

**Dr. S. Brahadeeswaran**  
**Professor and Head**  
**Department of Physics**  
**UCE- Tiruchirappalli (BIT Campus)**  
**Anna University Chennai**  
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➤ **Research Area: Developing crystalline and nanocrystalline materials for Nonlinear Optical, Terahertz and Semiconductor Applications**

➤ **Educational Qualifications:**

Qualification	Department	Year (From -To)	Class
Ph. D	Department of Physics Indian Institute of Science Bangalore	1994 - 2001	
M. Sc (Materials Science)	Department of Physics College of Engineering Guindy Anna University	1988-1990	First
B. Sc	Department of Physics Raja Duraisingam Govt. Arts College Sivagangai Madurai Kamaraj University	1984-1987	First

➤ **Experience:**

Name of Company / Institutions	Designation of Post	From	To	Relieved on	Experience (in Years)
Indian Institute of Science Bangalore	Junior Research Fellow (Schemes)	24-02-1992	02-09-1994	02-09-1994	2.5
Indian Institute of Science Bangalore	Research Associate (Provisional)	01-08-2000	22-01-2001	22-01-2001	0.5
University of Strathclyde United Kingdom	Academic Visitor	26-01-2001	02-08-2001	02-08-2001	0.5
Osaka University Japan	JSPS Postdoctoral Fellow	24-09-2001	24-09-2003	24-09-2003	2.0
Osaka University Japan	Specially Appointed Researcher	01-10-2003	15-04-2007	15-04-2007	3.5

Anna University BIT Tiruchirappalli	Assistant Professor (Temporary)	03-09-2007	14-09-2009	--	2.0
Anna University BIT Trichy/Chennai	Assistant Professor	15-09-2009	14-09-2012	--	3.0
Anna University Chennai	Associate Professor	15-09-2012	14-09-2015	--	3.0
Anna University Chennai	Professor	15-09-2015	Till Date	--	3 Years 3 Months

➤ **Awards:**

- Awarded internationally competitive Japan Society for the Promotion of Science (**JSPS**) **Postdoctoral Fellowship** for 24 months by the Govt. of Japan
- Received **Young Scientist Award** under DST SERC (Govt. of India) Fast Track Scheme
- **Ph. D studentship** from Indian Institute of Science Bangalore
- Awarded **Junior Research Fellowship** (JRF) (Project Scheme) by Indian Institute of Science Bangalore
- Awarded **Research Associateship** (Provisional) by Indian Institute of Science Bangalore

➤ **Honours:**

- Selected by Anna University Chennai **to teach Engineering Physics through online** to all the Engineering Colleges affiliated to Anna University Chennai
- Elected as a **First Vice-Chairman of Materials Research Society of India (MRSI)**- Trichy Chapter

➤ **Additional / Academic Responsibilities at University:**

- **Deputy Director** – Centre for Affiliations, Regional Campus – Tiruchirappalli, Anna University
- **Member** – Syllabus Sub-Committee of Anna University Chennai Board of Studies – **Regulations 2017**

- **Deputy Director** – Library (of erstwhile Anna University of Technology Tiruchirappalli)
- **Deputy Overall Coordinator – NBA Core Committee** of Bharathidasan Institute of Technology Tiruchirappalli of Anna University Chennai
- **Member – AICTE Swachhta Single Member Expert Committee**
- **Member – Inspection Committee of Affiliating colleges** of Anna University Chennai
- **Chief Coordinator** – UG Internal Assessment Examinations BIT Campus
- **Member** – Squad - Anna University Examinations
- **Anna University Representative-** Anna University Examinations
- **Member-** Purchase Committee of BIT Campus of Anna University Chennai
- **Member** - Malpractice Enquiry Committee of Anna University Chennai
- **Member** – Non-teaching (Temporary) staff salary fixation committee at BIT Campus of Anna University Chennai
- **Member-** Research Advisory Council – BIT Campus Tiruchirappalli
- **Doctoral Committee Member- for Ph. D scholars** Anna University Chennai
- **Expert Member - Viva Voce examination** of Anna University Chennai
- **Member- Question Paper Setting-** Materials and Engineering & crystal growth and thin film physics, Fundamentals of Materials Science, Materials science & crystal growth and thin film physics.

➤ **Professional Activities:**

- **Expert Member** – Board of Studies of Department of Physics of Periyar Maniammai University, Thanjavur
- **Expert Member** – Board of Studies of PSN College of Engineering Tirunelveli
- **Expert Member** – Board of Studies of Vivekananda College of Engineering for Women Tiruchengode

- **Reviewer** for the journals of following international publishers: **American Chemical Society, Royal Society of Chemistry, Wiley & Sons, Elsevier, Springer** etc.
- **Chief Superintendent (Additional)** for TNEB, TWAD Board and TANCET Examinations
- **External Subject Expert**- UGC-DAE-CSR Project at St. Joseph's College
- **Member**- Research Advisory Council – BIT Campus Tiruchirappalli
- **Doctoral Committee Member- for Ph. D scholars** of National Institute of Technology Tiruchirappalli, Anna University Chennai, Bharathidasan University Tiruchirappalli, Bharathiar University Coimbatore
- **Expert Member - Viva Voce examination** of Bharathidasan University Tiruchirappalli
- **Member -Assessment Committee**-CECRI, Karaikudi
- **External Examiner**- For M. Sc / M. Phil/ Practical/ Project viva-voce/ M. Tech (NDT) thesis evaluation Examinations
- **External Member** – Purchase Committee of National Institute of Technology Tiruchirappalli
- **Member- Question Paper Setting**- Materials and Engineering & crystal growth and thin film physics, Fundamentals of Materials Science, Materials science & crystal growth and thin film physics.

