

**Dr.M.B.JESSIERAJ**

Associate Professor,  
Department of Physics,  
Bishop Heber College,  
Tiruchirappalli - 17.

E-mail :

Phone :

Web:

## Qualification

Degree	Branch	Institution / University	Year of Passing
Phd	physics	Bharathidasan	2013
Mphil	physics	Alagappa	2000
Msc	physics	Madurai Kamaraj	1999
Bsc	physics	Madurai Kamaraj	1997

## Ph.D. Details

Title of Thesis	Area of Specialization	Research Centre	Year of Award
investigation on the effect of additives on the granulometric, spectral, structural, linear and nonlinear optical characteristics of glycine crystal	crystal growth	Anna University, Trichy	August, 2013
Research Supervisor			

Cleared NET / SET :	Details	Year of Passing
SET		November, 1999

## Additional Qualification

Name of Course	Place of Study	Date	Duration
PGDCA	Madurai Kamaraj	April 2000	1 year

## Work Experience

Name of Institution	Address of Institution	Designation	From	To
The American College	The American College Madurai	Assistant Professor	jun 2002	Aprl 2003
Bishop Heber College		Assistant Proffessor	08-02-2004	

**Teaching / Research Experience**

**U.G. :** 21      **P.G. :** 21      **M.Phil.** 15      **Ph.D.** 10

**Research Guidance**

**U.G. :**      **P.G. :** 17      **M.Phil. :** 15      **Ph.D. :** 5

**Field Experience**

Type	Name of the Sector	Designation	From	To
Field	Physical Research Laboratory,Ahmedabha	candidate	5/15/1998	6/30/1998



## Table of Contents

1.	<b>Conferences / workshops / Seminars Attended</b>	<b>33</b>
2.	<b>Research Papers Presented</b>	<b>18</b>
3.	<b>Publication in Journals</b>	<b>23</b>
4.	<b>Publication in Books</b>	<b>0</b>
5.	<b>Books Published / Edited</b>	<b>1</b>
6.	<b>Conferences / Workshops / Seminars Organised</b>	<b>4</b>
7.	<b>Research Projects</b>	<b>1</b>
8.	<b>Resource Person</b>	<b>2</b>
9.	<b>Consultancy</b>	<b>1</b>
10.	<b>Awards Recieved</b>	<b>4</b>
11.	<b>Patent</b>	<b>0</b>
12.	<b>Extension Activities Undertaken</b>	<b>0</b>
13.	<b>Professional Membership</b>	<b>4</b>
14.	<b>M.Phil. / Ph.D. Produced</b>	<b>38 / 4</b>

