthil Kannan, S. Gunsekaran ,"Measuring Air Quality by Analysing Pollutants – ISC

	3 Model”, International Journal of Frontiers in Science and Technology, 2(2), 73 – 81, 2014.
30.	B. Latha, S. Gunasekaran , S. Srinivasan, G. R. Ram Kumaar, “Computation and Interpretation of vibrational spectra on the structure of Losartan using ab initio and Density Functional Methods”, Spectrochimica Part A, 132, 375 - 386, 2014. (IF- 2.163).
31.	S. Gunasekaran “Vibrational spectra, electronic and quantum mechanical investigations on ciprofloxacin” Indian J Phys-ISSN 0973- 1458 –IJP an international journal.
2013	
1.	T. Lawrence and S. Gunasekaran ,”Isolation, Structural Analysis of an Alkaloid in <i>Toddalia Asiatica</i> and Theoretical Comparison”, International Journal of Innovative Research in Science, Engineering and Technology, Vol. 2, pp. 7581 – 7589, 2013. (I.F – 0.66).
2.	M. Prabhakaran, A. R. Prabakaran, S. Gunasekaran , S. Srinivasan, “Molecular structure and Vibrational Spectroscopic Investigation of Melamine using DFT theory calculations”, Spectrochimica Part A, Vol.123, pp.392- 401, 2013.(IF- 2.163).
3.	R. R. Saravanan, S. Seshadri, S. Gunasekaran , R. Mendoza-Merono, S. Garcia-Granda, “Crystallographic, experimental (FT-IR and FT-RS) and theoretical (DFT) Investigation, UV-Vis, MEP, HOMO-LUMO and NBO/NLMO of (E)-1-[1-(4-Chlorophenyl)ethylidene] thiosemicarbazide”, Spectrochimica Part A, Vol.121, pp.268-275, 2013. (IF- 2.000).
4.	B. Prameena, G. Anbalagan, S. Gunasekaran , G. R. Ram Kumaar, “Structural, optical electron paramagnetic, thermal and dielectric characterization of Chalcopyrite”, Spectrochimica Part A, Vol. 122, pp.348 – 355, 2013. (IF- 2.000).
2008	
1.	Stella Mary S. Shahil Kirupavathy, P. Mythily, Dr. R. Gopalakrishnan, ‘Growth and Characterization of Sodium pentaborate (NaB ₅) single crystals’, 2008 – Spectrochimica. Acta. Part A, Vol. 71, Issue 4, pp 1311 – 1316.
2.	P. Mythili, T. Kanagasekaran, S. Stella Mary , D. Kanjilal, R. Gopalakrishnan, ‘Swift heavy ion induced modification on the optical, mechanical and dielectric behaviour of GLS single crystals’, Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, Volume 266, Issue 8, April 2008, Pages:1737-1740.
3.	S. Shahil Kirupavathy, S. Stella Mary , Dr. R. Gopalakrishnan, ‘Growth and characterization of pure and doped Cadmium Thiourea Acetate single crystals’, 2008 – J. Cryst. Growth, Vol. 306, pp 102 – 110.
4.	S. Stella Mary S. Shahil Kirupavathy, , P. Mythily, T.

	Kanagasekaran, Dr. R. Gopalakrishnan, 'Studies on the growth, optical, electrical and spectral properties of potassium pentaborate (KB5) single crystals', 2007 – Spectrochimica Acta Part A, Vol. 71, Issue 1, pp 10 – 16.
5.	S. Shahil Kirupavathy, S. Stella Mary , P. Mythily, T. Kanagasekaran, Dr. R. Gopalakrishnan, 'Investigations on the Growth and characterization studies of Cadmium Thiourea Acetate (CTA) single crystals', 2007 – J. Cryst. Growth, Vol. 306, pp. 102–111.
6.	S. Shahil Kirupavathy, S. Stella Mary , P. Mythily, T. Kanagasekaran, Dr. R. Gopalakrishnan, 'Swift heavy ion induced modification on the optical, mechanical and dielectric behaviour of GLS single crystals', Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, Volume 266, Issue 8, April 2008, Pages 1737–1740

PUBLICATIONS IN INTERNATIONAL CONFERENCES

2014	
63.	S. Kamatchi, E. Sailatha and S . Gunasekaran , "Discrimination of Thyroid Diseased Blood by using FT-IR Spectroscopy, International Conference on Perspectives in Vibrational Spectroscopy" (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum
64.	S. Gunasekaran , P. Kuppuraj, "A practical and economical approach on ultrasonically irradiated biodiesel", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum.
65.	V. Manivannan, S. Gunasekaran , S. Kumaresan, "Spectroscopic and Ultrasonic characterization of hydrogen bonded glycine dimer in aqueous phase", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum.
66.	R. Rajasekar, S. Gunasekaran , T. S. Renuga Devi, S. Kumaresan, "Spectrometric identification of an isolated anti-diabetic compound from Caussia Auriculata", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum
67.	P.Rajesh, S. Gunasekaran , S. Seshadri, T. Gnanasambandan, "Spectroscopic study and quantum chemical calculations of Trifluoperazine, International Conference on Perspectives in Vibrational Spectroscopy" (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum.

68.	S. Gunasekaran , P. Ramesh, M. Parasuraman, G. R. Ramkumaar, "Molecular Structure, Vibrational spectra UV-Visible and NMR Analysis on Ranitidine hydrochloride using HF and DFT method", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum.
69.	S. Selvaraj, P. Rajkumar, S. Gunasekaran , S. Kumaresan,"An in-vitro approach and Spectroscopic studies on anti-diabetic activity on the extracts of Cassia auriculata", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum.
70.	E. Sailatha, S. Gunasekaran , K. Shobana, P. Rajesh, "Experimental and theoretical spectroscopic studies of Anastrozole using quantum mechanical methods", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum
71.	S. Gunasekaran , T. Sri Lavanya,"Analysis on the Insulation Property of Vermiculite", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum.
72.	M. Suhasini, E. Sailatha, S. Gunasekaran ,"FTIR, FTR and UV-Vis Analysis of Rifampicin", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum.
73.	N. Swarnalatha, S. Gunasekaran , S. Muthu, "Spectroscopic and molecular structure investigation of trioxsalen by DFT method: A combined experimental and theoretical study", International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14), 8-12 July 2014, Mar Ivanios College, Trivandrum.
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166.	T. Sri Lavanya, S. Gunasekaran , "Spectroscopic and Dielectric measurements on Vermiculite", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
167.	S. Venda, S. Gunasekaran , S. Srinivasan,"Growth and Characterization of L- Asparagine Sodium Nitrate single crystal", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
168.	S. Suresh, S. Gunasekaran , S. Srinivasan,"Studies of the Molecular Geometry, Vibrational spectra, Frontier molecular orbital, Non- Linear optical and thermodynamic properties of salicylic acid by quantum chemical calculations", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
169.	B. Sylajaa, S. Gunasekaran , S. Srinivasan,"Density Functional Theory, Restricted Hartree Fock simulations and Vibrational Spectroscopy studies of Chlordiazepoxide", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram
170.	P. Rajesh, R. Gopathy, S. Gunasekaran , "FT-IR, FT-Raman, UV-Vis Spectral, NBO, NLO, MEP Conformational and Electronic spectral Analysis of Allantoin", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
171.	P. Ramesh, G.R. Ramkumaar, S. Gunasekaran , "Experimental and Theoretical investigation and NBO analysis on the structure of Ranitidine Hydrochloride", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014,

