

**JAMAL MOHAMED COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI-20**

**DEPARTMENT OF PHYSICS**



1. Name : **Dr. S. PRABHAKARAN**
2. Father's Name : Dr. M. Subramaniam, M.Sc., Ph.D.,
3. Designation : Assistant Professor & MID
4. Date of Birth : 05.10.1968
5. Educational Qualification : M.Sc., B.Ed., M.Phil., Ph.D.,
6. Teaching experience : UG- 13 Years & PG- 10 Years
7. Email id & Mob no. : sppy@jmc.edu [Mob. 96776 93993]
8. Area of Specialization : **Vibrational Spectroscopy**

**Title of the Thesis:** "Density Functional Theory studies of Vibrational spectra, HOMO-LUMO and NLO analysis of some Polyatomic Molecules"

**Details of Publications: 07** (4 International, 3 National)

- FTIR and FT-Raman, normal coordinate analysis of the structure and vibrational spectra of o-nitrobenzaldehyde oxime, *Elixir Vib Spec.36 (2011) 3397-3404.*
- Molecular structure, vibrational spectroscopic, first hyper-polarizability, NBO and HOMO, LUMO studies of p-iodobenzene sulfonyl chloride, *Spectrochimica Acta Part A 82 (2011) 332-339.*
- DFT studies and vibrational spectra of 2-bromomethyl-4-nitroanisole, *Indian Journal of Pure & Applied Physics, Vol.50, January 2012, pp. 26-33.*
- Vibrational spectroscopic investigations, first hyperpolarizability, HOMO-LUMO and NMR analyzes of p-fluorobenzonitrile, *Spectrochimica Acta Part A 102 (2013) 59-65.*
- Scaled quantum chemical studies of the structure and vibrational spectra of 4-bromo-1,2 (methylene dioxy) benzene, *International Journal of Sciences and Applied Research, Vol.4(3) 2017, 49-61.*
- Vibrational (IR and Raman) and Computational Tool (HF and DFT) analysis on 2,4-difluoro benzyl alcohol, *Imperial Journal of Interdisciplinary Research, Vol.3(3) 2017, 1586-1595.*
- Vibrational analysis, *ab initio* HF and DFT studies of 2,4,6-trimethyl phenol, *Indian Journal of Pure & Applied Physics, Vol.56, February 2018, 119-127.*

### **9. Details of Papers Presented: 03**

1. Presented a research paper entitled, “Vibrational analysis, ab initio HF and DFT studies of 2,4,6-trimethylphenol” in the **International Conference on Chemistry and Materials**, organized by Department of Chemistry, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli –24 during Nov 14<sup>th</sup> and 15<sup>th</sup> 2014.
2. Presented a research paper entitled, “Scaled quantum chemical studies of the structure and vibrational spectra of 4-bromo-1,2(methylene dioxy) benzene”, UGC sponsored **International Conference on Chemical and Environmental Research**, organized by the Department of Chemistry, Jamal Mohamed College (Autonomous) Tiruchirappalli – 20 on 7<sup>th</sup> January, 2017.
3. Presented a research paper entitled, “Structure, First hyper polarizability, HOMO-LUMO and NBO analysis of 1,5 - difluoro - 2,4 – dinitrobenzene based on DFT”, UGC Sponsored **National Level Seminar on Recent Advancements in Materials**, organized by the Department of Physics, Jamal Mohamed College (Autonomous) Tiruchirappalli – 20 on 15<sup>th</sup> February, 2017.

### **10. Details of Seminars / Conferences / Workshops attended:**

NAAC sponsored National level seminar on “Quality Enhancement in Teaching, Research and Extension in Higher Education Institutions – Prospects and Problems” organized by Jamal Mohamed College (Autonomous), Tiruchirappalli-20 from April 15 and 16, 2010.

“Recent Advances in Spectroscopic Techniques” organized by P.G and Research Department of Physics, Bishop Heber College (Autonomous), Tiruchirappalli-17 on 7<sup>th</sup> September 2010.

UGC sponsored Inter collegiate seminar on “Nano Science and Technology” held at Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on 7<sup>th</sup> October 2010.

