Curriculum Vitae

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Academic Background

June 1988 - April 1991	B.Sc. Physics Bishop Heber College, Thiruchirappalli
June 1991 - April 1993	M.Sc. Physics Jamal Mohammed College, Thiruchirappalli
August 1993 - February 1995	Project Assistant Crystal Growth Center, Anna University, Chennai
March 1995 - January 2001	Ph.D. Physics Materials Science Division Indira Gandhi Center for Atomic Research Kalpakkam, Tamil Nadu
Thesis Title	Phase Transition and Defect Studies in BaFCl

Professional Background

January 2001-August 2001	Postdoctoral Fellow, Center for Interdisciplinary Research Tohoku University, Sendai, Japan.
September 2001-January 2004	Japan Society for Promotion of Science (JSPS) Fellow Nagoya Institute of Technology, Nagoya, Japan.
February 2004-January 2006	Postdotoral Fellow, Department of Physics, University of Puerto Rico, San Juan, Puerto Rico, USA.
June 2006 - September 2007	Guest Lecturer Bharathidasan Institute of Technology Thiruchirappalli.
September 2007 - October 2010	Lecturer Department of Physics Manonmaniam Sundaranar University, Tirunelveli
October 2010 - October 2013	Reader Department of Physics Manonmaniam Sundaranar University, Tirunelveli
October 2013 - October 2016	Associate Professor Department of Physics Manonmaniam Sundaranar University, Tirunelveli
October 2016 - till date	Professor

List of the Projects

No.	Title of the Project	Funding Agency	Amount	Period
	Principal Investigator			
1	Electric field control of magnetization in FM/FE hybrid structures	UGC-DAE CSR, Indore	Rs.7,26,749/-	2012-2016
2	Development of Lead Free Piezoelectric ceramics	CSIR, New Delhi	Rs.12,48,394/-	2012-2015
3	Development of Magnetoelectric laminated composites for magnetic field sensors and microwave devices	UGC, New Delhi	Rs.9,77,038/-	2011-2014
4	Electric Field Induced Magnetisation Reversal in FM/FE Thin Film Heterostructures	DST SERB CRG, New Delhi	Rs.26,51,000/-	2020-2023
	Co-Investigator			
5	Fabrication of titania nanotubes arrays with polyoxometalates and their photo electrochemical hydrogen generation properties	DST, New Delhi	Rs.31,35,960/-	2012-2015

Research Guidance

No.	Degree	Completed	On-going
1	Ph.D.	4	8
2	M.Phil.	26	2

List of the SCI Journal Publications

49	Impact of non-magnetic BaTiO3 substitution on structure, magnetic, thermal and ferroelectric properties of BiFeO3 ceramics at morphotropic phase boundary P. Esther Rubavathi, Santhi Maria Benoy, K.Baskar, L.Venkidu, M. Veera Gajendra Babu, D.Dhayanithi, N.V.Giridharan and B.Sundarakannan Materials Chemistry and Physics, https://doi.org/10.1016/j.matchemphys.2020.123560
48	Room temperature magnetoelectric coupling in Fe-doped sodium bismuth titanate ceramics D.E. Jain Ruth, Raja Altaf U Rahman, D. Manikandan , L. Venkidu, B. Sundarakannan, PeterSchmid-Beurmann, Peng Zhoud, G. Srinivas and R. Murugan Journal of Alloys and Compounds, 830 (2020) 154679
47	Structure, morphology and magnetodielectric investigations of BaTi1-xFexO3- ceramics P. Esther Rubavathi; L.Venkidu; MVG.Babu; R. Venkat Raman; B. Bagyalakshmi; S. M. Abdul Kader; K Baskar; M. Muneeswaran; N.V. Giridharan; B.Sundarakannan Journal of Materials Science: Materials in Electronics 30 (2019)5706-5717
46	Impact of Ba/Ti ratio on the magnetic properties of BaTiO3 ceramics P.Esther Rubavathi, M.Veera Gajendra Babu, B.Bagyalakshmi, L.Venkidu, D.Dhayanithi, N.V.Giridharan, B.Sundarakannan Vacuum 159 (2019)374-378
45	Room temperature multiferroicity and magnetoelectric coupling in Na-deficient sodium bismuth titanate D.E. Jain Ruth, R.AU Rahman, B.Sundarakanan and Murugan Ramaswamy Applied Physics Letters 114 (2019) 062902
44	Temperature-induced strain mediated magnetization changes in NiFe2O4/BaTiO3 heterostructure B. Bagyalakshmi, N.Lakshminarasimhan, and B. Sundarakannan. Ceramics International, 44 (2018)15099-15103