➤ **Membership of Scientific and Professional Societies:**

1. Life Member – Materials Research Society of India (MRSI)
2. Life Member – Indian Laser Association (ILA)
3. Life Member – Indian Association of Crystal Growth (IACG)

**Fellowships and Grants:**

Name of the Award / Fellowship	Sponsoring Agency	International / National/State/University level	Date

Japan Society for the Promotion of Science Postdoctoral Fellowship	Ministry of Education, Govt. of Japan. at Osaka University, Japan	International	24-09-2001 to 23-09-2003
Junior Research Fellowship (JRF - Schemes)	Indian Institute of Science Bangalore Sponsor: ISRO Ahmadabad	National	24-02-1992 to 01-09-1994
Research Associateship (Provisional)	Indian Institute of Science Bangalore Sponsor: CSIR, New Delhi	National	01-08-2000 to 22-01-2001

### **Patent details**

<b>Sl. No</b>	<b>Title of the Patent</b>	<b>Funding Agency</b>	<b>Patent details</b>
1	Rapid Growth of Thin and Flexible Organic Semiconductor Single Crystals Using Modified Solution Technique	DST - SERC Fast Track Young Scientist Scheme (Government of India) Applicant: Anna University of Technology Tiruchirappalli 620024 India	IPR Patent-Filed 1584/CHE/2012 Dated: 23-04-2012 National
2	Generation of efficient terahertz waves using solution grown N-benzyl-2-methyl - 4-nitroaniline single crystals – an I indigenous approach.	DST - SERB (Government of India) Applicant: Anna University Chennai Tiruchirappalli 620024 India,	IPR Patent-Filed 201741001472 Dated: 13-01-2017 National

#### ➤ **Completed B.E/M. E Projects:**

- Number of ME Projects Completed: NA
- Number of BE Project Completed: NA
- Number of M. Tech Projects Completed: **15**

#### ➤ **Ph. D Research Projects (Completed): 5**

<b>Name of the Scholar</b>	<b>Title of the Thesis</b>	<b>Year of completion</b>
Dr. G. Shanmugam	Synthesis, Crystal Growth and Characterization of Certain Benzoate and Sulfonate Organic Nonlinear Optical Materials	2013

Dr. V. Kannan	Synthesis, Crystal Growth and Characterization of Hydrazoium L-Tartarate and Certain Pyridine Based Organic Nonlinear Optical Single Crystals	2014
Dr. K. Thirupugalmani	Investigations on Selected Technologically Important Organic Single Crystals for Nonlinear Optical, Terahertz and Semiconductor Applications	2016
Dr. M. Krishnakumar	Synthesis, Crystal Growth and Characterization of Certain Benzoate, L-tartrate and Glutarate Based Organic Nonlinear Optical Materials	2017
Dr. P. Satchidhanandham	Synthesis, crystal growth and Characterization of certain Aminopyridine based organic Nonlinear optical materials	2018

➤ **PhD Research Projects (Ongoing): 03**

➤ **Sponsored Research Activities:**

1. \*\*\* Ultra-fast Transient Spectroscopy to Probe Charge Carrier Dynamics in Molecular Semiconductor Crystals –An Indigenous and Cost-Effective Approach \*\*\*

Duration: 3 Years

Role: Principal Investigator

Agency: Department of Science and Technology (DST)

Grant: **Rs.18,47,200/-**

2. \*\*\* Growth of DAST and BNA Single Crystals for Terahertz Applications \*\*\*

Duration: 3 Years

Role: Principal Investigator

Agency: Department of Science and Technology (DST)

Grant: **Rs. 29,79,024/-**

➤ **Consultancy Activities:** *Nil*

\*\*\*PROJECT NAME\*\*\*

Duration: \_\_\_ Years

Role: \_\_\_\_\_

Agency: \_\_\_\_\_

Amount: \_\_\_\_\_

➤ **Publications:**

**a. Books: NA**

**b. International Journals:(Citation Index 804 h-index = 16 as on 19-12-2018)**

1. Crystal growth and characterization of sodium p-nitrophenolate dihydrate: a semiorganic nonlinear optical material, **S. Brahadeeswaran**, V. Venkataramanan, J.N. Sherwood and H.L. Bhat, Journal of Materials Chemistry 8 (1998) 613(Impact Factor 6.1)
2. Twin-free and High-Quality DAST Crystals - Effected through Solutions of Lower Supersaturation Coupled with Isothermal Solvent Evaporation, **S. Brahadeeswaran**, S. Onduka, M. Takagi, Y. Takahashi, H. Adachi, T. Kamimura, M. Yoshimura, Y. Mori, K. Yoshida and T. Sasaki, Crystal Growth & Design 6 (2006) 2463 (Impact Factor 4.72)
3. Ultrasonic measurement of the elastic constants of sodium p-nitrophenolate dihydrate single crystals, A.V. Alex, J. Philip, **S. Brahadeeswaran** and H.L. Bhat, Physical Review B 62(2000) 2973 (Impact Factor 3.772)
4. Organic nonlinear optical DAST crystals for electro-optic measurement and terahertz wave generation, Y. Takahashi, H. Adachi, T. Taniuchi, M. Takagi, Y. Hosokawa, S. Onzuka, **S. Brahadeeswaran**, M. Yoshimura, Y. Mori, H. Masuhara, T. Sasaki and H. Nakanishi, Journal of Photochemistry and Photobiology A: Chemistry 183 (2006) 247 (Impact Factor 2.362)
5. Dielectric, thermal, and mechanical properties of the semiorganic nonlinear optical crystal sodium p-nitrophenolate dihydrate, **S. Brahadeeswaran**, H.L. Bhat, N.S. Kini, A.M. Umarji, P. Balaya and P.S. Goyal, Journal of Applied Physics 88 (2000)5935 (Impact Factor 2.20)
6. Nonlinear optical activity of anhydrous and hydrated sodium p-nitrophenolate **S. Brahadeeswaran**, V.Venkataramanan and H.L.Bhat, Journal of Crystal Growth 205 (1999) 548 (Impact Factor 1.757)
7. Influence of dopants on photo-induced damage in GdxY1-xCa4O(BO3)3 crystal **S. Brahadeeswaran**, R. Kuwabara, N. Hisaminato, Y. Syuto, K. Sato, H. Kitano, M. Yoshimura, Y. Mori and T. Sasaki, Journal of Crystal Growth 275/1-2 (2005) e887 (Impact Factor 1.757)

