

Curriculum Vitae

General Information

Name : Dr. P.B. NAGABALASUBRAMANIAN
Designation : Assistant Professor
Department : Physics
Date of Appointment
In the institution : 16.10.1998 - 26.10.2010 (as Hourly Basis)
27.10.2010 - 02.01.2013 (as Consolidate)
In the present post : 03.01.2013 - Till Date (Regular)

Academic Qualifications : M.Sc., M.Phil., Ph.D.,

Total Teaching Experience : 24 Years 8 Months (Under graduate)
05 years (Post graduate)

Courses Taught	Name of the University/ College / Institution	Duration
UG Physics	Arignar Anna Govt Arts & Science College, Karaikal (<i>As Hourly basis Lecturer</i>)	16.10.1998 -26.10.2010
UG Physics	Avvaiyar Govt. College for Women, Karaikal (<i>As Consolidated Basis Lecturer</i>)	(10-10-2011 to 02.01.2013 (Sparing of Service)
UG & PG Physics	Arignar Anna Govt. Arts & Science College, Karaikal (<i>as Regular Basis</i>)	03.01.2013 - 05.05.2023
PG Physics	Dr. Kalaingar M. Karunanidhi Government Institute for Post Graduate Studies and Research, Karaikal	06.05.2023 to Till date Service spared from AAGASC

Orientation / Refresher Courses

OC	UGC sponsored Orientation course conducted by Academic Staff College, Madras University, Chennai from 28.01.2014 to 24.02.2014.
RC	UGC - HRDC Sponsored Refresher course in Physics by Academic Staff College, Madras University, Chennai from 23.05.2017 to 12.06.2017.
RC	UGC - HRDC Sponsored Refresher course in Physics by Academic Staff College, Bharathidasan University, Tiruchirappalli from 23.10.2019 to 05.11.2019.
RC	UGC - HRDC Sponsored Refresher course in Physics (online mode) by Academic Staff College, Pondicherry University, Puducherry from 04.08.2021 to 17.08.2021.
RC	UGC - HRDC Sponsored Refresher course in Physics (online mode) by Academic Staff College, Madurai Kamaraj University, Madurai from 07.10.2022 to 20.10.2022.

FDP	7 days National Level FDP on Innovation Through Tradition: Embracing Indian Knowledge Systems in the NEP 2020, organized by RVS college of Arts and Science in association with Shiksha Sanskriti Utthan Nyas (SSUN), Tamilnadu held from 6 th to 12 th January, 2024.
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Research Profile :

Course	Title of work/Theses	University where the work was carried out
M.Phil	Spectral analysis of some Pharmaceutically active Herbal samples	Manonmaniam Sundaranar University, Tirunelveli
Ph.D.	FTIR and FT-Raman spectral analysis and scaled quantum mechanical calculations of certain active benzene, pyridine and naphthalene derivatives	PRIST University, Thanjavur

Total Number of Publications (National & International)	:	19
Total number of contributions as Resource person	:	04
Total Number of contributions as Chair Person	:	07
Total Number of papers presented in Seminar, conference, workshop etc	:	26
Total Number of Awards received	:	03
Citations		368
h-index		09
i10-index		08

As Research Guide (MSc Students) : 07
As Editorship
❖ Editorial Member in International Journal of Advanced Science and Engineering
As Reviewer
❖ Reviewer for Elsevier Journals such as Spectrochimica acta A, Molecular Structure and Vibrational Spectroscopy.
❖ Reviewer for the Journal Computational Biology and Chemistry
As Doctoral Committee member
❖ Doctoral Committee Member for Ph.D Scholars of AVC, Mannampandal, Mayiladuthurai

As Chair Person : 07
❖ Acted as Chair Person for Oral Presentation Session in the International Conference on Nanomaterials and Molecular Research , organized by PG & Research Department of Physics, St. Joseph's College of Arts & Science (Autonomous), Cuddalore held on 08-09 December, 2016.