	Annamalai University, Chidambaram
172.	K. Shobana, E. Sailatha, S. Gunasekaran , G.R. Ramkumaar, "Experimental and Theoretical Spectroscopic studies on Temozolomide – A Chemotherapeutic drug", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
173.	P. P. Moorthi, S. Gunasekaran , G.R. Ramkumaar, "Vibrational Spectroscopic studies of Isoleucine by Quantum Chemical Calculations", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
174.	K. Rajalakshmi, S. Gunasekaran , M. Vetrivel, S.Kumaresan, "Density Functional Theoretical study in Optimization of 2-propylpyridine – 4- Carbothioamide", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram
175.	A. Chinnammal Janaki, E. SAILatha and S. Gunasekaran , "Green synthesis of ZNO Nanoparticles, its characteristics and its Antimicrobial activity", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram
176.	G.R. Ramkumaar, S. Gunasekaran , and S. Srinivasan, "Vibrational spectral investigation of 2-aminopentanedioic ACID using Coulomb-Attenuating and Double hybrid density functional theory method", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
177.	P.Govindasamy, S. Gunasekaran , and S. Srinivasan, "Vibrational spectroscopic (FTIR and FT-Raman) investigation, NBO, HOMO-LUMO, MESP analysis of 4-[5-(4-Mthylphenyl)-3-(Trifluoromethyl)-1 H-Pyrazol-1-YL] benzene-1-1sulfonamide", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
178.	P. Rajesh, S. Gunasekaran , S.Seshadri and S. T. Ganasanbandan, "Conformational analysis of Ornidazole by Quantum Chemical Calculations", National Conference in

	Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
179.	K. Kalaimagal, S. Gunasekaran , and G. R. Ramkumaar, "Quantum Mechanical study of the structure and spectroscopic (FTIR, FT-Raman), NBO and HOMO-LUMO analysis of Chloramphenical", National Conference in Advanced Materials and its Applications (NCAMA'14), 4&5 th April 2014, Annamalai University, Chidambaram.
180.	S. Gunasekaran and P. S. Ganeshvar, "Spectroscopic investigation of some Lung Drugs", National conference on advanced materials (NCAM 2014), 18-19, July 2014, Sri Vidya Mandir Arts and Science College, Uthangarai.
181.	K. Senthil Kannan and S. Gunasekaran , "Photoluminescence study of LAO- New NLO material", National conference on advanced materials (NCAM 2014), 18-19, July 2014, Sri Vidya Mandir Arts and Science College, Uthangarai.
182.	S. Gunasekaran and P. S. Ganeshvar, Photoluminescence study of LAO- New NLO material", National conference on advanced materials (NCAM 2014), 18-19, July 2014, Sri Vidya Mandir Arts and Science College, Uthangarai
2013	
183.	T. Gnanasambandan, S. Gunasekaran , and S. Seshadri, "FTIR, FT-Raman,, UV-Vis spectral and normal coordinate analysis of chlorzoxazone", National Seminar on Frontier Areas of Spectrophysics (NASFAS'13), 19&20 th December 2013 SCSVMV University, Enathur, Kanchipuram
184.	R. R. Saravanan, S. Seshadri, S. Gunasekaran , V. Dayalan, A. K. Mohanakrishanan,"Molecular Electrostatic potential, Conformational Analysis and Molecular Docking Studies of Bromo methylindole derivative", National Seminar on Frontier Areas of Spectrophysics (NASFAS'13), 19&20 th December 2013 SCSVMV University, Enathur, Kanchipuram.

b) **Monographs** – Nil

c) **Chapters in Books**

S.No.	Name of the Author	Name of the Chapter	Title of the Book	Publisher
1.	Dr.S.Stella Mary	Design of Experiments	Proceedings of workshop on Research Methodology (Oct 2014)	St.Peter's University

d) **Edited Books** – Nil

e) **Books with ISBN with details of Publishers** – 17

S. No.	Name of the Author	Title of the Book	ISBN No.	Publisher
1.	Dr. S. Stella Mary	Engineering Physics I	ISBN 9788190858427 I edition 2007 Revised edition 2013	R.K. Publisher Coimbatore
2.	Dr. S. Stella Mary	Engineering Physics II	ISBN 9788190858434 I edition 2007 Revised edition 2013	R.K. Publisher Coimbatore
3.	Dr. S. Stella Mary	Engineering Physics Manual	I edition 2007 Edition 2014	R.K. Publisher Coimbatore
4.	Dr.S.Gunasekaran, Chairperson	XII Std. Higher Secondary Physics	Tamilnadu Text Book Corporation, Govt. of Tamilnadu	I Edition 2004 to 2015
5.	Dr.S.Gunasekaran, Chairperson	XI Std. Higher Secondary Physics	Tamilnadu Text Book Corporation, Govt. of Tamilnadu	I Edition 2004 to 2015
6.	Dr.S.Gunasekaran, Chairperson	VI Std. Science	Tamilnadu Text Book Corporation, Govt. of Tamilnadu	I Edition 2004 to 2015
7.	Dr.S.Gunasekaran, Chairperson	XII Std. Environmental Education	Tamilnadu Text Book Corporation, Govt. of	I Edition 2004 to 2015

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			Tamilnadu	
8.	Dr.S.Gunasekaran, Chairperson	XI Std. Environmental Education	Tamilnadu Text Book Corporation, Govt. of Tamilnadu	I Edition 2004 to 2015
9.	Dr.S.Gunasekaran, Chairperson	X Std. Environmental Education	Tamilnadu Text Book Corporation, Govt. of Tamilnadu	I Edition 2004 to 2015
10.	Dr.S.Gunasekaran, Chairperson	IX Std. Environmental Education	Tamilnadu Text Book Corporation, Govt. of TN	I Edition 2004 to 2015
11.	Dr.S.Gunasekaran, Chairperson	XII Std. Higher Secondary Physics - Practical Work Book	Directorate of School Education, Govt.of Tamilnadu.	I Edition 2004 to 2015
12.	Dr.S.Gunasekaran, Chairperson	XI Std. Higher Secondary Physics - Practical Work Book	Directorate of School Education, Govt.of Tamilnadu.	I Edition 2004 to 2015
13.	Dr.S.Gunasekaran, Chairperson	X Std. Higher Secondary Physics - Practical Work Book	Directorate of School Education, Govt.of Tamilnadu.	I Edition 2004 to 2015
14.	Dr.S.Gunasekaran, Chairperson	IX Std. Higher Secondary Physics - Practical Work Book	Directorate of School Education, Govt.of Tamilnadu.	I Edition 2004 to 2015
15.	Dr.S.Gunasekaran, Chairperson	Question Bank for Higher Secondary Physics	PTI, Directorate of School Education, Govt.of Tamilnadu.	I Edition 2004 to 2015
16.	Dr.S.Gunasekaran,	Solutions to	PTI, Directorate	I Edition 2004 to

	Chairperson	unsolved problems, XII Std. Higher Secondary Physics	of School Education, Govt.of Tamilnadu.	2015
17.	Dr.S.Gunasekaran, Chairperson	Applied Physics for Vocational Group - Higher Secondary Physics	Tamilnadu Text Book Corporation Govt.of Tamilnadu.	I Edition 2004 to 2015

f) **Number listed in International Database(for e.g. web of science, scopus, Humanities International complete, Dare Database –International Social sciences Directory, EBSCO host, etc) – 60**

g) **Citation Index - range/ average – 1817**

h) **SNIP - : Nil**

i) **SJR - : 0.05 -5.065**

j) **Impact factor - Range /average : Min:0.66 & Max:3.358**

k) **H-index- Min: 2 & Max: 20**

l) **Total Impact factor – 137.24**

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Nil

25. Faculty selected nationally/internationally to visit other laboratories / institutions / industries in India and abroad

