CURRICULAM VITAE

Dr.P. SUTHANTHIRA KUMAR M.Sc.,M.Phil.,PhD
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https://scholar.google.com/citations?user=fvsm3B4AAAAJ
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EDUCATIONAL DETAILS

Degree/ Examination	Month & Year of Passing	School/Institute	Percentage (%)
Post Doctoral Research Fellow	2019 - 2021	Henan University of Technology, Zhengzhou, Henan, China.	-NA-
Ph.D (Physics)	Nov-2020	The Gandhigram Rural University, Gandhigram, Tamilnadu.	Highly Commented
M. Phil., (Physics)	May-2013	Anna University, Chennai, Tamilnadu.	80.0
M.Sc., (Physics)	April-2011	The American college, Madurai, Tamilnadu.	63.2
B.Sc., (Physics)	April-2009	Bishop Heber College, Trichy, Tamilnadu.	74.5
H.S.C	March-2006	Sarva seva Higher Secondary School, Dindigul, Tamilnadu.	68.0
S.S.L.C	April-2004	Sarva seva Higher Secondary School, Dindigul, Tamilnadu.	89.8

PROJECT WORKS COMPLETED

- **Ph.D Thesis**

  Synthesis, Structural and Spectroscopic Investigations on Dy^{3+}, Sm^{3+}, Pr^{3+}, Eu^{3+}, Er^{3+} and Er^{3+}/Yb^{3+} Ions doped Zinc telluro-fluoroborate based glasses for Photonic Applications

- **M.Phil Project**

  Growth and Characterization of L-Histidine Nitrate Single Crystal: A Novel Second Order Nonlinear Optical Material

- **M.Sc Project**

  Synthesis, Structural and Optical Properties of Tin Oxide (SnO_2) Nanoparticles

LIST OF PUBLICATIONS (International Peer reviewed Journals)

1. Spectroscopic properties and excited state dynamics of Sm^{3+} ions in zinc telluro-fluoroborate glasses
   P. Suthanthirakumar, S. Arunkumar, K. Marimuthu
   Journal of Luminescence 202 (2018) 289–300

2. Investigations on the spectroscopic properties and local structure of Eu^{3+} ions in zinc telluro-fluoroborate glasses for red laser applications
   P. Suthanthirakumar, S. Arunkumar, K. Marimuthu
   Journal of Alloys and Compounds 760 (2018) 42–53

3. Effect of Pr^{3+} ions concentration on the spectroscopic properties of Zinc telluro-fluoroborate glasses for laser and optical amplifier applications
   P. Suthanthirakumar, Ch. Basavapoornima, K. Marimuthu
   Journal of Luminescence 187 (2017) 392–402

4. Investigations on Spectroscopic properties of Dy^{3+} doped Zinc telluro-fluoroborate glasses for Laser and White LED applications
   P. Suthanthirakumar, K. Marimuthu
   Journal of Molecular Structure 1125 (2016) 443–452

5. Structural and spectroscopic behavior of Er^{3+}/Yb^{3+} co-doped boro-tellurite glasses
   P. Suthanthirakumar, P. Karthikeyan, P.K.Manimozhi, K.Marimuthu,
   Journal of Non-Crystalline Solids 410 (2015) 26–34

6. Spectroscopic properties of Sm^{3+} ions doped Alkaliborate glasses for photonics applications
   R. Nagaraj, **P. Suthanthirakumar**, R. Vijayakumar, K.Marimuthu
   Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 185 (2017) 139–148

7. Structural and luminescence behaviour of Er^{3+} doped telluro-fluoroborate glasses
   P. Karthikeyan, **P. Suthanthirakumar**, K. Marimuthu
   Journal of Molecular Structure 1083 (2015) 268–277

8. Enhanced luminescence properties and Judd-Ofelt analysis of novel red emitting Sr2LiScB4O10: Eu3+ phosphors for WLED applications
   Qiuling Chen, Baoji Miao, **P. Suthanthira Kumar**, Sankui Xu
   Optical Materials, Volume 116, June 2021, 111093

