

**Curriculum Vitae of Dr. R. Saravanan, Associate Professor & Head, Research Centre and P.G.  
Dept of Physics, The Madura College, Madurai – 625 011, Tamil Nadu, India.  
Email; [saragow@gmail.com](mailto:saragow@gmail.com);**

<b>Name</b>	Dr. R. Saravanan			
<b>Father's name</b>	Late Mr. P. Ramachandran			
<b>Sex</b>	Male			
<b>Marital Status</b>	Married			
<b>Permanent Address</b>	Dr. R. Saravanan, M.Sc., M.Phil., Ph.D. 2/111, South II Street Kalvi Nagar Near MKU Quarters Madurai – 625 021			
<b>Address for communication</b>	Dr. R. Saravanan, M.Sc., M.Phil., Ph.D. Associate Professor Research Centre and P.G. Dept of Physics, The Madura College, Madurai – 625 011, Tamil Nadu, India Cell No.: 94430 69852 Email: <a href="mailto:saragow@gmail.com">saragow@gmail.com</a>			
<b>Date of birth</b>	28/05/1964			
<b>Place of birth</b>	Kadayanallur			
<b>District and State</b>	Tirunelveli, Tamil Nadu			
<b>Nationality &amp; Religion</b>	Indian, Hindu			
<b>Particulars of Educational Qualifications</b>				
<b>Examination passed</b>	<b>Subjects/ Subjects with specialization</b>	<b>Year of Passing</b>	<b>Class</b>	<b>Name of the College and University</b>
Ph.D. (1988- 1993)	Physics (Condensed Matter Physics)	1993	Highly Commended	School of Physics, Madurai Kamaraj University, Madurai-21
M.Phil. (1986-1987)	Physics (X-ray Crystallography)	1987	I	School of Physics, Madurai Kamaraj University, Madurai-21
M.Sc. (1984-1986)	Physics	1986	I	Dept. of Physics, The Madura College, Madurai-11
B.Sc. (1981-1984) (2 Majors)	Physics Chemistry	1984 1984	I I	Dept. of Physics, The Madura College, Madurai-11

## Teaching Experience

No.	Institution	Position	Duration		Total years of service
			From	To	
1	Dept. of Physics, The Madura College, Madurai-11	Lecturer	19/06/2000	18/06/2004	4
2	Research Centre & PG Dept. of Physics, The Madura College, Madurai-11	Asst. Prof. (S.S.)	19/06/2004	18/06/2009	5
3	Research Centre & PG Dept. of Physics, The Madura College, Madurai-11	Asst. Prof. (S.G.)	19/06/2009	18/06/2012	3
4	Research Centre & PG Dept. of Physics, The Madura College, Madurai-11	Associate Professor	19/06/2012	May, 2015	-
5	Research Centre & PG Dept. of Physics, The Madura College, Madurai-11	Associate Professor & Head	June, 2015	~ April, 2022	-
6	Research Centre & PG Dept. of Physics, The Madura College, Madurai-11	Associate Professor	2022	Till date	

## Employment details:

Name of the Institution where employed	Date of joining	Date of leaving	Designation	Nature of work
Institute of Materials Research (IMR), Tohoku University, Sendai, Japan	01/01/1998	31/03/1998	Research Associate	Research
Centre for Interdisciplinary Research (CIR), Tohoku University, Sendai, Japan	01/04/1998	31/03/1999	Lecturer	Research
Centre for Interdisciplinary Research (CIR), Tohoku University, Sendai, Japan	01/04/1999	31/03/2000	Visiting Researcher	Research
The Madura College, Madurai-11	19/06/2000	18/06/2004	Lecturer	Teaching
The Madura College, Madurai-11	19/06/2004	18/06/2009	Lecturer (S.S.)	Teaching
The Madura College, Madurai-11	19/06/2009	18/06/2012	Lecturer (S.G.)	Teaching
The Madura College, Madurai-11	19/06/2012	Till date	Associate Prof.	Teaching

## Experience in extension service :

### 1. Dr. R. Saravanan is one of the reviewers in some Journals

Title of the Journal	ISSN No.	International/ National/State	Impact factor/ h- index
<a href="#"><u>Materials Letters (Elsevier)</u></a>	ISSN: 0167-577X	International	2.437/99
<a href="#"><u>Physics and Chemistry of Solids (Elsevier)</u></a>	ISSN: 0022-3697	International	2.048/83
<a href="#"><u>Journal of Alloys and Compounds (Elsevier)</u></a>	ISSN: 0925-8388	International	3.014/122
<a href="#"><u>Materials Science in Semiconductor Processing (Elsevier)</u></a>	ISSN: 1369-8001	International	2.593/45
<a href="#"><u>Materials Science and Engineering B -Solid-State Materials for Advanced Technology (Elsevier)</u></a>	ISSN: 0921-5107	International	3.316/97
<a href="#"><u>Crystal Research and Technology (Wiley)</u></a> (Previously) (Online)	ISSN: 0232-1300 ISSN: 1521-4079	International	1.0/57
<a href="#"><u>Solid State Communication (Elsevier)</u></a>	ISSN: 0038-1098	International	1.549/116
<a href="#"><u>Scientific Reports - Nature Publishing Group</u></a>	ISSN:2045-2322	International	5.47/122
<a href="#"><u>Intermetallics (Elsevier)</u></a>	ISSN: 0966-9795	International	3.42/94
Review records available at <a href="https://publons.com/a/935117">https://publons.com/a/935117</a>			

He has written many DOS as well as window based software (GUI) programs highly useful to the students, researchers in the fields of Crystallography, Materials Science and Engineering. Softwares developed

#### Software Programs Written By Dr. R. Saravanan

##### DOWNLOAD SOFTWARE

[Software Programs](#)

[DATA For Processing](#)

[Manual](#)

Many Softwares Including GUI Programs Have Been Written By The PI In Visual FORTRAN And Accepted In The Sincris Software Data Base Of The IUCr (International Union Of Crystallography, [Www.lucr.Org](http://www.lucr.org)). These Programs Are Highly Useful To The Beginners As Well As Experienced Researchers In The Fields Of Crystallography And Materials Science. The Details Of The Software Programs Have Been Given As Follows.

**Computer Programs Developed By Dr. R. Saravanan For Research Purposes (Available At The Sincris Software Data Base Of The International Union Of Crystallography [Www.lucr.Org](http://www.lucr.org)).**

All These Executables Have Been Developed Using Fortran77 And Visual Fortran Compilers By Dr. R. Saravanan - (IUCr ID: IUCr3611) [Http://Www.lucr.Org/lucr-Top/Wdc/](http://www.lucr.org/lucr-Top/Wdc/). GUI Versions Of Many Of These Programs Are Also Available. Most Of These Programs Are Available At The SINCRIS Software Database Of The IUCr (International Union Of Crystallography) In Their Website ([Http://Www.lucr.Org/](http://www.lucr.org/)).

**Program 1 ([Sfac331](#)) (GUI Available)** - For The Generation And Calculation Of The X-Ray Structure Factors And The Real And Imaginary Parts Of The Structure Factors Of Any Crystalline System.

IUCr Reference; [Https://Www.lucr.Org/Resources/Other-Directories/Software/Sfac331](https://www.lucr.org/Resources/Other-Directories/Software/Sfac331)

**Program 2 ([Asf88](#)) (GUI Available)** - For The Generation And Calculation Of The X-Ray Structure Factors And The Real And Imaginary Parts Of The Structure Factors Of Any Crystalline System.

IUCr Reference; [Https://Www.lucr.Org/Resources/Other-Directories/Software/Asf89](https://www.lucr.org/Resources/Other-Directories/Software/Asf89)

**Program 3 (Sara11)** - Program For The Refinement Of Various Parameters Of III-V And II-VI Semiconductors (ZnS And Elemental (Diamond) Semiconductors. To Refine Parameters In The Harmonic, Anharmonic And Charge Transfer Approximations. Refines Individual Thermal, Scale, Extinction Parameters And The Charge Transfer From One Atom To The Other In ZnS Type Structures. Calculates The Real And Imaginary Phase Parts FA And FB Of The Structure Factors. Includes Bijvoet Differences In The Analysis. Averages The Bijvoet Equivalent Reflections, Etc., Etc.

IUCr Reference; <https://www.lucre.org/resources/other-directories/software/sara12>

**Program 4 (Caf2 ha)** - For CaF<sub>2</sub> Structures Program To Refine Parameters In The Harmonic Approximation. Refines Individual Thermal, Scale, Extinction Parameters In CaF<sub>2</sub> Type Structures.

IUCr Reference; [https://www.lucre.org/resources/other-directories/software/caf2\\_ha4](https://www.lucre.org/resources/other-directories/software/caf2_ha4)

**Program 5 (Caf2 an)** - For CaF<sub>2</sub> Structures Program To Refine Parameters In The Anharmonic Approximation. Refines Individual Thermal, Scale, Extinction Parameters In CaF<sub>2</sub> Type Structures.

IUCr Reference; [https://www.lucre.org/resources/other-directories/software/caf2\\_an](https://www.lucre.org/resources/other-directories/software/caf2_an)

**Program 6 (Nacl)** - For NaCl Structures Program To Refine Parameters In The Harmonic Approximation. Refines Individual Thermal, Scale, Extinction Parameters In NaCl Type Structures.

IUCr Reference; <https://www.lucre.org/resources/other-directories/software/nacl>

**Program 7 (Dremablp) (GUI Available)** - For The Data Reduction. Single Crystal Data Reduction Program. Corrects Lp, And Absorption. Applicable To Any System. To Single Crystal Spheres. Converts The Uncorrected Structure Factors Into Lp And Absorption Corrected Structure Factors.

IUCr Reference; <https://www.lucre.org/resources/other-directories/software/dremablp2>

**Program 8 (Scat771) (GUI Available)** If You Have A Set Of H K L Values And Powder Intensities, You Would Like To Apply Lp And Multiplicity Corrections For Any Point Group, And Convert The Intensity Data Into Corresponding Structure Factors. You May Want To Calculate The Structure Factors For The Supplied Set Of H K L Values. You May Want To Correct The Structure Factors For Anomalous Dispersion Effects For 10 Different Wavelengths. You May Want To Calculate The Real And Imaginary Parts Of The Structure Factors. You May Want To Calculate The Sin(Theta)/Lambda Values And The Atomic Scattering Factors Of All The Atoms That You Specify In Your Structure. You Can Do All These Tasks With This Program. Any Number Atoms (From 212 Different Kinds Of Atoms/Ions) Can Be Handled In Your Structures. The Program Can Be Wisely Used For Multiple Tasks. There Are Options To Suppress The Application Of Multiplicity Correction And Absorption Correction Individually Or In Combination. Also, Simulation Of Structure Factors For A Given Set Of H K L Values Can Be Done. No Need To Supply Analytical Coefficients, Dispersion Corrections – All Data Are Pre-Connected. Atom Names And Some Preliminary Info Enough.

IUCr Reference; <https://www.lucre.org/resources/other-directories/software/scatt771win>

**Program 9 (Cubindex)**

Applicable To Cubic Systems Only (!). Many Indexing Programs For A General Crystallographic System Are Freely Available Nowadays. Many Of Them Do The Indexation Only. This Program (At Present Only For Cubic Systems), Does Many Useful Additional Tasks. It Does The Following; Indexes Cubic Reflections. Finds The D Values If Not Given. Finds The Cell Constant. Fits It To A Straight Line (No Graph) Using Nelson-Riley Function. Gives Least-Squares Results Of N-R Analysis. Applies Multiplicity And Polarization Corrections To Observed Powder Intensities. Converts Them Into Structure Factors. Calculates Atomic Scattering Factors Of Each Element In The System. Calculates The Corresponding Structure Factors. Calculates The Real And Imaginary Parts Of The Structure Factor Of Each Reflection. Does A Wilson-Plot Analysis Using Fobs And Fcal. Gives The Least Squares Results Of Wilson Plot. Efficient Use Can Result In Several Information Of Your System. IUCr Reference; <https://www.lucre.org/resources/other-directories/software/cubindex2>

**Program 10 (Datared) (GUI Available)** - Similar To The Program Dremablp (Program 7). If The Input Is In The Form Of - Left Background Intensity - Peak Intensity - Right Background Intensity, You Can Use This Program For The Data Reduction. Single Crystal Data Reduction Program. Corrects Lp, Absorption And Background Intensities. Applicable To Any System. To Single Crystal Spheres. Converts The Uncorrected Structure Factors Into Lp, Absorption And Background Corrected Structure Factors.

IUCr Reference; <https://www.lucre.org/resources/other-directories/software/datared2>

**Program 11 (Reduce)** (GUI Available) Program Reduce - (Similar To The Program Dated (Program 10). If The Input Is In CAD-4 Format, U Can Use This Program. Single Crystal Data Reduction Program. Corrects Lp, Absorption And Background Intensities. Applicable To Any System. To Single Crystal Spheres. Converts The Uncorrected Structure Factors Into Lp, Absorption And Background Corrected Structure Factors. These Programs Can Be Downloaded And Used Without Any Charges And Warranties. If You Use Any Of These Programs, Just Give Me A Mail ([Saragow@Gmail.Com](mailto:Saragow@Gmail.Com)) Informing Me Which Program You Are Using.