Nil

26. Faculty Serving in a) National Committees b) International Committees c) Editorial Boards

a) Faculty serving in National Committees

S. No.	Name of the faculty	Details
1	Dr.S. Gunasekaran	Referee for the journals <ul style="list-style-type: none"> • Spectrochim. Acta, France • Journal of Molecular liquids, USA • Asian Journal of Physics, USA • Chemistry and Physics Letter, USA • Indian Journal of Pure & Applied Physics, India • Annamalai University Journal, India • Annamalai University Journal of Engineering and Technology, India • Convergence India. • Member in the Advisory Committee for International Conference
2	Dr. S. Stella Mary	

b) Faculty serving in International Committees

Nil

c) Editorial Boards

S. No.	Name of the faculty	Details
1	Dr.S. Gunasekaran	Editorial board of Journals and Conference Proceedings <ul style="list-style-type: none"> • Asian Journal of Physics • National Conference on Perspectives in Lasers and Spectroscopy (NCPLAS 2009), 286-26 September 2009 • National Conference on Recent Advances in Physics (NCRAP 2008),1-2 February 2008 • International Conference on Spectrophysics – INCONS 2005, 9–12 February 2005 Chennai, India • National Conference on Recent advances in molecular interactions, 26-27, March 2004, Coimbatore, India. • National Conference on Spectrophysics – NCONS 2000, 9-11 August 2000, Chennai,

		<p>India.</p> <ul style="list-style-type: none"> • National Conference on Spectrophysics – NCONS 1997, 8-10 February 1997, Chennai, India. • National Conference on recent advances in molecular structure, NCMS, July 2007, Chennai, India
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d) Any other (please specify) :

1. Inaugural Address – Academic and Research activities for the period 2013-2015 by Dr.S.Gunasekaran

S.No	Conference/Seminar/Workshop	Date and Month	Year	Venue
1	IGNITED-2015	21 st August	2015	Dharmamurthi Rao Bahadur Calavala Cunnan Chetty's Hindu College, Chennai.
2	AVIT Research Forum	10 th August	2015	Aarupadai Veedu Institute of Technology (AVIT), Chennai.
3	National Conference on Solar Energy and its Applications (NCSEA'15)	15 th July	2015	E.R.K. Arts and Science College, Dharmapuri.
4	International Year of Light	10 th April	2015	Dr. MGR Educational and Research Institute, Chennai.
5	Workshop on Theoretical Ultrasonics	28 th March	2014	Annamalai University Chidambaram.
6	National Seminar on Frontier Areas of SpectroPhysics (NASFAS - 2013)	19-20 December	2013	SCSVMV University Enathur, Kanchipuram
				Sri Vidya

7	Inspire internship Programme	27 th Nov -1 st Dec	2013	Mandir Arts & Science College Uthangarai.
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2. Keynote Address

S.No	Conference/Seminar/Workshop	Date and Month	Year	Venue
1	National Conference on Recent Advances in Applied Sciences (NCRAAS' 15)	5-6 February	2015	C.T.T.E College for Women, Chennai.
2	National Conference on Spectrophysics (NCONS' 15)	30-31 January	2015	S.T. Hindu College, Nagercoil.
3	National Conference on Advanced Materials (NCAM' 14)	18-19 July	14	Sri Vidya Mandir Arts & Science College Uthangarai.
4	National Conference in Advanced Materials and its Applications (NCAMA – 2014)	4-5 March	2014	Annamalai University Chidambaram.

3. Invited Talks Given / Chaired the Sessions / In Conferences / Seminars/ Symposia/ Workshops

1. International Year of Light and Light Based Technologies, April 2015, Dr. MGR Educational and Research Institute, Chennai.
2. National Conference on Recent Advances in Applied Sciences (NCRAAS' 15), February 2014, C.T.T.E. College for Women, Chennai.
3. National Conference on Spectrophysics (NCONS' 15), January 2015, S.T. Hindu College, Nagercoil, Tamil Nadu.
4. International Conference on Frontier Areas in Physics, December 2014, SCSVMV University, Enathur, Kanchipuram, Tamil Nadu.
5. Workshop on Research Methodology, October 2014, Chennai, Tamil Nadu.
6. PINTECH' 14, October 2014, SCSVMV University, Enathur, Kanchipuram, Tamil Nadu.
7. National Conference on Materials of Modern World (NCMMW' 14), September 2014, Chennai, Tamil Nadu.

8. National Conference on Recent Advances in Material Sciences (NCRAMS'14), September 2014, Pondicherry, India.
9. National Conference on Advanced Materials (NCAM'14), July 2014, Sri Vidya Mandir Arts & Science College, Uthangarai, Tamil Nadu.
10. Workshop on Theoretical Ultrasonics (WTU' 14), March 2014, Annamalai University, Chidambaram. Tamil Nadu.
11. National Conference in Advanced Materials and its Applications (NCAMA – 2014), March 2014, Annamalai University, Chidambaram. Tamil Nadu.
12. National Seminar on Frontier Areas of Spectrophysics (NASFAS 2013), December 2013, SCSVMV University, Kanchipuram, Tamil Nadu.
13. Recent trends in Laser Spectroscopy and its Applications (RTILSA 2013), October 2013, Sai Ram Engineering College, Chennai, Tamil Nadu.
14. National Seminar on New Materials Research and Nano Technology (NSNMRN 2013), September 2013, Govt. Arts College, Ooty, Tamil Nadu.

4. Self Motivation Talk / Special Lectures

S.No	Title of the Talk	Month	Year	Venue
1	Self Motivation for Gen Next	17 th July	2015	Kathivadi High School, Vellore Dt.
2	Self Motivation for Gen Next	November	2014	Chinmaya Vidhyalaya, Virugambakkam
3	Genre Development to Bind Science and Society	26 th September	2014	L.N.Government College, Ponneri
4	Concept Development for Inspiring Innovations(Quality + Utility)	28 th August	2014	Morappur Kongu College of Arts and Science, Morappur
5	Concept Development for Inspiring Innovations(Quality + Utility) – <i>Young Students Scientist Programme</i>	25 th April	2014	St. Joseph's College Cuddalore
6	Self Motivation for Gen Next	March	2014	University of Madras Chennai
7	Self Motivation for Gen Next	March	2014	St. Peter's University
8	Concept Development for Inspiring Innovations	15 th March	2014	Dr. Ambedkar Government Arts College, Chennai

9	Self Motivation for Gen Next	1 st February	2014	Vivekananda Matriculation School, Pandamangalam, Namakkal
10	Concept Development for Inspiring Innovations(Quality + Utility)	21 st February	2014	Jaya College of Arts & Science, Chennai.
11	Concept Development for Inspiring Innovations(Quality + Utility)	18 th February	2014	Bharathi Women's College (Autonomous), Chennai.
12	Learning Electron Mechanics Through Experiments	18 th February	2014	Bharathi Women's College (Autonomous), Chennai.
13	Concept Development for Inspiring Innovations(Quality + Utility)	30 th January	2014	Kongunadu Arts and Science College Coimbatore
14	Concept Development for Inspiring Innovations (Quality + Utility)	13 th December	2013	Jamal Mohamed College Tiruchirappalli
15	Concept Development for Inspiring Innovations(Quality + Utility)	26 th November	2013	Periyar Institute of Management Studies (PRIMS) Periyar University, Salem
16	Learning Electron Mechanics Through Experiments	18 th November	2013	DG. Vaishnav College Chennai

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, Workshops, training programs and similar programs).