8. Growth and characterization of semiorganic sodium para-nitrophenolate dihydrate from aqueous solution, S. Vanishri, **S. Brahadeeswaran** and H.L. Bhat, Journal of Crystal Growth 275/1-2 (2005) e147 (Impact Factor 1.757)
9. Growth of high quality DAST crystals for THz applications, **S. Brahadeeswaran**, S. Onduka, M. Takagi, Y. Takahashi, H. Adachi, M. Yoshimura, Y. Mori and T. Sasaki, Journal of Crystal Growth 292 (2006) 441 (Impact Factor 1.757)
10. Development of DAST Crystals with High Damage Tolerance, Yoshinori Takahashi, Shinji Onzuka, **Srinivasan Brahadeeswaran**, Masashi Yoshimura, Yusuke Mori and Takatomo Sasaki, Optical Materials 30 (2007) 116 (Impact Factor 1.714)
11. Controlled Habit and Growth, and Electrooptic Evaluation of Organic Nonlinear Optical 4-Dimethylamino- N-Methyl- 4-Stilbazolium Tosylate (DAST) Crystals K. Nagaoka, H. Adachi, **S. Brahadeeswaran**, T. Higo, M. Takagi, M. Yoshimura, Y. Mori and T. Sasaki, Japanese Journal of Applied Physics 43 (2004) L261 (Impact Factor 1.309)
12. High-Quality Organic 4-dimethylamino-N-methyl-4-stilbazolium Tosylate (DAST) Crystals for THz Wave Generation, H. Adachi, T. Taniuchi, M. Yoshimura, **S. Brahadeeswaran**, T. Higo, M. Takagi, Y. Mori, T. Sasaki and H. Nakanishi, Japanese Journal of Applied Physics 43 (2004) L1121 (Impact Factor 1.309)
13. Investigations on Influence of Crystal Defects on Laser-Damage Tolerance of Organic Crystal, 4-dimethylamino-N-methyl-4-stilbazolium Tosylate (DAST), Yoshinori Takahashi, Kazumasa Sugiyama, **Srinivasan Brahadeeswaran**, Shinji Onzuka, Tomosumi Kamimura, Masashi Yoshimura, Yusuke Mori, Kunio Yoshida and Takatomo Sasaki, Japanese Journal of Applied Physics 46 (2007) 318 (Impact Factor 1.309)
14. On Suppression of Narrow-Line Defects (NLD) in Organic 4-dimethylamino-N-methyl-4-stilbazolium tosylate (DAST) Crystals through Uninterrupted Solution Stirring during Growth Process Yoshinori Takahashi, Shinji Onzuka, **Srinivasan Brahadeeswaran**, Masashi Yoshimura, Yusuke Mori and Takatomo Sasaki, Japanese Journal of Applied Physics 46 (2007) 324 (Impact Factor 1.309)
15. The elastic constants of sodium p-nitrophenolate dihydrate single crystals measured by ultrasonic PEO technique, A.V. Alex, J. Philip, **S.**



