



St Thomas College, Kozhencherry

Established in 1953 | Reaccredited by NAAC with Grade A | ISO 9001:2015 Certified | ISO 21001:2018 Certified

Affiliated to Mahatma Gandhi University, Kottayam

www.stthomascollege.info

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Faculty Profile

Dr. Prathibha Vasudevan

Assistant Professor

Department of Physics

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Personal Details

Date of Birth	19.05.1984
Nationality	Indian
Marital Status	Married
Permanent Address	Pavithram, Poovathoor P.O, Koipuram, Pathanamthitta- 689531, Kerala, India.

Higher Education

2008 – 2013	Ph.D Physics, M.G University, Kottayam.
2007 – 2008	M.Phil Physics, M.G University, Kottayam.
2006 – 2007	B.Ed Physical Science, Titus II Teachers College, Thiruvalla.
2004 – 2006	M.Sc Physics, St. Thomas College, Kozhencherry.
2001 – 2004	B.Sc Physics, St. Thomas College, Kozhencherry.

Professional Position

04 November 2014 to present	Assistant Professor, Department of Physics, St Thomas College, Kozhencherry
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Teaching Experience

2014 – 2023	Undergraduate students
	Postgraduate students

Courses Taught

M.Sc	Electronics
	Quantum mechanics
	Computational Physics

Courses Taught (continued)

- Nuclear Physics
- B.Sc ■ Optics, Laser and Fiber Optics
- Properties of Matter and Astrophysics
- Classical and Quantum Mechanics
- Nuclear and Particle Physics
- Molecular spectroscopy

Other Important Responsibilities/Positions Held

- AY 2015-'20 ■ Internal mentor, WWS programme
- AY 2015-'19 ■ Executive Committee member, Women's cell
- AY 2016-'19 ■ Committee member, College website
- AY 2016-'20 ■ Coordinator, Internal assessment
- AY 2016-'18 ■ Committee member, Internal exams
- AY 2017-'21 ■ Committee member, Research forum
- AY 2017-'23 ■ Coordinator, SC/ST/OBC cell
- AY 2019-'20 ■ Committee member, Website and Publications committee
- AY 2019-'21 ■ Committee member, Science Club
- AY 2019-'20 ■ Committee member, Multidisciplinary Research centre
- AY 2020-'23 ■ Committee member, Library Infrastructure and Automation committee
- AY 2021-'23 ■ Committee member, Minority cell
- Committee member, Research Advisory committee
- Committee member, Tourism and Eco-club
- AY 2015-'23 ■ Chief Examiner and Additional Examiner, B.Sc.and M.Sc Degree Examinations (Theory and Practicals) held under Mahatma Gandhi University, Kottayam
- AY 2018-'23 ■ Board member, Board of Examiners for the M.Sc Physics (Materials Science) University examinations, Catholicate College, Pathanamthitta.

Professional Membership and Activities

- Senior member of Applied Physics Society of international Association of Computer Science and Information Technology (IACSIT)
- Life member, Indian Academy of Physics Teachers
- Member of Raman International Optronics Society (RIOS)
- Member, PG Board of studies, M. G University, Kottayam
- Approved Mahatma Gandhi University Research Guide, No.6013/AC A 6/2019/ MGU dated 27-11-2019.

Awards and Achievements

- INSA Visiting Scientist Fellowship by Indian National Science Academy, 2019-2020.
- State level meritorious scholarships for conducting research by Kerala State Council for Science, Technology and Environment (KSCSTE) under Govt. of Kerala (May 2009- May 2012).

Awards and Achievements (continued)

- Second Rank, M.Phil. Physics under Mahatma Gandhi University, Kottayam (2008)
- Second Rank, M.Sc. Physics under Mahatma Gandhi University, Kottayam (2006)
- University meritorious scholarships for conducting M.Phil course (2007-2008).
- University meritorious scholarships for conducting M.Sc course (2004-2006)
- Awarded St. Thom excellence award M.Sc(2004-2006)) sponsored by Alumini association (Dubai, Sharajh and Northern Emirates) of St. Thomas College, Kozhencherry.
- Certificate of Merit (Top-scorer B.Ed in Physical Science)from Titus II Teachers college, Thiruvalla.

Research Interests

- Nanophosphors
- Green synthesis
- Hybrid materials
- Polymer Nanocomposites
- ORMOSILS and ORMOCERs