Year	FDP	Training Prog.	Workshops	Seminars	Conference
2015	1	-	-	-	-
2014	9	-	1	6	-
2013	2	-	1	2	-
2012	4	1	1	1	1
2011	-	-	1	-	-
2010	-	3	1	-	-

Workshops / training program details are given in below table

S. No.	Name of the faculty	Program	Period	Organized by
1	Dr.S.Stella Mary	Assessment and Accreditation of Universities – By NAAC	09.04.2015	St.Peter's University, Chennai
	Dr.S. Gunasekaran	Assessment and Accreditation of Universities – By NAAC	09.04.2015	St.Peter's University, Chennai
3	Mr. R.B. Mani	Assessment and Accreditation of Universities – By NAAC on.	09.04.2015	St.Peter's University, Chennai
4	Ms. Girija. K	Assessment and Accreditation of Universities – By NAAC	09.04.2015	St.Peter's University, Chennai
5	Ms. Jeethu Johny	Assessment and Accreditation of Universities – By NAAC	09.04.2015	St.Peter's University, Chennai
6	Dr.S.Stella Mary	How to Instill Quality in Technical Education – Practical Approach	01.12.2014	St.Peter's University
7	Dr.S. Gunasekaran	How to Instill Quality in Technical Education – Practical Approach	01.12.2014	St.Peter's University
8	Dr.M.Parasuraman	How to Instill Quality in Technical Education – Practical Approach	01.12.2014	St.Peter's University
9	Ms. S.Syedali Fathima	How to Instill Quality in Technical Education – Practical Approach	01.12.2014	St.Peter's University
10	Dr.S.Stella Mary	Innovative Teaching Methodology	10.11.2014	St.Peter's University
11	Dr.S. Gunasekaran	Innovative Teaching Methodology	10.11.2014	St.Peter's University
12	Dr.M.Parasuraman	Innovative Teaching Methodology	10.11.2014	St.Peter's University

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13	Ms. S.Syedali Fathima	Innovative Teaching Methodology	10.11.2014	St.Peter's University
14	Dr.S.Stella Mary	Nanotechnology Technology for the future	20.06.2014	St.Peter's University
15	Dr.S. Gunasekaran	Nanotechnology Technology for the future	20.06.2014	St.Peter's University
16	Dr.M.Parasuraman	Nanotechnology Technology for the future	20.06.2014	St.Peter's University
17	Ms. S.Syedali Fathima	Nanotechnology Technology for the future	20.06.2014	St.Peter's University
18	Dr.S.Stella Mary	Academic and Research program for 2014	18.06.2014	St.Peter's University
19	Dr.S. Gunasekaran	Academic and Research program for 2014	18.06.2014	St.Peter's University
20	Dr.M.Parasuraman	Academic and Research program for 2014	18.06.2014	St.Peter's University
21	Ms. S.Syedali Fathima	Academic and Research program for 2014	18.06.2014	St.Peter's University
22	Dr.S.Stella Mary	New Facility materials characterization using Spectroscopy	28.04.2014	SAIF Lab-St.Peter's University
23	Dr.M.Parasuraman	New Facility materials characterization using Spectroscopy	28.04.2014	SAIF - St.Peter's University Lab-
24	Ms. S.Syedali Fathima	New Facility materials characterization using Spectroscopy	28.04.2014	SAIF Lab-St.Peter's University
25	Dr.S.Stella Mary	Management of Students in present environment	21.04.2014	St.Peter's University
26	Dr.S. Gunasekaran	Management of Students in present environment	21.04.2014	St.Peter's University
27	Dr.M.Parasuraman	Management of Students in present environment	21.04.2014	St.Peter's University

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28	Ms. S.Syedali Fathima	Management of Students in present environment	21.04.2014	St.Peter's University
29	Dr.S.Stella Mary	Awareness lecture on income tax, professional tax, provident fund and employees state insurance	07.04.2014	St.Peter's University
30	Dr.S. Gunasekaran	Awareness lecture on income tax, professional tax, provident fund and employees state insurance	07.04.2014	St.Peter's University
31	Dr.M.Parasuraman	Awareness lecture on income tax, professional tax, provident fund and employees state insurance	07.04.2014	St.Peter's University
32	Ms. S.Syedali Fathima	Awareness lecture on income tax, professional tax, provident fund and employees state insurance	07.04.2014	St.Peter's University
33	Dr.S.Stella Mary	Teaching – Learning process	08.04.2014	St.Peter's University
34	Dr.S. Gunasekaran	Teaching – Learning process	08.04.2014	St.Peter's University
35	Dr.M.Parasuraman	Teaching – Learning process	08.04.2014	St.Peter's University
36	Ms. S.Syedali Fathima	Teaching – Learning process	08.04.2014	St.Peter's University
37	Dr.S.Stella Mary	Preparing project proposals	10.04.2014	St.Peter's University
38	Dr.S. Gunasekaran	Preparing project proposals	10.04.2014	St.Peter's University
39	Dr.M.Parasuraman	Preparing project proposals	10.04.2014	St.Peter's University
40	Ms. S.Syedali Fathima	Preparing project proposals	10.04.2014	St.Peter's University
41	Dr.S.Stella Mary	Achieving academic excellence and high quality research	30.10.2013	St.Peter's University

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42	Dr.M.Parasuraman	Achieving academic excellence and high quality research	30.10.2013	St.Peter's University
43	Mr. A.Mohamed Hidayathullah	Achieving academic excellence and high quality research	30.10.2013	St.Peter's University
44	Ms. J.Mohana	Achieving academic excellence and high quality research	30.10.2013	St.Peter's University
45	Dr.S.Stella Mary	Concept development for inspiring innovation	01.10.2013	St.Peter's University
46	Dr.M.Parasuraman	Concept development for inspiring innovation	01.10.2013	St.Peter's University
47	Mr. A.Mohamed Hidayathullah	Concept development for inspiring innovation	01.10.2013	St.Peter's University
48	Ms. J.Mohana	Concept development for inspiring innovation	01.10.2013	St.Peter's University
49	Dr.S.Stella Mary	Personality Re Engineering	01.09.2012	St.Peter's University
50	Dr.M.Parasuraman	Personality Re Engineering	01.09.2012	St.Peter's University
51	Mr. A.Mohamed Hidayathullah	Personality Re Engineering	01.09.2012	St.Peter's University
52	Dr.S.Stella Mary	Motivation towards Teaching	11.08.2012	St.Peter's University
53	Dr.M.Parasuraman	Motivation towards Teaching	11.08.2012	St.Peter's University
54	Mr. A.Mohamed Hidayathullah	Motivation towards Teaching	11.08.2012	St.Peter's University
55	Dr.S.Stella Mary	Personality Re-Engineering	11.09.2012	St.Peter's University
56	Dr.M.Parasuraman	Personality Re Engineering	11.09.2012	St.Peter's University
57	Mr. A.Mohamed Hidayathullah	Personality Re Engineering	11.09.2012	St.Peter's University

Workshop attended:

S.No	Name of the faculty	Program	Period	Organized by
1	Dr.S.Stella Mary	Research Management	13.03.2009	St.Peter's University
2	Dr.M.Parasuraman	Research Management	13.03.2009	St.Peter's University
3	Mr. A.Mohamed Hidayathullah	Research Management	13.03.2009	St.Peter's University
4	Dr.S.Stella Mary	Research Management	07.04.2010	St.Peter's University
5	Dr.M.Parasuraman	Research Management	07.04.2010	St.Peter's University
6	Mr. A.Mohamed Hidayathullah	Research Management	07.04.2010	St.Peter's University
7	Dr.S.Stella Mary	Workshop on Research Methodology	18.11.2011	TNSCST&NCSTC, New Delhi
8	Dr.M.Parasuraman	Workshop on Research Methodology	18.11.2011	TNSCST&NCSTC
9	Mr. A.Mohamed Hidayathullah	Workshop on Research Methodology	18.11.2011	TNSCST&NCSTC
10	Dr.S.Stella Mary	Workshop on Research Methodology	19.10.2012	TNSCST&NCSTC
11	Dr.M.Parasuraman	Workshop on Research Methodology	19.10.2012	TNSCST&NCSTC
12	Mr. A.Mohamed Hidayathullah	Workshop on Research Methodology	19.10.2012	TNSCST&NCSTC
13	Ms. J.Mohana	Workshop on Research Methodology	19.10.2012	TNSCST&NCSTC
14	Dr.S.Stella Mary	Workshop on Research Methodology	25.10.2013	St.Peter's University
15	Dr.M.Parasuraman	Workshop on Research Methodology	25.10.2013	St.Peter's University
16	Mr. A.Mohamed	Workshop on	25.10.2013	St.Peter's