- Brahadeeswaran** and H.L. Bhat, Journal of Pure and Applied Ultrasonics 21 (1999) 47 (Impact Factor NA)
16. Sodium p-nitrophenolate tetrahydrate, **S. Brahadeeswaran**, H.L. Bhat, J.N. Sherwood, R.M. Vrcelj, Acta Crystallographica E 58 (2002) m290 (Impact Factor 0.508)
  17. Spectroscopic, thermal and mechanical studies on 4-Methylanilinium p-toluenesulfonate - A new organic NLO single crystal, G. Shanmugam and **S. Brahadeeswaran**, Spect. Chim. Acta A 95 (2012) 177 (Impact Factor 2.098)
  18. Synthesis, structure, growth and characterization of a novel organic NLO single crystal: Morpholin-4-ium-p-aminobenzoate, G. Shanmugam, K. Ravi Kumar, B. Sridhar and **S. Brahadeeswaran**, Mater. Res. Bull. 47 (2012) 2315–2323 (Impact Factor 2.145)
  19. 2-Amino-5-chloropyridinium 4-aminobenzoate, V. Kannan, P. Sugumar, **S. Brahadeeswaran** and M. N. Ponnuswamy, Acta Crystallographica E68 (2012) o3187 (Impact Factor 0.508)
  20. Spectroscopic, Quantum-chemical and X-ray diffraction studies of Piperidinium p- Hydroxybenzoate -combined experimental and theoretical studies on a novel NLO crystal G Shanmugam, K Thirupugalmani, V Kannan, **S Brahadeeswaran**, Spect. Chim. Acta A 106 (2013) 175-184 (Impact Factor 2.098)
  21. Growth of Ultrathin and Highly Efficient Organic Nonlinear Optical Crystal 4'-Dimethylamino-N-methyl-4-Stilbazolium p-Chlorobenzenesulfonate for Enhanced Terahertz Efficiency at Higher Frequencies **S. Brahadeeswaran**, Y. Takahashi, M. Yoshimura, M. Tani, S. Okada, S. Nashima, Y. Mori, M. Hangyo, H. Ito, and T. Sasaki Crystal Growth & Design 13 (2013) 415- 421 (Impact Factor 4.72)
  22. 2-Amino-6-methylpyridinium 4-hydroxybenzoate V. Kannan, P. Sugumar, **S. Brahadeeswaran** and M. N. Ponnuswamy Acta Crystallographica E69 (2013) o610 (Impact Factor 0.508)
  23. Thermophysical, mechanical and dielectric studies on piperidinium p-hydroxybenzoate A novel organic NLO single crystal **G. Shanmugam**, K. Thirupugalmani, R. Rakhikrishna, J. Philip, **S. Brahadeeswaran**, Journal of Thermal Analysis and Calorimetry 114 (2013) 1245-1254 (Impact Factor 1.982)

24. Investigations on influence of coloration on growth of high quality Hydrazonium L-tartrate single crystal V. Kannan, **S. Brahadeeswaran**, Journal of Crystal Growth 374 (2013) 71-78 (Impact Factor 1.757)
25. Synthesis, growth, thermal, optical, mechanical and dielectric studies of N-succinopyridine: an organic nonlinear optical single crystal V. Kannan, K. Thirupugalmani, G. Shanmugam and **S. Brahadeeswaran**, Journal of Thermal Analysis and Calorimetry 115 (2014) 731-742 (Impact Factor 1.982)
26. Spectroscopic, nonlinear optical and quantum chemical studies on 4 Pyrrolidinium p-Hydroxybenzoate – A phase matchable organic NLO crystal, G. Shanmugam, M.S. Belsley, D. Isakov, E. de Matos Gomes, K. Nehru and **S. Brahadeeswaran**, Spect. Chim. Acta A 114 (2013) 284-292 (Impact Factor 2.098)
27. Studies on Vibrational, NMR Spectra and Quantum Chemical Calculations of N-Succinopyridine: An Organic Nonlinear Optical Material, V. Kannan, K. Thirupugalmani, **S. Brahadeeswaran**, Journal of Molecular Structure 1049 (2013) 268-279 (Impact Factor 1.404)
28. Studies on thermophysical and mechanical properties of hydrazonium L-tartrate An organic nonlinear optical material V. Kannan, R. Rakhikrishna, J. Philip and **S. Brahadeeswaran** Journal of Thermal Analysis and Calorimetry 116 (2014) 339- 347 (Impact Factor 1.982)
29. Rapid growth of thin and flexible organic semiconductor single crystal Anthracene by solution growth technique for device fabrication K. Thirupugalmani, G. Shanmugam, V. Kannan, **S. Brahadeeswaran**, Journal of Crystal Growth 413 (2015) 67–70 (Impact Factor: 1. 707)
30. Second- and third-order nonlinear optical and quantum chemical studies on 2-amino-4-picolinium-nitrophenolate-nitrophenol: A phasematchable organic single crystal, K. Thirupugalmani, S. Karthick, G. Shanmugam, V. Kannan, B. Sridhar, K. Nehru, **S. Brahadeeswaran**, Optical Materials 49 (2015) 158–170 (Impact Factor: 2. 023)
31. Synthesis, growth, thermal, optical and mechanical studies on 2-amino-6-methylpyridinium 4-hydroxybenzoate, A novel organic nonlinear optical material, V. Kannan, **S. Brahadeeswaran**, J Therm Anal. Calorim.124 (2016) 889-898 (Impact Factor: 1.781)

