

Curriculum Vitae

Dr.R.Nagalakshmi received her Ph.D., from Bharathidasan University, Tiruchirappalli, Tamil Nadu, India. She pursued her postdoctoral research in the Department of Condensed Matter Physics and Materials Science, Tata Institute of Fundamental Research, Mumbai. She joined in the Department of Physics NITT as faculty in December 2008.



Research work :

1. Synthesis, growth and characterization of new organic non-linear optical crystals with large transparency in UV–VIS region, optical susceptibilities, inherent ultrafast responses times, high optical threshold for laser power and good conversion efficiency for second harmonic generation (SHG) and Terahertz (THz) applications
2. Preparation of Poly and single crystalline rare earth intermetallic compounds (3D transition metals, rare earth and uranium) which exhibits strong electron correlations such as magnetic order, Kondo, Heavy fermion, Spin glass and superconductivity at low temperatures. The properties are measured using the techniques of electrical resistivity, magnetization and specific heat in the temperature range 1.8-300K and the analysis of data.
3. Investigations on some rare earth (Gd and Dy) and manganese based magnetic refrigerant materials
4. Synthesis of organic nano fibers for nonlinear optical applications

*In the study of FeAs systems, for Co-doped sample $CaFe_{1.94}Co_{0.06}As_2$ a superconducting transition is observed at $T= 17$ K (*Physical Review B* **79**, (2009) 012504)*

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2. Designation: Associate professor
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5. Email : nagaphys@yahoo.com , nagalakshmi@nitt.edu
6. Field(s) of Specialization:
 - Nonlinear optics
 - Single crystal growth of nonlinear optical materials – Solution and Melt
 - Vibrational spectroscopy
 - Synthesis of organic nano fibers
 - Strongly correlated electron systems
 - Rare earth intermetallic systems - Flux technique and Arc Melting
 - Magnetism and superconductivity at low temperatures

National Institute of Technology, Tiruchirappalli:

Rare earth & Non Rare earth based
Magnetocaloric Materials

7. Employment Profile

Job Title	Employer	From	To
Associate Professor/Physics	National Institute of Technology, Tiruchirappalli, TN	March 2018	till date
Assistant Professor/Physics	National Institute of Technology, Tiruchirappalli, TN	Dec 2008	February 2018
Post doctoral Fellow	, Department of Condensed Matter Physics and Materials Science Tata Institute of Fundamental Research, Mumbai	August 2007	December 2008
Research Associate	Indian Institute of Science, Bangalore	02 July 2007	31 July 2007
Senior Research Fellow, CSIR	Periyar University, Salem	April 2007	June 2007
Junior Research Fellow, DRDO	Nehru Memorial College (Autonomous) Puthanampatti, Tiruchirappalli	April 2003	October 2006

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D	Bharathidasan University Tiruchirappalli	2007	Commended	Physics, Materials Science
M.Phil	Bharathidasan University Tiruchirappalli	2004	89.6%, Distinction	Physics
M.Sc	Bharathidasan University Tiruchirappalli	2002	81.9% First Class	Applied Physics
B.Sc	Bharathidasan University Tiruchirappalli	2000	83.5%, First Class with Distinction	Physics
HSC	St.Marys Matriculation Hr.Sec School, Cuddalore	1997	83.2%	State Board

National Institute of Technology, Tiruchirappalli:

SSLC	Bharathi Matriculation Hr.Sec. School Thammampatty	1995	86.2%	Matriculation
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9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/ Institution	From	To
M.Sc. Second year course coordinator	Department level	Jan 2018	Till date
Associate Dean	Research and Consultancy Institute level	Dec 2017	Till date
Ph.D. Coordinator (Department Coordinator)	Ph.D admissions, Conducting Class Test and Semester Examination, Comprehensive Viva and Overall monitoring of the course at Department level	June 2012	July 2016
Ph.D. Coordinator (Institute) for Physics and Chemistry	..do... at Institute level for Physics and Chemistry departments	June 2012	June 2014

10. Awards, Associate ships etc.

Year of Award	Name of the Award	Awarding Organization
2016	Travel grant to present papers (Oral and Poster) in Conference at Big Sky, Montana , USA.	DST and INSA
2010	Young Scientist Research Award	Basic science Committee, Board of Research in Nuclear Sciences
2009-2012	Level – II certification on Ultrasonic Testing	ASNT
2002	First Rank (Gold Medalist) in M.Sc Applied Physics	Bharathidasan University, Tiruchirappalli
2000	8 th Rank in B.Sc (Physics)	Bharathidasan University, Tiruchirappalli

11. Fellowships

National Institute of Technology, Tiruchirappalli:

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2006	Jawaharlal Nehru Memorial fellowship	Osaka University, Osaka, Japan	Apr 2006	July 2006
2006	Visiting Fellowship	Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bangalore	2006	2007
2010& 2016	National Slovak Scholarship for Teachers (Twice)	Slovak Academy of Sciences	May 2010	July 2010
2018	National Slovak Fellowship	Presov University		

12. Details of Academic Work

(i) Curriculum Development:(Syllabus Revision)

M.Sc :PH 677 - Instrumentation and PH 661 Solid State Physics,
PH- 659-General Physics Laboratory – I(Introduced New Experiments)

M.Tech :PH 614- Advanced NDT I

Ph.D : Course work

(ii) Courses taught at Postgraduate and Undergraduate levels :

B.Tech :PH 101 and PH 102-(PHYSICS I and II)

M.Sc :PH 677 - Instrumentation and PH 661 Solid State Physics,
PH- 659-General Physics Laboratory – I

M.Tech :PH 614- Advanced NDT I

Ph.D : Course work –PH: 800 Research Techniques in Physical Sciences

(iv) Other contribution(s)

- Purchase initiator of department plan fund purchases
- Committee members for convocation at institute level
- Stock verification at institute level
- Establishment of research laboratory facilities

13. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Cost(Rs. In lakhs)	Status
		From	To		Ongoing/ Completed
Growth and irradiation of Rare earth intermetallic crystals for magnetic applications	DAE Young scientist Research Award by Basic science Committee, Board of Research in Nuclear Sciences (BRNS).	2010	2013	16,40,000/-	Completed

National Institute of Technology, Tiruchirappalli:

	No: 2010/20/37P/13/BRNS dt 18/2/2011				
Functionalized materials for electrooptics: Synthesis, single crystal growth, nonlinear and electrooptical properties	Council Of Scientific And Industrial Research Human Resource Development Group No: 03(1158)/10/EMRII dated 26/4/2010	2010	2013	17, 23,000/-	Completed
Crystal growth vibrational studies and nonlinear optical properties of tartrates	Indo Portugese Joint Project by DST INT/PORTUGAL/P-12/2009 dated 27/12/2009	2010	2013	4,64,200/- (Exchange visits , 1 visit per year)	Completed
Magnetic field induced structural transition studies on some rare earth and non-rare earth giant MCE compounds exhibiting first-order magnetic transitions	UGC-DAE Indore CSR-IC/CRS-150/2015-2016/07 Date: 26/03/2016	2016	2019	6,54,000/-	Ongoing
Synthesis of Organic Nanofibers for NLO Applications	DST-SERB, New Delhi File No: EMR/2016/005324	2017	2020	27,06,192/-	On going

14. Research Guidance

M.Sc projects	M.Tech projects	Ph.D
Completed:15 Ongoing :2	Completed:15 Ongoing:2	Completed : 3(Regular) Ongoing: 6 (Regular) 1(Part Time) M.S by Research : 1 (ongoing) (part time)

National Institute of Technology, Tiruchirappalli:

Number of PhDs guided: 3

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
T.P.Rashid	Magnetocaloric properties of Gadolinium and Dysprosium based alloys for wide temperature range magnetic refrigeration	Supervisor	2018
S.Nallamuthu	Magnetic, Thermodynamic and Transport Properties of R-T-X Type Intermetallic Compounds	Supervisor	2016
N.Sudharsana	Growth And Charecterisation Of Novel Organic Crystals For Nonlinear Applications	Supervisor	2014

15. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/Schools etc. (mentioning the role)

Workshops

Date (s)	Title of Activity	Level of Event (International / National/ Local)	Role (Participant/ Speaker/ Chairperson , Paper presenter, Any other)	Event Organized by	Venue
December 7-10, 2004.	Indo Japan Workshop on crystal growth and applications of advanced materials for Opto electronics	International	Participant	Crystal Growth Centre Anna University	Crystal Growth Centre Anna University, Chennai, India
July 6-7, 2005	Accelerator User Workshop	National	Participant	University Accelerator Centre (IUAC), New Delhi	University Accelerator Centre (IUAC), New Delhi,
August 18-19, 2005	workshop on optics and Photonics-WOOP 2005,	National	Participant	National Institute of Technology	National Institute of Technology

National Institute of Technology, Tiruchirappalli:

August 30-31, 2005.	workshop on recent advances in Physical science Research,	National	Participant	Periyar University, Salem	Periyar University, Salem,
2005 and 2009	irradiation of swift heavy ions		Experimental work	Inter University Accelerator Center (IUAC), New Delhi	Inter University Accelerator Center (IUAC), New Delhi
November 25 and December 5, 2007.	Workshop on 'Correlated Electrons and Frustrated Magnetism' (CEFM 07),	International	Participant	International Centre, Dona Paula, Goa,	International Centre, Dona Paula, Goa,
January 27, 2009 – 2 February 2009	Training and Certification course on ASNT – Level 2- on Ultrasonic testing, ,		Participant	MSME Testing Centre, Chennai	MSME Testing Centre, Chennai
December 3-4, 2010	Science Academics Lecture workshop on Spectroscopy	National	Participant	Department of Chemistry, NITT	Department of Chemistry, NITT
5th September 2012	CSIR project Monitoring Session of Extramural Research Schemes.	National	Project presenter	physical sciences research committee by CSIR New Delhi	physical sciences research committee by CSIR New Delhi
26-28, November, 2012.	BRNS Project presentation in the Young Scientist Awardees Meet ,	National	Principal Investigator	BARC, Mumbai	BARC, Mumbai
October 25-26, 2013	BRNS Basic Science Meeting (BRNSProject Monitoring Session)	National	Principal Investigator	Anna University, Chennai- 620025	Anna University, Chennai-620025
on May 28, 2014	Presented DST project proposal before the Programme Advisory Committee	National	Principal Investigator	PSG Institute of Advanced Studies, Coimbatore- 641004	PSG Institute of Advanced Studies, Coimbatore- 641004

National Institute of Technology, Tiruchirappalli:

	on “Condensed Matter Physics and Materials Science”				
Jan 20, 2015	Strongly Correlated Electron Systems (SCES),	National	Participant	Bharathidasan University, Trichy,	Bharathidasan University, Trichy,
Feb23-27,2015	Asian Charge Density Workshop (ACDW)	International	Participant	IISC, Bangalore	IISC, Bangalore
28 th and 29 th April 2015	TEQIP-II sponsored Conclave on Academic Reforms(CAR 2015),	National	Participant	NITT	NITT
18-19, December 2015	Research Scholars Workshop	National	Best research paper presentation (oral) award	UGC-DAE Consortium for Scientific Research	Indore, Madhya Pradesh
February ,10, 2016	Collaborative Research Scheme	National	Principal Investigator	UGC-DAE Consortium for Scientific Research	Indore, Madhya Pradesh
March 11, 2016	Materials Research Panel Meeting by	National	Principal Investigator	Naval research Board	IIT Madras, Chennai
09-12 January 2017.	Indo-French workshop on pressure effects on strongly correlated electron systems	International	Participated	Bharathidasan University IWPEPCM-2017	BDU Trichy
04-09 December 2017	Capacity Building of Women managers in Higher Education	National	Participated	National Institute of Technology	NIT, Trichy

