

Details of Research Project/ Collaborations/ Publications:

List of Projects implemented / Submitted:

Principal Investigator: Dr. VijaylakshmiDayal

Google Scholar Citations

Citation indices	Till date
Citations	86
h-index	6
i10-index	2

S. No.	Title	Grant Period	Cost (Rs. In lakhs)	Funding Agency
1.	Investigation of ferroelectric, ferromagnetic and magnetoelectric properties in some novel multiferroic Perovskites-oxide" Young Scientist Research Award (YSRA) Sctn. No: 2011/20/37P/01/BRNS/0075 dated: 13.04.2011	2011-2015 (Completed)	1280000.00 (APPROVED) ~ 400000.00 (ADDITIONAL GRANT RECEIVED)	BRNS
2.	Magnetic And Transport Studies In Ferromagnetic Metallic/Insulating Manganite Nanocomposite, Collaborative Research Scheme (CRS) CRS APPROVAL NO.: CSR-IC/CRS-89/2014-2015/596 dt: 18.09.2014	2014-2017 (ongoing)	238000.00 (1 st Year) 238000.00 (2 nd year)	UGC-DAE-CSR Indore Centre
3.	Design and development of low cost automated susceptometer for the measurement of linear and nonlinear magnetic AC susceptibility of magnetic nano particles	Submitted (2015)	20.00 Lakhs	VGST, Karnataka
4.	Studies of high temperature thermoelectric properties of oxide semiconductors and their	Submitted (2016)	37.50 lakhs	BRNS, BARC, Mumbai.

	application for power generator			
5.	Tuning of Magnetic and Magneto-transport Properties in Core/Shell Bimagnetic nanostructure for sensor Application	Submitted (2016)	27.61 lakhs	DST, Nanomission, New Delhi.

No of Ph. D Students: 04

Ph. D. Guide: Dr. VijaylakshmiDayal

Sl. No.	Name of the Student	Topic	Status
1.	Mr. Punith Kumar V. (DAE-YSR-BRNS Project)	Electrical and Magnetic Properties of Bismuth Based Manganites	Submission May 2016
2.	Mr. Manju M. R.	Structural, Optical and Magnetic Properties of Doped BaSnO ₃	Registered Part Time
3.	Mr. Vinay P. P. (UGC DAE CSR Indore Project)	Magnetic And Transport Studies In Ferromagnetic Metallic/Insulating Manganite Nanocomposite	To be registered
4.	Ms. Rashmi P.	Fe-Based Superconductor	Registered

RESEARCH IN COLLOBORATION/USER:

International Collaboration:

1. Prof. Dr. D. C. Jiles, , Ames Laboratory Associate, US Dept. of Energy, Dept. of Electrical and Computer Engineering, Iowa State University, USA (also, XRD & SEM)
2. Dr. R. L Hadimani, Department of Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond VA 23284, USA.
3. Department of Physics, Ionics Group, University of Malaya, Kulalampur, Malaysia.
4. Dr. Fu Hao, University of Electronic Science and Technology of China, Chengdu, 610054, China

National Collaboration:

5. Dr. R. J. Choudhary, UGC-DAE Consortium for Scientific Research, Indore.
6. Dr. Alok Banerjee, UGC-DAE Consortium for Scientific Research, Indore.
7. Dr. Dipankar Das, UGC-DAE Consortium for Scientific Research, Kolkata.
8. Dr. T. K. nath, Indian Institute of Technology (IIT), Kharagpur, WB

9. Dr. Rajeev Rawat, UGC-DAE Consortium for Scientific Research, Indore.
10. Prof. Dr. R. N. Bhowmik, Department of Physics, Pondicherry University, Pondicherry.
11. Dr. Deshpande, UGC-DAE Consortium for Scientific Research, Mumbai Centre.

RESEARCH FACILITY AVAILABLE:

Material preparation facilities using solid state route and Chemical wet method: (At work Place, Maharaja Institute of Technology-Mysore)

- High Temperature Furnace (upto 1600 Deg C) (Naskar& Company)
- Hydraulic Press (10 Tone): Technosearch Instruments
- Analytical Balance (sensitivity: 0.1 mg): Denver.
- Hot Plate With Magnetic stirrer
- Microwave Influx
- Dry Box

Publications list (Title of paper, authors, Journal details, pages, year etc.)