43	Coexistence of ferroelectric phases and electric filed induced structural transformation in sodium potassium bismuth titanate ceramics M. Veera Gajendra Babu, B. Bagyalakshmi, N. V. Giridharan, D. Dhayanithi, and B. Sundarakannan Journal of Applied Physics, 123 (2018) 234101
42	Structure, microstructure, magnetic and magnetodielectric investigations on BaTi (1-x-y) FexNbyO3 ceramics. L. Venkidu, MVG. Babu, P. Esther Rubavathi, B. Bagyalakshmi, B.Sundarakannan Ceramics International, 44 (2018) 8161-8165
41	Structureproperty relation to enhance the piezoelectric and ferroelectric properties in $(Na_{0.5}\ Bi_{0.5})TiO_3$-based non-MPB lead-free piezoelectric ceramics DE Jain Ruth, L. Venkidu, and B.Sundarakannan J Mater Sci: Mater Electron,29(2018)5433-5438
40	Impact of K-compensation on phase fraction, dielectric permittivity, remnant polarization and piezoelectric constant of sodium potassium bismuth titanate ceramics M. Veera Gajendra Babu, B. Bagyalakshmi and B. Sundarakannan J Mater Sci: Mater Electron, DOI 10.1007/s10854-017-7811-8
39	Investigations on the effect of Ba and Zr co-doping on the structural, thermal, electrical and magnetic properties of $BiFeO_3$ multiferroics S.M. Abdul Kader, D.E. Jain Ruth, M. Veera Gajendra Babu, M. Muneeswaran, N.V. Giridharan, and B. Sundarakannan Ceramics International 43 (2017) 15544 15550
38	Grain size induced monoclinic (Cm) to rhombohedral (R3c) transformation in sodium potassium bismuth titanate ceramics M. Veera Gajendra Babu, B. Bagyalakshmi, D. Pathinettam Padiyan,Y. Ren, and B. Sundarakannan Scripta Materialia 141 (2017) 67 71
37	A correlative study on strain and variation of coercive field in lead-free $(Na0.5Bi0.5)TiO_3$ $Bi(Mg_{0.5}Zr_{0.5})O_3Bi(Mg_{0.5}Ti_{0.5})O_3$ ternary system D. E. Jain Ruth and B. Sundarakannan J Mater Sci: Mater Electron, DOI 10.1007/s10854-017-7486-1
36	Grain size effect on structure and electrical properties of lead-free Na0.4K0.1Bi0.5TiO3 ceramics M. Veera Gajendra Babu, B. Bagyalakshmi, L. Venkidu, B. Sundarakannan Ceramics International 43 (2017) 12599 12604
35	Significant enhancement in magnetization value of the K-doped $0.75BiFeO_330.25\ BaTiO_3$ lead-free multiferroics S.M. Abdul Kader, D.E. Jain Ruth, M. Veera Gajendra Babu, B. Bagyalakshmi, B. Sundarakannan Materials Letters 190 (2017) 270 272
34	Structural and Electrical Properties Bismuth Magnesium Titanate Substituted Lead-free Sodium Bismuth Titanate Ceramics D.E. Jain Ruth, M. Muneeswaran, N.V. Giridharan, and B. Sundarakannan J Mater Sci: Mater Electron 27(2016) 7018 - 7023 (IF:1.569)
33	Enhanced Electrical Properties in Rb-substituted Sodium Bismuth Titanate Ceramics D.E. Jain Ruth, M. Muneeswaran, N.V. Giridharan, and B. Sundarakannan Appl. Phys. A 122 (2016) 502-6p (IF:1.444)
32	Converse Magnetoelectric effect in $NiFe_2O_4/BaTiO_3$ heterostructure by electric field induced interferroelectric phase transition B.Bagyalakshmi, M. Veera Gajendra Babu, B. Sundarakannan, S. Kalavathi, V. Sridharan and G. Amarendra Materials Letters 170 (2015) 48-52 (IF:2.3)
31	Structural and Raman spectroscopi studies of poled lead-free piezoelectric sodium bismuth titanate ceramics D.E. Jain Ruth and B. Sundarakannan Ceramics International, 42 (2016) 4775-4778 (IF:2.6)
30	Structural and electrical properties of (1-x) $(Na_{0.5}Bi_{0.5}TiO_3$ x $Bi(Ma_{0.5}Zr_{0.5})O_3$ lead-free piezoelectric ceramics D.E. Jain Ruth, S.M. Abdul Kader, M. Muneeswaran, N.V. Giridharan D. Pathinettam Padiyan and B. Sundarakannan Ceramics International 42 (2016) 3330-3337 (IF:2.6)