1. National level Seminar on **"moocs development & delivery"** sponsored by ugc organized by HRDC at trichy during 26/08/2021 to 01/01/1900.
2. International level Workshop on **"Electrostatics in HealthcareElectrostatics in Healthcare"** sponsored by iop organized by at during 10/07/2021 to 01/01/1900.
3. International level Seminar on **"Interviewing in a COVID World"** sponsored by acs organized by acs at during 02/07/2021 to 01/01/1900.
4. College level Seminar on **"International Webinar On True Facts about Viruses and Pandemic Spread"** sponsored by iqac organized by iqac at during 10/06/2021 to 01/01/1900.
5. International level Seminar on **"Seeing Color Through Different Eyes - Individual Differences in Human Color Perception"** sponsored by OSA organized by OSA at during 04/06/2021 to 01/01/1900.
6. International level Seminar on **"Selecting the Right Power Semiconductors for Multi-MHz Power Converters"** sponsored by IEEE organized by IEEE at during 01/09/2020 to 01/09/2020.
7. International level Seminar on **"How to Make Remote Learning Work for All Students"** sponsored by educationweek organized by educationweek at during 13/08/2020 to 01/01/1900.
8. International level Seminar on **"Electrostatics in Healthcare"** sponsored by IOP organized by IOP at during 10/07/2020 to 10/07/2020.
9. -1 level Seminar on **"skills with Write & Improve"** sponsored by ACS organized by ACS at during 10/07/2020 to 10/07/2020.
10. International level Seminar on **"Help your students improve their writing"** sponsored by cambridge Assessment English organized by cambridge Assessment English at during 01/07/2020 to 01/07/2020.
11. International level Seminar on **"Teaching Remotely Together: Lessons Learned"** sponsored by ACS organized by ACS at during 01/07/2020 to 01/01/1900.
12. International level Seminar on **"10 Essential Scholarly Publishing Tips"** sponsored by ACS organized by ACS at during 30/06/2020 to 30/06/2020.
13. International level Seminar on **"Better Communication in the Digital Age: Learning to Love Brevity and Clarity"** sponsored by ACS organized by ACS at during 24/06/2020 to 01/01/1900.
14. National level Seminar on **"BEAUTY OF PHYSICS IN THE FIELD OF ENGINEERING AND TECHNOLOGY - A GLIMPSE"** sponsored by Science and Humanities Department, SCAD PolytechnicCollege organized by Science and Humanities Department, SCAD PolytechnicCollege at tamilnadu during 23/06/2020 to 01/01/1900.
15. International level Seminar on **"Beyond motivation: engaging students (online and offline)"** sponsored by cambridge Assessment English organized by cambridge Assessment English at during 16/06/2020 to 01/01/1900.
16. National level Seminar on **"Advanced Materials"** sponsored by Department of Physics, LRG Government Arts College organized by Department of Physics, LRG Government Arts College at Tirupur during 03/06/2020 to 01/01/1900.

17. National level Seminar on **"Turn the Challenges to Opportunities: COVID-19 Pandemics and measures to combat by Higher Education of India"** sponsored by MHRD organized by National Assessment and Accreditation Council at Bengaluru during 27/05/2020 to 27/05/2020.
18. College level Seminar on **"Webinar on Ulocking Online Evaluation"** sponsored by IQAC, BHC, Trichy organized by IQAC, BHC, Trichy at trichy during 22/05/2020 to 01/01/1900.
19. College level Seminar on **"Webinar on Online Teaching: The New Norm"** sponsored by IQAC, BHC, Trichy organized by IQAC, BHC, Trichy at trichy during 21/05/2020 to 21/05/2020.
20. College level Workshop on **"Experimental physics"** sponsored by DBT organized by Dept. of Physics, Bishop Heber College at Tiruchirapalli during 12/03/2018 to 13/03/2018.
21. International level Conference on **"material physics"** sponsored by UGC organized by Dept. of Physics, Bishop Heber College at Tiruchirapalli during 29/01/2018 to 29/01/2018.
22. Regional level Seminar on **"Strategies to Eliminate Violence Against Women Towards Gender Equal Society"** sponsored by Dept of Women's cell, Bharathidasan University and Sadhana, Women's Cell, Bishop Heber College organized by Dept of Women's cell, Bharathidasan University and Sadhana, Women's Cell, Bishop Heber College at Trichy during 05/12/2016 to 05/12/2016.
23. College level Workshop on **"Curriculum Design and Evaluation Techniques"** sponsored by DBT organized by Bishop Heber College at Trichy during 21/11/2016 to 22/11/2016.
24. National level Conference on **"Advancement of women in science and technology"** sponsored by UGC organized by Bishop Heber College at Tiruchirapalli during 05/08/2014 to 06/08/2014.
25. Regional level Workshop on **"Nonlinear Physics"** sponsored by ? Science Academies' organized by Bishop Heber College at Tiruchirapalli during 23/01/2014 to 25/01/2014.
26. College level Workshop on **"Capacity Building Programme"** sponsored by Bishop Heber College organized by Bishop Heber College at Tiruchirapalli during 25/02/2012 to 25/02/2012.
27. College level Workshop on **"Examination Reforms and Evaluation"** sponsored by Bishop Heber College organized by Bishop Heber College at Tiruchirapalli during 18/03/2011 to 19/03/2011.
28. College level Seminar on **"Recent trends in Spectroscopic Techniques"** sponsored by Bishop Heber College organized by Bishop Heber College at Tiruchirapalli during 07/09/2010 to 07/09/2010.
29. College level Workshop on **"Frontier topics in Physics"** sponsored by ? IASc, Bangalore, INSA, New Delhi and NAS, Allahabad organized by Bishop Heber College at Tiruchirapalli during 04/02/2008 to 05/02/2008.
30. College level Workshop on **"Maternity Production Benefits in Tamil Nadu"** sponsored by ? All India Christian Higher Education, New Delhi organized by Bishop Heber College at Tiruchirapalli during 01/03/2007 to 01/03/2007.
31. College level Workshop on **"? TRCurriculum development and Evaluation"** sponsored by TANSCH and UGC organized by Bharathidasan University and Bishop Heber College at Trichy during 09/03/2006 to 11/03/2006.
32. College level Orientation on **"orientation programme for young lectures"** sponsored by Bishop Heber College organized by Bishop Heber College at Tiruchirapalli during 23/09/2004 to 24/09/2004.
33. National level Seminar on **"Recent trends in thin film technology"** sponsored by St. Joseph's College, organized by St. Joseph's College, at Tiruchirapalli during 14/02/2003 to 01/01/1900.