32. Investigation of NLO Active 2-Amino-5- methylpyridinium 2-hydroxy-5-chlorobenzoate Single Crystals, Asian Journal of Research in Social Sciences and Humanities, M. Krishnakumar, K. Thirupugalmani and **S. Brahadeeswaran**, 6 (2016) 2016-2044.
33. Intense THz source based on BNA organic crystal pumped at Ti:sapphire wavelength, Mostafa Shalaby, Carlo Vicario, Karunanithi Thirupugalmani , **Srinivasan Brahadeeswaran** and Christoph P. Hauri, Optics Letters, 41 (2016) 1777-1780 (Impact Factor: 3. 040)]
34. DAST crystal-based terahertz generation and recording of time resolved photoacoustic spectra of N<sub>2</sub>O gas at 0.5 and 1.5 THz bands, K.S. Rao, A.K. Chaudhary, M. Venkatesh, K. Thirupugalmani, **S. Brahadeeswaran**, Current Applied Physics, 16 (2016) 777-783 (Impact Factor: 2.144)
35. Study on the efficient PV/TE characteristics of the self-assembled thin films based on bismuth telluride/cadmium telluride, Vivekanandan Raman, Dinah Punnoose, Pari Baraneedharan, Sunkara Srinivasa Rao, Chandu V. V. M. Gopi, Venkatesh S, **S Brahadeeswaran** and Hee-Je Kim, RSC Adv., 7, (2017) 6735-6742 (Impact Factor: 2.94)
36. Growth, characterization and quantum chemical studies of an organic single crystal: 3-Aminopyridine 4-Nitrophenol for opto-electronic applications, Satchidhanandham Panchapakesan, Karthick Subramani, **Brahadeeswaran Srinivasan**, Journal of Materials Science: Materials in Electronics, 28(2017) 5754-5775 (Impact Factor: 2.01)
37. Second and third-order nonlinear optical and DFT calculations on 2-amino-5-chloro pyridinium-L-tartrate: A phasematchable organic single crystal, M. Krishnakumar, S. Karthick, K. Thirupugalmani, **S. Brahadeeswaran**, Optical Materials 66 (2017) 79-93 (Impact Factor: 2. 023)
38. Influence of polar solvents on growth of potentially NLO active organic single crystals of N-benzyl-2-methyl-4-nitroaniline and their efficiency in terahertz generation, K Thirupugalmani, M Venkatesh, S Karthick, KK Maurya, N Vijayan, AK Chaudhary, **S Brahadeeswaran**, CrystEngComm., 19 (2017) 2623-2631 (Impact Factor: 3.4)
39. Studies on structure, growth and characterization of third order nonlinear optical 2-amino-5-chloropyridinium-4-amino benzoate single crystal, M.

Krishnakumar, K. Thirupugalmani, **S. Brahadeeswaran**, Materials Science-Poland. DOI: 10.1515/msp-2017-0061 (Impact Factor: 0.6)

40. Generation of efficient THz radiation by optical rectification in DAST crystal using tunable femtosecond laser pulses, Mottamchetty Venkatesh, K Thirupugalmani, KS Rao, **S Brahadeeswaran**, AK Chaudhary, Indian Journal of Physics, 91 (2016) 319-326 (Impact Factor: 1.0)
41. Growth, spectral, thermal, electrical, mechanical and nonlinear optical properties of organic single crystal 4-Amino-(1-methylphenyl) pyridinium bromide, P. Satchidhanandham, S. Karthick, S. **Brahadeeswaran**, Optik, 157 (2018) 774-786 (Impact Factor: 1.19)
42. Experimental and quantum chemical studies on N-H---O hydrogen bonded helical chain type Morpholinium 2-chloro-4-nitrobenzoate: A phasematchable organic nonlinear optical material, S. Karthick, K. Thirupugalmani, G. Shanmugam, V. Kannan, **S. Brahadeeswaran**, J. Mol. Struct. 1156 (2018) 264-272 (Impact Factor: 2.011)
43. Growth, structural, linear, nonlinear optical and laser induced damage threshold studies of an organic compound: 2-Amino pyridinium-4-hydroxy benzoate, M. Krishnakumar, S. Karthick, **G. Vinitha**, K. Thirupugalmani, B. Babu, **S. Brahadeeswaran**, Materials Letters 235 (2019) pp. 35-38. Impact factor: 2.687)
44. Synthesis, structural, spectral, third order nonlinear optical and quantum chemical investigations on hydrogen bonded novel organic molecular adduct 4-(dimethylamino)benzaldehyde 4-nitrophenol for opto-electronic applications, S. Karthick, K. Thirupugalmani, V. Kannan, G. Shanmugam, M. Krishnakumar, G. Vinitha, B. Sridhar, **S. Brahadeeswaran**, J. Mol. Struct. 1178 (2019) 352-365 (Impact Factor: 2.011)
45. Photoluminescence, third-order nonlinear optical and DFT studies of HydrzoniumL-tartrate – combined experimental and theoretical studies, V. Kannan, S. Karthick, **S. Brahadeeswaran**, Z. Phys. Chem. 2018 (Accepted) (Impact Factor: 1.144)
46. Investigations on the quantum chemical studies and physicochemical properties of an opto-electronic material: 1-Allyl-2-Aminopyridine-1-ium bromide P. Satchidhanandham, S. Karthick, **S. Brahadeeswaran** Optics and Laser Technology 2018 (Accepted) (Impact Factor: 2.50)

**c. National Journals: Nil**

➤ **List of Seminar / Short Term Course /FDP/ Workshop attended:(Within India)**

**a. List of Seminar / Short Term Course /FDP/ Workshop**

1. TEQIP-II sponsored faculty development programme (2015), " Nanotechnology Applications in Engineering and Technology (NAET'15) ", organized by Dept. of Petrochemical Technology, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli-24 during 06-05-2015 to 19-05-2015. (14 Days)
2. TEQIP-II sponsored faculty development programme (2015), " Advanced Research in Materials for Engineering and Technological Applications (ARMETA-2015)", organized by Dept. of Physics, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli-24 during 17-07-2015 to 30-07-2015. (14 Days)
3. TEQIP-II sponsored faculty development programme (2016), " Recent Advancements in Materials (RAM'16)", organized by Dept. of Physics, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli-24 during 11-07-2016 to 24-07-2016. (14 Days)
4. TEQIP-II sponsored two days lecture workshop (2016), " Chemistry for Sustainable Green Environment (CHES GREEN'16)", organized by Dept. of Chemistry, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli-24 during 11-03-2016 to 12-03-2016. (02 Days)

➤ **International Conferences Participated:**

1. IUCr Congress of Crystallography (1999), Polymorphism and nonlinear optical activity in sodium p-nitrophenolate, International Conference on Crystallography, organized by Glasgow, United Kingdom during 4 Aug 1999 to 13 Aug 1999
2. The 5th Pacific Rim Conference on Lasers and Electro-Optics (2003), Influence of growth parameters on Gray-track formation in GdYCOB, International Conference on Lasers and Electro-Optics organized by Taipei, Taiwan during 15 December 2003 to 19 December 2003.
3. Lasers and Electro-Optics (2005), Laser damage evaluation of organic nonlinear optical 4-dimethylamino-N-methyl-4-stilbazolium tosylate (DAST) crystal for THz wave generation, International Quantum Electronics Conference 2005 and

the Pacific Rim Conference on Lasers and Electro-Optics 2005, Tokyo, Japan, July 2005.