29	Role of strain and lattice distortion on ferroelectric and piezoelectric properties of bismuth magnesium zirconate substituted sodium bismuth titanate D.E. Jain Ruth and B. Sundarakannan J. Material Science: Materials in Electronics, 27(2016)32503257 (IF 1.569)
28	Substitutional effect of bismuth ferrite on the electrical properties of sodium bismuth titanate ceramics D.E. Jain Ruth, S.M. Abdul Kader, M. Muneeswaran, N.V. Giridharan D. Pathinettam Padiyan and B. Sundarakannan J. Material Science: Materials in Electronics, 27 (2016) 407-413 (IF 1.569)
27	Role of rubidium cation substitution in the A-site of sodium bismuth titanate ceramics D.E. Jain Ruth, M. Veera Gajendra Babu, S.M. Abdul Kader, B. Bagyalakshmi, D. Pathinettam Padiyan and B. Sundarakannan J. Material Science: Materials in Electronics, 26 (2015) 6757 (IF 1.569)
26	Isothermal grain growth and effect of grain size on piezoelectric constant of $Na_{0.5}Bi_{0.5}TiO_3$ M. Muthuramalingam, D. E. Jain Ruth, M. Veera Gajendra Babu, N. Ponpandian, D. Mangalaraj and B. Sundarakannan Scripta Materialia 112 (2016) 58-61 (IF 3.224)
25	Enhanced piezoelectric constant and remnant polarisation in K-compensated sodium potassium bismuth titanate M. Veera Gajendra Babu, S.M. Abdul Kader, M. Muneeswaran, N.V. Giridharan, D. Pathinettam Padiyan, and B. Sundarakannan Materials Letters 146 (2015) 81-83 (IF:2.3).
24	Effect of cobalt substitution on the optical properties of bismuth ferrite thin films M. Sharmila, S.M. Abdul Kader, D.E. Jain Ruth, M. Veera Gajendra Babu, B. Bagyalakshmi, R.T. Ananth Kumar, D. Pathinettam Padiyan and B. Sundarakannan Materials Science in Semiconductor Processing 34 (2015) 109-113 (I.F: 1.7).
23	Enhancement in hydrogen generation using bamboo like TiO_2 nanotubes fabricated by a modified two-step anodization technique S.T. Nishanthi, B. Sundarakannan, E. Subramanian, D. Pathinettam Padiyan Renewable Energy 77 (2015) 300-307.
22	An insight into the influence of morphology on the photoelectrochemical activity of TiO_2 nanotube arrays S.T. Nishanthi, E. Subramanian, B. Sundarakannan, D. Pathinettam Padiyan Solar Energy Materials & Solar Cells, 132 (2015) 204209. (IF:5.030)
21	Plasmonic silver nanoparticles loaded titania nanotube arrays exhibiting enhanced photoelectrochemical and photocatalytic activities S.T.Nishanthi, S.Iyyapushpam, B.Sundarakannan, E.Subramanian, D.Pathinettam Padiyan, Journal of Power Sources, 274 (2015) 885-893. (IF: 5.211)
20	Inter-relationship between extent of anatase crystalline phase and photocatalytic activity of TiO_2 nanotubes prepared by anodization and annealing method S.T.Nishanthi, S. Iyyapushpam, B. Sundarakannan, E. Subramanian, D. Pathinettam Padiyan Separation and Purification Technology, 131 (2014) 102-107. (IF:3.065)
19	Significance of crystallinity on the photoelectrochemical and photocatalytic activity of TiO_2 nanotube arrays S.T.Nishanthi, S. Iyyapushpam, B. Sundarakannan, E. Subramanian, D. Pathinettam Padiyan Applied Surface Science, 313 (2014) 449-454. (IF:2.538)
18	Influence of thickness on the optical properties of amorphous $GeSe_2$ thin films: analysis using Raman Spectra, Urbach energy and Tauc parameter R.T. Ananth Kumar, P. Chitra Lekha, B. Sundarakannan and D. Pathinettam Padiyan Philosophical magazine, 92, (2012)1422-1434. (IF 1.825)
17	XPS and Raman Characterisation of Single-Walled Carbon Nanotubes Grown From PretreatedFe_2O_3nanoparticles P.B. Amama, D. Zemlyanov, B. Sundarakannan, R. S. Katiyar and T. Fisher Journal of Physics D: Applied Physics 41, 165306 (2008) (IF 2.721)
16	Raman Scattering investigation of hydrogen and nitrogen ion implanted ZnO thin films J. Kennedy, B. Sundarakannan, R.S. Katiyar, A. Markwitz, Z. Li, and W. Gao Current Applied Physics, 8 (2008) 291-294 (IF 2.212)