❖ Acted as Chair Person cum Rapporteur in Two - Day National Workshop On Skill Development organized by Department of Commerce, Arignar Anna Govt. Arts & Science College, Karaikal on 15-16 March 2017.
❖ Chaired a session for the ORAL PRESENTATION in the International Conference on New materials & Arid Land (ICNMAL-2018) , held at St. Joseph's College of Arts & Science (Autonomous), Cuddalore in collaboration with International Desert Council, Japanese Association for Arid Land Studies and B.R. Ambedkar Bihar University, Bihar on March, 15-16, 2018.
❖ Chaired a session for the ORAL PRESENTATION in the National Conference on Photovoltaic Technology (NCPT-2020) , held at St. Joseph's College of Arts & Science (Autonomous), Cuddalore on January, 24, 2020.
❖ Chaired a Poster presentation session and evaluated the presentation in the International Conference on Advanced Novel Materials in Multi Disciplinary perspectives (ICARMP'23) organized by PG & Research Department of Physics, St. Joseph's College of Arts & Science (Autonomous), Cuddalore on 3-4 March 2023.
❖ Chaired a Poster presentation session and evaluated the presentation in the International Conference on Advanced Functional Materials (ICAFM-2023) organized by PG & Research Department of Physics, TBML College Porayar, on 3-4th October 2023.
❖ Chaired a technical session in the National Conference on Recent Advancements in Applications of Nanomaterials (RAAN-2023) on 17 th October 2023 organized by PG & Research Department of Physics, AVVM Sri Pushpam College, Thanjavur.

Resource Person/Representation : 04
❖ Acted as Resource Person in the National Level Seminar on Recent Trends in material science and delivered a lecture on Nanoscience and its Applications organized by Dharmapuram Gnanambigai Government Arts College (W), Mayiladuthurai, 22 nd February, 2020.
❖ Represented as College Nominee for the presentation of a project proposal in DST-SATHI meeting held on 4 th April 2023 at Jawaharlal Nehru Center for Advanced Scientific Research (JNCASR), Bengaluru.
❖ Acted as Resource Person in the Two days National Level Seminar Science and Entrepreneurship NSSE 2023 and presented an invited lecture on Science and Entrepreneurship organized by Dharmapuram Gnanambigai Government Arts College (W), Mayiladuthurai, 17 th April, 2023.
❖ Acted as Resource person in the Physics Association function and presented a talk on Current Scenario in Nano Science in Physics association Inauguration programme organized by TBML College Porayar on 18 th August, 2023.

Convenor / Organizing Secretary/Committee member : 09
❖ Acted as Organizing Committee Member for conducting a National Conference on Recent Advances in Molecular spectroscopy in honour of Prof. Dr. S. Mohan, organized by Department of Physics, Kanchi Mamunivar Centre for Post Graduate Studies & Tagore Arts College, Puducherry held on 14 th September 2014.
❖ Acted as Organizing Secretary in Science Day Celebrations 2017 conducted by Department of Physics, Arignar Anna Govt. Arts & Science College, Karaikal on 28 th February 2017.
❖ Acted as college co-ordinator for State level inter collegiate Quiz competition organized by Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam and Dept. of Physics, AVC College, Mannampandal, Mayiladuthurai on 28 th October 2017.

❖	Acted as Organizing Secretary in Science Day Celebrations 2018 conducted by Department of Physics, Arignar Anna Govt. Arts & Science College, Karaikal on 28 th February 2018.
❖	Worked as Organizing committee member for the National workshop on Advanced materials for Energy Conversion and Storage held at AAGASC, Karaikal, 25 th February 2020.
❖	Worked as Organizing committee member for the One day International webminar on 3D printed Bio-Ceramics for Medical Applications organized by Dept. Of Physics, AAGA&SC, Karaikal on 20.05.2020.
❖	Worked as Organizing committee member for the National webminar on Redefinon of SI Units and Importance to Science and Technology organized by Dept. of Physics, AAGA&SC, Karaikal on 30.05.2020.
❖	Acted as External member for Energy Audit committee with IQAC members of ADM College for Women on 15.04.2023, Nagapattinam.
❖	Acted as Organizing secretary and organized a One day National Conference on Emerging Materials and Computational Techniques 2023 (NCEMCT-2023) organized by Department of Physics, Dr. Kalaingar M. Karunanidhi Govt. Institute for Postgraduate Studies and Research, Karaikal sponsored by Innovative Spectrophysicist Association, Puducherry on 29 th September 2023.