SL. NO	AUTHORS/ TITLE/ VOLUME/PAGE NO/ JOURNAL NAME/PUBLISHER YEAR	Year	IF
INTERNATIONAL			
1.	Punith Kumar V., R. L. Hadimani, D. Paladhi, T. K. Nath, D. C. Jiles and VijaylakshmiDayal ; Investigation of Magnetic Interactions, Electrical and Magneto-Transport Properties in Ga-Substituted $\text{La}_{0.4}\text{Bi}_{0.6}\text{MnO}_3$ Perovskite Manganites, 209 , 75-86, Journal of Materials Science and Engineering B , Elsevier publications	2016	2.169
2.	Punith Kumar V., R. L. Hadimani, D. Paladhi, T. K. Nath, D. C. Jiles and VijaylakshmiDayal , Investigation of magnetic interactions and Transport Mechanism in Al-substituted $\text{La}_{0.4}\text{Bi}_{0.6}\text{MnO}_3$ Manganites, In Press, Journal of Alloys and Compounds, Elsevier publications	2016	2.999
3.	VijaylakshmiDayal , Punith K. V., R. L. Hadimani. And D. C. Jiles Investigation of Critical behavior in $\text{La}_{0.4}\text{Bi}_{0.6}\text{Mn}_{1-x}\text{Ti}_x\text{O}_3$ ($x=0.05-0.1$) perovskite manganite, 15 , 1245-1250 Current Applied Physics [Elsevier Publications, ISSN:15671739.	2015	2.03

4.	VijaylakshmiDayal , Punith Kumar V., R. L. Hadimani, E. A. Balfour, H. Fu and D. C. Jiles; Magnetic Interaction and Electronic Transport in $\text{La}_{0.4}\text{Bi}_{0.6}\text{Mn}_{0.5}\text{Ti}_{0.5}\text{O}_3$ Manganite, IEEE Transactions on Magnetics , 51 (11) , 1-4, DOI 10.1109/TMAG.2015.2433394,	2015	1.01
5.	V. Punith Kumar, VijaylakshmiDayal , R. L. Hadimani , R. N. Bhowmik • D. C. Jiles, Magnetic and electrical properties of Ti-substituted lanthanum bismuth manganites; Journal of Material Science 50 10 3562-3575 , [Springer], ISSN 0022-2461, DOI 10.1007/s10853-015-8916-1	2015	2.305
6.	PunithKumarV. And VijaylakshmiDayal ; Investigation of Phase Coexistence and Correlation in $\text{La}_{1-x}\text{Bi}_x\text{MnO}_{3+\delta}$ ($x=0.4$ and 0.6) Material Research Express 2 046105 , [IOP Science]ISSN :2053-1591	2015
7.	VijaylakshmiDayal , Punith Kumar V, Investigation of Complex Magnetic state in $\text{La}_{0.8}\text{Bi}_{0.2}\text{MnO}_3$, Journal of Magnetism & Magnetic Materials , Vol 361 pp. 212-218 [Elsevier Publications, ISSN: 0304-8853]	2014	2.002
8.	VijaylakshmiDayal , Punith Kumar V, R. L. Hadimani and D. C. Jiles, Evolution of Griffith's Phase in $\text{La}_{0.4}\text{Bi}_{0.6}\text{Mn}_{1-x}\text{Ti}_x\text{O}_3$ Perovskite Oxide, Journal of Applied Physics , 115, 17E111 American Institute of Physics Publication (AIP), ISSN: 0021-8979	2014	2.185
9.	VijaylakshmiDayal , Punith V. Kumar, Investigation of electrical resistivity and magnetotransport properties of $\text{La}_{0.67}\text{Ca}_{0.33}\text{Mn}_{0.99}\text{Fe}_{0.01}\text{O}_3$ perovskite oxide, Solid State Communications , 158 70–75 [Elsevier Publications ISSN: 0038-1098]	2013	1.698
10.	L. Joshi, S. Keshri, V. Dayal and N. Ramma; Existence of Griffiths phase in $\text{La}_{0.67}\text{Ca}_{0.33}\text{Mn}_{0.99}\text{Fe}_{0.07}\text{O}_3$ J. Alloys and Compounds 479, 1-2, 24 879-882(Elsevier Publication, ISSN No. 0925-8388,	2009	2.999
11.	S. Keshri, VijaylakshmiDayal , Leena Joshi Influence of Fe doping on electrical properties of LCMO, Phase Transition 81 1 17-28[Taylor & Francis: ISSN NO. 0141-1594].	2008	1.044
12.	VijaylakshmiDayal and S. Keshri Structural and Magnetic properties of $\text{La}_{0.67}\text{Ca}_{0.33}\text{Mn}_{(1-x)}\text{Fe}_x\text{O}_3$ ($x=0-0.07$) Solid State Communication 142 63-66 (Elsevier Publication,	2007	1.698