4. 31st International Conference on Infrared and Millimeter Waves and 14th International Conference on Terahertz Electronics (2006), Terahertz pulse generation in organic crystal DAST from various short pulse IR lasers, Shanghai, China, Sep 2006
5. 31st International Conference on Infrared and Millimeter Waves and 14th International Conference on Terahertz Electronics (2006), Annealing temperature dependence of Terahertz wave detection by low-temperature-grown-GaAs based photoconductive antennas gated by 1560 nm optical pulses, Shanghai, China, Sep 2006
6. 31st International Conference on Infrared and Millimeter Waves and 14th International Conference on Terahertz Electronics (2006), Terahertz emission from various organic crystals, Shanghai, China, Sep 2006
7. Research in Condensed Matter Physics (2012), International Conference on Research in Condensed Matter Physics (ICCMP-2012), Structure, Growth, Optical & Quantum chemical studies on a Novel organic NLO single crystal: Morpholin-4-ium p-aminobenzoate, organized by Department of Physics, University of Madras, Chennai, Sep 2012.
8. Lasers and Electro-Optics Pacific Rim (CLEO-P R) (2013), Generation of Efficient Terahertz Waves Using As-Grown DASC Single Crystals, International Conference on Lasers and Electro-Optics Pacific Rim (CLEO-P R), Kyoto, Japan, 30 Jun - 04 Jul 2013
9. Photonics (2014), Optical Parametric Amplifier Based Efficient Terahertz Generation in DAST Crystal using Optical Rectification, International Conference on Fiber Optics and Photonics, organized by Department of Physics, Indian Institute of Technology Kharagpur, Kharagpur, India, during 13 December 2014 to 16 December 2014
10. UGC sponsored Recent Trends in Materials Science and Applications (2017), Growth and Laser Damage Threshold Studies on Morpholin-4-ium p-aminobenzoate- a Phasematchable Organic NLO Crystal, International Conference on Recent Trends in Materials Science and Applications organized

by Department of Physics, Sri Meenakshi College of Arts and Science, Madurai on 06-01-2017

11. UGC sponsored Recent Trends in Materials Science and Applications (2017), Growth and Physicochemical Studies on Pyrrolidinium p-Hydroxybenzoate- an organic NLO crystal from benzoate family, International Conference on Recent Trends in Materials Science and Applications organized by Department of Physics, Sri Meenakshi College of Arts and Science, Madurai on 06-01-2017
12. Recent Advancements in materials (2015), Optical, Structural and Electrical properties of NLO active 8-Hydroxyquinoline Single Crystals, International Conference on Recent Advancements in materials, organized by Department of Physics, BIT Campus, Tiruchirappalli, India, Oct 2015.
13. Recent Advancements in materials (2015), Vibrational Spectroscopic studies on Hydrazonium L-tartrate, International Conference on Recent Advancements in materials, organized by Department of Physics, BIT Campus, Tiruchirappalli, India, Oct 2015.
14. Recent Advancements in materials (2015), Physical properties of Morpholin-4-ium p-aminobenzoate: A novel organic NLO crystal from benzoate family, International Conference on Recent Advancements in materials, organized by Department of Physics, BIT Campus, Tiruchirappalli, India, Oct 2015.
15. TEQIP II Sponsored International Conference on Advances in Biological, Chemical & Physical Sciences (2017), Synthesis, crystallographic, growth, and characterization studies of novel NLO single crystal: 2-amino-4-picolinium nitrophenolate nitrophenol, International Conference on Advances in Biological, Chemical & Physical Sciences (ABCPS'18), organized by Department of Physics, BIT Campus, Anna University, Tiruchirappalli-24 during 13th March 2017 to 15th March 2017
16. TEQIP II Sponsored International Conference on Advances in Biological, Chemical & Physical Sciences (2017), Quantum chemical and dielectric studies on p-methylanilinium p-toluenesulfonate single crystals, International Conference on Advances in Biological, Chemical & Physical Sciences (ABCPS'18), organized by Department of Physics, BIT Campus, Anna University, Tiruchirappalli-24 during 13th March 2017 to 15th March 2017

17. TEQIP II Sponsored International Conference on Advances in Biological, Chemical & Physical Sciences (2017), Second- and third-order nonlinear optical and DFT calculations on 2-amino-5-chloropyridinium-L-Tartrate: A phasematchable organic single crystal, International Conference on Advances in Biological, Chemical & Physical Sciences (ABCPS'18), organized by Department of Physics, BIT Campus, Anna University, Tiruchirappalli-24 during 13th March 2017 to 15th March 2017

18. TEQIP II Sponsored International Conference on Advances in Biological, Chemical & Physical Sciences (2017), Growth and characterization of N-Succinopyridine (NSP): A phasematchable organic Nonlinear Optical Single Crystal, International Conference on Advances in Biological, Chemical & Physical Sciences (ABCPS'18), organized by Department of Physics, BIT Campus, Anna University, Tiruchirappalli-24 during 13th March 2017 to 15th March 2017.