Research Publications

- **Biogenic synthesis of Cerium oxide nanoparticles using Justicia Adathoda leaves extract: Size-strain study by X-ray peak profile analysis and luminescence characteristics.**
Prathibha Vasudevan. Journal of Molecular Structure 1272 (2023) 134144 (Publisher: Elsevier, IF- 3.841), September 2022.
- **Crystallographic studies and optical analysis on nanocrystalline synthesized through hesperidin mediation.** Praveen K. H, Prathibha Vasudevan, Arun S. Prasad. Journal of Crystal Growth (Publisher: Elsevier, IF- 1.83), Volume 581, March 2022, 126513, ISSN 0022-0248
- **Recent advancements in multifunctional applications of sol-gel derived polymer incorporated TiO₂-ZrO₂ composite coatings: A comprehensive review.**
Sanu Mathew Simon, Gejo George, MS Sajna, VP Prakashan, Twinkle Anna Jose, Prathibha Vasudevan, AC Saritha, PR Biju, Cyriac Joseph, NV Unnikrishnan. Applied Surface Science Advances, (Publisher: Elsevier), Volume 6, 2021, 100173, ISSN 2666- 5239.
- **Phytochemical mediated sol-gel synthesis, crystallographic structure, morphology and optical investigations on ZnO nanoparticles.**
Prathibha Vasudevan, Arun S. Prasad. Journal of Cluster Science (2021) (Publisher: Springer, IF- 3.061).
- **Phytochemical mediated synthesis of ZnO: Dy³⁺ nanophosphors: Judd–Ofelt analysis, structural and spectroscopic properties.**
Prathibha Vasudevan, Viji Vidyadharan, Sanu Mathew Simon, N V Unnikrishnan. Journal of Science: Advanced Materials and Devices (Publisher: Elsevier, Impact factor- 7.382) Volume 5, Issue 2, June 2020, Pages 242-249.
- **Electrical, optical and structural properties of tin phthalocyanine oxide thin films.**
Susan Mathew, Prathibha Vasudevan. International journal of basic and applied research, August 2019, Volume 9 Number 8.
- **Biosynthesis and characterizations of CeO₂ nanoparticles.**
Prathibha Vasudevan, Susan Mathew, Alfiya Basheer and Jincy Lalji. International journal of basic and applied research, June 2019, Volume 9 Number 6.

Research Publications (continued)

- **Green Synthesis and spectroscopic investigations of Dy³⁺ doped Iron oxide nanophosphors.**
Prathibha Vasudevan. International Journal for Research in Applied Science and Engineering Technology, Volume 6 Issue IV (April 2018).
- **Bio approach: Green synthesis of ZnO:Dy³⁺ nanophosphors.**
Prathibha Vasudevan, Amal Dev P K. International Journal of Advance Research in Science and Engineering 06 (2017).
- **Structural, Optical and AC electrical properties of Ce³⁺ doped TiO₂-SiO₂ Matrices.**
Viji Vidyadharan, Prathibha Vasudevan, Karthika S, Cyriac Joseph, N V Unnikrishnan and P R Biju. Journal of Elec Materi 44 (2015) 2754-2761.
- **Structural and spectroscopic studies of Sm³⁺/CdS nanocrystallites in sol-gel TiO₂ -ZrO₂ matrix.**
Karthika S, Prathibha Vasudevan, Ann Mary K A, Viji Vidyadharan, Biju P R, Unnikrishnan N V. Journal of Elec Materi 43 (2014):447-451.
- **Structural and luminescence enhancement properties of Eu³⁺/Ag nanocrystallites doped SiO₂-TiO₂ matrices.**
K V Arun Kumar, K P Revathy, Prathibha Vasudevan, Sunil Thomas, P R Biju, N V Unnikrishnan. Journal of rare earths 31(2013)441-448.
- **Physical properties of nanostructured ZnS powder with strong confinement Effects.**
K R Bindu , Arturo I. Martinez, Prathibha Vasudevan, Unnikrishnan N.V and E I Anila. Journal of rare earths 31(2013)441-448.
- **Structural and Spectroscopic Characterization of Ho³⁺ in Sol-Gel Silica.**
RejiKumar P.R., Prathibha Vasudevan, Karthika S., George J., N.V.Unnikrishnan. Journal of optoelectronics and advanced materials 12 (2010) 1065.
- **Synthesis and dielectric studies of poly (vinyl pyrrolidone) / titanium dioxide nanocomposites.**
Prathibha Vasudevan, Sunil Thomas, Arumkumar K V, Karthika S and Unnikrishnan N V. IOP Conf. Series: Materials Science and Engineering 73 (2015) 012015.
- **RGB Emission From RE Ions Doped Titania /PVP Hybrid Matrix.**
Prathibha Vasudevan, Arun Kumar K.V, Sunil Thomas, Biju P.R and Unnikrishnan N.V. AIP Conf. Proc. 1391(2012)661-663.
- **Synthesis of pure anatase TiO₂ nanocrystals in SiO₂ host and the determination of crystal planes by ImageJ.**
Prathibha Vasudevan, S. Karthika, Joseph Cyriac, C. Sudarasanakumar and N.V. Unnikrishnan. Mater. Letts 65 (2011) 664-666.
- **Fluorescence enhancement in Sm³⁺/TiO₂ nanocrystallites doped PVP matrix.**
Prathibha Vasudevan, Sunil Thomas, Karthika.S, Biju P.R, Cyriac Joseph and Unnikrishnan N.V. J Opt (July-September 2011) 40(3)96-100.
- **Synthesis and structural characterizations of sol gel derived titania/ poly(vinyl pyrrolidone) hybrids.**
Prathibha Vasudevan, Sunil Thomas, Biju P.R, Sudarsanakumar C and Unnikrishnan N.V. J Sol-Gel Sci Technol 62 (2012) 41-46

Minor Research Project

- 2015-2016 ■ Completed SPYTIS II Student Project titled **Green synthesis and characterization of ZnO nanoparticles** funded by KSCSTE, Govt. of Kerala.