	IISN No. 0038-1098]		
13.	S. Keshri and VijaylakshmiDayal ; Low Field AC-Susceptibility Study on gamma-irradiated $\text{Bi}_{1.2}\text{Pb}_{0.33}\text{Sr}_{1.54}\text{Ca}_{2.06}\text{Cu}_3\text{O}_{10+\delta}$ Superconductor; Phase Transition 80 3 243-251 [Taylor & Francis: ISSN NO. 0141-1594].	2007	1.044
14.	V. Dayal, S. Keshri, A. Saha and H. Kishan; Effect of gamma-irradiation on the structural and transport properties of polycrystalline $\text{Bi}_{1.2}\text{Pb}_{0.33}\text{Sr}_{1.54}\text{Ca}_{2.06}\text{Cu}_3\text{O}_{10+\delta}$ superconductor; Radiation Effects & Defects in solids 162 5 359- 366[Taylor & Francis: ISSN NO. 1042-0150]	2007	0.50
15.	S. Keshri, V. Dayal , S. Ravi and P. K. Nayak; AC susceptibility study in the single phase Bi-2223 system Czechoslovak J. of Phys. 55, 73-84 [Springer-Verlag, ISSN No. 0011-4626]	2005	0.42
National Journal:			
16.	S. Keshri and V. Dayal ; Structural and electrical transport properties of nanosized $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$ sample synthesized by a simple low cost novel route; Pramana 70 4 697-704 (Indian Academy of Science, Issn No. 0304-4289)	2008	0.720
17.	S. Keshri, V. F. Kraidenov, L. Joshi and V. Dayal ; Electrical Properties of under pressure $\text{La}_{0.67}\text{Ca}_{0.33}\text{Mn}_{0.99}\text{Fe}_{0.01}\text{O}_3$ International Journal of material Science 2 191-199 [Research India, ISSN NO. 2226-4531]	2007	
18.	S. Keshri, VijaylakshmiDayal and A. Poddar; Effect of gamma-irradiation on thermoelectric power of $\text{Bi}_{1.2}\text{Pb}_{0.33}\text{Sr}_{1.54}\text{Ca}_{2.06}\text{Cu}_3\text{O}_{10+\delta}$ Indian J Cryogenics 31(1-4), 108-11[ISSN No. 0379- 0479]	2006	
19.	V. Dayal , S. Keshri, S. Ravi and P. K. Nayak; Transport and thermal properties of superconductor; Indian J. of Cryogenic 28 4 122-126[ISSN No. 0379- 0479]	2003	
UNDER COMMUNICATION			
1.	Manju. M.R., Punith Kumar V. , VijaylakshmiDayal "Investigation of Ferromagnetic properties in Fe/Co substituted BaSnO_3 Perovskitestannates", (Under Review), Physica B: Condensed		2016

	Matter, Elsevier publications, December 2015.	
	UNDER PREPARATION:	
2.	Manju M. R, R. L. Hadimani, D. C. Jiles and VijaylakshmiDayal , Structural, electrical and optical properties of BaSnO ₃ and BaLaSnO ₃ Perovskite Oxide.	
3.	Manju M. R and VijaylakshmiDayal Structural, Magnetic and optical properties of BaSnO ₃ -CoFe ₂ O ₄ composite	
4.	Punith K. V. and VijaylakshmiDayal , Griffiths Phase anomaly and correlation with CMR in La _(1-x) Bi _x MnO ₃ (x=0, 0.1, 0.3)	
5.	Vinay PP, R. Rawat and VijaylakshmiDayal , Structural, Magnetic and optical properties of PSMO Perovskite oxide	

Conferences presentations/Proceedings:

REFEREED CONFERENCE PROCEEDINGS PUBLISHIED/ATTENDED INTERNATIONAL (HELD ABROAD)		
1.	VijaylakshmiDayal , Punith Kumar V., R. L. Hadimani and D. C. Jiles, "Investigation of Low Temperature Non-Linear Magnetization Behavior in Al and Ga- Substituted La _{0.4} Bi _{0.6} MnO ₃ Manganites" <i>American physical society (APS) March meeting 2016</i> , Monday-Friday, March 14-18, 2016; Baltimore, Maryland, USA.	Conf. Pro c.
2.	VijaylakshmiDayal , Punith Kumar V., R. L. Haidmani, E. A. Balfour, Hao. Fu and D. C. Jiles, Magnetic interaction and electronic transport in La _{0.4} Bi _{0.6} Mn _{0.5} Ti _{0.5} O ₃ manganite, Abstract Designation: HU-09, Intermag 2015 Beijing, People's Republic of China, May 11 to May 15 , 2015	Jour. Pub.
3.	VijaylakshmiDayal , Punith Kumar V, R. L. Hadimani and D. C. Jiles, Evolution of Griffith's Phase in La _{0.4} Bi _{0.6} Mn _{1-x} Ti _x O ₃ Perovskite Oxide,); 58th MMM conference Denver, Colorado, USA. November 4-8, 2013	Jour. Pub.
4.	VijaylakshmiDayal and Punith K. V.; Electrical Conductivity and Magnetotransport properties of Fe Based	Abs.

	PerovskiteManganite Oxide ICYRAM-2012, Material Research Society Singapore. Singapore; July 1 - 6 , 2012 (ORAL)	
5.	S. Keshri and V. Dayal Synthesis and Characterization of Pure Phase Bi-2223 Super conducting Sample IMFP-2005 Kuala Lumpur, Malaysia, July 25-28, 2005.	Conf. proc.
INTERNATIONAL (HELD IN INDIA)		
6	Punith Kumar V,R. L. Hadimani, D. C. Jiles, A. M. Awasthi and VijaylakshmiDayal , Structural, Raman, Magnetic and Dielectric properties of $La_{0.4}Bi_{0.6}TiO_3$ Perovskite Oxide, submitted to ICMagMa 2014 ; Pondicherry University, Pondicherry September 15-17, 2014.	Jour. Pub.
7.	Punith Kumar V. and VijaylakshmiDayal , Correlation between Magnetoresistivity and Magnetism in $La_{1-x}Bi_xMnO_3$ ($x=0.0, 0.1, 0.3$ & 0.5). Magma 2013, IIT Guwahati. December 05-07, 2013	Conf. proc..
8.	Punith K. V , Manju M. R.and VijaylakshmiDayal ; Electrical and Magnetic Properties of $La_{0.5}Bi_{0.5}MnO_3$; International Conference on Recent Trends in Applied Physics and Materials Science , RAM-2013; Bikaner (Rajasthan) India; 1-2 February 2013 , AIP Conf. Proc. (2013), American Institute of Physics Publications	AIP Conf. proc..
9.	Punith K. V.and VijaylakshmiDayal ; Study of Magnetotransport Properties of Manganite CONIAPS , XIVSVNIT Surat-India December 22-24, 2011	ABS.
10.	V. Dayal and S. Keshri Transport and Thermal Properties of Single Phase Bi-2223 Composition and Effect of gamma-Irradiation on it ISAMP-2004 IIT , Kharagpur, India, December 6-8, 2004	Conf proc..
NATIONAL		
11.	Punith Kumar V.,Manju M. R, Meenakshi. G and VijaylakshmiDayal , Investigation on Thermal Decomposition of Lanthanum Manganites and its primaryconstituents using TGA and DTA Techniques, UGC Sponsored National conference on Recent Trends in Physics, Mathematics and Engineering, SaradaVilas College, Mysore, 20-21 Feb 2015, Article will be published in <i>Proceedings of RTPME 2015</i> , ISBN: 978-81-930115-1-5, pp. 93-97	Conf. proc.
12.	Punith Kumar V., Vinay P P. and VijaylakshmiDayal , Electrical conductivity and Magneto Transport properties in $La_{0.6}Sr_{0.4}MnO_3$ Nanomaterial, National Conference on Scientific, Computational and Informational Research Trends in Engineering (NCSCI-2016)	Conf. proc.