**d. Proceedings of International/National Conferences Edited:**

Sl. No.	Title of Conference/ Seminar etc.	Date(s) of the event	Sponsor	Whether International/ National/State/ Regional/University or College Level	Mark awarded by the Selection Committee
1	International conference on Advances in Biological, Chemical and Physical Sciences (ABCPS)	March 2017	TEQIP-II	International <b>(Chief Editor)</b> ISBN 978-93-80622-24-8	
2	National Conference on Materials for Sustainable Energy (NCMSE)	August 2016	TEQIP-II	National <b>(Chief Editor)</b> ISBN 978-81925974-1-5	



➤ **Conferences**

**a. International Conferences:**

<b>Sl. No.</b>	<b>Name of the Programme</b>	<b>Name of Organising Agency</b>	<b>Title of the Paper</b>	<b>Month and year</b>
1.	IUCr Congress of Crystallography	Glasgow, United Kingdom	Polymorphism and nonlinear optical activity in sodium p-nitrophenolate	Aug 1999
2.	The 5th Pacific Rim Conference on Lasers and Electro-Optics	Taipei, Taiwan	Influence of growth parameters on Gray-track formation in GdYCOB	December 2003
3.	International Quantum Electronics Conference 2005 and the Pacific Rim Conference on Lasers and Electro-Optics 2005	Tokyo, Japan	Laser damage evaluation of organic nonlinear optical 4-dimethylamino-N-methyl-4-stilbazolium tosylate (DAST) crystal for THz wave generation	July 2005
4.	31 <sup>st</sup> International Conference on Infrared and Millimeter Waves and 14 <sup>th</sup> International Conference on Terahertz Electronics	Shanghai, China	Terahertz pulse generation in organic crystal DAST from various short pulse IR lasers	Sep 2006

5.	31 <sup>st</sup> International Conference on Infrared and Millimeter Waves and 14 <sup>th</sup> International Conference on Terahertz Electronics	Shanghai, China	Annealing temperature dependence of Terahertz wave detection by low-temperature-grown-GaAs based photoconductive antennas gated by 1560 nm optical pulses	Sep 2006
6.	31 <sup>st</sup> International Conference on Infrared and Millimeter Waves and 14 <sup>th</sup> International Conference on Terahertz Electronics	Shanghai, China	Terahertz emission from various organic crystals	Sep 2006
7.	International Conference on Research in Condensed Matter Physics (ICCMP-2012)	Department of Physics, University of Madras, Chennai	Structure, Growth, Optical & Quantum chemical studies on a Novel organic NLO single crystal: Morpholin-4-ium p-aminobenzoate	Sep 2012
8.	2013 Conference on Lasers and Electro-Optics Pacific Rim (CLEO-P R)	Kyoto, Japan	Generation of Efficient Terahertz Waves Using As-Grown DASC Single Crystals	Jul 2013
9.	Photonics 2014: 12 <sup>th</sup> International Conference on Fiber Optics and Photonics	Department of Physics, Indian Institute of Technology Kharagpur, Kharagpur,	Optical Parametric Amplifier Based Efficient Terahertz Generation in DAST Crystal using Optical Rectification	Dec 2014

10.	International Conference on Recent Advancements in Materials	Department of Physics, BIT Campus, Tiruchirappalli, India	Optical, Structural and Electrical properties of NLO active 8-Hydroxyquinoline Single Crystals	Oct 2015
11.	International Conference on Recent Advancements in Materials	Department of Physics, BIT Campus, Tiruchirappalli	Vibrational Spectroscopic studies on Hydrazonium L-tartarate	Oct 2015
12.	International Conference on Recent Advancements in Materials	Department of Physics, BIT Campus, Tiruchirappalli	Physical properties of Morpholin-4-ium p-aminobenzoate: A novel organic NLO crystal from benzoate family	Oct 2015
13.	UGC sponsored Recent Trends in Materials Science and Applications	Department of Physics, Sri Meenakshi College of Arts and Science, Madurai	Growth and Laser Damage Threshold Studies on Morpholin-4-ium p-aminobenzoate- a Phasematchable Organic NLO Crystal	Jan 2017
14.	UGC sponsored Recent Trends in Materials Science and Applications	Department of Physics, Sri Meenakshi College of Arts and Science, Madurai	Growth and Physicochemical Studies on Pyrrolidinium p-Hydroxybenzoate- an organic NLO crystal	Jan 2017

15.	TEQIP II Sponsored International Conference on Advances in Biological, Chemical & Physical Sciences	Department of Physics, BIT Campus, Anna University, Tiruchirappalli -24.	Synthesis, crystallographic, growth, and characterization studies of novel NLO single crystal: 2-amino-4-picolinium nitrophenolate nitrophenol	March 2017
16.	TEQIP II Sponsored International Conference on Advances in Biological, Chemical & Physical Sciences	Department of Physics, BIT Campus, Anna University, Tiruchirappalli -24.	Quantum chemical and dielectric studies on p-methylanilinium p-toluenesulfonate single crystals	March 2017
17.	TEQIP II Sponsored International Conference on Advances in Biological, Chemical & Physical Sciences	Department of Physics, BIT Campus, Anna University, Tiruchirappalli -24.	Second- and third-order nonlinear optical and DFT calculations on 2-amino-5-chloro pyridinium-L-Tartrate: A phasematchable organic single crystal	March 2017
18.	TEQIP II Sponsored International Conference on Advances in Biological, Chemical & Physical Sciences	Department of Physics, BIT Campus, Anna University, Tiruchirappalli -24.	Growth and characterization of N-Succinopyridine (NSP): A phase matchable organic Nonlinear Optical Single Crystal	March 2017