9. Silver (Ag) nanoparticles enhanced luminescence properties of Dy3+ ions in borotellurite glasses for white light applications
   R. Vijayakumar, R. Nagaraj, **P. Suthanthirakumar**, K.Marimuthu
   Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 204 (2018) 537–547

10. Influence of modifier oxide on the structural and radiation shielding features of Sm3+-doped calcium telluro-fluoroborate glass systems
    Qiuling Chen, KA Naseer, **P.Suthanthira Kumar**, Baoji Miao, KA Mahmoud, MI Sayyed, *Journal of the Australian Ceramic Society volume 57, 275–286 (2021)*

11. Structural and Luminescence Studies of Sm3+ Doped Telluro-Fluoroborate Glasses for Photonic Applications
    P. Suthanthirakumar, M.Mariyappan, K. Marimuthu
    International Journal of Scientific Research in Science and Technology 3 (2017) 165–169.

12. Optical Properties of Dy3+ Doped Zinc Boro-Phosphate Glasses for Photonic Applications
    P. Karthikeyan**, P. Suthanthirakumar**, K. Marimuthu
    International Journal of Scientific Research in Science and Technology 3 (2017) 155–159.

13. Spectroscopic properties of Er^{3+}/Yb^{3+} co-doped zinc boro-tellurite glasses for 1.5μm broadband optical amplifiers
    P. Suthanthirakumar, P. Karthikeyan, R. Vijayakumar, K. Marimuthu
    *AIP Proceedings **1665**, 070007 (2015); doi: 10.1063/1.4917871*

14. Influence of silver nanoparticles on the spectroscopic properties of Sm^{3+} doped borophosphate Glasses
    P. Suthanthirakumar, K. Marimuthu
    *AIP Proceedings **1731**, 070008 (2016); doi: 10.1063/1.4947840*

15. Spectroscopic investigations on Pr3+ ions doped lead telluro-borate glasses for photonic applications
    P. Suthanthirakumar, M. Mariyappan and K. Marimuthu
    *AIP Proceedings **1942**, 070004 (2018); doi: 10.1063/1.5028802*

16. Structural and optical studies on Sm3+ ions doped bismuth fluoroborate glasses for visible laser applications
    M. Mariyappan, **P. Suthanthirakumar**, S. Arunkumar, and K. Marimuthu
    *AIP Proceedings **1942**, 070020 (2018) doi: 10.1063/ 1.5028818*

17. Investigations on optical properties of Sm^{3+} ion doped boro-phosphate glasses
    R. Vijayakumar, **P. Suthanthirakumar**, P. Karthikeyan, K. Marimuthu
    *AIP Proceedings **1665**, 070040 (2015); doi: 10.1063/ 1.4917904*

18. Investigations on structural and optical behavior of Er3+ doped lead boro-tellurite glasses
    P. Karthikeyan, **P. Suthanthirakumar**, R. Vijayakumar, K. Marimuthu
    *AIP Proceedings **1665**, 070008 (2015); doi: 10.1063/ 1.4917872*

19. Luminescence properties of Er^{3+} ions doped bismuth borate glasses for 1.53 μm broadband optical amplifiers
    M. Mariyappan, **P. Suthanthirakumar**, S. Arunkumar, and K. Marimuthu
    *AIP Proceedings **1832**, 070017 (2017); doi: 10.1063/ 1.4980452*

20. Enhanced luminescence properties of Er3+/Yb3+ doped zinc tellurofluoroborate glasses for 1.5 μm optical amplification
    KA Naseer, P Karthikeyan, S Arunkumar, **P Suthanthirakumar**, K Marimuthu
    AIP Proceedings **2265 (1)**, 030237, (2020); DOI: https://doi.org/10.1063/5.0019171

21. Luminescence Studies on Eu^{3+} ions doped telluroborate glasses for photonic applications
    R.Divina, **P. Suthanthirakumar**, K.A.Naseer, K. Marimuthu
    *AIP Proceedings **2115**, 030267 (2019);* DOI: 10.1063/1.5113106

PAPERS PRESENTED IN INTERNATIONAL CONFERENCES

1. Spectroscopic Investigations on Pr^{3+} Ions Doped Telluro-Fluoroborate Glasses

   International Conference on Science, Technology and Applications of Rare Earths (ICSTAR-2015) organized by Rare Earths Association of India during 23rd–25th April, 2015 in Thiruvananthapuram, Kerala, India.