List Of Research Publications

List Of Research Publications

National & International : 19

1. **P.B.Nagabalasubramanian, S.Periandy, S.Mohan, M. Govindarajan**, *FTIR and FT Raman spectra, vibrational assignments, ab initio, DFT and normal coordinate analysis of α,α -dichlorotoluene*, Spectrochimica Acta Part A 73 (2009) 277-280, **Impact Factor :4.4**
2. **P.B. Nagabalasubramanian, S. Periandy, S. Mohan**, *A scaled quantum mechanical approach of vibrational analysis of o-tolunitrile based on FTIR and FT Raman spectra, ab initio, Hartree Fock and DFT methods*, Spectrochimica Acta Part A 74 (2009) 1280-1287, **Impact Factor :4.4**
3. **P.B. Nagabalasubramanian, S. Periandy, S. Mohan**, *Ab initio HF and DFT simulations, FT-IR and FT-Raman vibrational analysis of α -chlorotoluene*, Spectrochimica Acta Part A 77 (2010) 150-159., **Impact Factor :4.4**
4. **P.B. Nagabalasubramanian, S. Periandy**, *FTIR and FT Raman, molecular geometry, vibrational assignments, ab initio and density functional theory calculations for 1,5-methylnaphthalene*, Spectrochimica Acta Part A 77 (2010) 1099-1107., **Impact Factor :4.4**
5. **P.B. Nagabalasubramanian, Mehmet Karabacak, S. Periandy**, *FT-IR, FT-Raman, ab initio and DFT structural, vibrational frequency and HOMO-LUMO analysis of 1-naphthaleneacetic acid methyl ester*, Spectrochimica Acta Part A 82 (2011) 169- 180., **Impact Factor :4.4**
6. **P.B. Nagabalasubramanian, M. Karabacak, S. Periandy**, *Molecular structure, polarizability, hyperpolarizability analysis and spectroscopic characterization of 1-(chloromethyl)-2-methylnaphthalene with experimental (FT-IR and FT-Raman) techniques and quantum chemical calculations*, Spectrochimica Acta Part A 85 (2012) 43- 52., **Impact Factor :4.4**

7. **P.B. Nagabalasubramanian**, M. Karabacak, S. Periandy, *Vibrational frequencies, structural confirmation stability and HOMO-LUMO analysis of nicotinic acid ethyl ester with experimental (FT-IR and FT-Raman) techniques and quantum mechanical calculations*, Journal of Molecular Structure 1017 (2012) 1- 13., **Impact Factor :3.8**
8. **P.B.Nagabalasubramanian**, S. Periandy, E. Kose,, A. Atac, M. Karabacak, A.M. Asiri, *FT-IR and FT-Raman, NMR and UV spectroscopic investigation and hybrid computational (HF and DFT) analysis on the molecular structure of mesitylene*, Spectrochimica Acta Part A 116 (2013) 622-634, **Impact Factor :4.4.**
9. **P.B. Nagabalasubramanian**, S. Periandy, *Monomer and dimer structural stability, experimental and theoretical spectroscopic investigations (FTIR, FT-Raman and UV-Vis), MEP, DOS and NLO studies of Niacin*, Asian Journal of Physics, Vol. 23, No 6 (2014) 999-1012. **Impact Factor :0.65.**
10. **P.B.Nagabalasubramanian**, S. Periandy, Mehmet Karabacak, M. Govindarajan, *Molecular structure, vibrational, electronic and thermal properties of 4-vinylcyclohexene by quantum chemical calculations*, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 145 (2015) 340-352.**Impact Factor : 4.4**
11. K. Suguna, **P.B. Nagabalasubramanian**, P.M. Anbarasan, R. Rengaiyan, *Experimental and quantum chemical study on geometry, stability, electronic structures, electronic Absorption, solvents effect and efficiency of β,ϵ -carotene-3,3'-diol as Natural Sensitizers for Dye Sensitized Solar Cells*, Int. J. Adv. Sci. Eng. Vol. 1 No. 4 1-9 (2015) ISSN 2349 5359. **Impact factor : 2.75**
12. **P.B.Nagabalasubramanian** et al., *Green synthesis of silver nanoparticles using leaf extracts of common weeds : A case study from Lantana Camera L. and Leucas aspera (willd) Link*, Int. J. Adv. Sci. Eng. - **Vol. 2 No.1 12-21 (2015)**, ISSN 2349 5359. **Impact factor : 2.75**
13. **P.B.Nagabalasubramanian** et al., *Molecular structure and spectroscopic properties of 4- methoxybenzaldehyde based on density functional theory calculations*, Int. J. Adv. Sci. Eng. Vol. 2 No. 2 76-87 (2015) 1 ISSN 2349 5359. **Impact factor : 2.75**
14. Rajeeve Singh and **P.B.Nagabalasubramanian**, *A Review on the Thermal donors in CZ-Silicon and their impact on electronic Industry*, International Journal of Applied Engineering Research ISSN 0973-4562, volume 14, Number 2, 2019.
15. K. Manivannane, K. Jayasheela, T. Prabhu, S. Periandy and **P.B.Nagabalasubramanian**, *Spectroscopic (FTIR, FT-Raman, FT-NMR and UV-Vis) investigation on 2-Benzyloxy-3-Methoxybenzaldehyde using quantum computational methods*, International Journal of Modern Engineering Research and Technology, ISSN 2348-8565, Volume 06, Issue 3, 2019 . **Impact factor 3.478**
16. Rajeeve Singh and **P.B.Nagabalasubramanian**, *Observation of interstitial oxygen related defects in CZ-Silicon in the temperature range*

450°C to 510°C based on FTIR Spectroscopy, AIP Conference Proceedings, 2220,040002 (2020).