**b. National Conferences:**

Sl. No.	Name of the Programme	Name of Organising	Title of the Paper / Talk	(Dates of the Event)
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1.	XVII National seminar on Crystal growth	Anna University, Chennai	Growth and Characterization of Hydrazonium L-Tartrate: An Organic Crystal	Jan 9-11, 2013
2.	National Seminar on Novel Materials (NSNM 2013)	Department of Physics, Shivani Engineering College, Tiruchirappalli	Theoretical and experimental studies of novel nonlinear optical crystal- Piperidinium p-hydroxy benzoate	March 2013
3.	National seminar on recent trends in physics (NSRTP 2011)	Shivani engineering college, Tiruchirappalli	Single crystal growth of 4-aminobenzophenone by the Bridgman technique and its	18-19 <sup>th</sup> March 2011
4.	Proceedings of the National Seminar on Novel Materials (NSNM 2013)	Shivani Engineering College, Tiruchirappalli	Growth, Spectroscopic and Optical Studies on Pyrrolidinium p-Hydroxybenzoate- an organic NLO crystal from benzoate family	March 2013
5.	Proceedings of the National Seminar on Novel Materials (NSNM 2013)	Shivani Engineering College, Tiruchirappalli	On Coloration of Hydrazonium L-tartrate	March 2013
6.	Proceedings of the National Conference on Advanced Materials and Applications (NCAMA-2013)	National Institute of Technology, Tiruchirappalli	Growth and Characterization of Hydrazonium L-tartrate	2013
7.	XVIII National Seminar on Crystal Growth (XVIII-NSCG) 2004	Center for crystal growth, SSN College of Engineering, Chennai	Investigations on influence of coloration on growth of high quality Hydrazonium L-tartrate single crystal	2004
8.	National Conference on Advance Materials (NCAM-2015)	Department of Physical Sciences, St. Joseph's College, Tiruchirappalli	Growth mechanism of large size Anthracene single crystal growth by a solution technique	6 <sup>th</sup> February 2015

9.	XIX National Seminar on Crystal Growth (XIX-NSCG-2015)	Vellore Institute of Technology (VIT) University, Vellore	Rapid growth of thin and flexible organic semiconductor single crystal Anthracene by solution growth technique for device fabrication	12-14 <sup>th</sup> March 2015
10.	National Conference on Physics of Bulk and Nano Materials & Devices (P-BAND '15)	Department of physics, BIT Campus, Anna University, Tiruchirappalli.	Growth mechanism of large size Anthracene single crystal growth by a solution technique	2015
11.	Student Conference on Optics and Photonics, SCOP-2016	Optical Society of America, Physical Research Laboratory	Growth, nonlinear optical and quantum chemical studies on 2-amino-4-picolinium-nitrophenolate-nitrophenol –A phasematchable NLO Material	02-09-2016 to 03-09-2016
12.	QIP Short Term Course cum Workshop.	Department of physics, IIT Kharagpur	Industrial Applications of Terahertz Radiation	April 2016
13.	Student Conference on Optics and Photonics, SCOP-2017	Optical Society of America, Physical Research Laboratory, Ahmedabad	Growth of Potentially NLO Active Organic Single Crystal N-Benzyl 2-Methyl-4-Nitroaniline (BNA) and Efficiency of Terahertz Generation	September 2017
14.	National Level Seminar On Recent Advancements in Materials	PG and Research Department of Physics Jamal Mohamed College, Tiruchirappalli	Growth and characterization of a novel organic nonlinear optical single crystal: 2-amino-6-methylpyridinium 4-	15 <sup>th</sup> Feb 2017
15.	UGC Sponsored XXI National Seminar on Crystal Growth and Applications	PG and Research Department of Physics National College, Tiruchirappalli	Investigations of NLO active 2-Amino-5-methylpyridinium-2-hydroxy-5-chlorobenzoate single crystals	6-8 March 2017

16.	UGC Sponsored XXI National Seminar on Crystal Growth and Applications	PG and Research Department of Physics National College, Tiruchirappalli	Synthesis, growth and quantum chemical studies of an organic single crystal: 3-Aminopyridine 4-nitrophenol for optoelectronics applications	6-8 March 2017
17.	UGC Sponsored XXI National Seminar on Crystal Growth and Applications	PG and Research Department of Physics National College, Tiruchirappalli	Synthesis, growth and thermal studies on 2-Amino-6-methylpyridinium 4-hydroxybenzoate: A novel organic NLO material	6-8 March 2017
18.	National Seminar on Solid State Physics and its Applications (NaSSSPA-2018)	PG and Research Department of Physics Jamal Mohamed College, Tiruchirappalli	Linear and nonlinear optical properties of Morpholinium-2-chloro-4-nitrobenzoate: a phasematchable organic single crystal	28 <sup>th</sup> February 2018
19.	National Conference on Processing and Fabrication of Advanced Materials (NCPFAM-2018)	Department of Physics, SSN college of Engineering, Kalavakkam, Chennai-603110	Effect of solvents on the growth of organic single crystal N-benzyl-2-methyl-4-nitroaniline (BNA) and their efficiency in terahertz generation	1-2 March 2018