   P. Suthanthirakumar, P. Karthikeyan, R. Vijayakumar, K. Marimuthu

2. Optical Investigations on Sm^{3+} Ions Doped Lead Borate Glasses For Laser Applications
   International Conference on Science, Technology and Applications of Rare Earths (ICSTAR-2015), Organized by Rare Earths Association of India, Thiruvananthapuram, Kerala, India during 23rd-25th April 2015.
   P. Lavanya, **P. Suthanthirakumar**, K. Priyadharshini, K. Marimuthu

3. Spectroscopic Properties and White Light Generation in Dy^{3+} Ions Doped Telluro-Fluoroborate Glasses

   Proceedings of the International conference on Sustainable energy technologies for Smart and clean cities (SETS & CC-2016) organized by Indian Institute of Technology Tirupati, India and Southern University and A&M College, LA, USA during 27-29th July 2016. ***ISBN: 978-93-82570-81-3***

   P. Suthanthirakumar, M. Mariyappan and K. Marimuthu

4. Structural and Optical Properties of Dy^{3+} Doped Zinc Boro-Tellurite Glasses for Laser and W-LED Applications

   Proceedings of the International conference on Sustainable energy technologies for Smart and clean cities (SETS & CC-2016) organized by Indian Institute of Technology Tirupati, India and Southern University and A&M College, LA, USA during 27-29th July 2016. ***ISBN: 978-93-82570-81-3***

   P. Karthikeyan, **P. Suthanthirakumar** and K. Marimuthu

5. Structural and Optical Properties of Dy^{3+} Doped Calcium Telluro-Fluoroborate for Laser and White Light Applications

   International Conference on Renewable Energy and Environment (ICREE-2016) Organized by the Department Of Physics, Sri Ramakrishna Mission Vidyalaya College Of Arts and Science, Coimbatore, India during 15-16, December 2016.

   P. Karthikeyan, **P. Suthanthirakumar** and K. Marimuthu

6. Structural and Luminescence Studies of Sm^{3+} Doped Telluro-Fluoroborate Glasses for Photonic Applications

   International Conference on Advanced Materials Organized by the Department of Physics, St. Joseph's College, Trichy, India during 14-15, December, 2017.

   P. Suthanthirakumar, M. Mariyappan, K. Marimuthu

7. Optical properties of Dy^{3+} doped Zinc boro-phosphate glasses for Photonic applications

   International Conference on Advanced Materials Organized by the Department of Physics, St. Joseph's College, Trichy, India during 14-15, December, 2017.

   P. Karthikeyan, **P. Suthanthirakumar**, K. Marimuthu

PAPERS PRESENTED IN NATIONAL CONFERENCES/SYMPOSIA

1. Visible and NIR luminescence of Er^{3+} doped Lead telluro-borate glasses

   National Conference on Luminescence and its Applications (NCLA-2014), organized by Luminescence Society of India and Rani Durgavati Vishwavidyalaya at Jabalpur during 5th to 7th February 2014.

   P. Suthanthirakumar, M. Vijayakumar, K. Marimuthu

2. Luminescence studies on Eu^{3+} doped Tellurofluoroborate glasses

National Conference on Luminescence and its Applications (NCLA-2014), organized by Luminescence Society of India and Rani Durgavati Vishwavidyalaya at Jabalpur during 5th to 7th February 2014.

R. Vijayakumar, **P. Suthanthirakumar**, M. Mariyappan, K. Marimuthu

3. Upconversion and Energy Transfer Studies on Er^{3+} doped Telluro Fluoroborate Glasses.

National Conference on Advanced Materials (NCAM 2014) organized by Department of physics and Department of Electronics at St. Joseph's college (Autonomous) on 24th February 2014

P. Suthanthirakumar, P. Karthikeyan, R. Vijayakumar, K. Marimuthu

4. Luminescence Behavior of Sm^{3+} ions in Lead Fluoroborate Glasses

National Conference on Advanced Materials (NCAM 2014) organized by Department of physics and Department of Electronics at St. Joseph's college (Autonomous) on 24th February 2014.