1. **"preparation & characterisation of 4-Dimethyl- aminopyridinium dihydrogen chloride"** in the International conference on *advances in engineering science and technology* sponsored by , organized by SBM college of Engg and Technology at Dindigul during 03/03/2016 to 01/01/1900.
2. **"Scenario of Indian Women in Science career"** in the National conference on *Advancement of Women in Science and Technology* sponsored by UGC, organized by sadhana, Bishop Heber college at Trichy during 05/08/2014 to 01/01/1900.
3. **"role of strontium on the crystallization of Brushite kidney stone"** in the National conference on *frontier topics in advanced materials* sponsored by UGC, organized by Department of Physics,Bishop Heber College at TIRUCHIRAPPALLI during 11/03/2013 to 01/01/1900.
4. **"analysis of vibrational spectra of 2- chloro-1,3 dibromo-5-florobenzene bases on density functional theory calculations and HUMO-LUMO analysis"** in the Select conference on *frontier topics in advanced materials* sponsored by UGC, organized by Department of Physics,Bishop Heber College at TIRUCHIRAPPALLI during 11/03/2013 to 01/01/1900.
5. **"growth and characterisation of artificial kidney stone- calcium oxalate crystal"** in the National conference on *frontier topics in advanced materials* sponsored by UGC, organized by Department of Physics,Bishop Heber College at TIRUCHIRAPPALLI during 11/03/2013 to 01/01/1900.
6. **"Influence of solvents on Benzoic acid crystal characteristics"** in the National conference on *advances in Material science* sponsored by , organized by Manonmanium University at Tirunelveli during 23/02/2012 to 01/01/1900.
7. **"Investigation on properties of mixed sulphate single crystal"** in the National conference on *Perspective in Laser, Optics, Spectroscopy and Nano Science* sponsored by UGC, organized by dept of physics, Bishop Heber college at Trichy during 14/02/2011 to 01/01/1900.
8. **"Crystal growth and characterization of epsomite single crystal"** in the National conference on *Perspective in Laser, Optics, Spectroscopy and Nano Science* sponsored by UGC, organized by dept of physics, Bishop Heber college at Trichy during 14/02/2011 to 01/01/1900.
9. **"Solar utilized modern Architecture"** in the National conference on *Recent Advances in Chemistry* sponsored by UGC, organized by dept of chemistry, Bishop Heber college at Trichy during 18/09/2009 to 18/09/2009.
10. **"Growth and characterization of non linear optical single crystal: p- nitro chloro Benzene"** in the National conference on *Nano Materials – Energy Conversion and Conservation* sponsored by , organized by at during 26/03/2009 to 01/01/1900.
11. **"Dimensional analysis of Iron Fractals"** in the National conference on *Nano Materials - Preparation Characterization and Devices* sponsored by , organized by dept of physics, Bishop Heber college at Trichy during 14/03/2008 to 01/01/1900.
12. **"Investigation on pure and inorganic added nonlinear optical crystal: Glycine"** in the National conference on *Nano Materials - Preparation Characterization and Devices* sponsored by , organized by dept of physics, Bishop Heber college at Trichy during 14/03/2008 to 01/01/1900.
13. **"Growth and characterization of nonlinear optical single crystal: Glycine sodium nitrate"** in the National conference on *Nano Materials - Preparation Characterization and Devices* sponsored by , organized by dept of physics, Bishop Heber college at Trichy during 14/03/2008 to 01/01/1900.
14. **"The solubility investigation on non linear optical single crystal – disodium hydrogen ortho phosphate"** in the Select conference on sponsored by , organized by at during 16/06/2006 to 01/01/1900.

