




University Faculty Details Page on DU Web-site

Title	Dr.	First Name	SEVI	Last Name	MURUGAVEL	Photograph
Designation		PROFESSOR				
Department		NORTH CAMPUS, PHYSICS AND ASTROPHYSICS				
Address (Campus) (Residence)		ROOM NO:167, MUTISTORYED BUILDING				
		Flat No. 595, DA Block, Shalimar bagh, Delhi – 110 088				
Phone No (Campus) (Residence) optional						
		011-27606259				
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Fax		011-27667061				
Email		murug at physics dot du dot ac dot in				
Web-Page						
Education						
Subject	Institution	Year	Details			
Ph. D	Indian Institute of Science	1998	Thesis topic: Local structure and transport properties of chalcogenide glasses			
M. Sc	Anna University	1991	Subjects: Materials Science			
B. Sc	University of Madras	1988	Subjects: Physics			
Career Profile						
Organization / Institution	Designation	Duration	Role			
Indian Institute of Science	Research Associate	1998-1999	Research			
Université Pierre et Marie Curie- Paris VI, Paris, France	Post-doctoral Fellow	1999-2000	Research			
University of Muenster, Germany	Alexander von-Humboldt Fellow	2000-2002	Research			
University of Muenster, Germany	Research Associate	2003-Nov'2006	Teaching and Research			
Max-Planck Institute for Solid State Research, Stuttgart, Germany	Guest Scientist	Dec'2006-Oct'2007	Research			
University of Delhi	Reader	Nov'2007-Sep'2010	Teaching and Research			
University of Delhi	Associate Professor	Sep'2010 –Nov'13	Teaching and Research			
University of Delhi	Professor	Nov'2013 – Present	Teaching and Research			
Research Interests / Specialization						
My research includes broadly on experimental condensed matter physics/materials science. In particular, I focus on electrical transport investigations glasses, ion-conducting glasses, glass-ceramics and electrode materials for lithium ion batteries. I also work on design and synthesis of advanced materials for memory device applications.						
Teaching Experience (Subjects/Courses Taught)						
2007- 2010: Advanced Experimental Solid State Physics						
2010 – 2017 : Physical at Nanoscale						

2018 – Advanced Solid State Physics - Experimental
2013- 2016: Computational Physics Laboratory
2010 – Present: Naomaterials Laboratory

Honors & Awards

2000: Alexander von-Humboldt Award, Germany

Publications (LAST FIVE YEARS)

In Indexed/ Peer Reviewed Journals

Year of Publication	Title	Journal	Co-Author
2019	Direct evidence for the influence of lithium ion vacancies on polaron transport in nanoscale LiFePO ₄	Phys. Chem. Chem. Phys., 21, 9858 -9864	A. Banday M. Ali, R. Pandey
	Effect of surfactant concentration on textural characteristics and biomineralization behavior of mesoporous bioactive glasses	Materials Science & Engineering C, 96, 20-29	A. Kumar, A. Aditya
	Correlating oxide ion conductivity with ionic size of dopant and defect structures in ThO ₂ -LnO _{1.5} (Ln=Y, La and Gd) prepared by modified epoxide gel method	Solid State Ionics, 329, 67-73	M. Pokhriyal, M. S. Vikash Kumar Tripathi, , S. Uma, R. Nagarajan
	Alkaline-earth metal based coordination polymers assembled from two different V-shaped ligands: Synthesis, structure, and dielectric properties	Inorganica Chem. Acta, 495, 118940	Balendra, A. Banday, S. Tewari, B. Singh, A. Ramanan
	Strontium-Carboxylate-Based Coordination Polymers: Synthesis, Structure and Dielectric Properties	ChemistrySelect 4, 4756-4766	Balendra, A. Banday, V. Kumar, A. Ramanan
2018	Reversal in the lattice contraction of alpha-Fe ₂ O ₃ nanoparticles	J. Phys. Chem. C 122, 9292-9301	M. Sharma, D. K. Shukla and Frank M. F. De Groot
	Improved dielectric and ferroelectric properties of Mn doped barium zirconium titanate (BZT) ceramics for energy storage applications	J. Phys. Chem. Solids, 117, 158-166	K. M. Sangwan, N. Ahlawat, R. S. Kundu, S. Rani, S. Rani, N. Ahlawat
2017	Nonideal Behavior of Glass and Crystal	J. Phys. Chem.B, 121, 5116-5124	Y. Sharma
	Small polaron hopping conduction mechanism in LiFePO ₄ glass and crystal	J. Appl. Phys., 121, 045111	A. Banday
	Thermal, structural, and defect studies on Pb modified Ge-Se glasses	J. Non-Cryst. Solids, 460 146-152	G. Kalra, M. Upadhyay, S. Abhaya, G. Amarendra
	Mesoporous 45S5 bioactive glass: synthesis, in vitro dissolution and biomineralization behavior	J. Mater. Chem. B, 5, 8786	A. Kumar, A. Aditya and A. R. Boccaccini
	Zinc Chloride Modified Electronic Transport and	Electron. Mater.	S. Dhankhar, R. S.