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/reduce2>

**Other GUI (Windows Based) Software Programs Written By Dr. R. Saravanan Are;**

[Asf88win](#) [\(Other Info\)](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/asf88win>  
[Dataredwin](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/dataredwin>  
[Dremablwin](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/dremablwin>  
[Reducewin](#)

IUCr Reference <https://www.lucr.org/resources/other-directories/software/reducewin>  
[Scat771win](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/scatt771win>  
[Sfac331win](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/sfac331>  
[Sfac332](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/sfac332>  
[Sfac333](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/sfac333>  
[Sfac334](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/sfac335>  
[Grain](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/grain>  
[Pri1d\\_3\\_win](#)

[FCC](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/fcc>  
[BCC \(Similar To FCC\)](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/bcc>  
[KCl \(\(Similar To NaCl\)](#)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/kcl>  
[Diamond](#) (For Diamond Structures)

IUCr Reference; <https://www.lucr.org/resources/other-directories/software/diamond2>

**He Has Contributed To The Teaching Community By Delivering A Software Program For The Consolidation And Maintenance Of The Marks Obtained By The Students Of A Class In Various Assessment Components Like, Written Test, Seminar, Assignment, Quiz. A Highly Useful Window Based Software For Teachers.**

[CMTM7](#) (*CMTM7 Is An Educational Software – Program For Consolidating Marks Obtained By The Students In A Class In Various Assessment Components*).

[UV-Vis](#) (Band Gap Of Materials From Absorption Data Using Tauc Plot)

Source Files (Written In Visual Fortran Code) For Most Of The Softwares Are Available [Here](#).

Manual (Write Up) Is Available For Most Of The Programs [Here](#).

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**Courses attended:****a) Refresher: 2**

1. UGC-Academic Staff College, Bharathiar University, Coimbatore–641046 (from 06/09/2006 to 26/09/2006)
2. UGC-Academic Staff College, Madurai Kamaraj University, Madurai–625021, (from 15/11/2007 to 05/12/2007)

**b) Orientation:**

1. UGC-Academic Staff College, Bharathiar University, Coimbatore–641046 (from 01/06/2002 to 28/06/2002)

**Membership in Professional Bodies:**

1. Life Member – Indian Association of Physics teachers (IAPT)
2. Member WDC (World Directory of Crystallographers) of International Union of Crystallography (ID: IUCr 3611, website: [wdc.iucr.org](http://wdc.iucr.org))

**Academic and Research committee membership**

No.	Institute	Nature of academic duty	Year
1	Dept. of Physics, Kalasalingam University, Krishnankovil	Member, Interview Committee, Selection of Research Scholars	08/07/2008
2	Dept of Physics, Jeyaraj Annapackiam College, Periyakulam	Member, Board of Studies.	06/03/2008
3	Dept. of Physics, Kalasalingam University, Krishnankovil	Member, Interview Committee, Staff Selection	02/01/2007
4	Dept. of Physics, Kalasalingam University, Krishnankovil	Member, Interview Committee, Selection of Research Scholars	03/08/2007
5	Dept of Physics, Jeyaraj Annapackiam College, Periyakulam	Member, Board of Studies.	03/03/2007
6	Dept. of Physics, SFR College for Women, Sivakasi	Member, Board of Studies.	10/05/2007 to 09/05/2009
7	Dept. of Physics, NMSSVN College, Madurai	Member, Board of Studies.	15/06/2007 to 14/06/2009
8	Dept. of Physics, Saraswathi Narayanan College, Madurai	Member, Board of Studies.	20/06/2007 to 19/06/2009
9	Dept. of Physics, Yadava College, Madurai	Member, Peer Group Team (NAAC)	12/03/2003
10	Dept. of Physics, Yadava College, Madurai	Member, Peer Group Team (NAAC)	15/10/2003
11	Board of Studies, Dept. of Physics, Thiagarajar College, Madurai	Member, Board of Studies.	
12	Dept. of Physics, Yadava Womens College, Madurai	Member, Board of Studies.	

**Invited Talks:**

The applicant has motivated the young students and researchers for higher learning and advanced research by delivering lectures at various Institutions. The invited lectures given by him have been given as

## Invited Talks.

<b>Date</b>	<b>Institute</b>	<b>Title Of The Lecture</b>	<b>Type</b>
<b>29/01/2015</b>	Sri Meenakshi Govt. Arts College For Women (A), Madurai-2	Materials And Their Characterization	Invited Talk - In PG Association Meeting
<b>13/03/2009</b>	Dept. Of Physics, Thiagarajar College, Madurai – 625 009	Smarter Materials	Key Note Address At The State Level Inter Collegiate Student Seminar On Physics Of Smart Materials
<b>27/09/2007</b>	J. College Of Arts And Science, Pudukkottai- 622 404	Materials And Technological Developments	Special Invited Lecture
<b>26/03/2007</b>	Dept. Of Physics, HKRH College, Uthamapalayam - 625 533	X-Ray Characterization Of Crystalline Systems	Special Keynote Address
<b>22/03/2007</b>	Dept. Of Physics, APA College Of Arts And Culture, Palani – 624 601	Materials And Their Characterization	Special Lecture(Intercollegiate Seminar On Current Trends In Physics)
<b>21/02/2007</b>	Dept. Of Physics, SN College, Perungudi Madurai – 625 022	Materials And Their Characteristics	Keynote Address (Einstein's Day Cum Intercollegiate Meet)
<b>12/02/2007</b>	Dept. Of Physics, Yadava College (Men), Tiruppalai , Madurai – 625 014	Avenues In Physics Research	Inaugural Address (State Level Intercollegiate Meet YEARN 2007)
<b>24/08/2006</b>	Dept. Of Physics, SVN College, Madurai – 625 019	Technological Materials And Their X-Ray Characterization	Invited Lecture
<b>22/02/2006</b>	Dept. Of Physics, Yadava College (Men), Tiruppalai , Madurai – 625 014	X-Ray Diffraction Studies On Materials	Invited Lecture (Regional Seminar On Condensed Matter Physics)
<b>08/10/2004</b>	Dept. Of Physics, Arul Anandar College, Karumathur – 625 514 .Madurai Dt	X-Ray Diffraction Studies On Materials	Guest Lecture
<b>24/07/2004</b>	Dept. Of Physics, Devanga Arts College, Aruppukkottai – 626 101	X-Ray Diffraction	Guest Lecture
<b>21/03/2003</b>	Dept. Of Electronics And Instrumentation Engineering, Faculty Of Engineering And Technology, Annamalai University, Annamalainagar–608 002	Valedictory Address	Valedictory Address For The Engineers (Technical Symposium “STROBE 2K3”)

### Title of M.Phil. dissertation and Ph.D. Thesis

Degree	Subject
M.Phil.	Studies on Crystalline Perfection of Solar Silicon Ribbons
Ph.D.	Studies on the Imperfections of Real Crystals

### Research Experience

No.	Year	Organization	Position	Nature of Job
1	Mar.1994- Aug.1997	CSIR-SRF, School of Physics, Madurai Kamaraj University, Madurai	Research Associate	Research & Teaching
2	Jan.1998- Mar.1998	Institute of Materials Research (IMR), Tohoku University, Sendai, Japan	Research Associate	Research
3	Apr.1998- Mar.1999	Centre for Interdisciplinary Research (CIR), Tohoku University, Sendai, Japan	Lecturer	Research
4	Nov.1999- Mar.2000	Centre for Interdisciplinary Research, (CIR), Tohoku University, Sendai, Japan	Visiting Researcher	Research
5	June 2000- Till date	Dept. of Physics, The Madura College, Madurai	Lecturer, Lecturer (S.S.), Lecturer (S.G.), Associate Prof., Head	Teaching and Research

### Number of candidates supervised/under supervision for research:

Degree	Awarded	Submitted	Under Supervision
M.Phil.	50	-	-
Ph.D.	13	2	3

### Publications: Books

No.	Authors/Editor	Title of the Book/Book chapter	Year	ISBN. No.	Publisher
1	N. Hazeen K. S. Syed Ali M. Prema Rani Dr. R. Saravanan (Book chapter)	Diffusion in Metals—An Annual Retrospective - X	2008	ISBN-10: 3-908451-58-2 ISBN-13:978-3-908451-58-7	Defects and Diffusion Forum (Trans Tech Publications – (TTP) <a href="http://www.ttp.net/">http://www.ttp.net/</a> )
2	Dr. R. Saravanan (Monograph)	Experimental Charge Density - Semiconductors, oxides and fluorides	2010	ISBN-13: 978-3-8383-8816-8 ISBN-10: 3-8383-8816-X	Lambert Academic Publishing (LAP) AG & Co. KG, Saarbrücken, Germany, 2010 (204 pages), <a href="https://www.lap-publishing.com/">https://www.lap-publishing.com/</a>
3	Dr. R. Saravanan (Monograph)	Experimental Electron Density - Dilute Magnetic Semiconducting materials	2010	ISBN-13: 978-3-8383-9666-8 ISBN-10: 3-8383-9666-9	Lambert Academic Publishing (LAP) AG & Co. KG, Saarbrücken, Germany, 2010 (204 pages), <a href="https://www.lap-publishing.com/">https://www.lap-publishing.com/</a>



4	Dr.R. Saravanan (Editor and contributor)	Characterization of Technological materials	Vol. 671, 2011	ISBN: 978-3-03785-012-1	TTP, Trans Tech Pub., Stafa-Zurich, Switzerland, <a href="http://www.scientific.net">http://www.scientific.net</a>
5	Dr.R. Saravanan (Editor and contributor)	Characterization of advanced materials	Vol. 699, 2012	ISBN: 978-3-03785-254-5	TTP, Trans Tech Pub., Stafa-Zurich, Switzerland, <a href="http://www.scientific.net">http://www.scientific.net</a>
6	R. Saravanan and M. Prema Rani (Monograph)	Metal and Alloy Bonding - An Experimental Analysis	2012	ISBN 978-1-4471-2203-6	Springer <a href="http://www.springer.com/">http://www.springer.com/</a> <a href="http://www.springer.com/materials/special+types/book/978-1-4471-2203-6">http://www.springer.com/materials/special+types/book/978-1-4471-2203-6</a>
7	R. Saravanan (Monograph)	Charge density and structural characterization of thermoelectric materials	2016	Print ISBN 978-1-945291-00-5 eBook ISBN 978-1-945291-01-2 DOI: <a href="http://dx.doi.org/10.21741/9781945291012">http://dx.doi.org/10.21741/9781945291012</a>	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
8	R. Saravanan (Monograph)	Nano Semiconducting Materials	2016	Print ISBN 978-1-945291-04-3 ePDF ISBN 978-1-945291-05-0 DOI: <a href="http://dx.doi.org/10.21741/9781945291050">http://dx.doi.org/10.21741/9781945291050</a>	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
9	R. Saravanan (Editor and contributor)	Novel Ceramic Materials	2016	Print ISBN 978-1-945291-02-9 ePDF ISBN 978-1-945291-03-6 DOI: <a href="http://dx.doi.org/10.21741/9781945291036">http://dx.doi.org/10.21741/9781945291036</a>	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
10	R. Saravanan (Editor and contributor)	Contemporary Dielectric Materials	2017	Materials Research Foundations Volume 28 ISBN: Print ISBN 978-1-945291-12-8 EPDF ISBN 978-1-945291-13-5 DOI: 10.21741/9781945291135 Publisher: MRF (Materials Research Foundations), USA <a href="http://www.Mrforum.Com/Mrfoundations/">Www.Mrforum.Com/Mrfoundations/</a> Year: 2017	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
11	R. Saravanan (Monograph)	Ferrite Materials For Memory Applications	2017	Materials Research Foundations Volume 18 Publication Date 2017, 172 Pages Print ISBN 978-1-945291-38-8 (Release Date November 11th, 2017) EPDF ISBN 978-1-945291-39-5	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>

				DOI: 10.21741/9781945291395 Year: 2017	
12	R. Saravanan (Monograph)	Non-Linear Optical Materials	2018	Materials Research Foundations Volume 28 Publication Date 2018, 195 Pages Print ISBN 978-1-945291- 60-9 (Release Date April 1st, 2018) EPDF ISBN 978-1-945291- 61-6 DOI: 10.21741/9781945291616 Year: 2018	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
13	R. Saravanan (Monograph)	Solid Oxide Fuel Cell (SOFC) Materials	2018	Materials Research Foundations Volume 23 Publication Date 2018, 182 Pages Print ISBN 978-1-945291- 50-0 (Release Date January 15th, 2018) EPDF ISBN 978-1-945291- 51-7 DOI: 10.21741/9781945291517 Year: 2018	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
14	R. Saravanan (Monograph)	Titanate Based Ceramic Dielectric Materials	2018	Materials Research Foundations Volume 25 Publication Date 2018, 168 Pages Print ISBN 978-1-945291- 54-8 (Release Date February 25th, 2018) EPDF ISBN 978-1-945291- 55-5 DOI: 10.21741/9781945291555 Year: 2018	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
15	R. Saravanan (Monograph)	Dilute Magnetic Semiconducting (DMS) Materials	2018	Materials Research Foundations Volume 35 Publication Date 2018, 206 Pages Print ISBN 9781945291760 (Release Date August 25th, 2018) EPDF ISBN 9781945291777 DOI: 10.21741/9781945291777 Year: 2018	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
16	R. Saravanan (Monograph)	Lead-Free Piezo- Ceramic Solid Solutions	2018	Materials Research Foundations Vol. 41 Publication Date 2018, 176 Pages	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>