National Institute of Technology, Tiruchirappalli:

Conferences: International-14, National-26

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
March 8-10, 2004.	Regional Conference on Photo Acoustics, Condensed Matter Physics	National	Paper Presenter	Condensed Matter Physics and NDT (2004)	Madurai Kamaraj University, Madurai, India
December 26-30, 2004	49 th DAE Solid State Physics Symposium	National	Paper Presenter	sponsored by Board of Research in Nuclear Sciences, Department of Atomic Energy, Nanak Dev University	Nanak Dev University, Amritsar, India
January 10 - 12, 2005	fourth DAE- BRNS National Laser Symposium (NLS-4)	National	Paper Presenter	Babha Atomic Research Centre	Mumbai, India
February 9 - 12, 2005	International Conference on Spectrophysics (INCONS 2005)	International	Paper Presenter	Pachaiyappa's College, Chennai	Pachaiyappa's College, Chennai
February 28- March 01, 2005	conference on crystal growth techniques and modeling	National	Paper Presenter	Anna University, Chennai	Anna University, Chennai
April 22, 2005	National Symposium on Chemical Structures and Dynamics	Participated	Paper Presenter	Indian Institute Technology Madras, Chennai	Indian Institute Technology Madras, Chennai
February 16 - 17, 2006	National conference on recent advances in Materials Science	National	Paper Presenter	Periyar University, Salem	Periyar University, Salem
December 21-22, 2006.	conference on PTLUPA-6	National	Paper Presenter	Institute of Technology Madras, Chennai	Institute of Technology Madras, Chennai
January 29-30, 2007	National conference on Recent Advances in Vibrational	National	Paper Presenter	Periyar University, Salem	Periyar University, Salem

National Institute of Technology, Tiruchirappalli:

	Spectroscopy (NCVS 2007)				
March 26-27, 2007	Second National Conference on Nonlinear Optics and Modelling in Crystal Growth	National	Paper Presenter	Anna University, Chennai	Anna University, Chennai
December 27-31, 2007.	DAE Solid State physics Symposium sponsored	National	Poster presented	Department of Atomic Energy , Government of India	University of Mysore, Mysore, India
Aug 17 th -24, 2008	International Conference on, Strongly Correlated Electron Systems	International	Poster presented	(SCES-2008)	(SCES-2008), held in Brazil
December 10-12, 2009	National Seminar and Exhibition on Nondestructive Evaluation	National	Participated	BHEL ,Trichy	NITT, India.
December 17- 18, 2009	beam time proposal	National	Paper Presenter	47 th Accelerator User Workshop, Inter University Accelerator Centre	New Delhi
18 -19, March, 2011	Carried out Swift heavy ion irradiation (Oxygen and Gold ion of different fluences)	National	Paper Presenter	47 th Accelerator User Workshop Inter University Accelerator Centre	New Delhi
July 06 – 09, 2010	14 th Czech and Slovak Conference on Magnetism	International	Participated	CSMAG 10 in Kosice	Kosice, Slovakia
November 10,2010	32 nd Basic Science Review Committee, BRNS	National	presented the salient features of the Major research project proposal	BARC	Mumbai
21-25 August 2011	Optics + Photonics 2011	International	poster Presenter	SPIE	San- Diego, CA, USA
December 12-16, 2011	International Conference on Advanced Materials held	International	Paper Presenter	(ICAM-2011)	Department of Physics, PSG college of Technology, Coimbatore
December 19-23,2011	56 th DAE-Solid State Physics Symposium	National	Poster Presenter	SRM University, Kattankulathur	SRM University, Kattankulathur

National Institute of Technology, Tiruchirappalli:

January 9-12, 2012	DAE-BRNS National Laser Symposium (NLS-20)	National	poster Presenter	DAE-BRNS ,Crystal Growth Centre	Anna University, Chennai
Feb 19-22 , 2012	Conference on Materials Engineering and Technology (ICMET-2012)	National	Paper Presenter	(ICMET-2012)	KL, Malaysia
December 9-12, 2012	Photonics 2012	National	poster Presenter	IIT Madras	IIT Madras
-	International Conference on Fundamental and Applied Sciences, (ICFAS)	International	Paper Presenter	(ICFAS),Singapore	Singapore
January 9-11, 2013	17 th National seminar on crystal growth	National	Paper Presenter	Department of Physics, Anna University	Chennai
February 3-4, 2014	Recent Advances in Materials Science (RAMS-2014)	National	Paper Presenter	(RAMS-2014 Department of Physics)	Bharathidasan University, Tiruchirappalli-24
December 16-20 2013	International Union of Materials Research Societies – International Conference	International	poster Presenter	Asia – 2013(IUMRS-ICA 2013)	IISC, Bangalore-12
January 8-11, 2014	DAE-BRNS National Laser Symposium (NLS)	National	poster Presenter	Department of Atomic and Molecular Physics	MIT, Manipal University, Manipal-576104, Karnataka, INDIA
December 16-20 2013	International Union of Materials Research Societies – International Conference in Asia – 2013 (IUMRS-ICA 2013)	International	poster Presenter	(IUMRS-ICA 2013) IISC, Bangalore-12	IISC, Bangalore-12
Oct.23-25, 2013	Conference on Nanostructuring by Ion Beams (ICNIB 2013)	National	posterPresenter	(ICNIB 2013) – Jaipur	Jaipur
7-11 , July 2014	International Conference on	International	poster Presenter	(SCES 14)	Grenoble, France

National Institute of Technology, Tiruchirappalli:

	Strongly Correlated Electron Systems				
September 15-17, 2014	International Conference on Magnetic Materials and Applications (ICMAGMA- 2014)	International	Paper Presenter	Pondicherry University	Pondicherry , India
August 2 – 7, 2015	20 th American Conference on Crystal Growth and Epitaxy (ACCGE-20)	International	Paper Presenter	Big Sky, Montana, USA	USA
October 15-16, 2015	UGC sponsored two days national seminar	National	Paper Presenter	St. John's College, Anchal, Kollam	Anchal, Kollam, Kerala
26 th – 28 th May 2016	First Symposium On Advanced Functional Materials(FUNMAT) conducted	National	poster Presenter - 2 (Best Poster)	CECRI, Karaikudi	CECRI, Karaikudi
October 31 - November 4, 2016	2016 Conference on Magnetism and Magnetic Materials (MMM 2016)	International	Paper Presenter	New Orleans Marriott in New Orleans, Louisiana	U. S. A
January 9-12, 2017 .	Physics of strongly correlated electron system (GIAN Program)	International	Participated	Bharathidasan University, Trichy	BDU Trichy
July 17-21, 2017.	International conference on Strongly Correlated Electron Systems (SCES-2017)	International	Poster Presented	Prague, Czech Republic	Prague
December 26-30, 2017	62 nd DAE Solid State Physics Symposium (DAE-SSPS 2017)	International	Paper Presented	Bhabha Atomic Research Centre, Mumbai	DAE Convention Centre, Anushaktinagar, Mumbai
February 14-16, 2018	26 th MRSI National Symposium on Advances in Functional and Exotic Materials	National	Poster Presented	Bharathidasan University, Trichy	SRM Hotel, Trichy
March 01-02, 2018	National Conference on Emerging Materials and	National	Paper Presented	Periyar University, Salem	Salem

National Institute of Technology, Tiruchirappalli:

	Methods for Advanced Applications				
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16. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Two days workshop , Convergence 2012, Recent Trends in Materials Research	National	21-22, December 2012	Convenor	Department of Physics, NITT
One day course on Advancements in Crystalline Materials	National	5 November, 2014	Convenor	Department of Physics, NITT
Workshop on statistical Physics and Materials Science	National	21-23 July 2016	Co-ordinator	Department of Physics, NITT

17. Invited Talks delivered: 23

Institute	Duration	Lecture Topics
Periyar University Salem	March 12, 2009 Workshop on Recent Developments in advanced Materials Research	Invited talk on intermetallic Superconductors -
Sri Paramakalyani College Alwarkurichi	March , 2009 Physics Association	Anisotropic, Magnetic and Superconducting properties of Iron oxide rare earth inter metallic compounds
National College Triruchirappalli	January 23, 2010 Physics Association	Anisotropic, Magnetic and Superconducting properties of rare earth inter metallic compounds
Institute of Experimental physics, Slovak Academy of Sciences, Slovakia	May 30, 2010	Invited talk on Strongly correlated systems

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Institute of Physics Jan Dlugosz University, Poland	May 27 – May 31, 2011	Invited talk on Studies on rare earth intermetallic systems
National College, Trichy	02 December 2012	Invited talk on Anisotropic Magnetic and Transport Properties of Rare Earth Intermetallic Compounds
Anna University	9-11 January 2013 XVII National Seminar on Crystal Growth	Strongly Correlated Electron System
Bishop Heber College Tiruchirappalli	Physics Association, 5 th August, 2013	Swift Heavy ion irradiation
Department of Physics, Central University of Tiuvarur	29 January 2014	Strongly Correlated Electron System
Department of Production Engineering, NITT	March 17, 2014	Pnictide Superconductors
School of Electrical and Electronics Engineering SASTRA University, Thanjavur	October 10, 11 2014	Photonic Materials
Bharathidasan University, Tiruchirappalli	20 November, 2014	Refresher Course
Dept of Physics, SeethalakshmiRamasw ami College, Trichy	29 January 2015	Crystalline Materials
Bharathidasan University, Tiruchirappalli	22 February, 2016	Refresher Course
Dept of Physics National College, Trichy	1 October 2016	Technology Assisted Research
Indo-French workshop on pressure effects on strongly correlated electron systems (IWPESCM-2017) in Bharathidasan University, Trichy	11 January 2017	Interesting aspects of Rare Earth Intermetallics
Cauvery college for women, Trichy	28 February 2017	Special Talk on Science Day
National College, Trichy	23 August 2017	Physics Association : Crystal Microns to Meters
Cauvery college for women, Trichy	04 September 2017	Physics Association : Terahertz Gap

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UGC Human Resource Development Centre Bharathidasan University, Tiruchirappalli	06 January 2018	Refresher course in Nanoscience: Evaluating the seminar
National level seminar on superconducting and ultra conductors Mount Zeon college of Engineering and Technology, Pudhukottai	22 nd February 2018	Superconductors
National college Trichy	02 nd March 2018	Characterization Techniques
UGC Human Resource Development Centre Bharathidasan University, Tiruchirappalli	19 th March 2018	UGC Refresher Course : Strongly Correlated Electron System

18. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Life Member –Indian Society for Non Destructive Testing	2009	LM-8455-TC
Life Member –Materials Research Society of India	2015	LMB2462

19. Academic Foreign Visits

Country	Duration of Visit	Programme
Osaka University Japan	April 2006-July 2006	Jawaharlal Nehru Memorial fellowship,
Institute of experimental Physics, Slovak academy of sciences, Kosice, Slovakia	May 23, 2010 to July 15, 2010	National Scholarship Program of the Slovak Republic
Laboratory for molecular cryospectroscopy and Biospectroscopy, Department of Chemistry,	May 15 – June 15, 2011	Indo Portugese Cooperation of science and Technology

National Institute of Technology, Tiruchirappalli:

Universidade de Coimbra , Portugal		
Institute of Physics Jan Dlugosz University, Poland	May 27- May 31 , 2011	Invited talk Studies on rare Earth intermetallic systems
Kuala Lumpur, Malaysia. July 24-26, 2012	Feb 19-22 , 2012	International Conference on Materials Engineering and Technology (ICMET-2012)
International Centre for Theoretical Physics (ICTP), Trieste Italy	24- 26 September 2013	Workshop on Light Element Materials based Superconductors
Big Sky Montana USA	August 2-7, 2015	AACGE Conference (Oral and Poster)
Prague, Czech Republic	July 17-21,2017	(SCES-2017)Poster Presentation