	Relaxation Studies in Barium-Tellurite Glasses	Lett., 13, 412–419	Kundu, S. Rani, P. Sharma, R. Punia and N. Kishore
	Calcium and Strontium Coordination Polymers Based on Rigid and Flexible Aromatic Dicarboxylates: Synthesis, Structure, Photoluminescence and Dielectric Properties	Chemistry Select, 2, 8567–8576	Balendra, A. Banday, P. K. Kanaujia, G. Vijaya Prakash and A. Ramanan
2016	Influence of lithium vacancies on the polaronic transport in olivine phosphate structure	J. Appl. Phys., 119, 045103	M. Sharma, and R. Shahid
	Synthesis, characterization and AC conductivity of alkali metal substituted telluride glasses	Solid State Ionics 296 54–62	A. K. Yadav, P. A. Jha, P. Singh
	Study of spinel-type ZnNixCo _{2-x} O ₄ nano-particles, Synthesised by thermal decomposition of ternary metal nitrate solutions	Mater. Res. Bull., 460, 93-100	J. Kumar, C.R. Mariappan, V. Kumara, G.V. Prakash
	Direct evidence for phase transition in thin Ge ₁ Sb ₄ Te ₇ films using in situ UV–Vis–NIR spectroscopy and Raman scattering studies	Phys. Status Solidi B 253, 1069–1075	S. Sahu ¹ , S. Kumar Pande, A.Manivannan, U.Prabhakar Rao Deshpande, Vasant G. Sathe, V. Raghavendra
	Electrical conductivity and modulus formulation in zinc modified bismuth boro-tellurite glasses	Indian J Phys 90, 1033–1040	S Dhankhar, R S Kundu, M Dult, R Punia and N Kishore
2015	The role of atomic vacancies on phonon confinement in α -GeTe	AIP Adv. 5, 047127	G. Kalra
	Structural and other physical properties of lithium doped bismuth zinc vanadate semiconducting glassy system	J. Mol. Str. 1079, 189–193	S. Dahiya, R. Punia, A.S. Maan
	DC Conduction and Electric Modulus Formulation of Lithium-Doped Bismuth Zinc Vanadate Semiconducting Glassy System	J. Amer. Ceram. Soc.,98, 2776-2783	S. Dahiya, R. Punia, A. Singh and A.S. Maan
	Temperature and frequency dependent conductivity and electric modulus formulation of manganese modified bismuth silicate glasses	J. Non-Cryst. Solids 423–424, 1-8	M. Dult, R.S. Kundu, J. Hooda, R. Punia, and N. Kishore
	Influence of textural properties on biomineralization behavior of mesoporous bioactive glasses	Biomed. Glasses 1, 1–9	A. Kumar
	Investigation of the intrinsic magnetodielectric	J. Mater. Chem. C,	J. Krishna Murthy,

	effect in La ₂ CoMnO ₆ : role of magnetic disorder	3, 836-843	K. Devi Chandrasekhar, A. Venimadhava
	Structural and other physical properties of lithium doped bismuth zinc vanadate semiconducting glassy system	J. of Mol. Str., 1079, 189-193	S. Dahiya, R. Punia, A.S. Maan

Articles

Nonlinear Ionic Conductivity of Solid Electrolytes, Dielectrics Newsletters, February 2008

Conference Presentations

1. Invited talk in Joint Indo German Workshop on Electrochemical Storage Systems: Synergy of Materials Design and Modelling, IIT Kharagpur during Feb. 17-20, 2016.
2. Invited talk in 2nd National Conference on Materials for Energy Conversion and Storage (MECS-2016) held at Pondicherry University during 11-13, March 2016.
3. Invited talk in the Sustainable Energy Technologies for Smart and Clean cities (SETS&CC) conference to be held at Tirupati, Andhra Pradesh state, India, during July 27-29, 2016.
4. Invited talk in Asian Conference on Solid State Ionics (ACSSI-2016) held in IIT Patna during 27-30 November, 2016.
5. Invited Talk in 11th National conference on Solid state ionics at Department of Physics, Tezpur University 20 – 23rd Dec.2015
6. Delivered invited talk in 1st Joint Meeting of DGG-ACerS GOMD to geather with 10th International Conference on Advances in Fusion and Processing of Glass (AFPG) at Aachen, Germany during 25-30th May 2014.
7. Delivered invited talk in “EMN Fall Meeting” held at University of Central Florida, USA during 07-12th December 2013.
8. Delivered invited talk at IUMRS – ICA 2013, held at IISc, Bangalore during 16th – 20th December 2013.
9. Delivered invited talk at National conference on advanced biomaterials at Vellore Institute of Technology (VIT), Vellore during December 2013.

Total Publication Profile **optional**

Book Chapter:

1. Trends in Biomaterials, Edited by G. P. Kothiyal and A. Srinivasan (Pan Stanford Publishing, 2016)

In Indexed/ Peer Reviewed Journals

70

Conference Presentations

20 conference presentations

Public Service / University Service / Consulting Activity

Not applicable

Professional Societies Memberships
<ul style="list-style-type: none"> • Society of glass technology • International dielectrics society • German Bunsen Society for Physical Chemistry • Energy Science Society of India (ESSI)
Projects (Major Grants / Collaborations)
<ol style="list-style-type: none"> 1. "Electrical transport investigations on advanced materials for energy and information storage applications", funded by DST (2010-2013) 2. "Equipment grant received with an amount of 20,000 Euros from the Alexander von-Humboldt Foundation, Germany" 3. "Transport and dynamics of alkali ions in solid electrolytes with disordered structure" funded by DST (2015-2017) 4. "Microstructure of Phase change memory materials" funded by UGC-DAE-CSR (2014-16) 5. "Investigations on nano structured olivine phosphate cathode materials for advanced energy storage devices" by CSIR (2015-2018)
Other Details
<p>SYNERGISTIC ACTIVITIES: Refereeing in the following Journals:</p> <ul style="list-style-type: none"> • Journal of Non-Crystalline Solids; Chemistry of Materials; Applied Physics Letters; Scientific Reports • Physics and Chemistry of Solids; European Journal of Physics • Physica status solidi; Journal of Materials Science • Bulletin of Materials Science; Mat. Sci. Eng., C • Materials Letters; Journal of Solid state Chemistry

(Signature of Faculty Member)

(Signature & Stamp
of Head of the Department)