15. **"A Novel crystal Ammonium Penta Borate: Growth and Characterization"** in the National conference on *Application Oriented Materials* sponsored by , organized by at during 21/04/2006 to 01/01/1900.
16. **"Growth and characterization of disodium hydrogen ortho phosphate single crystal for non linear application"** in the National conference on *Novel Materials and Technologies* sponsored by , organized by at during 17/02/2006 to 18/02/2006.
17. **"Growth and characterization of a Novel Calcium Penta Borate single crystal for non linear application"** in the National conference on *Subtle World of Physics* sponsored by , organized by at during 09/02/2006 to 01/01/1900.
18. **"Optical and Micro hardness studies on Ammonium Penta Borate"** in the National conference on *Advances in material science* sponsored by , organized by at during 01/01/2006 to 01/01/1900.





1. **"Experimental, computational analysis of new organic NLO crystal: Piperazinium nicotinic acid and its efficiency in optoelectronic applications"** published in optical materials (PEER REVIEW) Vol. 122, Issue No. 111694, December 2021 ISSN : ---.
3. **"Promising Computational, Structural, Vibrational and Optical properties of Piperazinium bis(2-carboxypyridine)monohydrate (PBCPM) crystal for NLO device applications"** published in optik (PEER REVIEW) Vol. 246, Issue No. 167836, November 2021 ISSN : ---.
4. **"Influence of ultrasonication time on the solar light irradiated photocatalytic dye degradability and anti bacterial activity of Pb doped ZnO nanocomposites"** published in ceramic international (PEER REVIEW) Vol. 47, Issue No. 22, August 2021 ISSN : ---.
5. **"Growth, structural, hirshfeld surface analysis, DFT and Z-scan technique of hybrid single crystal of piperazinium perchlorate"** published in journal of molecular sructure (PEER REVIEW) Vol. , Issue No. , May 2020 ISSN : ---.
6. **"Second and third-order NLO response of 2-amino-5-nitropyridinium tetrafluoroborte"** published in optik (PEER REVIEW) Vol. , Issue No. , January 2019 ISSN : ---.
7. **"Nonlinear Optical Behavior of Nanostructured 4-Dimethyl-Aminopyridinium Dihydrogen Phosphate"** published in International Journal of Nanoscience (PEER REVIEW) Vol. 16, Issue No. 4, September 2017 ISSN : ---.
8. **"Nonlinear Optical Behavior of Nanostructured 4-Dimethyl-Aminopyridinium Dihydrogen Phosphate"** published in International Journal of Nanoscience (PEER REVIEW) Vol. 16, Issue No. 4, September 2017 ISSN : ---.
9. **"Effect of reducing agents in tuning the third-order optical nonlinearity and optical limiting behavior of reduced graphene oxide"** published in Chemical Physics (PEER REVIEW) Vol. , Issue No. , March 2017 ISSN : 1089-7690.
10. **"Growth and Characterization of Calcium Doped Barium Tartrate Crystal from silica Gel"** published in Asian Journal of Science and Technology (PEER REVIEW) Vol. 06, Issue No. 08, August 2015 ISSN : ---.
11. **"Inhibitory Effect of Aqueous Citrate on the Growth of Calcium Oxalate Crystals"** published in American Journal of Pharmacy and Health Research (PEER REVIEW) Vol. 3, Issue No. 2, March 2015 ISSN : 2321-3647.
12. **"Nucleation Controlled Growth of cadmium Calcium Tartrate Crystals from Silica Gel and their Characterization"** published in Indian Streams Research Journal (PEER REVIEW) Vol. IV, Issue No. VII, August 2014 ISSN : ---.