				Print ISBN <a href="#">978-1-945291-94-4</a> (Release Date November 25th, 2018) EPDF ISBN <a href="#">978-1-945291-95-1</a> DOI: 10.21741/9781945291951 Year: 2018	
17	R. Saravanan (Monograph)  Materials Research Forum Vol. 136 Publication Date 2022, 139 Pages Print ISBN 978-1-64490-218-9 ePDF ISBN 978-1-64490-219-6 DOI: <a href="https://doi.org/10.21741/9781644902196">https://doi.org/10.21741/9781644902196</a> Year: <b>2022</b>	<b>Characterization of Ceramic-Ferrite Magneto-Electric Composite</b>	2022	Materials Research Foundations Vol. 136 Publication Date 2022, 139 Pages Print ISBN 978-1-64490-218-9 ePDF ISBN 978-1-64490-219-6 DOI: <a href="https://doi.org/10.21741/9781644902196">https://doi.org/10.21741/9781644902196</a> Year: 2022	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
18	R. Saravanan (Monograph)  Materials Research Forum Vol. 140 Publication Date 2023, 194 Pages Print ISBN 978-1-64490-226-4 ePDF ISBN 978-1-64490-227-1 <a href="https://doi.org/10.21741/9781644902271">https://doi.org/10.21741/9781644902271</a> Year: <b>2023</b>	<b>Multiferroic Materials</b>	2023	Materials Research Foundations Vol. 140 Publication Date 2023, 194 Pages Print ISBN 978-1-64490-226-4 ePDF ISBN 978-1-64490-227-1 <a href="https://doi.org/10.21741/9781644902271">https://doi.org/10.21741/9781644902271</a> Year: <b>2023</b>	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>
19	R. Saravanan (Monograph)  Materials Research Forum Vol. 139 Publication Date 2023, 116 Pages Print ISBN 978-1-64490-224-0	<b>Transition Metal Doped Spintronics Materials</b>	2023	Materials Research Foundations Vol. 139 Publication Date 2023, 116 Pages Print ISBN 978-1-64490-224-0 ePDF ISBN 978-1-64490-225-7 <a href="https://doi.org/10.21741/9781644902257">https://doi.org/10.21741/9781644902257</a>	MRF (Materials Research Foundations), USA <a href="http://www.mrforum.com/mrfoundations/">www.mrforum.com/mrfoundations/</a>

ePDF ISBN 978-1-64490-225-7 https://doi.org/10.21741/9781644902257 Year: <b>2023</b>				
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### Research Projects undertaken:

No	Title of the project	Amount Sanctioned	Agency	Period of the Project	Year of Completion
1	Preparation, characterization and local structure of new lead free piezo ceramics	Rs. 20,27,300	NRB (DRDO) DNRD/05/4003/NRB/ NRB-269/MAT/12-13 Dt.15/04/2013	3 years June,22, 2013 – June 2016	June, 2016
2	Oxide based dilute magnetic materials – Synthesis and local structural characterization <b>Role: CI</b>	Rs. 6,98,800/-	UGC (39-497/2010 (SR))	3 years (Feb. 2011 – Jan. 2014)	January, 2014
3	Bulk growth and X-ray characterization of local structure in silicon and germanium based Dilute Magnetic semiconductors <b>Role: PI</b>	Rs. 9,32,000	CSIR (03(1138)/09/EMR-II)	3 Years (Mar. 2009 – Mar. 2012)	30/03/2012  Publications:6 International
4	Thermal motion of core and valence electrons, charge transfer and MEM [Maximum Entropy Method] electron density distributions in technologically important semiconductors. <b>Role: PI</b>	Rs. 2,02,000	CSIR (03(0949)/02/EMR-II)	3 Years ( Oct. 2001 – Nov. 2004)	30/11/2004  Publications: 12 International: 8 Indian: 4

**DST-FIST:** Funding to the tune of **Rs. 21.6 lakhs** was obtained from DST. The interview was attended at New Delhi, by **Dr. R. Saravanan** along with the Principal, The Madura College, Madurai. The proposal for this funding was by and large prepared by the applicant.

### Papers presented in National/International seminars, Symposia, Conferences and Work Shops:

1. X-ray Studies on the Crystalline Texture in Solar Grade Silicon Ribbons S. K. Mohanlal and **R. Saravanan**, XIX National Seminar on Crystallography, *Changanachery, Kerala, December, 1987.*
2. Presented a paper in the seminar entitled “X-ray Diffraction and its Recent Trends” at the Madurai Kamaraj University, *Madurai-21, R. Saravanan, February, 1988.*

3. Bonding Charges, Thermal Factors and Dispersion Effects in the Compound III-V Semiconductors. **R. Saravanan**, S. K. Mohanlal and K. S. Chandrasekaran **XXI National Seminar on Crystallography, BARC, Bombay, G21, December, 1989.**
4. Anharmonicity and Polarity effects in the X-ray Diffraction of Compound Semiconductors. K. S. Chandrasekaran, **R. Saravanan** and S. K. Mohanlal, **National Science Congress, Cochin, February 1990.**
5. Characterization of Epitaxial layers and Crystal Substrate by Buerger Precession technique. **R. Saravanan**, and S. K. Mohanlal, **XXII National Seminar on Crystallography, Calcutta, December, 1990.**
6. Anomalous Dispersion Correction Terms  $f''$  for Ga and In: An Experimental Investigation **R. Saravanan**, and S. K. Mohanlal **XXII National Seminar on Crystallography, Calcutta, December, 1990.**
7. Topographic Attachment to Weissenberg Camera for Crystal Defect Studies. **R. Saravanan** and S. K. Mohanlal. **National Symposium on Instrumentation, (NSI-16), Cochin, November, 1991**
8. Experimental determination of  $f''$  for indium by X-ray diffraction **R. Saravanan**, and S. K. Mohanlal **Proc. Sol.State.Phy.Sym. (DAE), (India), Vol.33c, 382, (1991)**
9. Effective Charge Transfer in GaAs and InSb: An Experimental Investigation. **R. Saravanan**, S. K. Mohanlal and K. S. Chandrasekaran, **XXIII National Seminar on Crystallography, Jaipur, March, 1992.**
10. Quasi-forbidden Reflections of GaP and InP: Measurement and analysis. **R. Saravanan**, S. K. Mohanlal and K. S. Chandrasekaran **XXIII National Seminar on Crystallography, Jaipur, March, 1992.**
11. Defect Characterization of  $Hg_{1-x}K_1-xCl$  and  $Hg_{1-x}Na_1-xCl$  XXVI, S. K. Mohanlal, **R. Saravanan** and M. Sekar **National Seminar on Crystallography, Mysore, January, 1995.**
12. Temperature Dependence of Thermal Vibration and Thermal Expansion in Aluminium. J. Jeyakanthan, **R. Saravanan**, S. K. Mohanlal and S. Natarajan, **XXVI National Seminar on Crystallography, Mysore, January, 1995.**
13. Effect of Temperature on the Thermal Vibrations in Silicon, S. K. Mohanlal, **R. Saravanan**, and J. Jeyakanthan, **XXVI National Seminar on Crystallography, Mysore, January, 1995.**
14. Debye-Waller Factors in  $NaxC60$ , S. Israel, **R. Saravanan**, N. Srinivasan and S. K. Mohanlal, **XXVI National Seminar on Crystallography, Mysore, January, 1995.**
15. Core-Valence Splitting of Thermal Vibrations in Germanium: Temperature Dependence. **R. Saravanan**, S. K. Mohanlal and J. Jeyakanthan, **XXVI National Seminar on Crystallography, Mysore, January, 1995.**
16. Participated and presented a paper in the **7th International ISSP (Institute of Solid State Physics) International Symposium, R. Saravanan, Tokyo, Japan, Nov.24-27, 1998.**
17. MEM Electron Density Distribution of GaAs And CdTe at RT and 200 K. **R. Saravanan** I National Conference on Recent Advances in Materials Science, DRDO & BRNS, **Tiruchy, 2000.**
18. Participated and presented a paper in the IVth Meeting of the **Asian Crystallographic Association, R. Saravanan, Bangalore, 2001.**
19. H<sup>+</sup> Implantation Effects On Lo Phonon-Plasmon Coupled Modes In N-GaAs – Raman Study P. Murugan, R. Kesavamoorthy, S. Amirthapandian, **R. Saravanan**, K. Ramachandran and N. Krishnamoorthy. **Proc. 44th SSP Symposium (DAE), 44, 285-286, Bombay, 2001.**
20. Thermal Conductivity of GaP by Photoacoustics and Simulation. M. Prema Rani, **R. Saravanan** and K. Ramachandran II National Conference on Recent Advances in Materials Science – NCMS-2002, **CSIR & DRDO, Tiruchy, Dec. 11-12, P28, p149-15, 2002.**

21. Bonding in vanadium Metal **R. Saravanan**, S. Israel, N. Srinivasan, B. Nagarajan, H. Shameem Banu and G. Chanthini Begum, **II National Conference on Recent Advances in Materials Science – NCMS-2002, CSIR & DRDO, Tiruchy, Dec. 11-12, 2002.**
22. Entropy Maximization Applied to the Electron Density in Sodium Metal, **R. Saravanan**, S. Israel, N. Srinivasan, H. Shameem Banu, B. Nagarajan and G. Chanthini Begum, **II National Conference on Recent Advances in Materials Science – NCMS-2002, CSIR & DRDO, Tiruchy, Dec. 11-12, 2002.**
23. Attended the Seminar on “Computer Simulation in Physics” (SCSP – 2002) at the School of Physics, **Madurai Kamaraj University, Madurai –21, R.Saravanan, February, 2002.**
24. Resolution of MEM (Maximum Entropy Method) Electron Density Maps: Case Study on KCl, **R. Saravanan**, N. Srinivasan, S. Israel and R. K. Rajaram Proc. **45th SSP Symposium (DAE), 45, Chandighar, 2002.**
25. MEM Bonding in NaCl at 78°K, 200°K and Room Temperature N. Srinivasan, **R. Saravanan**, S. Israel and R. K. Rajaram Proc. **45th SSP Symposium (DAE), 45, Chandighar, 2002.**
26. Photoacoustic measurements in Sn<sub>1-x</sub>GexTe M. Sivabharathy, N. Sankar, **R. Saravanan**, and K. Ramachandran Proc. **45th SSP Symposium (DAE), 45, Chandighar, 2002.**
27. An Investigation on the Bonding In SrCl<sub>2</sub> At 300k And 80K, N. Srinivasan, S. Israel and **R. Saravanan**, **National Seminar on Crystallography, Oct, 24-26, Jammu, E-6, 2002.**
28. Oxygen Binding in BaO, CaO, MgO and SrO, **R. Saravanan**, S. Israel and N. Srinivasan, **National Seminar on Crystallography, Oct, 24-26, Jammu, E-3, 2002.**
29. Charge Density Distribution Mapping of Copper, Chromium, Iron and Aluminium by Maximum Entropy Method (MEM). S. Israel, **R. Saravanan**, N. Srinivasan and R.K. Rajaram, **National Seminar on Crystallography, Oct, 24-26, Jammu, E-1, 2002.**
30. MEM Charge Distribution in MnHg R. Kalidoss, S. Swaminathan, M. Muruganatham and **R. Saravanan**, **National Seminar on Crystallography, Jammu, 2002.**
31. The Structure and Electron Density Distribution of FeSi S. Swaminathan, R. Kalidoss, M. Muruganatham and **R. Saravanan**, **National Seminar on Crystallography, Oct, 24-26, Jammu, D-7, 2002.**
32. Growth and X-Ray Characterization of Carbonates of Barium, Strontium and Calcium in Gel Medium N. Ajeetha, K.S. Syed Ali, **R. Saravanan**, **National Seminar on Crystallography, Oct, 24-26, Jammu, I-26, 2002.**
33. X-Ray Characterization of Gel Grown Ferro Electric Single Crystals of SrHPO<sub>4</sub> And PbHPO<sub>4</sub> K.S. Syed Ali, N. Ajeetha, **R. Saravanan**, **National Seminar on Crystallography, Oct, 24-26, Jammu, I-1, 2002.**
34. Graphical Analysis of Charge Transfer in GaAs And CdTe at Different Temperatures, P. Manimaran, K. Balamurugan, S. Mariyappan, K. Asharamani, **R. Saravanan and N. Srinivasan**, **National Seminar on Crystallography, Oct, 24-26, Jammu, D-6, 2002.**
35. Charge Transfer in Compound Semiconductors at Different Temperatures, K. Asharamani, K. Balamurugan, P. Manimaran, S. Mariyappan, **R. Saravanan** and N. Srinivasan, **National Seminar on Crystallography, Oct, 24-26, Jammu, D-1, 2002.**
36. Anomalous Dispersion Corrections of Telluride in II-VI Compound Semiconductors at Different Temperatures, D. Arthi, G. Rajasudha , K. VimalaDevi, S. Prasanna Subramanian, **R. Saravanan** and N. Srinivasan, **National Seminar on Crystallography, Oct, 24-26, Jammu, E-4, 2002.**
37. Computational Analysis of X-Ray Intensities and Refinement of Anomalous Dispersion Corrections For GaAs At 170K, 200K, 250K, 300K S. Prasanna Subramanian, D. Arthi, G. Rajasudha , K. Vimala Devi, **R. Saravanan** and N. Srinivasan, **National Seminar on Crystallography, Oct, 24-26, Jammu, A-5, 2002.**

38. Local Structure GaAs and Ge using pair distribution function. K.S. Syed Ali and **R. Saravanan**, **National Conference on Current Trends in Condensed Matter Research**, September 20-22, Abstract No. 11. **Warangal**, Pp16, **2004**.
39. Electronic Structure of ZnTe at RT, 200 K, 100 K. S. Israel and R. Saravanan **National Conference on Current Trends in Condensed Matter Research**, September 20-22, Abstract No. 10. **Warangal**, Pp15, **2004**.
40. Bonding in fluorite compound CaF<sub>2</sub> usnin MEM. **R. Saravanan** and S. Israel, **National Conference on Current Trends in Condensed Matter Research**, September 20-22, **Warangal**, Pp15, **2004**.
41. Imaging of Electron Density Distributions of SrCl<sub>2</sub> by Maximum Entropy Method. N. Srinivasan, S. Israel and **R. Saravanan**, **National Seminar on Crystallography**, Novemeber, NCL, **Pune**. Abtract No. 120AB, **2004**.
42. Study of Electronic Charge Densities by MEM for NaCl at RT, 200 K and 78 K. N. Srinivasan, A. Aarthi, A. Anitha, P. Nagapushpavalli, S. Israel and **R. Saravanan**, **National Seminar on Crystallography**, Novemeber, 2004, NCL, **Pune**. Abtract No. 120A, **2004**.