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	Hidayathullah	Research Methodology		University
17	Ms. S.Syedali Fathima	Workshop on Research Methodology	25.10.2013	St.Peter's University
18	Ms. Ramalakshmi	Workshop on Research Methodology	25.10.2013	St.Peter's University
19	Dr.S.Stella Mary	Workshop on Research Methodology	16.10.2014 & 17.10.2014	St.Peter's University
20	Dr.S. Gunasekaran	Workshop on Research Methodology	16.10.2014 & 17.10.2014	St.Peter's University
21	Ms. S.Syedali Fathima	Workshop on Research Methodology	16.10.2014 & 17.10.2014	St.Peter's University
22	Ms. R. Girija	Workshop on Research Methodology	16.10.2014 & 17.10.2014	St.Peter's University
23	Mrs.Jeethu Johny	Workshop on Research Methodology	16.10.2014 & 17.10.2014	St.Peter's University

Seminar/Conferences attended:

S. No.	Name of the faculty	Program	Period	Organized by
1	Dr.S.Stella Mary	PG & M.Phil. students Technical Seminar in Applied Sciences & Engineering	March 2014	Science & Humanities Association St.Peter's University
2	Dr.S. Gunasekaran	PG & M.Phil. students Technical Seminar in Applied Sciences & Engineering	March 2014	Science & Humanities Association St.Peter's University
3	Mr. R. B. Mani	PG & M.Phil. students Technical Seminar in Applied Sciences & Engineering	March 2014	Science & Humanities Association St.Peter's University
4	Ms. R. Girija	PG & M.Phil. students Technical Seminar in Applied Sciences &	March 2014	Science & Humanities Association St.Peter's

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		Engineering		University
5	Mrs.Jeethu Johny	PG & M.Phil. students Technical Seminar in Applied Sciences & Engineering	March 2014	Science & Humanities Association St.Peter's University
6	Dr.S. Gunasekaran	National Conference in Advanced Materials and its Applications (NCAMA'14),	04.04.2015 & 05.04.2015	Annamalai University, Chidambaram
7	Dr.S. Gunasekaran	National Conference on Recent Advances in Molecular Spectroscopy (NCRAMS'14),	14.09.2014	Kanchi Mamunivar Centre for PG & Research, Puducherry.
8	Dr.S. Gunasekaran	National Conference on Materials for Modern World (NCMMW'14)	10.09.2014 & 11.09.2014	Easwari Engineering College, Chennai.
9	Dr.S. Gunasekaran	National Conference on Advanced Materials (NCAMA'14	18.07.2014 & 19.07.2014	Sri Vidya Mandir Arts and Science College, Uthangarai.
10	Dr.S. Gunasekaran	National Conference on Materials for Modern World (NCMMW'14)	10.09.2014 & 11.09.2014	Easwari Engineering College, Chennai.
11	Dr.S. Gunasekaran	National Conference on Advanced Materials (NCAMA'14)	18.07.2014 & 19.07.2014	Sri Vidya Mandir Arts and Science College, Uthangarai.
12	Dr.S. Gunasekaran	International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS'14)	08.07.2014 to 12.07.2104	Mar Ivanios College, Trivandrum.
13	Dr. S. Stella Mary	17 th National Seminar on Crystal Growth,	January 2013	CRL, Department of Physics, Anna

				University, Chennai.
14	Dr.S. Gunasekaran	National Seminar on Frontier Areas of Spectrophysics (NASFAS'13),	19.12.2012 & 20.12.2013	SCSVMV University, Enathur, Kanchipuram.
15	Dr. S. Stella Mary	99 th national science day conference	03.01.2012 to 06.01.2012	SRM University Kattankulathur Chennai

28. Student Projects

- **Percentage of students who have done in-house projects including inter-departmental projects**
- **Percentage of students doing projects in collaboration with other universities /industry/institute**

Year	% of In-house Projects	% of project in collobaration with other University / Industry / Institute
M.Phil Projects		
2014 - 2015	100	-
2013 - 2014	100	-
2012 - 2013	100	-
2011 – 2012	100	-
2010 – 2011	100	-
2009 - 2010	100	-

29. Awards / recognitions received at the national and international level by Faculty:

- **Awards and Recognition of Faculty**

S. No.	Name of the faculty	Details
1.	Dr.S. Gnasekaran Professor & Dean R&D	<ul style="list-style-type: none"> • Tamil Nadu Scientist Award 2013 (TANSA'13) Conferred on prestigious TANSA'13 in Physical Sciences, by Tamil Nadu State Council for Science and Technology. • Conferred D.Sc. in Physics from the University of Madras in the Year 2011. • Life Time Achievement Award- Presented by Indian SpectroPhysics Association (ISPA) for the outstanding contribution to Science & Technology and selfless services to education & research in College and School Education at National Conference on Spectrophysics held at Pachaiyappa's College and Women's Christian College, Chennai during 7-8 March, 2012. • Eminent Scientist Award- Conferred by Jagadguru Kanchi Sankaracharya Jayendra Saraswathi Swamigal for the outstanding contribution to Science and Technology at Sankara College of Arts and Science, Kanchipuram during July 2010. • Certificate of appreciation Award- Award for the Valuable Services and Contribution in Human Resource and Development, conferred by ISPA, during retirement Felicitation held on 31st May 2013. • Sri Vidya Mandir Award - Award for excellence in the spheres of Research, academic and administration, conferred by Sri Vidya Mandir Educational Institutions, Uthangarai during International Conference on Recent Advances in Physics (ICRAP), 12-13, August 2013 held at SVMC • Higher Education Award- Outstanding Service in the field of Higher Education Award conferred by Alumini Association, St.Joseph's College (Autonomous) Tiruchirappalli. • Research Appreciation Award - Bestowed with Citation of Appreciation by ISPA, D.G. Vaishnav College and Dr MGR University to commemorate the award of Doctor of Science (D.Sc.)

2.	Dr. S. Stella Mary	<ul style="list-style-type: none"> • Research Guide Achievement Award- Conferred for the successful completion of 25 doctorates awarded during National Conference on Recent Advances in Physics (NCRAP), 1-2 February, 2008 • Certificate of appreciation - Awarded for the successful conduct of 10 State Level Technical Seminars during 10th State level Technical Seminar in Physical Sciences, 15-16 February, 2008 at Meenakshi College, Chennai - 24. • Psychometric Educational Services Award- Awarded for the valuable services and contribution to the Human Resource Development and Awarded during NCRAP of GCs School of Creative Intelligence and Research Foundation Trust, Veppur, Arcot, 1-2 February, 2008. • Certificate of appreciation - Awarded by the Journal, Spectrochemica Acta A, for the step 1% citation of the article "Vibrational Spectral Investigation on Xanthine and its derivatives - theophylline, caffeine and theobromine" • Best Teacher Award conferred by Lions Clubs International, District 324- A1 2013-2014. • Teacher's Day Award presented by Pachaiyappa's college, Chennai. • Teacher's Day Award conferred by Lions Club, Anna Nagar, Chennai. • Best Student Award presented by St. Joseph's College, Tiruchirappalli. • Best Paper Presentation Award- Awarded best paper presentation award during Second National Symposium on Nonlinear Optical Crystals and Modeling and Crystal Growth at Anna University Chennai by Indian Science Congress Association • Has been invited as Chief Guest in School
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- **Doctoral / post doctoral fellows** : Nil

- **Awards and Recognition of Students:** Nil

30. Seminars/ Conferences/Workshops organized and the source of funding (National / International) with details of outstanding participants, if any.