13. **"Scenario of Indian Women in Science career"** published in proceedings of National conference on Advancement of Women in Science and Technology (SELECT) Vol. , Issue No. , August 2014 ISSN : 978-93-80767-42-0.
14. **"Structural and Optical Characterisation of Zinc Doped Potassium Hydrogen Tartrate Crystal for Antibacterial Analysis"** published in Scholars Journal of Engineering and Technology (PEER REVIEW) Vol. 2, Issue No. 6A, January 2014 ISSN : 2321 – 435X.
15. **"Linear Optical, Microhardness and Electrical Properties of Glycine Potassium Fluoride (GPF) Crystal"** published in IEEE proceedings of International conference on Emerging Trends in Science Engineering and Technology (PEER REVIEW) Vol. , Issue No. , December 2012 ISSN : 978-1-4673-5144-7.
16. **"Studies on Thermal, Microhardness And Di-electric Properties of Glycine Nickel Chloride"** published in International Journal of Scientific & Technology Research (PEER REVIEW) Vol. 1, Issue No. 10, November 2012 ISSN : 2277-8616..
17. **"Growth and Studies of Halides doped Zinc Thiourea Sulphate (HZTS) crystals"** published in International Journal of Advancements in Research & Technology (SELECT) Vol. 1, Issue No. 5, October 2012 ISSN : 2278-7763.
18. **"Growth and Investigations on the Nucleation Kinetics of Calcium Oxalate Monohydrate"** published in International Journal of Innovative Research & Development (SELECT) Vol. 1, Issue No. 8, October 2012 ISSN : 2278 – 0211.
19. **"Studies on characteristics of Glycine Barium nitrate crystal"** published in ELIXIR -Crystal growth (PEER REVIEW) Vol. 47, Issue No. , January 2012 ISSN : 2229 -712X.
20. **"Influence of solvents on Benzoic acid crystal characteristics"** published in proceedings of National Seminar on advances in Material science (SELECT) Vol. , Issue No. , January 2012 ISSN : ---.
21. **"Influence of additives on Glycine crystal characteristics"** published in Global Journal of Engineering and Applied Sciences (SELECT) Vol. 1, Issue No. 4, January 2011 ISSN : 2249 – 2623.
22. **"Growth and characterization of New NLO material:NMOBA"** published in Proc. Intl. Workshop Prep. & Charact. Tech. Imp. Single crystals (SELECT) Vol. , Issue No. , January 2000 ISSN : ---.
23. **"Experimental, computational analysis of new organic NLO crystal: Piperazinium nicotinic acid and its efficiency in optoelectronic applications"** published in optical materials (PEER REVIEW) Vol. , Issue No. , January 1900 ISSN : ---.

## Books Published / Edited

- 1

- \* . **FRONTIER TOPICS IN ADVANCED MATERIALS.** : , January 1900.

## Conferences / Workshops / Seminars Organised

- 4

1. National level Conference Entitled **"FRONTIER TOPICS IN ADVANCED MATERIALS"** at Tiruchirappalli, sponsored by UGC, during 13/03/2013 to 01/01/1900.
2. National level Conference Entitled **"Perspectives in LASER, optics , spectroscopy &nano science"** at Tiruchirappalli, sponsored by UGC, during 14/02/2011 to 01/01/1900.
3. National level Conference Entitled **"Nano materials for energy conservation"** at Tiruchirappalli, sponsored by u, during 26/03/2009 to 01/01/1900.
4. National level Conference Entitled **"Nano materials – Preparation, characterization and devices"** at Tiruchirappalli, sponsored by , during 14/03/2008 to 01/01/1900.