	to be held @ GSSS Institute of Engineering and Technology for Women, Mysore, Karnataka on 30 th January 2016.	
13.	Punith Kumar V., Manju. M.R., VijaylakshmiDayal , Critical behavior and Non-universal low-field Magnetic Scaling in La _{1-x} BixMnO ₃ (x=0.4 & 0.6) Perovskite Manganite Oxide , 59 th DAE SSP symposium 2013 at Vellore Institute of Technology, Vellore, December 14-17, 2014, AIP Conf. Proc. (2015), American Institute of Physics Publications.	Conf. proc.
14.	Punith Kumar V., Manju. M.R., VijaylakshmiDayal , Investigation of Magnetic Spin Glass Property in La _{0.5} Bi _{0.5} MnO ₃ Sample Using Non-Linear AC Susceptibility Measurements. 58 th DAE SSP symposium 2013 at Thapar university, Patiala, December 21-25, 2013 AIP Conf. Proc. 1591, 1546 (2014), American Institute of Physics Publications.	Conf. proc.
15.	Punith Kumar V. and VijaylakshmiDayal , "Investigation of Critical exponent in La _{0.5} Bi _{0.5} MnO ₃ using Non-linear Higher Harmonic AC Susceptibility Measurements" UGC sponsored Two Days National Level Seminar on "Material Science and Engineering" NSMSE-2014, JSS College of Arts, Commerce and science, Mysore – 570025, March 21-22, 2014.	Conf. proc.
16.	VijaylakshmiDayal , Young Scientist Research Awardees Meet (YSRAM-2012), 26-28 November 2012	Conf. Proc.
17.	V. Dayal and S. Keshri; Structural and Electrical Transport Properties of nanosized 52 nd DAE Solid State Physics Symposium University of Mysore, Karnataka December 27-31, 2007	Conf. proc.
18.	S. Keshri and V. Dayal Thermoelectric power of Bi-2223 super conducting samples NCRAMS Nagpur January 21-22, 2006	Conf. proc.
19.	S. Keshri and V. Dayal Transport, Structural and Thermal Properties of Bi2212 superconductive sample DAE Solid State Physics Symposium Guru Nanak Dev University, Amritsar, December 26-30, 2004	Conf. proc.
20.	S. Keshri, V. Dayal , S. Ravi and P. K. Nayak AC susceptibility study in NSCCFA 2004 Bengal Engineering College, Howrah, West Bengal, March 25-27, 2004	Conf. proc.
21.	V. Dayal , S. Keshri, P. K. Nayak, and S. Ravi Susceptibility of Bulk Bi-2223 Superconductor NCMA-2004 Kurukshetra University March 11-13, 2004	Conf. proc.
22.	V. Dayal and S. Keshri Study of some properties of Bi-2212 sample DAE Solid State Physics Symposium, Jiwaji University, December, 2003.	Conf. proc.

Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by Dr. VijaylakshmiDayal:

item	Details
Award	
Young scientist Research Award	Department of Atomic Energy (DAE) , Board of Research of Nuclear Sciences, India [Research Project Award-2011]
Research Award	Rs 1,20,000 from Maharaja Institute of Technology- Mysore on 24/05/2011 in recognition of getting Young scientist Research Award from DAE, Board of Research of Nuclear Sciences, India
Achievement	
Academic	M.Sc., University Topper[First class first] VinobaBhave University-Jharkhand (2001)
Travel Grant	AICTE, BRNS and DST (Young Scientist) for attending International Conference of Young Researcher on Advance Materials [ICYRAM] 2012; Singapore [Claimed from AICTE]
Reviewer	
Journal	Journal of Applied Physics (American Institute of Physics (AIP) publications)
	Journal of Physics: Condensed Matter, [Institute of Physics (IOP), Publications]
	Journal of Magnetism and Magnetic Material (Elsevier Publications)
	Phase Transition (Taylor & Francis, USA)
	Blue Ocean Research Journal
Conference Proc.	Department of Atomic Energy - Solid State Physics Symposium (AIP Conference Proceedings, American Institute of Physics (AIP) publications)
Book	"Engineering Physics", published by Orient Longman Publications, Hyderabad ,Universities Press, (an associate of Orient Black Swan)
Editor	
Journal Pub.	Journal of Nano Materials, India
Journal Pub.	Blue Ocean Research Journal, India
Research Guide (Approved Research Guide)	

	Vishwesharaiya Technological University, Belgaum, Karnataka.
	AMET University, Chennai, India
Convener	
	State Level Paper presentation Competition 2011 at Maharaja Institute of Technology Mysore, held on 13 April 2011
Interview	
Radio Programme	Interview aired by All india Radio , Mysore on 24/06/2011 in recognition of getting Young scientist Research Award from DAE, Board of Research of Nuclear Sciences, India
Member	
Chairman	Sexual Harassment Committee, Maharaja Institute of Technology- Mysore, from June 2014-till date
Colloquium	Birla Institute of Technology, Mesra, Ranchi: 2003 & 2004