15	Raman scattering study of Zr-substituted $Ba_4Ti_3O_{12}$ Ceramics S.R. Das, P. Dobal, B. Sundarakannan, R.R. Das, and R.S. Katiyar J. Raman Spectros. 38 (2007) 1077-1081 (IF 2.671)
14	Low frequency Raman scattering from acoustic phonons confined in ZnO nanoparticles H.K. Yadav, V. Gupta, K. Sreenivas, S.P. Singh, B. Sundarakannan and R.S.Katiyar Phys. Rev. Lett. 97, 085502 (2006) (IF 7.512)
13	Ti and V substitutions in $KNbO_3$ ceramics: Dielectric Study B. Sundarakannan, K. Kakimoto and H. ohsato Ferroelectrics 302, 175 (2004) (IF 0.469)
12	Frequency and temperature dependent dielectric and conductivity behavior of $KNbO_3$ ceramics B. Sundarakannan, K. Kakimoto and H. ohsato Journal Applied Physics 94, 5182 (2003) (IF 2.183)
11	High pressure Raman scattering studies on BaFCl B.Sundarakannan, T.R.Ravindran, R.Kesavamoorthy and S.V.M.Satyanarayana Solid state communication, 124, 385 (2002) (IF 1.897)
10	Antiferroelectric-to-paraelectric transition in BaFCl. B.Sundarakkannan, R.Kesavamoorthy, J.Adelene Nisha, V.Sridharan and T.Sivakumar Physical Review B 57, 11632 (1998) (IF 3.736)
9	Anharmonic behaviour of BaFCl using Raman scattering. B. Sundarakkannan and R. Kesavamoorthy European Physical Journal B 3, 179 (1998) (IF 1.345)
8	Powder diffraction data of BaFCl. R.Kesavamoorthy, G.V.N. Rao, B.Sundarakkannan, G.Ghosh and V.S.Sastry Powder Diffraction, 12, 255 (1997) (IF 0.636)
7	Thermal effect on BaFCl: High-temperature X-ray diffraction. R.Kesavamoorthy, B.Sundarakkannan, G.V.Narasimha Rao, and V.S.Sastry Thermochimica Acta, 307, 185 (1997) (IF 2.184)
6	Raman scattering investigation on heat-treated BaFCl B.Sundarakkannan, R.Kesavamoorthy, N.Dharmarasu and V.S. Sastry Physica Status Solidi (a) 177, 567 (2000) (IF 1.61)
5	Raman scattering studies in H^+ and He^+ implanted n-GaAs N.Dharmarasu, B.Sundarakkannan, R.Kesavamoorthy, K.G.M.Nair and J. Kumar Nuclear Instruments and Methods in Physical Research B 145, 395 (1998) (IF 1.124)
4	Investigations on H+ and He+ implantion effects in n-InP using Raman scattering N.Dharmarasu, B.Sundarakkannan, R.Kesavamoorthy, K.G.M.Nair and J. Kumar Physica B 262, 329 (1999) (IF 1.319)
3	Raman scattering and optical absorption studies on Ar^+ implanted CdS thinfilms K.L.Narayanan, K.P.Vijayakumar, K.G.M.Nair, B.Sundarakkannan, G.V.Narasimha Rao and R. Kesavamoorthy Nuclear Instruments and Methods in Physical Research B 132, 61 (1997) (IF 1.124)
2	Raman scattering studies of oxygen implanted CdS thin films prepared by vacuum evaporation K.L. Narayanan, K.P. Vijayakumar, K.G.M. Nair, B. Sundarakkannan, and R. Kesavamoorthy Nuclear Instruments and Methods in Physical Research, 160, 471(2000) (IF 1.124)
1	Effect of irradiation on the microhardness of the LEC grown semi-insulating GaAs single crystals M.Udhayasankar, S.Arulkumaran, J.Arokiaraj, P.Santhanaraghavan, B.Sundarakkannan, J.Kumar, P.Ramasamy, K.G.M. Nair, P.Magudapathy, N.S. Thampi and K. Krishan Journal of Nuclear Materials 225, 314 (1995). (IF 1.865)