Academic Foreign Visits (By Students)

Country	Name	Duration of Visit	Programme
Slovakia	Dr.S.Nallamuthu	October – December 2013	National Scholarship Program of the Slovak Republic Presov University
	T.P.Rashid	September – November 2015	
	K.Arun	August – October 2016	
France	Dr.S.Nallamuthu (Sponsored by TEQIP)	July 7-11, 2014	Strongly Correlated Electron Systems (SCES) Conference , Grenoble
USA	T.P.Rashid (Awarded DST Travel Grant)	October 31- November 4, 2016	2016 Conference on Magnetism and Magnetic Materials (MMM 2016), New Orleans
Hungary	K.M.Hijas	Feb –July 2018.	Stipendium Hungaricum Fellowship 2017 – 18
Prague	K.Arun (Awarded DST Travel Grant)	July 04 - July07 2018	12 th Prague Colloquium on f – electron systems.

20. Publications: Refereed Research Journals: **64**

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Citation	Impact Factor of the Journal
T.P. Rashid , K. Arun , Ivan Curlik , SergejIlkovic , Marian Reiffers , Andrea Dzubinska , R.Nagalakshmi	Investigations on magnetocaloric and magneto-transport properties of Gd ₁₀ Co ₂₀ Si ₇₀ alloy	Journal of Rare Earths	Accepted		2018		
K.M. Hijas , S. Madan Kumar , K. Byrappa , T. Geethakrishnan , S. Jeyaram , R. Nagalakshmi	Spectroscopic investigations using density functional theory on 2-methoxy-4(phenyliminomet hyl)phenol: A non linear optical material	Journal of Molecular Structure	1155	249-259	2017		
T.P. Rashid , K. Arun , Ivan Curlik , SergejIlkovic , Marian Reiffers , Andrea Dzubinska , R.Nagalakshmi	Effect of spin fluctuations in magnetocaloric and magnetoresistance properties of Dy ₁₀ Co ₂₀ Si ₇₀ alloy	Journal of Applied Physics	122	093903	2017		2.103
S Nallamuthu, A Dzubinska, M Reiffers, JR Fernandez, R.Nagalakshmi	Ferromagnetism in orthorhombic R ₂ Al ₃ (R= Ce and Pr) compounds	Physica B: Condensed Matter	521	128	2017		1.386
Nallamuthu, Adubinska, M Reiffers, R.Nagalakshmi	Low Temperature Magnetic Ordering in NdAgAl ₃	ActaPhysicaPolonica A	131	1013	2017		1.38
TP Rashid, ICurlik, S Ilkovic, M Reiffers, R.Nagalakshmi	Gd ₃ Fe ₄ Si Alloy for Magnetic Refrigeration Application in a Wide Temperature Range	Journal of Superconductivity and Novel Magnetism			2017		1.38

S Nallamuthu, S SelvaChandrasekaran, P Murugan, Marian Reiffers, R Nagalakshmi	Magnetic, thermodynamic and transport properties of novel non-centrosymmetric $RCoSi_3$ (R= Pr, Nd and Sm) compounds	Journal of Magnetism and Magnetic Materials,	416	373-383	2016	2	2.357
N Sudharsana, V Krishnakumar, R Nagalakshmi	Bis (3-methoxy-4-hydroxybenzaldehyde-2, 4, 6-trinitrophenol) organic cocrystal: Synthesis and physico-chemical properties	The European Physical Journal Plus	131	348	2016		
T.P. Rashid, S. Nallamuthu, K. Arun, Ivan Curlik, SergejIlkovic, Marian Reiffers, and R. Nagalakshmi	Magnetocaloric properties of $GdFe_{0.83}Al_{3.02}$ multiphase alloy having multiple magnetic transitions	Journal of Materials Chemistry and Physics,	180	279-283	2016	1	2.101
T.P. Rashid, S. Nallamuthu, K. Arun, Ivan Curlik, SergejIlkovic, Andrea Dzubinska, Marian Reiffers, and R. Nagalakshmi	Magnetocaloric effect over a wide temperature range due to multiple magnetic transitions in $GdNi_{0.8}Al_{1.2}$ alloy	European Physical Journal Plus,	131	156	2016	1	1.521
N.Sudharsana, S.Hamad,S.VenugopalRao,V.Krishnakumar, R.Nagalakshmi	A systematic study of hydroxyethylamm onium p-nitrophenolate single crystal exhibiting third order nonlinearity	Journal of Crystal Growth	452	179-183	2016		1.462
N. Sudharsana, A. Sharma, N. Kuş, R. Fausto, M. Luísa Ramos, V. Krishnakumar, R. Pal, T.N. Guru Row, R. Nagalakshmi	Low temperature FTIR, Raman, NMR spectroscopic and theoretical study of hydroxyethylamm onium picrate	Journal of Molecular Structure	1104	40-51	2016	1	1.753

National Institute of Technology, Tiruchirappalli:

N.Sudharsana, V.Krishnakumar, R.Nagalakshmi	Experimental and Theoretical Investigations of Non-Centrosymmetric 8-hydroxyquinolinium dibenzoyl-(L)-tartrate methanol monohydrate single crystal	Materials Research Bulletin, (Impact factor: 1.96)	61	136-145	2015	3	1.96
N.Sudharsana, S.Hamad,S.Venugopal Rao,V.Krishnakumar, R.Nagalakshmi	Hydroxyethylammonium maleate (HEAM) single crystal for optical limiting applications	Applied Physics A: Materials Science and Processing,	118	553-561	2015	1	1.694
R. Nagalakshmi , Ruta Kulkarni, S.K. Dhar, A. Thamizhavel, V. Krishnakumar, Marian Reiffers, Ivan Čurlik, Hans Hagemann, Dominique Lovy, S. Nallamuthu, R. Nagalakshmi	Magnetic properties of the tetragonal $RuGa_3$ (R=Pr, Nd and Gd) single crystals	Journal of Magnetism and Magnetic Materials,	386	37-43	2015	5	2.002
S. Prabu, R.Nagalakshmi , J. Balaji, P. Srinivasan	Synthesis, crystal growth, studies on vibrational spectroscopy and nonlinear optical properties of 4-methoxy-4-chlorochalcone	Materials Research Bulletin	50	446-453	2014	9	1.968
S. Prabu, R.Nagalakshmi , J. Balaji, P. Srinivasan	Investigations on the Vibrational Modes and Non-linear Optical Properties of 4-Fluoro Chalcone Crystal	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	129	114-120	2014	5	2.129
N.Sudharsana, G.Jasmine, S.Muthunatesan, V.Krishnakumar, R.Nagalakshmi	Experimental and theoretical studies of 2,5-dichloroanilinium picrate	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy,	121	53-62	2014	15	2.129

National Institute of Technology, Tiruchirappalli:

S.Nallamuthu, T.P.Rashid, V.Krishnakumar, Celine Besnard, Hans Hagemann, Marian Reiffers, R. Nagalakshmi	Anisotropic magnetic, transport and thermodynamic properties of novel tetragonal Ce ₂ RhGa ₁₂ compound	Journal of Alloys and Compound,	604	319-383	2014	2	2.72
N.Sudharsana, R.Nagalakshmi , V.Krishnakumar	Synthesis, Experimental and Theoretical Studies of 8-hydroxyquinolinium-3, 5-dinitrobenzoate single crystal	Journal of Crystal Growth	398	45-47	2014	13	1.69
N.Sudharsana, K.Asokan, V.Krishnakumar, R.Nagalakshmi	Oxygen and gold ion irradiation effects on hydroxyethylammonium (L) tartrate monohydrate single crystals	Radiation Measurements	49	88-94	2013	1	1.14
S. Prabu, R.Nagalakshmi , P.Srinivasan	Investigations on the physico-chemical properties of 4-bromochalcone single crystals for nonlinear optical applications	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	103	45-52	2013	10	2.129
LG Prasad, V Krishnakumar, R Nagalakshmi	Growth and characterization of semi-organic nonlinear optical crystal: Sodium 2, 4-dinitrophenolate monohydrate	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy		377-382	2013	17	
V Krishnakumar, G Shanmugamand R Nagalakshmi	Large third-order optical nonlinearity of Mg-doped PbS/PVA freestanding nanocomposite films	J. Phys. D: Appl. Phys. 45 (2012) 000000 (7pp)	45		2012	19	2.521

National Institute of Technology, Tiruchirappalli:

N.Sudharsana, B.Keerthana, R.Nagalakshmi , V.Krishnakumar, L. Guru Prasad	Growth and Characterization of Hydroxyethylamm onium Picrate Single Crystals for Third-Order Nonlinear Optical Applications	Materials Chemistry and Physics,	134	736-746	2012	46	2.129
N. Sudharsana, G. Subramanian, V. Krishnakumar, R. Nagalakshmi	Growth and characterization of anilinium hydrogen sulfate (AHS) single crystals: An organic nonlinear optical material	Spectrochimic aActa ,	97	798-805	2012	15	2.129
L.Guruprasd, V.Krishnakumar R. Nagalakshmi	Growth and nonlinear optical studies of N- acetyl-l-Cysteine crystal	Eur. Phys. J. Appl. Phys(Impact Factor: 0.789)	57	10201	2012	4	0.789
V.Krishnakumar, M. Rajaboopathi, R. Nagalakshmi	Studies on vibrational, dielectric, mechanical and thermal properties of organic nonlinear opticalco- crystal:2,6- diaminopyridiniu m-4- nitrophenolate-4- nitrophenol	Physica	407	1119- 1123	2012	14	1.276
V.Krishnakumar, M.Rajaboopathi, R. Nagalakshmi	Optical and mechanical properties of MgCl ₂ added triglycinesulphate single crystals	International Journal of Modern Physics B,(Impact Factor: 0.4)	26	1250038	2012	2	0.4
R.Nagalakshmi , Ruta Kulkarni, S.K.Dhar, . Thamizhavel, V.Krishnakumar, Céline Besnard,	Crystal growth and structure determination of novel tetragonal Ce ₂ RhGa ₁₂ compound	Chemistry of Metals and Alloys Volume 4, Issue ¾		229-233	2011	1	-

National Institute of Technology, Tiruchirappalli:

Hans Hagemann, Marian Reiffers							
V. Krishnakumar, M. Rajaboopathi, R. Nagalakshmi	MgCl ₂ added triglycinesulphate crystals	Adv. Mater. Letter 2 (2011) 163- 169.		163-169	2011	11	1.93
L.Guruprasad, V.Krishnakumar, R. Nagalakshmi , S.Manohar	Physicochemical properties of highly efficient organic NLO crystal: 4-aminobenzamide	Materials Chemistry and Physics	128	90-95	2011	9	2.129
R. Nagalakshmi , V.Krishnakumar, Hans Hagemann, S.Muthunatesan	Polarized Raman and hyperpolarizability studies of Hydroxyethylamm onium (L) tartrate monohydrate for quadratic nonlinear optics	J. Mol. Structure..	988	17-23	2011	20	1.599
R.Nagalakshmi , V.Krishnakumar,N .Sudharsana, A.Wojciechowski, M.Piasecki, I.V.Kityk, Michael Belsley ,DmitryIsakov	Studies on physico – chemical properties of Hydroxyethylamm onium (L) tartrate monohydrate single crystals	Physica B: Condensed Matter	406	4019- 4026	2011	16	1.276
V.Krishnakumar, R. Nagalakshmi , S.manohar, M.Piasecki, I.V.Kityk, P.Bragiel	Parametrical optical effects in the 1:1 complex of resorcinol and urea – a nonlinear optical crystal	Physica B Condensed Matter. (Impact Factor: 1.276)	405	839	2010	11	1.276
Neeraj Kumar, K.V.Shah, R. Nagalakshmi , S.K.Dhar	Strongly correlated electron behavior in R ₂ Ru ₃ Ga ₉ (R = Ce and U)	Journal of Applied Physics,	107	09E113	2010		2.259
L.Guruprasad, V.Krishnakumar, R. Nagalakshmi	Investigation on the physicochemical properties of 2,4- dinitrophenol- :Efficient organic nonlinear optical crystal for	Physica B Condensed Matter	405	1652	2010	21	1.276