P. Karthikeyan, **P. Suthanthirakumar**, M. Mariyappan, K. Marimuthu

5. Composition dependent spectroscopic properties of Dy^{3+} doped Zinc telluro-fluoroborate glasses for lasing materials and White LEDs

23rd – National Laser Symposium, sponsored by the Board of Research in Nuclear Sciences (DAE-BRNS), Department of Atomic Energy, in collaboration with Indian Laser Association (ILA), rganized at Department of Physics, Sri Venkateswara University, Tirupati, Andhra Pradesh, India during 3rd–6th December, 2014.

P. Suthanthirakumar, P. Karthikeyan, R. Vijayakumar, K. Marimuthu

6. The study on optical properties of Sm^{3+} ions in borate and borophosphate glasses for visible laser applications

23rd – National Laser Symposium, sponsored by the Board of Research in Nuclear Sciences (DAE-BRNS), Department of Atomic Energy, in collaboration with Indian Laser Association (ILA), rganized at Department of Physics, Sri Venkateswara University, Tirupati, Andhra Pradesh, India during 3rd–6th December, 2014.

R. Vijayakumar, **P. Suthanthirakumar**, P. Karthikeyan, K. Marimuthu

7. Investigations on concentration dependent structural and optical behavior of Sm^{3+} ions in lead telluroborate glasses for laser applications

23rd – National Laser Symposium, sponsored by the Board of Research in Nuclear Sciences (DAE-BRNS), Department of Atomic Energy, in collaboration with Indian Laser Association (ILA), rganized at Department of Physics, Sri Venkateswara University, Tirupati, Andhra Pradesh, India during 3rd–6th December, 2014.

M. Mariyappan, S. Arunkumar, **P. Suthanthirakumar**, K. Marimuthu

8. Spectroscopic properties of Er^{3+}/Yb^{3+} co-doped zinc boro-tellurite glasses

59th DAE Solid State Symposia (DAE-SSPS 2014), organized by Bhabha Atomic Research Centre at VIT University, Vellore, during 16th to 20th December 2014.

P. Suthanthirakumar, P. Karthikeyan, R. Vijayakumar, K. Marimuthu

9. Investigations on optical properties of Sm^{3+} ion doped borophosphate glasses

59th DAE Solid State Symposia (DAE-SSPS 2014), organized by Bhabha Atomic Research Centre at VIT University, Vellore, during 16th to 20th December 2014.

R. Vijayakumar, **P. Suthanthirakumar**, P. Karthikeyan, K. Marimuthu

10. Structural and Spectroscopic properties of Sm^{3+} doped Boro-phosphate glasses for visible solid state lasers

24th DAE–BRNS National Laser Symposium (NLS–24) organised by Raja Ramanna Centre for Advanced Technology (RRCAT), Indore, Madhya Pradesh during 2nd–5th December, 2015.
P. Suthanthirakumar, K. Marimuthu

11. Influence of Silver Nanoparticles on the Spectroscopic Properties of Sm^{3+} Doped Boro-phosphate Glasses

60th DAE–Solid State Physics Symposium (DAE–SSPS 2015) organised by Bhabha Atomic Research Centre (BARC) and Amity University, Noida, Uttar Pradesh during 21st–25th December, 2015.
P. Suthanthirakumar, K. Marimuthu

12. Spectroscopic Properties of Dy^{3+} Doped Boro-Tellurite Glasses for Laser and W–LED Applications

National Conference on Recent Trends in Electronics (NCRE–2016) organized by Department of Electronics at St. Joseph's college (Autonomous), Tiruchirappalli-2 on 18th February 2016.