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#### **Awards and Fellowships obtained**

1. Awarded Senior Research Fellowship by CSIR New Delhi, during Mar.1991- Feb.1993 - Availed
  2. Awarded Research Associateship by CSIR New Delhi, during Mar. 1994 – Aug. 1997 (In CSIR research Project)- Availed
  3. Invited by **Georg-August-Universität Göttingen (Germany)** to work as a guest scientist in the Mineralogisch-Kristallographisches Institut during 1995 -1997– Not availed by the candidate
  4. Awarded Research Associateship by CSIR , New Delhi, during Oct.1997-Apr.1998 – Availed on Leave
  5. Awarded **the Matsumae International Foundation Fellowship -1998** (Japan) for doing research at a Japanese Research Institute – Not availed by the candidate.
  6. Awarded a **Research fellowship at the Institute of Materials Research, Tohoku University, Sendai, Japan** January 1998 – March 1998 – Availed
  7. Awarded a Lecturership position at the **Centre for Interdisciplinary Research, Tohoku University, Sendai, Japan** – April 1998 – March 1999 – Availed
  8. Awarded a Lecturership position (as visiting Scientist) at the **Centre for Interdisciplinary Research, Tohoku University, Sendai, Japan** November 1999 – March 2000 – Availed
-

## Ph.D. Completed

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Currently Doing  
Thesis Submitted  
Completed

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15.

**(Dr.) T. AKILAN, M.Sc., M.Phil.**

(Now working at Abu Dhabi, UAE)

**Project Fellow-UGC Major Research Project**

**PG and Research Department of Physics**

**Thiagarajar College of Arts and science**

**Teppakulam, Madurai-625 009**

**Mobile: 94898 65653**

**Email: akilan28@gmail.com**

**Dr.N.Srinivasan (Supervisor)**

**PG and Research Department of Physics**

**Thiagarajar College of Arts and science**

**Teppakulam, Madurai-625 009**

Ph.D. Topic:

**SYNTHESIS AND LOCAL STRUCTURAL CHARACTERIZATION OF OXIDE BASED DILUTE MAGNETIC MATERIALS**

**Date of Registration : 03/10/2011**

**Registration no. : F8754**

**Date of Submission of Thesis: 23/12/2022**

**Date of viva voce examination :**

---

14.

Dr. S. V. Meenakshi, Assistant Professor

Department of Physics, Sri Meenakshi Govt. Arts College for Women (Autonomous)

Madurai 625 002,

Mobile: 90801 49901,

Email: svmeenu74@yahoo.in

Ph.D. topic:

Synthesis and structural, dielectric, magnetic characterization of ceramic-ferrite magneto-electric composites

Date of Registration : 21/11/2014

Registration no. : P3734

Date of Submission of Thesis : 23/02/2022

Date of viva voce examination : 15/02/2024

---

## Degree Awarded

13.

Name: Dr. G. Gowri, M.Sc., M.Phil., Ph.D.

Assistant Professor, Research Centre and PG Department of Physics,

The Madura College, Madurai- 625 011

Mobile: 99445 68916, Email: gowrikanna01@gmail.com

Ph.D. topic: Synthesis, characterization and charge density of multiferroic materials

Date of Registration : 19/12/2015

Registration no. : P4287

Journal Publications: International: 5; National: Nil

Conference/Seminar : 5



Status: Viva-Voce Examination Completed On 09/01/2023

Date of Colloquium Presentation : 13/05/2021

Date of Thesis submission : 01/07/2021

Date of viva voce examination : 09/01/2023

---

12.

Name: Dr. S. Sasikumar, M.Sc., M.Phil., Ph.D.

NRB-DRDO Project-Project Fellow, Research Scholar, Dept. Of Physics, The Madura College, Madurai – 625 011, TN, India

Title Of The Ph.D.: Synthesis And Characterization Of BaTiO<sub>3</sub> Based Lead Free Piezoelectric Materials

Registration No.: F9436, Dt. (24/11/14)(MKU)

Journal Publications: International: 5; National: Nil

Conference/Seminar : 5

Status: Viva-Voce Examination Completed On 14/12/2018

---

11.

Name: Dr. R.A.J.R.Sheeba, M.Sc., M.Phil., Ph.D.

SRF-CSIR Project, Research Scholar, Dept. Of Physics, The Madura College, Madurai – 625 011, TN, India

Title Of The Ph.D.: Characterization Of Si And Ge Based DMS Materials

Registration No.: F8372, Dt. 09/04/2010 (MKU)

Journal Publications: International: 5; National: Nil

Conference/Seminar : 3

Status: Viva-Voce Examination Completed On 11/12/2018

---

10.

Name: Dr. Y. B. Kannan, M.Sc., M.Phil., Ph.D.

Assistant Prof., Dept. Of Physics, Arumugam Pillai Seethai Ammal College, Tiruppattur – 630 211, Sivagangai Dt.

(As Co-Guide) Title Of The Ph.D.: Synthesis And Characterization Of Ferrite Materials

Registration No.: P9315, Dt. 12/03/2011 (MKU)

Journal Publications: International: 7; National: Nil

Conference/Seminar : 3

Status: Ph.D. Degree Applied. (Viva-Voce Completed On 28/09/2018).

---

9.

Name: Dr. J. Mangaiyarkkarasi, M.Sc., M.Phil., Ph.D.

Associate Prof., Dept. Of Physics, NMSS Vellaichamy Nadar College, Nagamalai, Madurai – 625019, (FDP Scholar – 2015-17)

Title Of The Ph.D.: Preparation And Structural Characterization Of Dielectrics And Ceramic Materials

Registration No.: P8545, Dt. 18/09/2009 (MKU)

Journal Publications: International: 7; National: Nil

Conference/Seminar : 3

Status: Degree Applied. (Viva Voce Completed On 06/07/2018)

---

8.

Name: Dr. N. Thenmozhi, M.Sc., M.Phil., Ph.D.

Associate Prof., Dept. Of Physics, NMSS Vellaichamy Nadar College, Nagamalai, Madurai – 625019, (FDP Scholar – 2015-17)

Title Of The Ph.D.: Growth, Physical And X-Ray Characterization Of Manganite Structures

Registration No.: P8479; Dt. 16/07/2009 (MKU)

Journal Publications: International: 8; National: Nil

Conference/Seminar : 3

Status: Degree Applied (Viva Voce Completed On 13/04/2018)

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7.

Name: Dr. T.K.Thirumalaisamy, M.Sc., M.Phil., Ph.D.  
Associate Prof., Dept. Of Physics, H.K.R.H. College, Uthamapalayam - 625 533, TN, India  
Title Of The Ph.D.: XRD Characterization Of Non Linear Optical Materials  
Registration No.: P8419, Dt. 4/6/2009, MKU  
Journal Publications: International: 8; National: -  
Conference/Seminar : 3  
Status: Degree Applied (Viva Voce Completed On 10/04/2018)

---

6.

Name: Dr. S. Saravanakumar, M.Sc., M.Phil., Ph.D.  
Asst. Prof., Dept. Of Physics, Kalasalingam University, Krishnan Kovil, Srivilli Putthur, TN, India  
Title Of The Ph.D.: Synthesis And Characterization Of Nano Semiconductors  
Registration No.: P9292, Dt. 28/02/2011, MKU  
Journal Publications: International: 10; National: 1  
Conference/Seminar : 5  
Status: Degree Awarded (Viva Voce 27/08/2015)

---

5.

Name: Dr. S. Francis, M.Sc., M.Phil., Ph.D.  
Dept. Of Physics, Yadava College, Madurai – 625016, TN, India  
Title Of The Ph.D.: Growth, Crystallographic, Structural, Physical, Magnetic Characterization Of Oxide Based Dilute Magnetic Semiconductors (DMS)  
Registration No.: 3530, Dt. 28/12/2005 (MKU)  
Journal Publications: International: 5; National: Nil  
Conference/Seminar : 3  
Status: Degree Awarded (Viva Voce 04/08/2014)

---

4.

Name: Dr. Charles Robert, M.Sc., M.Phil., Ph.D.  
Associate Prof., Dept. Of Physics, HKRH College, Uthamapalayam – 625533, TN, India  
Title Of The Ph.D.: Structural And Physical Characterization Of Thermoelectric Materials  
Registration No.: 3521, Dt. 15/12/2005 (MKU)  
Journal Publications: International: 5 National: 1  
Conference/Seminar : 2  
Status: Degree Awarded (Viva Voce 08/08/2014)

---

3.

Name: Dr. M. Prema Rani, M.Sc., M.Phil., Ph.D.  
Associate Prof., Dept. Of Physics, The Madura College, Madurai – 625011, TN, India (FDP Scholar – 2010-12)  
Title Of The Ph.D.: Analysis Of Average And Local Structure And Characterization Of Important Metals And Semiconductor Materials Using Single Crystal And Powder X-Ray Diffraction  
Registration No.: 3416; Dt.05/04/2005 (MKU)  
Journal Publications: International: 5; National: 1  
Conference/Seminar : Nil  
Status: Degree Awarded (Viva Voce 05/03/2012)

---

2.

Name: Dr. K. S. Syed Ali, M.Sc., M.Phil., Ph.D.  
(Now At USA)  
Title Of The Ph.D.: Growth, Structural And Electronic Characterization Of Some Diluted Magnetic Materials

Registration No.: 3464; Dt.19/08/2005 (MKU)  
 Journal Publications: International: 5 National: 3  
 Conference/Seminar : Nil  
 Status: Degree Awarded (Viva Voce 23/06/2011)

1.

Name: Dr. S. Israel, M.Sc., M.Phil., Ph.D.  
 Lecturer (S.G.), M.Sc., M.Phil., Ph.D., Dept. Of Physics, American College, Madurai – 625002, TN, India  
 Title Of The Ph.D.: X-Ray Studies Of The Electronic Properties Of Some Technologically Important Semiconducting Systems  
 Registration No.: 0635 Dt. 03/10/2001 (MKU)  
 Journal Publications: International: 12; National: 1  
 Conference/Seminar : Nil  
 Status: Degree Awarded (Viva Voce 11/07/2007)

### M.Phil Guidance by Dr. R. Saravanan

No	Name	Title of the Dissertation	College/ University	Year
1	Mr.S. S. Saravanakumar	Structural Refinement, Thermal Vibration and Electron Density Distribution of ZnTe using X-ray Data	Manonmaniam Sundaranar University (MSU)	Aug. 2003
2	Mr.T. Vivekanandan	Structure and Electronic Properties of III-V Compound Semiconductor GaP	Manonmaniam Sundaranar University (MSU)	Sep. 2003
3	Mr.A. Mujiber Rahman	Structure and MEM (Maximum Entropy Method) Electron Density Distribution of the Fluorite Type Compound CaF <sub>2</sub> using Single crystal X - ray Data	Bharathidasan University (BU)	Nov. 2003
4	Mr.S. Francis	X - Ray Powder Data Analysis of Sulfides: SrS, PuS, PbS, CaS, BaS, MnS and HgS	Bharathidasan University (BU)	Dec. 2003
5	Mrs. B. Revathi	X - Ray Anomalous Dispersion Studies in CdTe at 200 K and 300 K	Manonmaniam Sundaranar University (MSU)	Sep. 2003
6	Ms. K. Vijayalakshmi	Structure of Metal Alloys NiAl and CoAl	Manonmaniam Sundaranar University (MSU)	Sep. 2003
7	Ms. J. Gayathri	Electronic Charge Distribution in Metals	Manonmaniam Sundaranar University (MSU)	Feb. 2004
8	Mr. K. S. Syed Ali	Average and Local Structure of Gallium Arsenide and Germanium: X - ray Data Analysis using Rietveld Structural Refinement and Pair Distribution Function	Bharathidasan University (BU)	Nov. 2004
9	Ms. R. Ramya	Effect of Atomic Displacement on the Structural Properties of Copper: Powder X - ray Data Analysis	Bharathidasan University (BU)	Dec. 2004
10	Mr. F. Winfred Shashikanth	Experimental Analysis on the Anomalous Dispersion Effects and Charge Transfer in InSb using Single Crystal X - ray Data	Bharathidasan University (BU)	Jan. 2005