Seminar on “Creating Competitiveness to Excel in Higher Education-a TQM approach” organized by Internal Quality Assurance Cell, Jamal Mohamed College(Autonomous), Tiruchirappalli-20 on 8<sup>th</sup> December 2010.

UGC Sponsored National Conference on “Perspectives in Laser, Optics, Spectroscopy and Nano-science” organized by P.G. and Research Department of Physics, Bishop Heber College (Autonomous), Tiruchirappalli-17 on 14<sup>th</sup> February 2011.

National Conference on Spectrophysics, organized by the Indian Spectrophysics Association, held at Pachaiyappa’s College, Chennai during 7-8 March 2012.

UGC Sponsored State Level Seminar on “Advanced Research in Physics - A Few Perspectives,” on 28<sup>th</sup> February 2012 held at Jamal Mohamed College (Autonomous), Tiruchirappalli-20.

Participated in the “Quality’12 (Excellence in NDE)” a National Level Symposium held in the Department of Physics, National Institute of Technology, Tiruchirappalli-19 on 13<sup>th</sup> March 2012.

UGC Sponsored National Level Seminar on “Nano science and Laser Materials Processing” held at Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on 9<sup>th</sup> March, 2013.

UGC Sponsored International Seminar on “Crystalline Materials and Optoelectronic Devices” held at Jamal Mohamed College (Autonomous), Tiruchirappalli 20 on 3<sup>rd</sup> February 2014.

Workshop on “Amateur Radio” on 28<sup>th</sup> February, 2014 held at Jamal Mohamed College (Autonomous), Tiruchirappalli – 20.

State level seminar on “Avenues for Higher Scientific Pursuits” on 8<sup>th</sup> September 2014 held at Jamal Mohamed College (Autonomous), Tiruchirappalli – 20.

National workshop on “Analytical Techniques for Chemical Characterization” on 13<sup>th</sup> March 2015, organized by Department of Chemistry, SCSVMV University, Kanchipuram.

National level seminar on “Laser and its Applications” held at Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on 16<sup>th</sup> March 2015.

International conference on “Recent trends in Materials science and Applications” held at Jamal Mohamed College, Tiruchirappalli-20 on 29<sup>th</sup> February 2016.

Workshop on “The role of a Teacher in the present Scenario”, organized by the Internal Quality Assurance Cell of Jamal Mohamed College, Trichy-20 on 10-12-2016.

**Faculty Development Program** on “Presentation Skills Level 1” conducted by ICT Academy, Chennai, on 23<sup>rd</sup> and 24<sup>th</sup> February 2017 held at Jamal Mohamed College, Trichy-20.

**NLP-Based Faculty Empowerment Programme**”, organized by the Internal Quality Assurance Cell of Jamal Mohamed College, Trichy-20 on 17<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup> June 2017

International conference on “Advanced Management-Changes and Challenges in Knowledge Era”, organized by Jamal Institute of Management, Jamal Mohamed College, Tiruchirappalli-20 on 17<sup>th</sup> February 2018.

National Seminar on “Solid State Physics and its Applications”, organized by Department of Physics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on 28<sup>th</sup> February 2018.

**Orientation programme** on “Soft Skills Development” organized by Department of Physics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on 22<sup>nd</sup> June 2018.

Workshop on “Writing Winnable Project Proposals”, organized by the Internal Quality Assurance Cell, Jamal Mohamed College, Trichy-20 on 23<sup>rd</sup> June 2018.

UGC CPE Sponsored workshop on “Professional Development for Academic Leadership in Curriculum Design” organized by Curriculum Development cell, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on 18<sup>th</sup> and 19<sup>th</sup> January 2019.

National Seminar on “Challenges and Changes in the Evaluation System”, organized by the Internal Quality Assurance Cell, Jamal Mohamed College, Trichy-20 on 26<sup>th</sup> February 2019

National Seminar on “Advanced Topics in Physics”, organized by Department of Physics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on 06<sup>th</sup> March 2019.

**Staff Enrichment programme** on “Ownership culture” organized by IQAC of Jamal Mohamed College, Trichy on 14.06.2019.

National Seminar on “Advanced Materials” organized by Department of Physics, Jamal Mohamed College, Trichy-20 on 23.01.2020.