P. Suthanthirakumar, R. Nagaraj, P. Karthikeyan, K. Marimuthu

13. Concentration effect on the luminescence properties of Pr^{3+} doped Alumino telluro-fluoroborate glasses for Laser applications

25th DAE–BRNS National Laser Symposium [NLS–25], in collaboration with Indian Laser Association (ILA) organised by Department of physics, School of applied sciences, KIIT University, Bhubaneswar, Odisha during 20–23 December, 2016.

P. Suthanthirakumar, K. Marimuthu

14. Structural and Optical properties of Dy^{3+} ions doped Bismuth fluoroborate glasses for white light applications

25th DAE–BRNS National Laser Symposium [NLS–25], in collaboration with Indian Laser Association (ILA) organised by Department of physics, School of applied sciences, KIIT University, Bhubaneswar, Odisha during 20–23 December, 2016.

P. Suthanthirakumar, K. Marimuthu

15. Luminescence properties of Er^{3+} ions doped bismuth borate glasses for 1.53µm broadband optical amplifiers

    61st DAE–Solid State Physics Symposium [DAE–SSPS 2016], in collaboration with Bhabha Atomic Research Centre (BARC) organised by Department of physics, School of applied sciences, KIIT University, Bhubaneswar, Odisha during 26–30 December, 2016.

    M. Mariyappan, **P. Suthanthirakumar**, K. Marimuthu

16. Concentration effect on the Spectroscopic properties of Sm^{3+} ions doped Lead telluro-fluoroborate glasses for Photonic applications

    National Conference on Luminescence and Applications [NCLA–17], in collaboration with Luminescence Society of India (LSI) organised by CSIR-Indian Institute of Chemical Technology (IICT), Hyderabad during 9–11 January, 2017.

    P. Suthanthirakumar, K. Marimuthu

17. Effect of Eu^{3+} ions Concentration on the Spectroscopic properties of Lead Telluro-Fluoroborate Glasses for Photonic Applications

    DAE-BRNS National Laser Symposium (NLS-26) organized by Bhabha Atomic Research Centre (BARC) at DAE convention centre, BARC, Mumbai, Maharastra during 20th to 23rd December 2017.

    P. Suthanthirakumar, M. Mariyappan, K. Marimuthu

18. Spectroscopic Properties of Dy^{3+} Doped Barium Telluro-Fluoroborate Glasses for White Light Applications

    DAE-BRNS National Laser Symposium (NLS-26) organized by Bhabha Atomic Research Centre (BARC) at DAE convention centre, BARC, Mumbai, Maharastra during 20th to 23rd December 2017.

    P. Karthikeyan, **P. Suthanthirakumar**, K. Marimuthu

19. Spectroscopic Investigations on Pr^{3+} ions Doped Lead Telluro-borate Glasses for Photonic Applications

    62nd DAE Solid State Physics Symposium (DAE-SSPS 2016) organized by Bhabha Atomic Research Centre (BARC) at DAE convention centre, BARC, Mumbai, Maharastra during 26th to 30th December 2017.

    P. Suthanthirakumar, M. Mariyappan, K. Marimuthu

20. Structural and Optical Studies on Sm^{3+} ions doped Bismuth Fluoroborate Glasses for Visible Laser Applications

    62nd DAE Solid State Physics Symposium (DAE-SSPS 2016) organized by Bhabha Atomic Research Centre (BARC) at DAE convention centre, BARC, Mumbai, Maharastra during 26th to 30th December 2017.

    M. Mariyappan, **P. Suthanthirakumar**, K. Marimuthu

21. Structural and Luminescence studies on Eu^{3+}:$B2O_3$–TeO_2–(Mg/Ba/Sr)O glasses

DAE-BRNS National Laser Symposium (NLS-27) organized by Bhabha Atomic Research Centre (BARC) at Raja Ramanna Center for Advanced Technology (RRCAT), Indore during 3rd to 6th December 2018.

P. Suthanthirakumar, K. Marimuthu

22. Luminescence Studies on Eu^{3+} ions doped Telluroborate Glasses for Photonic Applications

63nd DAE Solid State Physics Symposium (DAE-SSPS 2018), organized by BARC, at Guru Jambheshwar University of Science and Technology, Hisar, Haryana during 18th to 22nd December 2018.