11	Mr. N. Sheenkumar	Structure of NH <sub>4</sub> Cl and ND <sub>4</sub> I in terms of Physical Parameters, Thermal Vibrations and Electron Density Distribution	Bharathidasan University (BU)	Feb. 2005
12	Mrs. A. Jeyagowri	X-ray Powder Data Analysis of the Structure of LiF, NaF and LiCl using Rietveld Refinement	Bharathidasan University (BU)	Aug. 2005
13	Ms. V. Ramya	. Powder X-ray Study of Calcite and Dolomite and the 'Derived' Structure of Magnesite	Manonmanium Sundaranar University (MSU)	Nov. 2005
14	Mr. A. Antony Michael Regan	Structural Studies of KH <sub>2</sub> PO <sub>4</sub> and NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> using Powder X-ray Data Analysis: Models With and Without Hydrogen Atoms	Bharathidasan University (BU)	Dec. 2005
15	Mr. B. Prakash	Core and Valence Thermal Vibrations in Cr, Na and V	Manonmanium Sundaranar University (MSU)	Dec. 2005
16	Ms. J. Sambhavi	Structural Comparison of the Three Grades of Silicon using X- ray Powder Data	Manonmanium Sundaranar University (MSU)	Nov. 2005
17	Mrs. N. Kavitha	Structure and Electron Density Distribution of Ba(NO <sub>3</sub> ) <sub>2</sub> and Sr(NO <sub>3</sub> ) <sub>2</sub> – using Rietveld Refinement	Manonmanium Sundaranar University (MSU)	Nov. 2005
18	Mr. A. Ajmal Bhasha	Rietveld Structural Analysis of PbO and Fe <sub>5</sub> Sm using Powder X-ray Data	Bharathidasan University (BU)	Dec. 2005
19	Mr. S. Baranitharan	Growth and Structural Characterization of Bi, Sb and Bi <sub>0.8</sub> Sb <sub>0.2</sub> using Powder X - ray Data	Bharathidasan University (BU)	Dec. 2005
20	Mrs. S. Vijayalakshmi	Analysis of Phase Transition in Ag <sub>0.05</sub> Na <sub>0.95</sub> Cl	Bharathidasan University (BU)	Dec. 2005
21	Mr. K. Karthikeyan	Structural and Bonding Characterization of Boron Compounds BA <sub>s</sub> , BP, BN and BPu using Maximum Entropy Method (MEM)	Manonmanium Sundaranar University (MSU)	Jan. 2006
22	Mr. A. M. Moorthy	Structural Characterization and Bonding in Fe <sub>0.67</sub> Ni <sub>0.33</sub> , Fe and Mg using Rietveld Refinement of Powder X-ray Data	Bharathidasan University (BU)	Apr. 2006
23	Mr. M. Ramachandran	Pair Distribution analysis of Al, Ni and Fe using X-ray Data	Manonmanium Sundaranar University (MSU)	Oct. 2006
24	Mr. M. Mohammed Hussain	Growth and Characterization of Dilute magnetic Semiconductors Ge <sub>1-x</sub> Mn <sub>x</sub> (x=0.03, 0.05, 0.07)	Madurai Kamaraj University (MKU)	Apr. 2008
25	Mr. K.Saravanakumar	Characterization of thermoelectric metal elements	Madurai Kamaraj University (MKU)	Dec. 2007
26	Mr. S. Sampath Kumar	MEM analysis of Charge Distribution in Simple Metals Al, Cu and Zn using X—Ray Data	Madurai Kamaraj University (MKU)	Apr. 2008
27	K. C. Anil	Electron Density and Local Structure in CsCl, CsBr and CsI	Manonmanium Sundaranar University (MSU)	July 2008
28	Ms. S. Kanmani Chitra	Structural Analysis of Shape Memory Metals Ni and Ti	Madurai Kamaraj University (MKU)	May 2008

29	Mrs. K. Selvarani	Structure, Electron Density and Charge Transfer in Zinc Selenide and Zinc Sulfide using Powder X—Ray Data	Bharathidasan University (BU)	Apr. 2008
30	Mrs.C. Usha Rani	Structure of LiF using Single Crystal XRD and MEM (Maximum Entropy Method)	Bharathidasan University (BU)	Apr. 2008
31	Mr. P. Saravanakumar	Structural Analysis of Semiconducting Systems CdSe and CdS by MEM (Maximum Entropy Method) using X- Ray Data	Bharathidasan University (BU)	Apr. 2008
32	Mr. J. Antony Dasan	Defect Structural Analysis using Powder X-Ray Data and Electron Density of KCl with Cd++ impurity	Bharathidasan University (BU)	Apr. 2008
33	M. Esra	Structural Analysis of ZnS by Maximum Entropy Method (MEM)	Alagappa University (AU)	Nov. 2008
34	Mr. S. Jegan	Accurate determination of Fractional Atomic Coordinates of atoms in Y2O3 and Cr2O3	Madurai Kamaraj University (MKU)	June 2009
35	Mr. M. Kumarasamy	Electronic structure analysis of ZnO by MEM method	Alagappa University (AU)	January 2009
36	Mr. N. Ramajayanthan	Powder XRD Characterization of In, Sn and their mechanical mixture	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	June 2009
37	Ms. B. Subha	Single crystal analysis of the structure of the thermoelectric materials InSb and PbTe	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	June 2009
38	K.J. Lakshmisri 200 9 MLP 01	Structural and Physical Characterization of Cr, Ti and V doped Al2O3 powders	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	2009-10
39	S.Lavanya 2009 MLP 02	Local structure of nano powders of Al2O3, Gd2O3 and Sm2O3	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	2009-10
40	S. Suganya Devi 2009 MLP07	Single crystal analysis of the fluorite compounds BaF2, CaF2, and MgF2	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	2009-10
41	Ms. M. Jeyapriya	Nano particle growth and characterization of SnO2 and Sb-doped SnO2	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	March 2010
42	Mr. S. Santhosh Kumar Jacob	Synthesis and characterization of nano semiconducting materials	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	May 2011
43	Ms. M. Ambika	X-ray studies on lead sulphide and gadolinium oxide (PbS and Gd2O3)	Dept. of Physics, The Madura	May 2011

			College, Madurai Kamaraj University (MKU)	
44	Ms. A. Mythili	Preparation and characterization of Co and Mn double doped $Zn_{1-2x}Co_xMn_xO$	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	May 2012
45	Ms. V. Devika	Characterization of Sr doped $BaTiO_3$ ( $Ba_{1-x}Sr_xTiO_3$ )	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	May 2013
46	Mr.S.Sasikumar	Synthesis and characterization of multi ferroic compound $Ga_{2-x}Fe_xO_3$	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	May 2013
47	Mr. M. Balasubramani	Synthesis, Characterization and charge density analysis on lead free piezo electric ceramics $Na_{1-x}K_xNbO_3$	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	May 2014
48	Mr.E.Asokan	Synthesis and characterization of lead free piezo ceramics $(1-x)Na_{1-y}K_yNb_{1-z}Sb_zO_3-xBaTiO_3$	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	June 2015
49	Mr.O.V. Saravanan	Electronic structure and bonding interaction in $Ba_{1-x}Sr_xZr_{0.1}Ti_{0.9}O_3$ ceramics	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	May 2017
50	Mr.S.Sonai	Electronic structure and chemical bonding in $La_{1-x}Sr_xMnO_3$ perovskite ceramics	Dept. of Physics, The Madura College, Madurai Kamaraj University (MKU)	May 2017

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No.	Name	Title of the report	Year
31	Mr. T. Jayapandi (2017PGP005) Ms. S. Manimegalai (2017PGP011) & Ms. S. Meenadevi (2017PGP013)	Structural, Optical Microstructural properties of lead free Piezoceramics $(1-x)SrTiO_3 + xNa_{0.5}Bi_{0.5}TiO_3$	May 2019
30	Ms. B. Saranya Devi (2016PGP012) & Ms. K. Nithya (2016PGP019)	Synthesis and characterization of multi ferroic material on $xNiFe_2O_4+(1-x)BaTiO_3$	May 2018
29	Ms. S. Umamaheswari (2015PGP26) & Ms. V. Nivethini (2015PGP27)	Synthesis and characterization of lead-free piezoceramic $(1-x)Ba(Zr_{0.2}Ti_{0.8})O_3$ $x(Ba_{0.7}Ca_{0.3})TiO_3$ , $x=0.4,0.5,0.6$	May 2017
28	Mr. O.V. Saravanan (2014PGP58) & Mr. S. Sonai (2014PGP63)	Synthesis and Structural Characterizations of $Na_{1-x}K_xNb_{0.95}Sb_{0.05}O_3$	May 2016

27	Ms. M.J. Viswanth (2014PGP018) & Ms. M. Ayshia siddika (2014PGP002)	Synthesis and characterization of multiferroic material on $(x)\text{MgFe}_2\text{O}_4+(1-x)\text{BaTiO}_3$	May 2016
26	MS. K. Dhivya (2013PGP002) & Ms. B. Sathiyakala (2013PGP020)	Synthesis and characterization of Zr doped $\text{BaTiO}_3$ ( $\text{BaTi}_{1-x}\text{Zr}_x\text{O}_3$ ) ceramics	May 2015
25	Mr. P. Alagupandi (2012PGP01), Ms. G. Meenakshi (2012PGP13) & Ms. G. Anipriyadevi (2012PGP25)	Synthesis and charge density analysis of $\text{BaTiO}_3$	May 2014
24	Ms. T. Uma (2012PGP062), Ms. S. Saranya (2012PGP073) & Ms. C. Yazhini (2012PGP074)	Synthesis and characterization of multiferroic compound $\text{Ga}_2\text{-xFe}_x\text{O}_3$	May 2014
23	Ms. P. Suganya (2013PGP016 & Ms. B. Vidya (2013PGP19)	Characterization of spin coated ZnO thin film	May 2013
22	Ms. M. Balasubramani (2011PGP03) & Mr. P. Rajiv Gandhi (2011PGP20)	Oxidation characterization of Magnesium and Zinc powders	June 2013
21	Ms. B. Dhanalakshmi (2010PGP05) & Mr. M. Murali (2010PGP11)	Characterization of $\text{Sm}_2\text{O}_3$ sintered at different temperatures	May 2012
20	Mr. M. Subakaran (2009PGP14), Ms. P. Devishree (2009PGP18) & Ms. C. Saraswathi (2009PGP23)	Gel growth of single crystals $\text{PbI}_2$	May 2011
19	Ms. P. Sathya Priya (2008 PGP 23) & Ms. C. Suganya Gandhi (2008 PGP 24)	High Temperature Crystal Growth of Mixed Systems $\text{Ba}_{1-x}\text{Sr}_x(\text{NO}_3)_2$	May 2010
18	Ms. A. Lakshmi (2007 PGP 04) Ms. S. Lavanya (2007 PGP 05) & Mr. K. Muniyandi (2007 PGP 11)	Preparation and powder XRD analysis of the nano powders of ZnS	May 2009
17	Mr. M. Muthu Pandi (2006PGP04) & Mr. M. Umamaheshwaran (2006PGP13)	Local Structure of $\text{Zn}_{1-x}\text{Mn}_x\text{O}$ ( $x=0.01$ and $x=0.04$ ) using X-ray Data	May 2008
16	Ms. M. Asha (2005PGP02) Ms. A. Sharanyah Dhevi (2005PGP15) & Ms. V. Sorna Meena (2005PGP17)	Analysis of Powder samples of $\text{Ba}(\text{NO}_3)_2$ and $\text{Sr}(\text{NO}_3)_2$ using XRD	May 2007
15	Mr. S. Sampath Kumar (2004 PGP 06), Ms. R. Aishwarya (2004 PGP 09) & Mr. B. Karthikeyan (2004 PGP 01)	Crystal Growth and Characterization of $\text{KCl}_{1-x}\text{Br}_x$	May 2006
14	Mr. V.S. Manoharan Mr.V. Senthil Murugan & Mr.G. Sivakumar	Structural Characterization of Metals Aluminium and Iron using Powder X-ray Intensities	May 2005
13	Ms.R. Amutha Priya(2003 PGP02) Ms.V. Parvatha Varthini 2003 PGP13) & Ms.G. Shyamala Devi( 2003 PGP20)	Structural Analysis of Ionic Systems NaCl, KCl and KBr using X-ray Powder Data	May 2005
12	Ms.I. Annal Sheeba (A2603751) & Ms.A. Indumathy (A2603754)	Crystal Growth of $\text{SrSO}_4$ and $\text{BaSO}_4$ by Gel Method	April 2004
11	Mr. S. Baranitharan Mr. A. M. Moorhy Mr. S. Senthil Krishnan & Mr. J. Thirukumaran	Rietveld Structural Analysis of Powder Data of HgSe, PbSe, SrSe and ZnSe	May 2004
10	Ms.R. Arathi Ms.G Deepa & Ms.S. Vijayalakshmi	Crystal Growth and Atomic Vibrations of Strontium and Barium Nitrate	May 2004

<b>9</b>	Ms.R. Deepa Ms.V. Revathy & Ms.M. Revathy	X- ray Studies on InAs and PbTe and Crystal Growth Studies using Slow Evaporation Method and Gel Technique	May 2004
<b>8</b>	Mr. K. Ramesh Kumar (2001PGP02) Mr. V. Balamurugan (2001PGP01) & Mr. J. R. Senthil MohanRam (2001PGP17)	Bonding in Inert Gases - Neon, Argon, Krypton and Xenon	May 2003
<b>7</b>	Ms.H. Shameem Banu, Mr. B. Nagarajan & Mrs. G. Chanthini Begum	Bonding in Sodium and Vanadium: Core and valence Electrons	June 2003
<b>6</b>	Ms.N. Ajeetha (A0601250)	Crystal Growth and X-ray Characterization of Carbonates of Barium, Strontium and Calcium	June 2002
<b>5</b>	Ms.J. Louri Vanitha Kalavathi (A0601254) & Ms.R. Meribah Sugantha Kala (A0601255)	Atomic Vibrations and Electron Distribution in the Fluorite Structures CaF <sub>2</sub> and SrCl <sub>2</sub>	April 2002
<b>4</b>	Mr. K. S. Syed Ali (A0601271)	Growth and X-ray Characterization of Ferroelectric Single Crystals of SrHPO <sub>4</sub> and PbHPO <sub>4</sub>	June 2002
<b>3</b>	Ms.S. Jeya Meena (2000 PGP 06) Ms.G. Nithiya Kalyani (2000 PGP 07) & Ms.R. Ramya (2000 PGP 10)	Crystal Growth and Atomic Vibrations of NaCl and KCl	May 2002
<b>2</b>	Mr.M. Muruganatham (2000 PGP 03) Mr. R.Kalidoss (2000 PGP 22) & Mr. S. Swaminathan (2000 PGP 23)	Structural Characterization of MnHg and FeSi Using X-ray Data	June 2002
<b>1</b>	Ms.G. Soundaralakshmi (99 PGP 11) & Ms.K.V.R. Sridevi (99 PGP 12)	X-ray Characterization of Elemental Semiconductors Silicon and Germanium	April 2001