17. K.Jayasheela, **P.B.Nagabalasubramanian**, S.Periandy, *Conformational & Spectroscopic characterization, charge analysis and molecular docking profiles of chromone-3-carboxylic acid using a quantum hybrid computational method*, Heliyon (Elsevier) 6 (2020) e04775. **Impact factor : 4**
18. A. Sathiya, S.Ramalingam, **P.B.Nagabalasubramanian**, J.Karpagam, *Structure activity investigation, CT complex analysis and spectroscopic investigation on antibiotic drug:Sulfamethoxazole using quantum chemical calculations*, Chemical Physics Impact (Elsevier) 3 (2021) 100031. **Impact factor : 2.2**
19. Sunder Arumugam, P.B.Nagabalasubramanian, School dropout an Evil, who is Socially Responsible? A study, The Ciencia & Engenharia-Science & Engineering Journal, ISSN:0103-944X, Volume 11, Issue 1, 2023, pp:185-196.

Participation/Papers presentation in Conferences, Seminars, Workshop, Symposia (International and National) : 26

1. Presented a paper at **International conference on Photonics, Nanotechnology and computer applications** from 25-28 February 2009 organized by PRIST UNIVERSITY, THANJAVUR,
2. Presented a paper at **National conference on Advances in Material science** on March 20, 2009 organized at St. Joseph's college of arts and science, Cuddalore.
3. Participated in the **International symposium on nuclear Physics** during December 8-12, 2009 at Bhabha atomic research center, Mumbai.
4. Presented a paper in the **International conference on Emerging Green Technologies** from 27-30 July 2011 organized by Periyar Maniammai university, Vallam, Thanjavur.
5. Presented a paper at **International conference on molecular spectroscopy of advanced material and bio-molecule** from 07-09 August, 2012 organized by Bishop Moore College, Mavellikara, Kerala.
6. Presented a paper titled "Stability,UV, Electronic Properties, NMR, DOS & MEP study on DS of Niasin" at **International conference on emerging trends in Physics** from 21-22 February, 2013 organized by St. Joseph's College of arts and Science (Autonomous), Cuddalore.
7. Participated 5 days **Training Programme on E- Literacy (IT for Non-IT) conducted by ICT Academy of Puducherry** from 4th March 2013 to 08th March 2013 held at Arignar Anna Govt. Arts & Science College, Karaikal.
8. Presented a paper titled "An experimental (FTIR, FT-Raman, NMR,UV-Vis) and Theoretical (DFT) investigation of Acetanilide :Structural stability, NBO and NLO Analysis" at **International conferernce on Recent Advances in Physics 2013 (ICRAP 2013)** from 12-13 August, 2013 organized by PG & Research Department of Physics, Sri Vidya Mandir Arts and Science College, Krishnagiri, Tamilnadu in Collaboration with Indian Spectrophysics Association (ISPA), Chennai.