Academic Year	Seminars	Conferences	Workshops
2010-2011	1	-	-
2011- 2012	1	-	-
2012- 2013	2	-	
2013- 2014	2	-	1
2014-2015	2	-	-
Total	8	-	1

S. No.	Title of the program & period	Convenor/ Co-ordinator	National/ International	Funding Agency
1	National Science Day Spectroscopy and its Applications 11.03.2011	Dr. S. Stella Mary Professor & Head, Physics	-	St.Peter's University
2	Guest lecture for B.E/B.Tech Nanoscience & Technology 22.03.2012	Dr. S. Stella Mary Professor & Head, Physics	-	St.Peter's University
3	National Science Day Applications of Raman Spectroscopy 04.03.2013	Dr. S. Stella Mary Professor & Head, Physics	-	St.Peter's University
4	Guest lecture for B.E/B.Tech -Nano Sciences and Technology 20.03.2013	Dr. S. Stella Mary Professor & Head, Physics	-	St.Peter's University
5	World Heart Day- Heart & Human Health 4.10.2013	Dr. S. Stella Mary Professor & Head,Physics Dr. S. Sayeeda Sultana, Pfor & Head, Chemistry	-	St.Peter's University
6	Guest Lecture for I BE/B.Tech- Self motivation for Gen Next 12.01.2014	Dr. S. Stella Mary Professor & Head,Physics Dr. S. Sayeeda Sultana, Pfor &	-	St.Peter's University

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		Head, Chemistry		
7	Guest lecture for B.E/B.Tech- New Engineering Materials and Nano Materials 5.03.2014	Dr. S. Stella Mary Professor & Head,Physics	-	St.Peter's University
8	Guest lecture for B.E/B.Tech & M.Sc- Scientific Principles in Engineering 6.03.2014	Dr. S. Stella Mary Professor & Head,Physics Prof. R. B. Mani/Professor	-	St.Peter's University
9	Guest lecture B.E/B.Tech & M.Sc.- Demo on Simple experiments and great achievements 12.03.2014	Dr. S. Stella Mary Professor & Head,Physics Prof. R. B. Mani/Professor	-	St.Peter's University
10	Guest Lecture for I M.Sc- Dirac Equations and Spatial Quantisation Feb 2015	Dr. S. Stella Mary Professor & Head,Physics Prof. R. B. Mani/Professor	-	St.Peter's University
11	National Science Day- Learning Physics through Experiments 4.03.2015	Dr. S. Stella Mary Professor & Head,Physics	-	St.Peter's University
12	Guest lecture for B.E/B.Tech & M.Sc.- Lecture on Nanomachines 23.03.2015	Dr. S. Stella Mary Professor & Head,Physics	-	St.Peter's University
13	Guest lecture for B.E/B.Tech- New Engineering Materials 30 th March 2015	Dr. S. Stella Mary Professor & Head,Physics	-	St.Peter's University
14	Guest Lecture for I BE/B.Tech- Self motivation for Gen Next 12.01.2014	Dr. S. Stella Mary Professor & Head,Physics	-	St.Peter's University

31. Code of ethics for research followed by the departments:

- Research must be undertaken in accordance with any relevant common law or legislation or interdisciplinary framed by the University
- All research involving human participants whether undertaken by academic staff, other university staff or students is to be subject to ethical approval. Where research projects fall within the scope of the Ministries, State governments, or any other academic research the framework and guidelines should be referred to an appropriate funding agency or institute.
- Researchers must respect the diversity, rights and dignity of participants and related persons in research.
- Informed consent should normally be obtained from participants.
- The confidentiality of information supplied by research participants and any agreement to grant anonymity to respondents should be respected
- Both the design of research and its conduct should ensure integrity and quality.
- Research is to be undertaken subject to the principle of academic independence. Where any conflicts of interest or partiality arise, these must be clearly stated prior to ethical approval being obtained

32. Student profile programme-wise:

Name of the Programme (refer to question no.4)	Applications received	Selected		Pass Percentage	
		Male	Female	Male	Female
M.Sc.,					
2014-2015	15	6	1	Pursuing	Pursuing
2015-2016	15	4	5	Pursuing	Pursuing
M.Phil.,					
2014 - 2015	25	13	10	100	100
2013 - 2014	10	1	6	100	100
2012 - 2013	10	7	2	100	100
2011 – 2012	10	5	2	100	100
2010 – 2011	10	2	3	100	100
2009 - 2010	12	2	1	100	100

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from universities outside the state	% of students from other countries
M.Sc				
2014-2015	Nil	88	12	Nil
2015-2016				
M.Phil				
2009-2010	NA	100	NIL	Nil
2010-2011	NA	100	NIL	Nil
2011-2012	NA	83	17	Nil
2012-2013	NA	100	NIL	Nil
2013-2014	NA	88	12	Nil
2014-2015	NA	96	4	Nil

34. How many students have cleared Civil services and Defense service examinations, NET, SLET, GATE and other competitive examinations? Give details category wise.

Nil

35. Student progression for last 5 years

Student progression	Percentage against enrolled				
	2010-11	2011-12	2012-13	2013-14	2014-15
UG to PG	NA	NA	NA	NA	NA
PG to M.Phil.	NA	NA	NA	NA	NA
PG to Ph.D.	-	-	-	-	2
Ph.D to post -Doctoral	NA	NA	NA	NA	NA
Employed	-	-	22%	-	10%
• Campus selection					
• Other than campus recruitment	100%	95%	78%	100%	89%

36. Diversity of staff.

Percentage of faculty who are graduates	
of the same University	Nil
From other universities within the state	75
From Universities from other states	25
From Universities outside the country	Nil

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period.

Period	Programme		
	M.Phil	Ph.D	D.Sc.
2008-09	-	1	-
2009-10	-	-	-
2010-11	-	-	-
2011-12	-	-	1
2012-13	2	-	-
2013-14	-	-	-
2014-15	2	-	-

38. Present details of departmental infrastructural facilities with regard to

a) **Library**- Our department has a library having,

- 100 text books
- 15 Lab manuals
- 51 student project reports along with CDs
- 2 Question Banks
- NPTEL Lectures
- Central Library having about 150 books and around 200 books in PG library related to UG and PG physics programs

b) **Internet facilities for staff and students** – Yes

- Name of the Internet Provider : NKN + BSNL
- Available Bandwidth : 1 Gbps
- Computers are available in Physics lab. Students and staffs can access internet from the labs. The university has 1Gbps internet connectivity.

c) **Total number of class rooms** – 06

d) **Class rooms with ICT facility** -YES

The department has 2 UG class rooms and 2 PG class rooms equipped with LCD projector and optional OHP facilities. An air conditioned seminar hall to accommodate about 300 students where in seminars, guest lectures, and department meetings are organized.

e) **Students Laboratories**

- Advanced physics lab
- Electronics Laboratory
- Microprocessor and Microcontroller Laboratory

f) **Research Laboratories**

- Sharing facilities in Sophisticated Analytical Instrumentation Facility - SPU

39. List of doctoral, post-doctoral students and Research Associates

a) **from the host institution/university**

S.No	Register No	Name of the Student
1	SP12PHD08	Ms.G.Joseline Sheeba Kamalini
2	SP13PHD501	D.Gopinath
3	SP13PHD502	E.Vinodh Kumar
4	SP13PHD503	S.Rajesh
5	SP13PHD001	T.Srilavanya
6	SP13PHD002	P.Ramesh
7	SP14PHD501	Janani P
8	SP14PHD001	Amal Raj D
9	SP14PHD002	Sasi Rekha P

b) **from other institutions/universities**

S. No.	Registration Number	Name of the Ph.D Scholar
1	SP12PHD08	Ms.G.Joseline Sheeba Kamalini
2	SP13PH001	Ms.S.Janet Priyavathani

40. Number of students receiving financial assistance from college, university, government or other agencies

2 students are receiving financial assistances from University.

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

Before starting up of the PG program (M.Sc.- Physics) a thorough survey was carried out for the number of colleges and Univesities which are offerenig B.Sc Physics course so that the number of students passing out each year was calculated. Based on this

the next survey was carried out for the number of colleges and Universities which are offering M.Sc.-Physics course and the number of seats offered by these institutions. It was found that more number of

students who pass out B.Sc physics and the number of intakes for M.Sc. physics in all the colleges and universities were less. So we concluded that the M.Sc. physics course can be offered in our University so that the students who really opt to pursue their PG program can have the opportunity to pursue the degree in our University.

42. Does the department obtain feedback from

**a) Faculty on curriculum as well as teaching-learning-evaluation?
If yes, how does the department utilize the feedback?**

Yes, the feedbacks are analyzed and any amendments or improvements requested in curriculum/syllabus are done with the approval of the Board of Studies. Any suggestion on Teaching Learning Process is discussed in the department and implemented if found necessary.

