

Dr. Davit B. Dhruv

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**General Information And Academic Background:**

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Designation & Institution-	Assistant professor Department of Physics, Saurashtra University, Rajkot
Date of Birth-	October 07, 1987
Gender (M/F/T)-	Male
Category Gen/SC/ST/OBC-	General (GEN)

Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award:-

Degree	Title	Name of guide	Date of Award	University
Ph. D.	“STUDIES ON STRUCTURAL TRANSPORT, ELECTRONIC AND MAGNETIC PROPERTIES OF FUNCTIONAL OXIDE”	Prof.N.A.Shah	24-07-2015	Saurashtra University, Rajkot

Period of teaching experience: - P.G. Classes (in years):- **8 year & 6 months**

U.G. Classes (in years):- **4 years & 6 months**

Research Experiences (Excluding Ph.D) : - 9 Years & 8 months

Fields of Specialization under the Subject:-

- Physics
- Applied Physics
- Material Science
- Nano Science
- Functional Oxide Materials

Research publications: -

Sr no	Authors	Title	Name of Journal	Volume	Page	ISSN NO	Doi	Year
1.	Davit Dhruv , RK Trivedi, Bhumika Nimavat, Sanjay Kansara, DD Pandya, MJ Keshvani, PS Solanki, Bharat Kataria, DG Kuberkar, NA Shah	Structure-property correlations in monovalent mixed oxide $\text{La}_{1-x}\text{K}_x\text{MnO}_3$ ($0.0 \leq x \leq 0.3$) manganites	Solid State Physics	1512	928-929	978-0-7354-1133-3	:https://doi.org/10.1063/1.4791344	2013
2.	Zalak Joshi, Davit Dhruv , N.A. Shah	Effect of Sintering Temperature on Current – Voltage Characteristics of Nanostructured Manganites	Journal of Nanoscience, Nanoengineering and Applications	4	1	2231-1777		2014
3.	Zalak Joshi, Davit Dhruv , Sanjay Kansara, Megha Vagadia, Nishant Barot, PK Mehta, PS Solanki, DG Kuberkar, NA Shah	Dielectric behavior of nanostructured: $\text{Y}_{0.95}\text{Ca}_{0.05}\text{MnO}_3$ Role of sintering temperature	AIP Conference Proceedings	1591	1306 - 1308		http://dx.doi.org/10.1063/1.4872939	2014
4.	Davit Dhruv , Zalak Joshi, Ashish Ravalia, Sanjay	I-V and C-V characteristics of	Solid State Physics	1591	1309 - 1311		10.1063/1.4872940	2014

	Kansara, DD Pandya, PS Solanki, DG Kuberkar, NA Shah	$Y_{0.95}Ca_{0.05}MnO_3/S$ i film						
5.	S.B. Kansara, Davit Dhruv , Bharat Kataria, C.M. Thaker, S. Rayaprol, C.L. Prajapat, M.R. Singh, P.S. Solanki, D.G. Kuberkar, N.A. Shah	Structural, Transport and Magnetic Properties of Monovalent Doped $La_{1-x}Na_xMnO_3$ Manganites	Ceramics International	41	7162-717	0272-8842		2015
6.	S.B. Kansara, Davit Dhruv , Zalak Joshi, D.D. Pandya, S. Rayaprol, P.S. Solanki, D.G. Kuberkar, N.A. Shah	Structure and Microstructure Dependent Transport and Magnetic Properties of Sol-Gel Grown Nanostructured $La_{0.6}Nd_{0.1}Sr_{0.3}MnO_3$ Manganites: Role of Oxygen	Applied Surface Science	356	1272-1281	0169-4332		2015
7.	Chirag Savaliya, KN Rathod, Davit Dhruv , JH Markna	Preparation of nanostructured copper oxide rods using advanced sonication method	International Journal of Nanoscience and Nanoengineering	2	27-31			2015
8.	J.H. Markna, Davit Dhruv , K.N. Rathod, Chirag Savaliya, T.M. Shiyani, D.D. Pandya, A.D. Joshi, N.A. Shah	Charge trap mechanism in hybrid nanostructured ($YMnO_3$) metal-oxide-semiconductor (MOS) devices	Journal of Nano Research	42	92	1661-9897	10.4028/www.scientific.net/JNanoR.42.92	2016