## Research Publications

No.	Names	Title of Article	Journal	Volume, Page, Year
<b>Publications – 2020-2023</b>				
154.		<b>Characterization of Ceramic-Ferrite Magneto-Electric Composites</b> <b>R. Saravanan</b> <i>Materials Research Foundations, USA, Vol. 136,(2023)</i> Publication Date 2023, 138 Pages Print ISBN 978-1-64490-218-9 ePDF ISBN 978-1-64490-219-6 <a href="https://doi.org/10.21741/9781644902196">https://doi.org/10.21741/9781644902196</a>		153.
		<b>Transition Metal Doped Spintronics Materials</b> <b>R.Saravanan,</b> <i>Materials Research Foundations, USA, Volume 139,(2023)</i> Publication Date 2023, 116 Pages ISSN 2471-8890 (Print), ISSN 2471-8904 (Online) Print ISBN 978-1-64490-224-0: ePDF ISBN 978-1-64490-225-7 <a href="https://doi.org/10.21741/9781644902257">https://doi.org/10.21741/9781644902257</a>		152.
		<b>Multiferroic Materials</b> <b>R. Saravanan</b> <i>Materials Research Foundations, USA, Vol. 140,(2023)</i> Publication Date 2023, 194 Pages Print ISBN 978-1-64490-226-4 ePDF ISBN 978-1-64490-227-1 <a href="https://doi.org/10.21741/9781644902271">https://doi.org/10.21741/9781644902271</a>		152.
		<b>Effect of Ca<sup>2+</sup> doping on the electronic charge density and magnetic properties of ZnFe<sub>2</sub>O<sub>4</sub> spinel ferrites</b> M. Thavarani, M. Charles Robert, N. Pavithra, <b>R. Saravanan</b> , Y. B. Kannan, and S. Balaji Prasath <i>Journal of Materials Science:Materials in Electronics, Springer, I.F.: 4.220</i> DOI: <a href="https://doi.org/10.1007/s10854-021-07605-8">https://doi.org/10.1007/s10854-021-07605-8</a>		
151.		<b>Influence of Zn<sup>2+</sup> doping on CaFe<sub>2</sub>O<sub>4</sub> spinel ferrites: An analysis of experimental charge density and magnetism</b> M.Charles Robert <sup>1</sup> , M.Thavarani, N.Pavithra, S.Balaji Prasath, <b>R.Saravanan</b> , Y.B.Kannan, <i>Journal of Superconductivity and Novel Magnetism - I.F.: 1.506</i> DOI: <a href="https://doi.org/10.1007/s10948-022-06176-x">https://doi.org/10.1007/s10948-022-06176-x</a>		150.

**Local structure and electron density distribution analysis of tin(II) sulfide using pair distribution function and maximum entropy method**

Muthaian Charles Robert, Nagaraj Pavithra, **Ramachandran Saravanan** and Subramanian Saravanakumar

**Z. Naturforsch - I.F.: 0.88**

<https://doi.org/10.1515/zna-2022-0017>

March 17, 2022

**149.**

**Room Temperature Magnetism and Experimental Electron Density Analysis of Co<sup>2+</sup> Doped ZnFe<sub>2</sub>O<sub>4</sub> Spinel Nanoferrites**

M Thavarani, MC Robert, SB Prasath, N Pavithra, **R Saravanan**

**Journal of Electronic Materials**, 1-14, 17/03/2022

<https://doi.org/10.1007/s11664-022-09553-3>

**148.**

Correction to: Charge Density Analysis, Structural, Electrical And Magnetic Studies Of (1-X)BaTiO<sub>3</sub>+NiFe<sub>2</sub>O<sub>4</sub> Ceramic Composite

S.V. Meenakshi, **R. Saravanan**, N.Srinivasan, O.V. Saravanan, D.Dhayanithi, Nambi Venkatesan Giridharan

*Journal of Electronic Materials (Springer US)*, Vol. 50, Issue 1, 400-401, (2021).

(DOI: 10.1007/S11664-020-08481-4)(2021)

**(Impact Factor = 1.774)**

**147.**

Investigation On Interatomic Chemical Bonding And Charge-Related Optical, Multiferroic Properties Of La<sub>1-x</sub>Zn<sub>x</sub>FeO<sub>3</sub> Bulk Ceramics.

G.Gowri, **R.Saravanan**, N.Srinivasan, O.V.Saravanan, S.Sonai

*Materials Chemistry And Physics (Elsevier)*, 267, 124652 (2021)

(<https://doi.org/10.1016/j.matchemphys.2021.124652>) (2021)

**(Impact Factor = 3.408)**

**146.**

Probing the effects of Al dopant over the structure and charge-related optical, magnetic, and electrical properties of Al<sup>3+</sup>-doped LaFeO<sub>3</sub> bulk multiferroic materials

G.Gowri, **R.Saravanan**, N.Srinivasan, K.Karunya, P.Jeyasheela, M.Uthra

*Chemical Papers (Springer)*, 75(8), 4337–4353(2021)

<https://doi.org/10.1007/s11696-021-01672-1> (2021)

**(Impact Factor = 1.680)**

**145.**

Exploration of (1 - x) BaTiO<sub>3</sub> + x ZnFe<sub>2</sub>O<sub>4</sub> magneto-electric ceramic composite on charge density: Structure and its characterization

S.V. Meenakshi, **R. Saravanan**, N. Srinivasan, D. Dhayanithi, N.V.Giridharan

*Journal of Alloys and Compounds (Elsevier)*, 888, 161491 (2021)

**(Impact Factor= 5.316)**

<b>144</b>	S.V. Meenakshi, R. Saravanan, N.Srinivasan, O.V.Saravanan, D.Dhayanithi, And Nambi Venkatesan Giridharan,	Charge Density Analysis, Structural, Electrical And Magnetic Studies Of (1-X)BaTiO <sub>3</sub> +NiFe <sub>2</sub> O <sub>4</sub> Ceramic Composite,	<i>J. Electronic Materials</i> , Springer (I.F: 1.774)	Vol. 49, Issue 12, P.7349–7362, 2020
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<b>Publications – 2019</b>				
<b>143</b>	G. Gowri, R.Saravanan, S.Sasikumar, I.B.Shameem Banu	Exchange bias effect ferroelectric property primary bonding and charge density analysis of La <sub>1-x</sub> CexFeO <sub>3</sub>	Materials Research Bulletin (Elsevier), (I.F: 4.019)	118, 110512, 2019
<b>142</b>	G.Gowri, R.Saravanan, S. Sasikumar, M.Nandhakumar, R.Ragasudha	Interatomic chemical bonding and charge correlation of optical, magnetic and dielectric properties of La <sub>1-x</sub> SrxO <sub>3</sub> multiferroics synthesized by solid-state reaction method	Journal of Materials Science:Materials in Electronics, Springer, (I.F: 2.220)	Vol. 30, 4409- 4426, 2019
<b>141</b>	.....R.Saravanan,.....	Origin of ferroelectricity in orthorhombic LuFeO <sub>3</sub>	Physical Review B, (I.F: 3.582)	100, 195116, 2019
<b>140</b>	S.Sasikumar, S.Saravanakumar, S.Asath Bahadur, R.Saravanan	Rietveld analysis optical and ferroelectric properties of (1-x)Na <sub>0.97</sub> K <sub>0.03</sub> NbO <sub>3-x</sub> BaTiO <sub>3</sub> ceramics synthesized by solid-state reaction method	Applied Physics A, Springer, (I.F: 1.810)	Vol. 125, 480, 2019
<b>139</b>	D. Sivaganesh, S.Saravanakumar, V. Sivakumar, K.S. Syed Ali, E. Akapo, E. Alemayehu, R. Rajajeyanthan, R. Saravanan	Structural, optical and charge density analysis of Al doped ZnO materials	Journal of Materials Science:Materials in Electronics, Springer, (I.F: 2.220)	Vol. 30, 2966- 2974, 2019
<b>138</b>	V. Shanmugavalli, O.V.Saravanan, K.Vishista, R.Saravanan	A Study of charge density distribution and enhanced electrochemical properties of zinc cobaltite/polyaniline nanocomposite for supercapacitor application	Ionic, Springer, (I.F: 2.394)	Vol. 25, 4393- 4408, 2019
<b>Publications – 2018</b>				
<b>137</b>	R Saravanan	Lead-Free Piezo-Ceramic Solid Solutions - Book	Materials Research Forum LLC	Vol. 41, 2018
<b>136</b>	R Saravanan	Dilute Magnetic Semiconducting (DMS) Materials - Book	Materials Research Forum LLC	Vol. 35, 2018
<b>135</b>	R Saravanan	Titanate Based Ceramic Dielectric Materials – Book	Materials Research Forum LLC, USA	Vol. 25, 2018

134	R Saravanan	Non-Linear Optical Materials - Book	Materials Research Forum LL, USA	Vol. 28, 2018
133	S.Saravanakumar, D.Sivaganesh, K.S. SyedAli, M. CharlesRobert, M. PremaRani, R.Chokkalingam, R.Saravanan,	Analysis Of Structural, Optical And Charge Density Distribution Studies On Zn1-XMnxS Nanostructures	<i>Physica B: Condensed Matter</i> , Elsevier, (I.F: 1.902)	Volume 545, 15 September 2018, Pages 134-140, (2018)
132	S. Sasikumar, R. Saravanan, S. Saravanakumar, M. Charles Robert	Preparation, Electronic Structure And Chemical Bonding Of Lead-Free (1-X)(K0.5Bi0.5)TiO3-XBaTiO3 Solid Solution	Applied Physics A: Materials Processing, Springer (2018) (I.F: 1.455).	124, 1-10, (2018)
<b>Publications – 2017</b>				
131	S. Sasikumar, R. Saravanan, S. Saravanakumar	Investigation On Charge Density, Piezoelectric And Ferroelectric Properties Of (1 – X)Ba(Zr0.2Ti0.8)O3– X(Ba0.7Ca0.3)TiO3 Lead-Free Piezoceramics	Journal Of Materials Science:Materials In Electronics (Springer).	29, Pages 1198–1208 (2018).
130	Y.B.Kannan, R. Saravanan, N.Srinivasan, I.Ismail	Effect Of Sintering On Dielectric And AC Conductivity Properties Of Ni0.5Zn0.5Fe2O4 Nano Ferrite Particles	Journal Of Australian Ceramic Society (Springer)	53, 577-581, 2017.
129	N. Thenmozhi, R Saravanan	High Temperature Synthesisand Electronic Bonding Analysis Of Ca-Doped LaMnO3 Rare-Earth Manganites	Rare Metals (Springer).	DOI: 10.1007/S 12598-017-0964-Z, 2017.
128	R.A.J.R.Sheeba, S. Saravanakumar, S. Israel, R. Saravanan	Understanding Electronic And Magnetic Transitions In Ball Milled Dilute Magnetic Semiconductor Si1-XNix Through Experimental Electron Density Distribution.	Journal Of Alloys And Compounds (Elsevier)	728, 887-895, 2017.
127	R. Saravanan	Contemporary Dielectric Materials	Materials Research Forum LLC 7, USA 7, ISBN 978-1-945291-12-8;978-1-945291-13-5, 2017	Vol. 28, 2017
126	S. Sasikumar, R. Saravanan, S. Saravanakumar, K. Aravinth	Charge correlation of ferroelectric and piezoelectric properties of (1-x)(Na0.5Bi0.5)TiO3-xBaTiO3 lead-free ceramic solid solution	Journal of Materials Science: Materials in Electronics (JMSE), Springer <i>Impact factor: 2.019</i>	Vol. 28 2017
125	N. Thenmozhi, S. Sasikumar, S. Sonai, R. Saravanan	Electronic structure and chemical bonding in La1-xSrxMnO3 perovskite ceramics	Materials Research Express (IOP Science) <i>Impact factor: 1.068</i>	2017