## Awards Recieved

- 4

Award Name	Presented by	Year	Level	Instituted by / Place	amount
CERTIFICATE OF EXCELLENCE IN REVIEWING	Indian Streams Research Journal	01/08/2014	NATIONAL		
GLORY OF INDIA AWARD	IIFS, New Delhi	01/06/2013	NATIONAL	Bangkok, THAILAND.	
THE BEST CITIZENS OF INDIA AWARD	International Publishing House	31/03/2013	NATIONAL		
BHARAT JYOTI AWARD	Former Governor of Tamilnadu & Assam	01/12/2012	NATIONAL	India International Friendship Society at India International Centre, New Delhi	

## RESEARCH PROJECTS

- 1

1. Minor project entitled **"Studies on the Crystal Size Reduction and Prevention of Renal kidney stones using natural crystal inhibitor, the fresh juice of citrus fruit (Lemon)"** (*PRINCIPAL INVESTIGATOR*), Sponsored by UGC, during 16/04/2013 to 1/31/2015 [Completed].

## PROFESSIONAL MEMBERSHIP

- 4

- \* member of ACTA during 01/08/2009 - Till Date
- \* member of Sadhana during 01/01/2004 - Till Date
- \* Board of studies of Bishop Heber college during 01/01/2004 - Till Date
- \* Examinar - PG Board of Bharathidasan University during 01/01/1900 -

## TRAINING PROGRAMME

- 6

- # NATIONAL level REFRESHER on **"Refresher Course in Physics"** Sponsored by UGC MHRD, Organized by Ramanujam college at Newdelhi during 27/10/2021 - 10/11/2021.
- # NATIONAL level REFRESHER on **"Refrsher course in physics"** Sponsored by UGC, Organized by How to Make Remote Learning Work for All Students at trichy during 23/10/2019 - 05/11/2019.
- # NATIONAL level short term cpourse on **"Research methodology"** Sponsored by UGC, Organized by HRDC, BDU at TRICHY during 06/02/2019 - 12/03/2019.
- # NATIONAL level REFRESHER on **"Refresher Course in Physics"** Sponsored by UGC, Organized by UGC Academic staff college, Bharathidasan University at Tiruchirappalli during 06/11/2014 - 26/11/2014.
- # NATIONAL level REFRESHER on **"Refresher Course in Physics"** Sponsored by UGC, Organized by UGC Academic staff college, Bharathidasan University at Tiruchirappalli during 27/01/2012 - 16/02/2012.
- # NATIONAL level ORIENTATION on **"Orientation Course"** Sponsored by UGC, Organized by UGC Academic staff college, Bharathidasan University at Tiruchirappalli during 01/11/2008 - 28/11/2008.

## RESOURCE PERSON

- 2

1. Regional level Invited Lectures on **"Intrude of single crystal growth in the avenue of technology"** at Trichy, 23/05/2017.
2. Regional level Workshop on **"Intrude of crystals in the avenue of Technology"** at Dept of physics, BHC, 21/05/2014.

## JOURNAL REFEREE

1. **Reviewer** of International Journal *"Dyes and Pigments"*(vol. ) at during 01/01/2019 - .
4. **Reviewer** of International Journal *"international scholars journals"*(vol. ) at USA, South Africa during 19/08/2013 - Till Date.

## CONSULTANCY

- 1

Regional for msc, mphil project work from January 2005 - .

## Additional Information

- @ served as judge for oral presentation in the one day state level conference on 23 March 2018, conducted by EXNORA club, BHC
- @ \*invited as Honourable Speaker for the "International Summit on Pharma and Clinical Trials" during June 12-13, 2017 at Sydney, Australia

**Signature of Staff**  
**(M.B.JESSIERAJ)**