National Institute of Technology, Tiruchirappalli:

	frequency doubling						
V.Krishnakumar , S.Manohar, R. Nagalakshmi	Semiorganic nonlinear optical l-lysine sulphate growth and characterization	SpectrochimActa A	75	1394	2010	13	2.129
L.Guruprasad, V.Krishnakumar, M. Jothi, R. Nagalakshmi	Spectroscopic and physicochemical studies on organic crystal of Brucine hydrogen maleate pentahydrate	SpectrochimActa A,	77	87	2010	5	2.129
V.Krishnakumar, R.Nagalakshmi , S.Manohar, K.Ozga, B.Claudet, M.Piasecki, I.V.Kityk, L.Kocsis, J.Pisarek	Elastooptical spectra of novel L-lysine monohydrochloride dehydrate single crystals	International Journal of Modern Physics B.	24	629	2010	5	0.4
L.Guruprasad, V.Krishnakumar, R. Nagalakshmi	Structural, spectral, thermal and optical studies on organic nonlinear optical 2-naphthol crystal	Crystal Research Technology.	45	1057-1063	2010	7	1.12
V. KrishnaKumar, S. Manohar, R.Nagalakshmi , M. Piasecki, I.V. Kityk, P. Bragiel	Zinc potassium phosphate hexahydrate crystals for nonlinear optics	Eur. Phys. J. Appl. Phys.	423	263-267	2009	15	0.789
Neerajkumar, R.Nagalakshmi , R.Kulkarni, P.L.Paulose, A.K.Nigam,S.K.Dhar, A.Thamizhavel	Anisotropic magnetic and superconducting properties of $I_{2-x}Co_xAs_2$ ($x=0,0.06$) single crystals	Physical Review B	79	012504	2009	112	3.767
V. Krishnakumar, L. Guruprasad, R. Nagalakshmi , P.Muthusamy	Physicochemical properties of organic non-linear optical crystal for frequency doubling : glycine acetamide	Materials Letters.	63	1255-1257	2009	15	2.269
V.Krishnakumar, R.Nagalakshmi ,	3-nitroaniline and 3-nitrophenol – A	Journal of optoelectronic	11	123-133	2009	2	0.52

National Institute of Technology, Tiruchirappalli:

K. Ozga, M. Piasecki, I. V. Kityk, P. Bragiel	novel non linear optical material	s and Advanced Materials					
V.Krishnakumar, L.GuruPrasad, R.Nagalakshmi	Investigation on 3-aminophenol: a nonlinear optical crystal for frequency doubling	Eur. Phys. J. Appl. Phys.	48 2	20403	2009	11	0.789
Devang A. Joshi, R.Nagalakshmi , R. Kulkarni, S.K. Dhar, A. Thamizhavel	Crystal growth and anisotropic magnetic properties of Ra_2Ge_2 (R=Pr, Nd and Sm) single crystals	Physica B Condensed Matter.	404(19)	2988	2009	5	1.276
Devang A. Joshi, R.Nagalakshmi , S.K. Dhar, A. Thamizhavel	Anisotropic magnetization studies of R_2CoGa_8 single crystals (R=Gd, Tb, Dy, Ho, Er, Tm, Y, and Lu)	Physical Review B	77	174420	2008	25	3.767
V.Krishnakumar, R.Nagalakshmi , and S.Manohar	Crystal growth and characterization of N-Hydroxyphthalimide ($C_8H_5NO_3$) crystal	Spectrochim Acta A.	71	110-115	2008	12	2.129
V.Krishnakumar, R.Nagalakshmi , and S.Sivakumar	Investigations on the physicochemical properties of the nonlinear optical crystal for blue green laser generation	Spectrochim Acta A.	71	119-124	2008	5	2.129
V.Krishnakumar and R.Nagalakshmi	Studies on the first order hyperpolarizability and terahertz generation in 3-nitroaniline	Physica B: Physics of Condensed Matter.	403	1863-1869	2008	38	1.276
V.Krishnakumar, G. Eazhilarasi, R.Nagalakshmi , M. Piasecki, I.V.	Field-induced nonlinear optical features of p-aminoazobenzene crystals	European Physical Journal Applied Physics.	42	263-267	2008	16	2.259

National Institute of Technology, Tiruchirappalli:

Kityk and P. Bragiel							
V.Krishnakumar R.Nagalakshmi , and S.Manohar	Probes on l-lysine monohydrochlorid edihydrate: A semiorganic nonlinear optical crystal	Spectrochimic aActa.	71	471-479	2008	8	2.129
G. Eazhilarasi, R.Nag alakshmi and V. Krishnakumar	Studies on crystal growth, vibrational and optical properties of organic nonlinear optical crystal: p-Aminoazobenzene	Spectrochimic aActa.	71	502-507	2008	27	2.129
V.Krishnakumar, R.Nagalakshmi , and S.Sivakumar	Effect of doping an organic molecule ligand on TGS single crystals	Spectrochimic aActa, A.	71	482-285	2008	22	2.129
V.Krishnakumar and R.Nagalakshmi	Terahertz generation in 3-Nitroaniline Single Crystals	Crystal Growth and Design.	8(11)	3882-3884	2008	12	4.69
V.Krishnakumar,D .K.Avasthi, Fouran Singh, P.K.Kulriya and R. Nagalakshmi	Study of the damage produced in K [CS (NH ₂) ₂] ₄ Br non-linear optical single crystal by swift heavy ion irradiation	Nuclear Inst. And Methods in Physics Research.	B256	675-682	2007	18	1.18
V Krishnakumar, R Nagalakshmi	Crystal growth and characterization of K [CS (NH ₂) ₂] ₄ Br—A semiorganic non-linear optical crystal	Spectrochimic a Acta Part A	68	443-453	2007	13	2.129
VK Kumar, R Nagalakshmi	Vibrational spectroscopic studies of an organic non-linear optical crystal 8-hydroxyquinolinium picrate	Spectrochimic a Acta Part A	66	924-934	2007	34	2.129