R. Divina, **P. Suthanthirakumar**, K.A. Naseer, K. Marimuthu

23. Spectroscopic Investigations on Sm^{3+} ions Doped Zinc Telluro-borate Glasses for Laser Applications

63nd DAE Solid State Physics Symposium (DAE-SSPS 2018), organized by BARC, at Guru Jambheshwar University of Science and Technology, Hisar, Haryana during 18th to 22nd December 2018.

M. Mariyappan, **P. Suthanthirakumar**, K. Marimuthu

BEST PAPER PRESENTATION AWARDS

1. Structural and Luminescence Studies of Sm^{3+} Doped Telluro-Fluoroborate Glasses for Photonic Applications

at International Conference on Advanced Materials Organized by the Department of Physics, St. Joseph's College, Trichy, Tamilnadu, India during 14-15, December, 2017.

2. Luminescence properties of Er^{3+} ions doped bismuth borate glasses for 1.53μm broadband optical amplifiers

at 61st DAE–Solid State Physics Symposium [DAE–SSPS 2016], in collaboration with Bhabha Atomic Research Centre (BARC) organised by Department of physics, School of applied sciences, KIIT University, Bhubaneswar, Odisha during 26–30 December, 2016.

3. Investigations on optical properties of Sm^{3+} ion doped borophosphate glasses

at 59th DAE Solid State Symposium [DAE–SSPS 2014], in collaboration with Bhabha Atomic Research Centre (BARC) organised by VIT University, Vellore, during 16th to 20th December 2014.

WORKSHOPS, SEMINARS AND SHORT TERM COURSES ATTENDED

1. UGC sponsored two days national workshop on "Recent Advances and Applications of Material Science (NWRAAMS-2017)" organized by the Department of Physics, The Gandhigram Rural Institute-DU, Gandhigram, during 2nd to 3rd November 2017.

2. National Workshop on Luminescence Materials Devices and Applications (NWLMDA 2013) organized by the Department of Physics, Bangalore university, Bengaluru & Luminescence Society of India, during 22nd to 33rd November 2013.

3. UGC sponsored Short term course on "Research Methodology Techniques of Writing Research Articles" by the Department of Physics, Anna University in association with Centre for Research Anna University, during 27th to 28th February 2013.

4. State level seminar on "Nanoscience & Its Applications" organized by the PG and Research Department of Physics, Lady Doak College, Madurai, on 15th February 2010.

PROGRAMMES ORGANIZED

1. Organized one day National workshop on "Optical Characterization of materials 2016" in the Department of Physics in association with the SPIE Student Chapter, The Gandhigram Rural Institute-DU, Gandhigram on 24th October 2016.

2. Conducted "Students Science Fair Programme" for the various Government School students of Dindigul district in the Department of Physics in association with the SPIE Student Chapter, Gandhigram Rural Institute–DU on 3rd September 2016.

3. Conducted "Outreach Programme" to Government Tribal Residential School students, Permumparai, Dindigul (Dt), Tamilnadu, to furnish basic knowledge about "OPTICS & related fields" on 5th August 2016.

INTERNATIONAL MEMBERSHIP

Active Member of **SPIE** [International Society for Optics and Photonics] Student Chapter - from April-2015

TECHNICAL SKILLS

- Certificate course : DCA (Diploma in Computer Applications)
- Languages : Basics of C and C++

INSTRUMENTS HANDLED

- High Temperature Electrical Furnaces
- Abbe Refractometer
- FTIR Spectrometer
- UV-Visible absorption Spectrometer
- Photoluminescence Spectrophotometer

PERSONAL DETAILS

Father's Name	:	R. Palanimuthu
Mother's Name	:	P. Shanthi
Date of Birth	:	07.03.1989
Sex / Marital Status	:	Male / Single
Nationality	:	Indian
Languages Known	:	Tamil and English

DECLARATION

I hereby declare that all the details given above are true to the best of my knowledge.

Thank You,

Yours Sincerely,

(P. SUTHANTHIRAKUMAR)