124	J. Magayarkkarasi, S.Sasikumar, O.V.Saravanan, R. Saravanan	Electronic structure and bonding interactions in Ba <sub>1-x</sub> Sr <sub>x</sub> Zr <sub>0.1</sub> Ti <sub>0.9</sub> O <sub>3</sub> ceramics	Frontiers of Materials Science (Springer) <i>Impact factor: 1.471</i>	Vol. 11 (2) 182-189 2017
123	Y.B. Kannan, R. Saravanan, N. Srinivasan, K. Praveena, and K. Sadhana	Structural, magnetic, optical and MEM studies on co-precipitated X <sub>0.4</sub> Zn <sub>0.6</sub> Fe <sub>2</sub> O <sub>4</sub> (X = Co, Mn) nano ferrite particles	Journal of Superconductivity and Novel Magnetism (Springer) <i>Impact factor: 1.180</i>	2017
122	S. Sasikumar, R.Saravanan	Structure and charge density properties of (1-x)(Na <sub>1-y</sub> K <sub>y</sub> NbO <sub>3</sub> )-xBaTiO <sub>3</sub> lead-free ceramic solid solution	Journal of Electronic Materials (Springer) <i>Impact factor: 1.579</i>	2017
121	S. Sasikumar, R. Saravanan, K. Aravinth	Piezoelectric and ferroelectric properties of lead-free (1-x)(Na <sub>1-y</sub> K <sub>y</sub> )(Nb <sub>1-z</sub> Sb <sub>z</sub> )O <sub>3</sub> -xBaTiO <sub>3</sub> solid solution	Physica B: Condensed Matter (Elsevier) <i>Impact factor: 1.386</i>	Vol. 512 58-67 2017
120	N.Thenmozhi, R. Saravanan, Yen-Pei Fu	Crystal Structure and Bonding Analysis of (La <sub>0.8</sub> Ca <sub>0.2</sub> )(Cr <sub>0.9-x</sub> Co <sub>0.1</sub> Cu) <sub>3</sub> Ceramics	Z.Naturforsch <i>Impact factor: 1.432</i>	2017
119	K. Sakthi Lavanya, B. Subha, M. Prema Rani, R. Saravanan	Charge density analysis and magnetic behavior of Li doped NiO nano structures synthesized by sol-gel process	Materials Research Foundations	Vol. 7 128-144 2017
118	B. Subha, R. Saravanan, N. Srinivasan	Effect of the sintering temperature on the micro structure and optical properties of ZnO ceramics	Materials Research Foundations	Vol. 7 102-111 2017
117	M. Charles Robert, S.Sasikumar, S. Saravanakumar, R. Saravanan	Structural, optical and magnetic properties of Ga <sub>2-x</sub> Fe <sub>x</sub> O <sub>3</sub>	Materials Research Foundations	Vol. 7 21-30 2017
116	Y.B.Kannan, R.Saravanan, N.Srinivasan, I.Ismail	Sintering effect on structural, magnetic and optical properties of Ni <sub>0.5</sub> Zn <sub>0.5</sub> Fe <sub>2</sub> O <sub>4</sub> ferrite nano particles	Journal of Magnetism and Magnetic Materials (Elsevier) <i>Impact factor: 2.630</i>	Vol. 423 (1 February 2017), 217–225 2017
115	R.Saravanan, Y.B.Kannan, N.Srinivasan, I.Ismail	Study of various sites interactions using maximum entropy method on mechanically alloyed Ni <sub>0.5</sub> Zn <sub>0.5</sub> Fe <sub>2</sub> O <sub>4</sub> nano ferrite particles sintered from 1100C to 1400C	Journal of superconductivity and novel magnetism (Springer) <i>Impact factor: 1.180</i>	Vol. 30, 407-419 2017
<b>Publications – 2016</b>				
114	R. Saravanan, N. Thenmozhi, Yen-Pei Fu	Preparation and Charge Density in (Co, Fe)-Doped La-Ca-Based Chromite	Journal of Electronic Materials, (Springer) (In Press) <i>Impact factor: 1.491</i>	2016

113	R. Saravanan, N. Thenmozhi, Y.P Fu	Structural characterization and electron density distribution studies of (La 0.8 Ca 0.2)(Cr 0.9– x Co 0.1 Mnx) O3	Physica B: Condensed Matter <i>Impact factor: 1.352</i>	Vol. 493, 25-34 (2016)
112	R. Saravanan, J Mangaiyarkkarasi	Synthesis and analysis of electron density distribution in Ba1– xSrxTiO3 ceramics	Journal of Materials Science: Materials in Electronics <i>Impact factor: 1.798</i>	Volume 27 (3), 2523 (2016)
111	J Mangaiyarkkarasi R. Saravanan,	Charge distribution around Ba-O and Ti-O bonds in BaTi <sub>1-x</sub> Zr <sub>x</sub> O <sub>3</sub> through powder X-ray diffraction	Rare Metals (Springer), (In Press) <i>Impact factor: 0.957</i>	2016
110	T.K.Thirumalaisamy, R. Saravanan, S. Butkute, A. Kareiva	Structure and charge density of Ce doped gadolinium gallium garnet (GGG)	Journal of Materials Science: Materials in Electronics (Springer) (international) <i>Impact factor: 1.798</i>	Volume 27, Issue 2, Page 1920-1928 (2016)
109	S. Sasikumar, R. Saravanan	Synthesis and Charge Density Analysis of BaTiO3	Materials Research Foundations (MRF), USA	Vol.2, 190-201 (2016)
108	N. Thenmozhi, R. Saravanan	Synthesis, Structure and Magnetic Behavior of Ce-Doped Lanthanum Manganite Ceramics	Materials Research Foundations (MRF), USA	Vol. 2, 177-189 (2016)
107	Y.B.Kannan, R.Saravanan, N.Srinivasan	Synthesis and Characterization of NiFe2O4 Nano Particles Prepared by the Chemical Reaction Method	Materials Research Foundations (MRF), USA	Vol. 2, 147-162 (2016)
106	T. K. Thirumalaisamy, S. Saravanakumar, R. Saravanan	Charge Density Distribution and Bonding in Calcite	Materials Research Foundations (MRF), USA	Vol. 2, 128-146 (2016)
105	R. Saravanan, G. Gowri	Charge Density of Al Doped Lanthanum Orthoferrites	Materials Research Foundations (MRF), USA	Vol. 2, 108-127 (2016)
104	T. K. Thirumalaisamy, S. Saravanakumar, R. Saravanan	Electronic Charge Density Distributions in Sb2O3	Materials Research Foundations (MRF), USA	Vol. 2, 93-107 (2016)
103	N. Thenmozhi, R. Saravanan, Yen-Pei Fu	Effects of Cations Substitution on Structural and Magnetic Properties of LaCrO3 Ceramic Perovskites	Materials Research Foundations (MRF), USA	Vol. 2, 40-54 (2016)
102	S. Sasikumar, R. Saravanan	Synthesis, Characterization and Charge Density Analysis of Lead Free Piezoceramics Na1-xKxNbO3	Materials Research Foundations (MRF), USA	Vol. 2, 14-26 (2016)
101	S.V. Meenakshi, R. Saravanan	Synthesis and Characterization of Al2TiO5-TiO2-Al2O3 Ceramics: Correlation with Charge Density	Materials Research Foundations (MRF), USA	Vol. 2, 81-92 (2016)
100	M.J. Viswanath, M. Aysha kani, S.V. Meenakshi and	Inter Bond Experimental Electron Density in Magnesium Ferrite Ceramic (MgFe2O4) Through XRD	Materials Research Foundations, USA	Vol. 2, 27-39 (2016)

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99	J. Mangaiyarkkarsi, R. Saravanan	Ferroelectric charge ordering in BaTi <sub>0.9</sub> Zr <sub>0.1</sub> O <sub>3</sub> lead-free ceramics through powder X-ray diffraction	Material Research Foundations, USA	Vol. 2, 55-68 (2016)
98	J. Mangaiyarkkarsi, R. Saravanan	Chemical bonding and charge density imaging in Ba <sub>0.2</sub> Sr <sub>0.8</sub> TiO <sub>3</sub> ceramics by iterative entropy maximization	Materials Research Foundations , USA	Vol. 2, 1-13 (2016)
97	R. Saravanan, S. Sasikumar	Synthesis and Structural Characterizations of Na <sub>1-x</sub> K <sub>x</sub> Nb <sub>0.95</sub> Sb <sub>0.05</sub> O <sub>3</sub>	Materials Research Foundations, USA	Vol. 2, 202-212 (2016)
<b>Publications – 2015</b>				
96	R. Sheeba, R. Saravanan, L.J. Berchmans	Signature of antiferromagnetism in entropy maximized charge density distribution of melt grown diluted magnetic semiconductor Ge <sub>1-x</sub> V <sub>x</sub>	Journal of Materials Science: Materials in Electronics <i>Impact factor: 1.798</i>	Volume 26 (6), 3772-3780 (2015)
95	T Akilan, N Srinivasan, R Saravanan	Structural and magnetic studies on Fe doped zinc oxide, Zn <sub>1-x</sub> Fe <sub>x</sub> O synthesized by solid state reaction	Journal of Materials Science: Materials in Electronics <i>Impact factor: 1.798</i>	Volume 26 (12), 9882-9890 (2015)
94	T Akilan, N Srinivasan, R Saravanan	Magnetic and optical properties of Ti doped ZnO prepared by solid state reaction method	Materials Science in Semiconductor Processing (Elsevier) <i>Impact factor: 2.264</i>	Volume 30, 381-387 (2015)
93	TK Thirumalaisamy, R Saravanan, S Saravanakumar	The redistribution of charge density in CaF <sub>2</sub> : Yb <sup>3+</sup>	Journal of Materials Science: Materials in Electronics <i>Impact factor: 1.798</i>	Volume 26 (9), 6683-6691 (2015)
<b>Publications – 2014</b>				
92	S.Saravanakumar, A. Escobedo-Morales, U. Pal, R. J. Aranda, R. Saravanan	Doping-induced Electron Density Modification at Lattice Sites of ZnO:Ga Nanostructures: Effects on Vibrational and Optical Properties	Journal of materials Science (Springer) (international) <i>Impact factor: 2.153</i>	Issue 49, Issue 16, page 5529-5536, (2014)
91	T. Akilan, N. Srinivasan, R. Saravanan, Prasanta Chowdury	Structure of vanadium doped zinc oxide, Zn <sub>1-x</sub> V <sub>x</sub> O	Journal of Materials and Manufacturing Processes (Taylor & Francis) (international) <i>Impact factor: 1.42</i>	Volume 29, Issue 7, Page 780-788 (2014)
90	S. Saravanakumar, J. Kamalaveni, M. Prema Rani, R. Saravanan	Solubility of Mn stabilized cubic zirconia nanostructures	J Materials Science: Materials in Electronics (international) <i>Impact factor: 1.486</i>	25, Issue 2, page 837-843,



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89	S.Saravanakumar, R. Saravanan, S.Sasikumar	Effect of sintering temperature on the magnetic properties and charge density distribution of nano-NiO	Chemical Papers (Versita) (In press) (international) <i>Impact factor: 1.098</i>	68 (6) page 788–797, 2014
88	S. Saravanakumar, S. Sasikumar, S. Israel, G.R. Pradhiba, R. Saravanan	Structural, magnetic and charge-related properties of nano-sized cerium manganese oxide, a dilute magnetic oxide semiconductor	Materials Science in Semiconductor Processing (Elsevier) (international) <i>Impact factor: 1.338</i>	17, page 186–193, 2014
<b>Publications – 2013</b>				
87	R.A.J.R. Sheeba, R. Saravanan, S. Sasikumar	Magnetic and charge derived properties of ball milled dilute magnetic semiconductor Si <sub>0.98</sub> Mn <sub>0.02</sub>	Physica B: Condensed Matter (Elsevier) <i>Impact factor: 1.328</i>	426 71–78 2013
86	S. Francis, R. Saravanan, Mohammed Acıkgözü	Solubility Limit of Sol–Gel Grown Nano Zn <sub>1-x</sub> Mg <sub>x</sub> O Through Charge Density Distribution	Z. Naturforsch. XXX, 1 – 9 (2013) DOI: 10.5560/ ZNA.2013-0043 <i>Impact factor: 1.363</i>	68a, 668 – 676 2013
85	P. Mohanty, S. Saravanakumar, R. Saravanan, Chandana Rath	TiO <sub>2</sub> Nanowires Grown from Nanoparticles: Structure and Charge Density Study	Journal of Nanoscience and Nanotechnology (American Scientific Publishers) <i>Impact factor: 1.56</i>	13, 1–7, 2013
84	S.Francis, R. Saravanan, L. John Berchmans	High temperature growth, charge distribution and magnetism in Co and Mn co-doped ZnO,	Journal of Materials Science: Materials in Electronics (Springer) <i>Impact factor: 1.486</i>	24, 2880– 2889, 2013
83	S. Francis, R. Saravanan L. John Berchmans	Effect of Co Doping on the Properties of ZnO Bulk Samples	Journal of Electronic Materials (Springer) (ISSN 0361-5235) <i>Impact factor: 1.635</i>	42(4), 701-710, 2013
<b>Publications – 2012</b>				
<b>No.</b>	<b>Authors</b>	<b>Article Title</b>	<b>Journal</b>	<b>Vol. &amp; Issue No., Page, Year</b>
82	S. Saravanakumar, M. Pattammal, S. Israel, R.A.J.R. Sheeba, R. Saravanan	The analysis on the rearrangement of charge density distribution in response to magnetic behavior in Mn doped SnO <sub>2</sub> nanoparticles	Physica B: Condensed Matter (Elsevier) (International) <i>Impact factor: 1.328</i>	407, No. 3; page 302-310, 2012

81	S. Francis, R. Saravanan, L. John Berchmans	Phase analysis in Zn <sub>1-x</sub> Cr <sub>x</sub> O through charge density	Phase Transitions (Taylor and Francis) <i>Impact factor: 1.01</i>	1–13, iFirst, 2012
80	R. Saravanan, S. Francis, L. John Berchmans	Doping level of Mn in high temperature grown Zn <sub>1-x</sub> Mn <sub>x</sub> O studied through electronic charge distribution, magnetization, and local structure	Chemical Papers (Versita) <i>Impact factor: 0.879</i>	66(3), 226–234, 2012
79	R.A.J.R. Sheeba, R. Saravanan, L. John Berchmans	Magnetism in melt grown dilute magnetic semiconductor Ge <sub>1-x</sub> Mn <sub>x</sub> from electron density	Materials Science in Semiconductor Processing (Elsevier) <i>Impact factor: 1.338</i>	15(4), 731–739, 2012
78	R. Saravanan, R.A.J.R. Sheeba	Comparison of Electronic Structure of As Grown and Solar Grade Silicon Samples	Semiconductors (ISSN 1063_7826), (Pleiades Publishing, Ltd.) <i>Impact factor: 0.627</i>	46(4), 440–446, 2012
77	R. A. J. R. Sheeba, R. Saravanan, L. John Berchmans	A theoretical estimation of the charge density distribution in the diluted magnetic semiconductors of Si <sub>1-x</sub> M <sub>x</sub> and Ge <sub>1-x</sub> M <sub>x</sub> (M = V, Mn, Co)	Materials Science Forum (TTP) <i>Impact factor: 0.41</i>	699, 167-183, 2012
76	S. Israel, S. Saravana kumar, R. Renuretson, R.A.J.R.Sheeba, R.Saravanan	Analysis on insulator–metal transition in yttrium doped LSMO from electron density distribution	Bull. Mater. Sci. (Springer) (international) <i>Impact factor: 0.584</i>	35, No. 1, pp. 111– 122, 2012
75	T. Akilan, M. Charles Robert, R. Saravanan	Experimental electronic structure of the thermoelectric materials Bi <sub>2</sub> Te <sub>3</sub> and Sb <sub>2</sub> Te <sub>3</sub>	Materials Science Forum (TTP) <i>Impact factor: 0.41</i>	699, 103-121, 2012
74	S.Santhosh Kumar Jacob, S.Saravanan Kumar, R.Saravanan	Synthesis and characterization of the nano semiconducting material cadmium sulphide	Materials Science Forum (TTP) <i>Impact factor: 0.41</i>	699, 79-88, 2012
73	M. Ambika, R.Saravanan	X-ray studies on PbS	Materials Science Forum (TTP) <i>Impact factor: 0.41</i>	699, 153-165, 2012