National Institute of Technology, Tiruchirappalli:

V. Krishnakumar and R.Nagalakshmi	Polarised Raman and infrared spectral analysis of L-alanine oxalate (C ₅ H ₉ NO ₆) – a non-linear optical single crystal	SpectrochimActa.	A-64	736-743	2006	27	2.129
V.Krishnakumar, and R.Nagalakshmi	Growth and spectroscopic characterization of a new organic non linear optical crystal-8-hydroxyquinoline	SpectrochimActa A	61	1097-1103	2005	34	2.129
V.Krishnakumar, and R.Nagalakshmi	Growth and vibrational spectroscopic studies of yttrium doped single crystals of trisodium barium pentachloride dihydrate	SpectrochimActa A.	61	2724-2729	2005	7	2.129
V Krishnakumar, R Nagalakshmi	Crystal growth and vibrational spectroscopic studies of the semiorganic non-linear optical crystal— bithiourea zinc chloride	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	61	499-507	2005	78	2.129
V.Krishnakumaran d R.Nagalakshmi	Polarised infrared and Raman studies of YCa ₄ O(BO ₃) ₃ – a non-linear optical single crystal	SpectrochimActa A.	60	2733-2739	2004	32	2.129
V Krishnakumar, R Nagalakshmi	Polarised Raman studies of YCa ₄ O(BO ₃) ₃ -a non-linear optical single crystal	Science Access	2	214-215	2004		

(B)Conferences/Workshops/Symposia Proceedings: 7

Author(s)	Title of Abstract/ Paper	Page numbers	Conference Theme	Year
R. Nagalakshmi , V.Krishnakumar, Hans Hagemann, S.Muthunatesan	Polarized Raman and hyperpolarizability studies of hydroxyethylammonium (L) tartrate monohydrate for quadratic nonlinear optics	1200 – 1201	AIP Conference Proceedings	2010
V.Krishnakumar, L. Guru Prasad, R. Nagalakshmi, and Hans Hagemann	Vibrational studies of the NLO crystal – 2,4- Dinitrophenol	1198 – 1199	AIP Conference Proceedings	2010
T. Pandiyarajan, R. Nagalakshmi, B. Karthikeyan	Optical and vibrational studies of surface modified ZnO nanostructures	8094	Proc. Of SPIE	2011
N.Sudharsana, R.Nagalakshmi, V.Krishnakumar , A.Sharma, R. Fausto,T. N. Guru Row ,Rumpa Pal	Vibrational and third-order nonlinear optical study on hydroxyethylammonium picrate (HEAP) single crystals	1263	AIP Conference Proceedings	2012
N Sudharsana, GJ Priya, V Krishnakumar, R Nagalakshmi	Linear and nonlinear optical properties of 2, 5-DCAP crystal- A combined experimental and theoretical study		Fiber Optics and Photonics 2012 International Conference	2012
P.Srinivasan, R.Nagalakshmi, Dmitry Isakov, Etelvina de Matos Gomes, Michael Scott Belsley and S.Prabu	Ruminations on the effect of MeV Si ⁸⁺ and Ag ⁸⁺ ion irradiation on nonlinear optical l-Valinium picrate single crystals	695-700	AIP Conference Proceedings	2012
S. Nallamuthu, K. Arun, Andrea Dzubinska, Marian Reiffers and R.Nagalakshmi	Investigation on Magnetic properties of Sm ₃ Ag _{2.55} Al _{8.45} compound	1942-130043	DAE Conference Proceedings	2018

21. Establishment of facilities

1. Establishing crystal growth facilities for organic and rare earth intermetallic systems .
(Solution, Melt and Flux growth techniques).
2. Low temperature Transport measurements (8-300K).
3. Tri arc furnace for preparation of Rare based alloys.
4. Electrospinning Setup.

National Institute of Technology, Tiruchirappalli:

Exposure to scientific equipments and software

1. Perkin Elmer Spectrometer model RX1 and the software Spectra V2.00
2. UV Spectrophotometer
3. X-Ray – Laue back reflection method for orienting the single crystals and cutting
4. X-ray rocking curve
5. Vibrating Sample Magnetometer (VSM)
6. Superconducting quantum interference device (SQUID)
7. Physical Property Measurement Systems (1.8K-300K)
 8. GAUSSIAN 16, FULLOROF, GSAS, CRYSTAL 09

Extra-curricular activities

Attended the Outbound Experiential Learning Camp for Team Building and Group Dynamics conducted by Adventure Zone (ISO 9001:2008) during 11-12 February, 2013

Academic Responsibilities outside the University

Position	Institution
Doctoral committee member	Anna University of Technology, Tiruchirappalli
	University College of Engineering, Panruti
	Bharathidasan University, Tiruchirappalli
	Anna University of Technology, Pudukottai
	Periyar University, Salem
	Karpagam Academy of Higher Education, Coimbatore
Thesis Examiner (Ph.D/M.Sc/M.Phil)	Anna University of Technology, Tiruchirappalli
	University of Kerala
	Anna University of Technology, Villupuram
Question paper Setting and Evaluation	Bharathidasan University, Tiruchirappalli Kalasalingam University, Virudhunagar

National Institute of Technology, Tiruchirappalli:

Board of Studies Member	Holy Cross College, Trichy
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