**b) Students on staff, curriculum and teaching-learning-evaluation
and how does the department utilize the feedback?**

Yes, The students feedback on staff are analyzed and the individual faculty is appraised based on the feedback and were informed the areas where the faculty has to improve further according to the requirements of the students

**c) Alumni and employers on the programmes offered and how does
the department utilize the feedback?**

Yes, any suggestion given by the alumni is noted and if viable taken for the approval of the management for further action.

43. List the distinguished alumni of the department (maximum 10).

S. No.	Name of the Alumni	Batch	Company/ Institution	Position
1	Ms. M. Janaki	2010-11	Higher studies -US	MS
2	Mr.S. Oliazhagan	2010-11	Government School	PG teacher
3	Ms. Saritha	2011-12	Government School	PG teacher

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4	Mr. D. Harendra Dadi	2011-12	Sri Venateswara University	Assistant Professor
5	Ms. K. Dhevaki	2011-12	Gandhigram Rural Institute	Research Associate
6	Mr. Ashwathaman	2012-13	CPS Global School	PG teacher
7	Ms.R. Ramalakshmi	2012-13	St. Peter's University	Assistant Professor
8	Ms. M. Syedali Fathima	2012-13	St. Peter's University	Assistant Professor
9	Ms. Jeethu Johni	2014-15	St. Peter's University	Assistant Professor
10	Ms. R. Girija	2014-15	St. Peter's University	Assistant Professor

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

- According to the necessity the special lectures are conducted for all students year wise.
- Seminar classes are held atleast one per semester
- Special Guest lectures were arranged by the experts on the topics which are significantly important based on the stipulated curriculum.
- Demo on different concepts of physics with simple experiments, by Dr. T.S. Natarajan, Professor, Department of Physics, Indian Institute of Technology, Madras conducted on 03.03.2015
- Lecture on New Engineering Materials, by Mr. A. Mohamed Hidayathullah, Assisitant Professor, St. Peter's College of Engineering & Technology, on 30th March 2015.
- Lecture on Nanomachines, by Dr. A. Thangaraja, Associate Professor, Department of Bio-Technology, St. Peter's University on 23.03.2015
- Lecture on Scientific Principles in Engineering, by Dr. B. Krishnan, Vice-President, Indian Spectrophysics Association on 06.03. 2014
- Demo on Simple experiments and great achievement by Dr. A. Subbiah Pandi, Professor and Head, Department of Physics, Presidency College, Chennai, conducted on 12.03.2014.

Details of Students enrichment programmes are given below

S. No.	Event Name	Event Date	External Experts
SPECIAL LECTURES ORGANIZED FROM 2010-2015			
1	National Science Day Spectroscopy and its Applications	11.03.2011	Dr. S. Gunasekaran Prof. Of Physics Founder president of ISPA Pachaiyappas College, Chennai
2	National Science Day Nanomaterials and its Applications	11.03.2011	Dr. S. Shail Kirupavathy Professor , Department of Physics Vellammal Engineering College Chennai
3	Guest lecture for B.E/B.Tech Nanoscience & Technology	22.03.2012	Dr. R. Sugaraj Samuel Assistant Professor, Department of Physics SRM University, Chennai
4	National Science Day Applications of Raman Spectroscopy	04.03.2013	Ariviyal Munaivar Dr. M. N. Ponnusamy Emeritus Prof. Department of BioPhysics & Crystallography University of Madras
5	National Science Day -Research topics in Science and Engineering	04.03.2013	Dr. S. Gunasekaran Prof. Of Physics Founder president of ISPA Pachaiyappas College, Chennai
6	Guest lecture for B.E/B.Tech -Nano Sciences and Technology	20.03.2013	Dr. S. Nisha Assisitant professor Adhiprasakthi Engineering College Chengalpet
7	W orld Heart Day- Heart & Human Health	04.10.2013	Dr. K. Kanatharaj Dean BioMedical Engineering St. Peter's University Avadi Chennai
8	Live Life programme	2013-2014	Dr. Kannan Girish, Psychiatrist
9	Guest Lecture for I BE/B.Tech- Self motivation for Gen Next	12.01.2014	Dr. S.Gunasekaran Dean (R&D), St. Peter's University

10	Guest lecture for B.E/B.Tech- New Engineering Materials and Nano Materials	05.03.2014	Dr. S. Priya Prof & Head Department of Physics RMD Engineering College Gumudipoondi
11	Guest lecture for B.E/B.Tech & M.Sc- Scientific Principles in Engineering	06.03.2014	Dr. B. Krishnan, Vice- President, Indian Spectrophysics Association
12	Guest lecture B.E/B.Tech & M.Sc.- Demo on Simple experiments and great achievements	12.03.2014	Dr. A. SubbiahPandi, Professor and Head, Department of Physics, Presidency College, Chennai
13	Guest Lecture for I M.Sc- Dirac Equations and Spatial Quantisation	Feb 2015	Dr. S. Mohan Professor & Head Department of Physics Vivekananda College Mylapore Chennai
14	National Science Day- Learning Physics through Experiments	04.03.2015	Dr. T.S. Natarajan Professor in Physics IIT, Chennai.
15	Guest lecture for B.E/B.Tech & M.Sc.- Lecture on Nanomachines	23.03.2015	Dr. A. Thangaraja, Associate Professor, Department of Bio-Technology, St. Peter's University
16	Guest lecture for B.E/B.Tech- New Engineering Materials	30.03.2015	Mr. A. Mohamed Hidayathullah Assistant Professor Department of Physics St. Peter's College of Engineering & Technology Chennai

45. List the teaching methods adopted by the faculty for different programmes.

- We have both the options of teaching on using either “Marker Pen with White Board” or “Chalk with Black Board”, “Power Point Presentation Technique” and Slides using over head projector. The first one is preferred and the last one is used as per requirement. Motivating the M. Sc. Students towards in-depth learning through projects that are either totally based on the subject or interdisciplinary.
- Daily 5 to 7 minutes are spent in classes revising what was discussed the previous day and questions from students are encouraged in class and after completion of each topic slip tests are given to students.

- Encourage PG and M.Phil. students to do projects in topics like nanotechnology, spectroscopy, thin films, X- ray crystallography, crystal growth and micro controller.
- The findings are presented in power point for viva voce examination
- Creating active participation platform through seminars, where information on recent application and advancement on syllabus oriented topics.
- Organizing periodic lectures by eminent scholars on related fields through Humanities & Sciences association.
- Encouraging students both at the UG and PG level to take part in all activities that are directly or indirectly related to Physics and hence bring out an appreciation for learning.
- Newer methods in teaching, both in terms of tools and methods – OHP, Ppt, net browsing and literature survey.
- Periodic upgrading through participation and presentation in Seminars (both national and international), Refresher Courses (discipline and interdisciplinary).
- Consistent changes in assessing methods to evaluate students both in terms of creativity and learning ability
- Working demonstrations are arranged in the class for some topics.
- Skills required for performing practicals are taught with proper emphasis and tested separately during internal assessment.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- The programme objectives are met through assessment tools which include four continuous assessment tests, assignment and one end semester examination.
- The progress reports are sent to parents for every unit test and model exam.
- The slip tests are being conducted for the failure students and class committee meeting is also conducted for improving student's performance.
- Seminars by students strictly by PPT
- The students are frequently asked to give their feedback about the courses and the methods adopted to handle them. Based on the feedback an appropriate action is taken as early as possible.
- Every assessment is carefully judged and the reasons for good or bad performance of students are identified, discussed with them and necessary action is taken in the next part of the course.
- EDUSAT programs are conducted

47. Highlight the participation of students and faculty in extension activities.

- Students are encouraged to participate in various extension activities by joining University level NSS programme, paper presentation, Sports and extra curricular activities.
- Some of the faculty members take part in Social Service Activities through NSS.
- Giving Guest Lecture for other Universities
- Acting as Chief Guest for School day
- Special Invitee in seminars and conferences

Dr. S. Stella Mary, Professor & Head

- ISO co-ordinator for implementing Quality Management Systems in University.
- Co-ordinator for conducting International Women's Day on 8th march every year by conducting various Technical and non technical events for Women Faculty and Students.
- Co-ordinator for the Culturals and Sports day of the University
- Presented paper on 'Design of Experiments' in the Research Methodology Workshop conducted for M.Phil and Ph.D students every Year
- Presented a Talk on 'Forces in Physics' in the 'INSPIRE' program conducted by St.Peter's College of Engineering & Technology
- As judge for the district level competition conducted by the Government of Tamil Nadu

Dr. S. Gunasekaran, Professor & Dean R&D

- Acted as Convenor for National and International conferences
- Chaired the sessions in National and International conferences
- As Chief Guests and presented talks at Schools and colleges and Universities

Participation of students in extension activities:

- a) Participation of I BE/B.Tech students in various competitions such as
 - Paper Presentation on various topics of interest
 - Invention/Models
 - Quiz Competition
 - Extempore during National Science Day Celebrations
- b) Participation of I BE/B.Tech students in other university.