Minor Research Project (continued)

2016-2017	Completed SPYTIS II Student Project titled Plant mediated biosynthesis and optical characterization of RE doped ZnO nanophosphors funded by KSCSTE, Govt. of Kerala
2017-2018	Completed Student Project titled Phyto mediated biosynthesis and characterization of rare earth doped silver nanophosphors funded by KSCSTE, Govt. of Kerala
	Completed SPYTIS II Student Project titled Biosynthesis of metal oxide nanophosphors funded by KSCSTE, Govt. of Kerala
2018-2019	Completed SPYTIS II Student Project titled X- ray peak profile analysis of ZnO nanophosphors funded by KSCSTE, Govt. of Kerala
	Completed SPYTIS II Student Project titled Photoluminescence and colorimetric analysis of metal oxide nanophosphors funded by KSCSTE, Govt. of Kerala
	Completed Student Project titled Rare earth doped green synthesized CeO₂ nanophosphors for display applications funded by KSCSTE, Govt. of Kerala
2019-2020	Completed Student Project titled Rare earth doped biosynthesized ZrO₂ nanophosphors for WLED applications funded by KSCSTE, Govt. of Kerala
	Completed Student Project titled Structural, morphological and dielectric studies of green synthesized Cerium oxide nanoparticles funded by KSCSTE, Govt. of Kerala









Faculty Development Programmes Attended

13-28 September 2017	Refresher course on "Experimental Physics" sponsored by Indian Science Academies organized by Bishop Moore college, Mavelikkara.
04 September 2018- 01 October 2018	Orientation programme, UGC HRDC Kerala University, Kariavattom, Kerala.
16-22 October, 2019	Winter School/Short term courses sponsored by CSIR and KSHCEC organized by Bishop Moore College, Mavelikkara.
13-19 May 2020	One week E-Summer School on "Advanced Functional Materials for Energy Harvesting, Storage and Biomedical Applications," organized by Bishop Moore College, Mavelikkara in association with Kerala State Higher Education Council.
19-23 May 2020	5 days Online National Level Faculty Development program on "Moodle- Learning management systems" organized by the Department of Computer Applications, MES College Marampally, in association with Spoken Tutorial, IIT Bombay.
23-29 May 2020.	One week online FDP on "Higher Education during COVID times and after: Challenges and Opportunities" organized by the Internal Quality Assurance Cell, Bishop Moore College, Mavelikkara in association with Kerala State Higher Education Council.
May 2020.	"X- Ray Crystallography", Annual Refresher Programme in Teaching (ARPIT); AICTE approved FDP course.
08-20 June 2020.	Two-week online FDP on "Nanocomposites and nanomaterials and it's Characterization" organized by the Department of Mechanical Engineering, Vimal Jyothi Engineering college, Kannur, Kerala.

Faculty Development Programmes Attended (continued)

- 09-15 September 2020.  One Week National FDP on “Research Ethics and Characterisation Techniques in Materials Science” jointly organized by Guru Angad Dev Teaching Learning Centre, S.G.T.B. Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNM-TT) of MHRD and Bishop Moore College, Mavelikara, Affiliated to the University of Kerala and St. John’s College, Agra.
- 07-13 October 2020.  One Week National FDP on “Instrumental method of Analysis” jointly organized by Guru Angad Dev Teaching Learning Centre, S.G.T.B. Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNM-TT) of MHRD and Bishop Moore College, Mavelikara, Affiliated to the University of Kerala and St. John’s College, Agra.

Recent Seminar/Conferences/Workshops Organized

-  Coordinator, “National Science day celebrations- 2017” funded by KSCSTE, Govt of Kerala, February 2017.
-  Coordinator, “National Ozone Day celebrations- 2018” funded by KSCSTE, Govt of Kerala, September 2018.
-  Coordinator, “National Science day celebrations- 2019” funded by KSCSTE, Govt of Kerala, February 2019.
-  Coordinator, “ESTERLLA 2K19, LED stars making-workshop” December 2019.
-  Coordinator, “National Science day celebrations- 2020” funded by KSCSTE, Govt of Kerala, February 2020.
-  Coordinator, “Two- day National Seminar on Advanced Materials and Applied Physics (NSAMAP 2023)” sponsored by KSCSTE, Govt of Kerala, 12-13 January 2023.
-  Coordinator, “Awareness programme for SC/ST/OBC students” organized by SC/ST/OBC cell, St. Thomas College, Kozhencherry, 24 January 2023.
-  Coordinator, “Telescopium- An Eye to Sky- Sky watch programme” in association with Break through Science Society, St. Thomas College, Kozhencherry, 28 January 2023.