**Orientation Program** on “MOOC’S and e-learning” on 29.01.2020 organized by Department of Library, Jamal Mohamed College, Trichy-20

National Seminar on “Popularization of solar energy and Materials for solar cell” organized by Department of Physics, Periyar E.V.R College, Trichy-23 on 31.01.2020.

### **Online Certification:**

“Stress Management” organized by Department of Management and Research, AVS College of Arts and Science, Salem, from 13.04.2020 to 17.04.2020.

“Basic Principles of Spectroscopy” organized by Department of Chemistry, AVS College of Arts and Science, Salem, from 17.04.2020 to 19.04.2020.

**Two weeks Faculty Development Programme on “Managing Online Classes and Co-Creating MOOCs” organized by Teaching Learning Centre, Ramanujan College, University of Delhi, sponsored by MHRD, PMMNMTT from April 20 - May 06, 2020.**

Webinar on “Emerging Technologies” organized by CSI-Vidyalankar Institute of Technology, Mumbai, from 20.04.2020 to 22.04.2020

“How to become an Online Teacher” organized by Amity University, New Delhi, on 23.04.2020

Webinar on “Fine-Tuning Research Skills for Effective Writing (Thesis, Article & Proposal)” organized by PG and Research Department of Commerce, Vivekananda College of Arts and Sciences for Women, Tiruchengode on 03.05.2020.

Webinar on “How Teachers and Counselors shall respond to the current Pandemic” organized by Amrita School of Engineering, Coimbatore on 09.05.2020.

One week “Online National **Faculty Enrichment Programme**”, organized by IQAC of Mannar Thirumalai Naicker College, Madurai from 13.05.2020 to 19.05.2020

Workshop on “Internet of Things” organized by Universal College of Engineering, Vasai, Maharashtra in association with The Institute of Engineering and Technology, on 14.05.2020 and 15.05.2020.

A webinar on “Principle for Communicate an Effectual Manuscript” conducted by SKC LNCT Group of Colleges, Indore on 18.05.2020.

National level webinar on “Explore the world of Electronic Media” organized by Maa Narmada Mahavidyayaiya, Dhamnod (M.P.) on 24.05.2020.

International webinar on “Art of writing Research review/Articles for Publishing in peer Reviewed Journals” organized by the IQAC of MES College, Erumely, Kerala on 25.05.2020.

National level Awareness Quiz on “ICT Initiatives of MHRD and UGC” organized by IQAC of Jamal Mohamed College in association with CSI, Tiruchirappalli chapter on 27.05.2020.

Interactive session of Hon'ble Minister of HRD, Shri Ramesh Pokhriyal Nishank ji on the topic “Turn the Challenges to Opportunities: COVID-19 Pandemics and measures to combat by Higher Education of India” hosted by NAAC, Bengaluru on 28.05.2020.

**Faculty Development Programme** on “C and C++” organized by PG and Research Department of Physics, Jamal Mohamed College, Trichy-20 from 27.05.2020 to 30.05.2020

International webinar on “Advanced Materials”, Organized by Department of Physics, LRG Government Arts College, Tirupur on 03.06.2020

**4-Weeks Induction/Orientation Programme for “Faculty in Universities/Colleges/Institutes of Higher Education” organized by Teaching Learning Centre, Ramanujan College, University of Delhi, sponsored by MHRD, PMMMNMTT from June 04 – July 01, 2020**

Online Level Quiz on NAAC, Organized by Department of Computer Engineering, P.V.P.P College of Engineering, Mumbai on 11.06.2020.

National online workshop on “Blended Learning” , organized by Department of Educational Technology, SNDT Women’s University, Mumbai on 13.06.2020.

Webinar on “Rebellion Einstein”, organized by Jansons Institute of Technology, Coimbatore in association with Tamilnadu Science Forum, Tirupur on 24.06.2020

Webinar on “Father of Modern Physics- Galileo”, organized by Jansons Institute of Technology, Coimbatore in association with Tamilnadu Science Forum, Tirupur on 25.06.2020.