- Mr. Sathish Kumar. S and Samson Soren, I Year Mechanical Engineering have participated in CONFLUENCE 2015 organised by the Department of Mechanical Engineering, B.S. Abdur Rahman University, Chennai.
- Mr. Sathish Kumar, I Year Mechanical Engineering has participated in Water Rocketry event in CONFLUENCE 2015 organised by the Department of Mechanical Engineering, B.S. Abdur Rahman University, Chennai and won the Second Prize.

Students participated in extension activities like events conducted in symposium and workshops

S. No.	Student Name & Class	Activity	Organized by	Period	Award Received
1	Mr. Sathish Kumar, I Year Mechanical Engineering	CONFLUENCE 2015	B.S. Abdur Rahman University, Chennai	One day	Participated
2	Samson Soren, I Year Mechanical Engineering	CONFLUENCE 2015	B.S. Abdur Rahman University, Chennai	One day	Participated
3	Mr. Sathish Kumar, I Year Mechanical Engineering	CONFLUENCE 2015 Water Rocketry event	Srinivasa Institute of Engineering and Technology	23.8.2014	Second

48. Give details of “beyond syllabus scholarly activities” of the department.

- Periodic guest lectures on technologically important topics are conducted by inviting experts, Academicians and industry persons.
- Workshops for both faculty and students are conducted to have outset knowledge in the area of physics and electronics.
- International Conferences for faculty and students are conducted in areas like spectroscopy, material science, Medical Physics, Molecular dynamics to help in acquiring the necessary skills for using modern tools and techniques.
- Students participate in programme like YRC, NSS and other seminar/ workshop conducted by our University and other institute. Students also participate in different science seminars etc.

49. State whether the programme/ department is accredited /graded by other agencies? If yes, give details

The Certification Body of TUV SUD South Asia Private Limited certifies that St.Peter's University has established and applies a Quality Management System and fulfilled the ISO 9001: 2008 which is effective from 2014-06-06.

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

- Every year number of students undertakes various projects under the guidance of department faculty members and completes them successfully to get M.Phil. degree
- Experts are called from other Universities and Institutes to impart knowledge about the current findings and advancements in physics.
- Frequent Guest lectures are conducted by the experts in the concerned subject.
- Workshops are conducted for the PG students in the areas of research
- PG students are encouraged to publish their research findings in reputed journals

Date	Speaker
22.03.2012	Dr. R. Sugaraj Samuel Assistant Professor, Department of Physics SRM University, Chennai
20.03.2013	Dr. S. Nisha Assitant professor Adhiprasakthi Engineering College Chengalpet
04.10.2013	Dr. K. Kanatharaj Dean BioMedical Engineering St. Peter's University Avadi Chennai
12.01.2014	Dr. S.Gunasekaran Dean (R&D), St. Peter's University
05.03.2014	Dr. S. Priya Prof& Head Department of Physics RMD Engineering College Gumudipoondi
06.03.2014	Dr. B. Krishnan, Vice-President, Indian Spectrophysics Association

12.03.2014	Dr. A. SubbiahPandi, Professor and Head, Department of Physics, Presidency College, Chennai
26.02.2015 & 27.02.2015	Dr. S. Mohan Professor & Head Department of Physics Vivekananda College Mylapore Chennai
04.03.2015	Dr. T.S. Natarajan Professor in Physics IIT, Chennai.
23.03.2015	Dr. A. Thangaraja, Associate Professor, Department of Bio-Technology, St. Peter's University
30.03.2015	Mr. A. Mohamed Hidayathullah Assistant Professor Department of Physics St. Peter's College of Engineering & Technology Chennai

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strength:

- Peaceful Environment and good infrastructure.
- Well equipped laboratories with qualified and dedicated team of staff.
- Providing the education for students from rural background.
- Students can pursue higher studies up to M. Sc. M.Phil., and Ph.D.
- Establishment of Sophisticated Analytical Instrumentation Facility (SAIF-SPU) within the campus

Weakness:

- Students from rural areas have poor awareness regarding research.
- Poor communication skill.
- retentivity of faculty
- lack of collaboration with other universities and research Institutes

Opportunities:

- Wide scope for research.
- Specialization of M.Sc. programme (Electronics) is relevant and job oriented

Challenges:

- Improvement of the student's communicative skill to fulfill the expectation of companies and industries.
- More research is to be done in the department
- Establishment of well equipped Research lab for growth of crystals and nano crystals
- Establishment of Characterization lab for crystals

52. Future plans of the department

- Department will be exploring more collaborations with International and National Institutions to promote research.
- Teachers are planning for more major research projects from different agencies.
- Department will be applying for Level 1 of DST-FIST project, so that a strong research centre may be set up in the University.
- M.Sc. Students will be given small projects to inculcate scientific research temperament among students.
- Plan to introduce UG (B.Sc Physics) programme
- Plan to achieve 100% pass results in UG & PG courses from the next academic year onwards.
- Organize one International Seminar/Conference every year.
- Inspire the staff members to publish articles in reputed national /International Journals / magazines.
- Indulge more in social activities related to environment protection.
- Establishment of Characterization lab for crystals.
- Establishment of well equipped Research lab for growth of crystals and nano crystals

PHOTO GALLERY

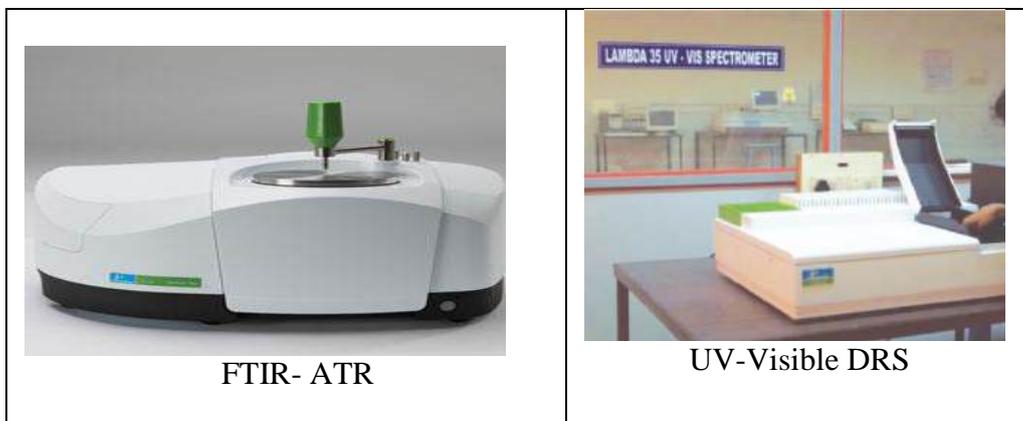




Photo-Luminescence Spectrometer



National Science Day on 11.3.2011



National Science Day on 04.3.2013



National Science Day on 12.3.2014



National Science Day on 3.3.2015