<p>9. Presented a paper titled “ Geometries, electronic structure, effect of extracting solvents, vibrational spectral studies and performances of Lawsonia Inermis (2-hydroxy-1,4,napthoquinone) using experimental and quantum calculations for dye sensitized solar cells” in the National Confernce on Molecular Spectroscopy held at Kanchi Mamunivar Centre for Post Graduate Studies, Puducherry on 14th September, 2014 in honour of Prof. Dr.S. Mohan.</p>
<p>10.Participated in the National workshop on instrumentation & Characterization XRD & TEM, held on 25th October 2014, organized by PG & Research Department of Physics, St.Joseph’s College of Arts & Science (Autonomous) Cuddalore.</p>
<p>11.Participated and presented a paper entitled Swami Vivekananda’s Views towards Development of Science & Technology, in the UGC sponsored Two Day National Seminar on The relevance of Swami Vivekananda’s thoughts in the 21st Century, organized by PG Dept. of social Work, Arignar Anna Govt. Arts & Sceince College, Karaikal from 27.03.2015-28.03.2015.</p>
<p>12.Presented a paper entitled “Vibrational (IR and Raman) and computational tool (HF and DFT) analysis on Phenyl hydrasine” in the International Conference on recent trends in M aterial Science and Applications organized by PG and Research dept. of Physics, Jamal Mohaded College (Autonomous), Tiruchirapalli on 29th February 2016.</p>
<p>13.Presented a paper entitled “Experimental and quantum Chemical study on Natural sensitizers for Dye Sensitized Solar Cells” in the UGC sponsored National Conference on Nano and Molecular Physics organized by Department of Physics, Kanchi Mamunivar Centre for Post Graduate Studies held on 14th October 2016.</p>
<p>14.Presented a paper entitled “Spectral Morphological and Optical Analysis of Cynadine as DSSC” in the International conference organized by PG & Research Department of Physics, St.Joseph’s College of Arts & Science (Autonomous), Cuddalore held on 08-09, December 2016.</p>
<p>15.Participated and presented a paper in the two day workshop on Photovoltaic and Energy Harvesting held at PG & Research Department of Physics, Thiru.Vi.Ka Govt. Arts College, Thiruvavarur during January 18 & 19, 2018.</p>
<p>16.Participated in the two day National Confernce on “A meet to tone up the future to Innovate, Educate and Elaborate”, organized by Teaching Fraternity of the Pondicherry University and Govt. Arts & Science College and Professional Colleges, Puducherry on 2-3, February, 2018.</p>
<p>17. Presented a Poster in the National Conference on Recent Trends in Physics of Materials (NCRTPM-2018), organized by PG and Research Department of Physics, Pachaiyappa’s College, Chennai during February 9-10, 2018.</p>
<p>18. Presented a Poster entitled “Azadirachta indica (Neem leaves) as Natural Sensitizers of Dye Sensitized Solar Cell (DSSC)”, in the National Conference on Recent Advanced Materials (NCRAM 2018), organized by Thiruvalluvar University College of Arts & Science, Vandavasi, sponsored by BRNS, Mumbai and TNSCST, Chennai during February 23-24, 2018.</p>
<p>19.Presented a poster entitled “In silico analysis and molecular docking studies of alkyl substituted Niasin” in the International Conference on New materials & Arid Land (ICNMAL-2018), held at St.Joseph’s College of Arts & Science</p>

(Autonomous), Cuddalore in coloboration with International Desert Council, Japanese Association for Arid Land Studies and B.R. Ambedkar Bihar University, Bihar on March, 15-16, 2018.
20. Presented a poster entitled “Study on Pharmaceutical importance of Phyradoxine Hydrochloride Drug” in the 2nd International Conference on Recent Trends in Applied Science And Technology (ICRTAST-2018) , organized by Periyar University, Salem, Tamilnadu, in association with Indian Science and Technology Association [Elavenil] during August 23-25, 2018.
21. Presented a Paper entitled “ DFT/TDDFT & Experimental studies of natural pigment Lawsone for dye sensitized solar cell applications” in the Recent Advancements in Nanotechnology RAN-2018 , organized by National Institute of Technology (NIT) Puducherry, Karaikal held on September, 19-20, 2018.
22. Participated in the Webinar on “ How Nanoscience and Technology inspired from nature and transforming the world” , organized by P.G. Department of Physics, Cauvery College (Autonomous), Trichy on 3 rd May 2020.
23. Participated in the Webminar series on “ Conceptual and Applied Physics” , jointly organized by Department of Physics, School of Science,RK University and Department of Nanoscience & Advanced materials, Saurashtra University, Rajkot during 5 th - 8 th May May 2020.
24. Participated in the Webminar on “ Physics webinar series” , organized by Department of Physics, Justice Basheer Ahmed Sayeed College for Women (Autonomous) from 26 th - 28 th May 2020.
25. Presented a paper titled Molecular Docking in Drug Discovery : Revoltionizing Drug Design with Artificial Intelligence in the international Conference on Advanced Functional Materials (ICAFM - 2023) organized by PG & Research Department of Physics, TBML College Porayar held on 3-4 th October 2023.
26. Presented a paper titled Synthesis, Charecterisation, Spectroscopic analysis and Molecular docking studies of Statin Derivatives in the National Seminar on Recent Advancements in applications of Nanomaterials (RAAN-2023) organized by PG & Research Department of Physics, AVVM Sri Pushpam College, Poondi & Bon Secours College for Women Thanjavur held on 16-17 th October 2023.

AWARDS : 03
❖ Received an award as “ Best Poster Presenter ” at International conference on emerging trends in Physics from 21-22 February, 2013 organized by St. Joseph’s College of arts and Science (Autonomous), Cuddalore.
❖ Honored with the Award “ Young Scientist ” in the field of Molecular Physics in National Conference on “Theoretical and Experimental Molecular Physics (NCTEMP)” conducted by Department of Physics, Tagore Arts College, Puducherry on 14 th March 2014.
❖ Honored with the Award for Meritorious Service and Invaluable commitment to the society by Rotary International, Rotary Club of Karaikal, 2019-20.