Webinar on “Sir.Isaac Newton”, organized by Jansons Institute of Technology, Coimbatore, in association with Tamilnadu Science Forum, Tirupur on 26.06.2020

International webinar series on “Emerging trends in energy & healthcare”, organized by Department of chemistry, Annai Hajira Women’s college, Melapalayam, Tirunelveli from 25.06.2020 to 27.06.2020

Online Outreach programme on “Role of Meteorites in Solar System” under DBT Star College scheme in Commemoration of the World Asteroid Day, organized by Department of Physics and TNSF-Trichy, Jamal Mohamed College, on 30.06.2020.

Webinar on “Preparation Methods and Deposition Techniques of Nano structures”, organized by Department of Physics, National College, Trichy on 25.07.2020.

Online **Faculty Development Programme** on “Spectroscopic Techniques” organized by Department of Physics, Jamal Mohamed College- Trichy from 03.08.2020 to 05.08.2020.

Three days Online **Faculty Development Programme** On “Condensed Matter Physics” organized by Department of Physics, Jamal Mohamed College, Trichy from 19.10.2020 to 21.10.2020

Online **Faculty Development Programme** on “Astrophysics” organized by Department of Physics, Jamal Mohamed College, Trichy from 11.11.2020 to 12.11.2020.

A Two day International Online Workshop on “Integration of Animation in Teaching-Learning” organized by C-KART, School of Education, PMMMNM on Teachers and Teaching, MoE, Govt.of India, from 28<sup>th</sup> to 29<sup>th</sup> January, 2021.

Online **Faculty Enrichment Programme** on “Art of writing in indexed Journal Publications” organized by Department of Library in association with IQAC Jamal Mohamed College, Trichy on 28.07.2021

A Two day National webinar on Functional Materials “NWFm’21”, organized by K. Ramakrishnan College of Engineering, Trichy on 23.08.2021 & 24.08.2021.

Advanced Materials – Webinar Series 2021 (Event 2): “Materials characterization using Non Destructive Testing (NDT)” organized by Department of Physics, St. Joseph’s College, Trichy on 20.09.2021

Advanced Materials – Webinar Series 2021 (Event 3): “Recent Trends in Laser Materials Processing” organized by Department of Physics, St. Joseph’s College, Trichy, on 21.10.2021

Advanced Materials – Webinar Series 2021 (Event 4): “Advanced Materials – Focus on Solar Energy” organized by Department of Physics, St. Joseph’s College, Trichy on 15.11.2021

Advanced Materials – Webinar Series 2021 (Event 5): “Novel Materials Materials” organized by Department of Physics, St. Joseph’s College, Trichy on 20.12.2021

An International Online Workshop on “Materials Science and Computational Methods”, organized by Department of Physics, Jamal Mohamed College, Trichy on 15.02.2022 & 16.02.2022

An Online **Faculty Development Programme** on “Astronomical Studies” organized by Department of Physics and Chiguru CoLab, Bangalore, Jamal Mohamed College, Trichy on 07.02.2022 & 08.02.2022

Two weeks online workshop on “Thinfilim and Nanomaterials (IWTN-2021”, organized by Department of Physics, Sathyabama Institute of Science and Technology, Chennai in Association with TNSCST during 09.08.2021 to 20.08.2021

Two day Online **Faculty Development Programme** on “Condensed Matter Physics” jointly organized by Department of Physics and IQAC, Jamal Mohamed College, Trichy in collaboration with ISPA-Chennai on 24.01.2022 & 25.01.2022

A School & College Teachers Online outreach programme on “HAM Radio as Technical hobby for social Service” organized by Department of Physics, Jamal Mohamed College, Trichy on 05.02.2022

**Eight weeks NPTEL-AICTE Faculty Development Programme on “Managing Services” course from 23.08.2021 to 24.10.2021**

### **11. Administrative Positions held in the College:**

- ❖ Member-in-charge of the Department (SF) women section
- ❖ Member- Board of studies
- ❖ Executive Committee member-JMC Alumni Staff chapter
- ❖ Department Library in-charge (SF)
- ❖ Indian Society of Systems for Science & Engineering - Life member

### **12. Extra- curricular activities:**

- Active NSS volunteer and NCC ‘B’ Certificate holder
- Countries visited: Australia, Kuala Lumpur, Penang, Langawi, Bangkok, Pattaya, and Thailand.

Staff Signature