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No.	Authors	Article Title	Journal	Vol. & Issue No., Page, Year
72	R. Saravanan, T. K. Thirumalaisamy,	Local structure determination of the nonlinear optical material	Phys. Status Solidi A (Wiley)	208(11),

	T. Kajitani	LiNbO <sub>3</sub> using XRD	<i>Impact factor: 1.469</i>	2643–2650, 2011
71	T.K. Thirumalaisamy, R. Saravanan	Charge density in MoO <sub>4</sub> tetrahedron and PbO <sub>8</sub> octahedron in PbMoO <sub>4</sub>	Journal of Materials Science: Materials in Electronics (Springer) <i>Impact factor: 1.486</i>	22(11), 1637-1648, 2011
70	S. Saravanakumar, M. Jeya Priya, R. Saravanan	Synthesis and electron density analysis of SnO <sub>2</sub> nano particles	Materials Science Forum (MSF) (TTP) <i>Impact factor: 0.41</i>	671, 121-129, 2011
69	M.Charles Robert, B. Subha, R. Saravanan	Single Crystal Charge Density Studies of Thermoelectric Material Indium Antimonide	Z. Naturforsch. <i>Impact factor: 1.363</i>	66a, 562-568, 2011
68	K. S. Syed Ali, R. Saravanan, M. Açıkğöz	XRD analysis of the local structure in diluted magnetic semiconductor Zn <sub>1-x</sub> Ni <sub>x</sub> O	Crystal Research and Technology (Wiley) <i>Impact factor: 1.12</i>	46, 41-47 2011
67	T.K.Thirumalaisamy, K.J.Lakshmi Sri, R.Saravanan	Local structural analysis of Al <sub>2</sub> O <sub>3</sub> , Cr:Al <sub>2</sub> O <sub>3</sub> and V:Al <sub>2</sub> O <sub>3</sub> using Powder XRD	Materials Science Forum (MSF) (TTP)	671, 131-152 2011
66	M. Prema Rani, R. Saravanan	Influence of Silicon and boron doping on the thermal conductivity of n-GaAs single crystals	Materials Science Forum (MSF) (TTP) <i>Impact factor: 0.41</i>	671, 153-163 2011
<b>Publications – 2010</b>				
65	R. Saravanan, S. Saravanakumar, S. Lavanya	Growth and local structure analysis of ZnS nano particles	Physica B: Condensed Matter (Elsevier) <i>Impact factor: 0.856</i>	B405, 3700-3703, 2010
64	K. S. Syed Ali, R. Saravanan, S. Israel, A. V. Pashchenko, V. P. Pashchenko	Local distortion in Co doped LSMO from entropy maximized charge density distribution	J. Alloys and Compounds (Elsevier) <i>Impact factor: 1.510</i>	501, 307-312, 2010
63	M. Charles Robert, R. Saravanan	Single crystal X-ray analysis of the electronic structure of the thermoelectric material Sn <sub>1-x</sub> Ge <sub>x</sub> Te	Indian J. Physics (Springer) <i>Impact factor: 1.166</i>	84(9), 1203-1210, 2010
62	K. S. Syed Ali, R. Saravanan, S. Israel, M. Açıkğöz, L. Arda	Ferromagnetic charge ordering through charge density analysis in nano sized diluted magnetic semiconductor Co <sub>2</sub> :ZnO	Physica B: Condensed Matter (Elsevier) <i>Impact factor: 0.856</i>	405, 1763-1769, 2010
61	M. Charles Robert, R. Saravanan	Triple phase structure and electron density analysis of the thermoelectric material Bi <sub>80</sub> Sb <sub>20</sub>	Powder Technology (Elsevier) <i>Impact factor: 1.766</i>	97, 159-164, 2010
<b>Publications – 2009</b>				

60	S.Israel, K.S.Syed Ali, R.A.J.R.Sheeba, R.Saravanan	Analysis on experimental valence charge density in Germanium at RT and 200 K	J. Phys. Chem. Solids (Elsevier) <i>Impact factor: 1.103</i>	70, 1185– 1194, 2009
59	S.Israel, K.S.SyedAli, R.A.J.R.Sheeba R. Saravanan	X-ray analysis of charge density distribution in GaP at 296 and 200K using Multipole and MEM models	Chinese J. Phys. <i>Impact factor: 0.518</i>	47 (3), 378-400, 2009
58	M. Charles Robert, R. Saravanan, K. Saravanakumar, M. Premarani	Structural analysis of Al, Ni and Cu using MEM, Multipole and Pair Distribution Function	Zeitschrift für Naturforschung Redaktion (Verlag der Zeitschrift für Naturforschung - VZN) <i>Impact factor: 1.007</i>	64a, 361-369, 2009
57	R.Saravanan, M.Charles Robert	Local structure of the thermoelectric material Mg <sub>2</sub> Si using XRD	J. Alloys and Compounds (Elsevier) <i>Impact factor: 1.510</i>	479, 26-31, 2009
56	R.Saravanan, M. Prema Rani	Effect of Iron doping on the electron density distribution in pure aluminium	Bentham Open - The Open Crystallography Journal Impact factor: Not yet	2, 6-10, 2009
55	R. Saravanan	Practical application of maximum entropy method in electron density and bonding studies (Topical Review)	Physica Scripta (Institute of Physics –IOP) <i>Impact factor: 0.970</i>	79, 048303, 2009
54	K.S.SyedAli, R.Saravanan, S. Israel	Growth of novel diluted magnetic semiconducting material Ge <sub>1-x</sub> Mnx and X-ray characterization by Maximum Entropy Method (MEM) and Pair Distribution Function (PDF)	J. Crystal Growth (Elsevier) <i>Impact factor: 1.757</i>	311, 1110- 1116, 2009
53	R.Saravanan, M.Charles Robert	Local structure of the high temperature thermoelectric material PbTe using Maximum Entropy method (MEM) and Pair Distribution function (PDF)	J. Phys. Chem. Solids (Elsevier) <i>Impact factor: 1.103</i>	70, 159-163, 2009
<b>Publications – up to 2008</b>				
52	N. Hazeen, K. S. Syed Ali, M. Prema Rani, R. Saravanan	X - ray characterization of Ag impurities in Na <sub>1-x</sub> Ag <sub>x</sub> Cl (Book contribution)	Defects & Diffusion Forum (DDF) (Trans Tech Pub.) (Book title: Defects and Diffusion in Metals—An Annual Retrospective X) <i>Impact factor: 0.483</i>	278, 33-44, 2008
51	R. Saravanan, S. Jainulabdeen, N. Srinivasan, Y. B. Kannan	X-ray Determination of Charge Transfer in Solar Grade GaAs	J. Phys. Chem. Solids (Elsevier) <i>Impact factor: 1.103</i>	69, 83-86, 2008
50	R.Saravanan, K S Syed Ali, S Israel	Electron density distribution in Si and Ge using multipole, maximum entropy method and pair distribution function analysis,	Pramana (Indian Academy of Sciences) <i>Impact factor: 0.417</i>	70 (4), 679-696, 2008

49	R. Saravanan, A.Majella Mary Ann, S. Jainulabdeen	Non-nuclear maxima (NNM), symmetric and asymmetric charge distribution in solar grade Si and n-GaAs, using X-ray powder data	Physica B (Elsevier) <i>Impact factor: 0.856</i>	B400, 16-21, 2007
48	R. Saravanan, M. Prema Rani	Maximum entropy method and multipole analysis of the bonding in sodium and vanadium metals	J. Phys.: Condens. Matter (Institute of Physics – IOP) <i>Impact factor: 1.900</i>	19, 266221, 2007
47	R. Saravanan, M. Prema Rani	Bonding in CoAl and NiAl metal alloys using multipole and MEM techniques	J. Alloys and Compounds (Elsevier) <i>Impact factor: 1.510</i>	431, 121-129, 2007
46	R. Saravanan	Application of Maximum Entropy Method for the Study of Electron Density Distribution in SrS, PuS, CaS, MnS and HgS using Powder X-ray data.	Pramana (Indian Academy of Sciences) <i>Impact factor: 0.417</i>	66 (6), 1057- 1065, 2006
45	K. S. Syed Ali, R. Saravanan, S.Israel, R.K.Rajaram	Electron density distribution and bonding in ZnSe and PbSe using maximum entropy method (MEM)	Bulletin of Materials Science (Indian Academy of Sciences) <i>Impact factor: 0.858</i>	9 (2), 107-114, 2006
44	R. Saravanan, S. Israel, Y. Ono,K. Ohno, M. Isshiki, T. Kajitani, R. K. Rajaram	Probabilistic electron density distribution in CdTe at RT and 200K	Crystal Research and Technology (Wiley Inter Science) <i>Impact factor: 0.921</i>	41 (3), 259 – 267, 2006
43	M. Sivabharathy, N.Sankar, R. Saravanan, K. Ramachandran	Optical, thermal and phase transition studies in $\text{Sn}_{1-x}\text{Ge}_x\text{Te}$	Bulletin of Materials Science (Indian Academy of Sciences) <i>Impact factor: 0.858</i>	28 (7), 675–679, 2005
42	R. Saravanan, S. Israel, R. K. Rajaram	Bonding in ZnTe at RT, 200 and 100 K Revealed by Entropy Maximized Electron Density Distribution	Physica B (Elsevier)  Impact factor: 0.856	B363 (1-4), 166-177, 2005
41	R. Saravanan, S. Israel.	Bonding in Fluorite Compound $\text{CaF}_2$ Using MEM.	Physica B (Elsevier) <i>Impact factor: 0.856</i>	B352 (1-4) 220-226, 2004
40	S. Israel, R. Saravanan, R.K. Rajaram.	Electronic Structure of InP at RT, 200K and 100K.	Physica B (Elsevier) <i>Impact factor: 0.856</i>	B349, 390-400, 2004
39	R. Saravanan, B. Revathy	Determination of Experimental X- ray Anomalous Dispersion Correction Term $f''$ of Tellurium in CdTe at 200 K and 300 K	Salsearch (Private)	36-52, 2004

38	S. Israel, R. Saravanan, N. Srinivasan, S.K. Mohanlal	An investigation on the bonding in MgO, CaO, SrO and BaO from the MEM electron density distributions	J. Phys. Chem. Solids (Elsevier) <i>Impact factor: 1.103</i>	64, 879-886, 2003
37	K.K.Balamurugan, R.Saravanan, K. Asharamani, P. Manimaran, S.Mariyappan, N.Srinivasan Y. Ono,M.Isshiki, T. Kajitani	Charge transfer in CdTe at 200 K and 300	Journal of Crystal Growth (Elsevier) <i>Impact factor: 1.757</i>	250, 382-392, 2003
36	R.Saravanan,Y. Ono, M.Isshiki,K.Ohno, T. Kajitani	Electron density distribution in GaAs using MEM	J. Phys. Chem. Solids (Elsevier) <i>Impact factor: 1.103</i>	64, 51-58, 2003
35	S. Israel, R.Saravanan, N. Srinivasan, R.K. Rajaram	High resolution electron density mapping for LiF and NaF by maximum entropy method (MEM)	J. Phys. Chem. Solids (Elsevier) <i>Impact factor: 1.103</i>	64, 43-49, 2003
34	K.S. Syed Ali, N.Ajeetha, R.Saravanan	Gel Growth and X-ray Characterization of Ferro Electric Single Crystals of SrHPO <sub>4</sub> and PbHPO <sub>4</sub>	Bulletin of Pure and Applied Sciences	21 (2), 151-157, 2002
33	R. Saravanan, S.Israel, S. Swaminathan, R. Kalidos, M. Muruganantham	Electronic Charge Distribution in the Intermetallic Compound MnHg	Crystal Research and Technology (Wiley Inter Science) <i>Impact factor: 0.921</i>	37 (12), 1310- 1317, 2002
32	G. Raja Sudha, K. Vimala Devi, D.Arthi,S.Prasanna Subramanian, N. Srinivasan, R. Saravanan	Experimental $f''$ of As at 170, 200, 250 and 300 K from the Bijvoet pairs of GaAs	Bulletin of Materials Science (Indian Academy of Sciences) <i>Impact factor: 0.858</i>	25 (4), 325-327, 2002
31	P. Murugan, R. Kesavamoorthy, S. Amirthapandiana, R. Saravanan, K. Ramachandran, N. Krishnamurthy	Raman Study on H <sup>+</sup> - implantation effects in highly doped n-GaAs	Physica B (Elsevier) <i>Impact factor: 0.856</i>	B315, 56, 2002
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29	K. S. Chandrasekaran, S. K. Mohanlal R. Saravanan, S. Israel	X-ray structure of BaTiO <sub>3</sub> -Missed Opportunities	Acta Cryst. B (IUCr) <i>Impact factor: 2.163</i>	B56, 918-919, 2000

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