9.	Davit Dhruv , Zalak Joshi, Sanjay Kansara, D.D. Pandya, J.H. Markna, K. Asokan, P.S. Solanki, D.G. Kuberkar, N.A. Shah	Temperature–Dependent I–V and C–V Characteristics of Chemically–Grown $Y_{0.95}Ca_{0.05}MnO_3/Si$ Thin Films	Materials Research Express	3	0364 02:1 –9	2053-1591	10.1088/2053-1591/3/3/036402	2016
10.	KinnariThakrar, Davit Dhruv , K.N. Rathod, Zalak Joshi, KevalGadani, D.D. Pandya, J.H. Markna, B.R. Kataria, P.S. Solanki, D.G. Kuberkar, N.A. Shah	Size–Controlled Electrical Properties of Sol–Gel Grown Nanostructured $Gd_{0.95}Ca_{0.05}MnO_3$	Journal of Sol–Gel Science and Technology	79	144-150	0928-0707	10.1007/s10971-016-4031-2	2016
11.	KevalGadani, Davit Dhruv , Zalak Joshi, HetalBoricha, K.N. Rathod, M.J. Keshvani, N.A. Shah, P.S. Solanki	Transport Properties and Electroresistance of a Manganite Based Heterostructure: Role of the Manganite – Manganite Interface, 18 (2016) 17740–17749	Physical Chemistry Chemical Physics	18	1774 0-1774 9	1463-9084	10.1039/c6cp02053d	2016
12.	Zalak Joshi, D.D. Pandya, Davit Dhruv , KevalGadani, HetalBoricha, Sanjay Kansara, J.H. Markna, P.S. Solanki, N.A. Shah	Investigations on Structural–Disorder Induced Modifications in the Transport Behavior of Rare–Earth Manganites	Bulletin of Materials Science	39	1109 – 1117	0973-7669	10.1007/s12034-016-1230-y	2016
13.	Davit Dhruv , Zalak Joshi, Sanjay Kansara, M.J. Keshvani, D.D.	Investigations on Device Characteristics of Chemically	Advanced Science Letters	22	843–848	1936-6612		2016

	Pandya, K. Asokan, P.S. Solanki, D.G. Kuberkar, N.A. Shah	Grown Nanostructured $Y_{0.95}Ca_{0.05}MnO_3/S$ i Junctions,						
14.	Rupeshkumar V Ramani, Bharat M Ramani, Anjana D Saparia, Davit Dhruv , Jaysukh Markna	Synthesis and optical characterization of CuO nanoparticles on solar borosilicate glass	Journal of Nano Research	37	68- 73	1661- 9897,	10.4028/w ww.scienti fic.net/JN anoR.37.6 8	2016
15.	Keval Gadani, Davit Dhruv , Zalak Joshi, Hetel Boricha, Eash Vaghela, DD Pandya, NA Shah, PS Solanki	Zener double exchange polynomial law for metallic region of $La_{1-x}K_xMnO_3$ manganites	AIP Conferenc e Procedin gs	1728	0205 16- 1– 0205 16-4		http://dx.d oi.org/10. 1063/1.49 46567	2016
16.	Zalak Joshi, Davit Dhruv , Keval Gadani, Hetel Boricha, DD Pandya, PS Solanki, NA Shah	Effect of sintering temperature on the structural and electrical properties of $Zn_{0.95}Cr_{0.05}O$	AIP Conferenc e Procedin gs	1728	0205 21- 1– 0205 21-4		http://dx.d oi.org/10. 1063/1.49 46572	2016
17.	Hetal Boricha, Davit Dhruv , Zalak Joshi, Alpa Zankat, DD Pandya, AD Joshi, PS Solanki, NA Shah	K-substitution induced electrical band gap engineering in $La_{1-x}K_xMnO_3$ manganites	AIP Conferenc e Procedin gs	1728			10.1063/1. 4946574	2016
18.	Hetal Boricha, Zalak Joshi, Davit Dhruv , KN Rathod, Keval Gadani, DD Pandya, Sanjay Kansara, CM Thaker, S Rayaprol, PS Solanki, NA Shah	Charge transport mechanisms in monovalent doped mixed valent manganites	Advanced Materials Procedin gs	1	96- 103		10.5185/a mp.2016/1 17	2016
19.	Jaydeep G Chavda, Rushit Trivedi, Charmy Patel, Davit	A novel of enhanced bandwidth using	Int. J. Curr. Res.	3	1-6	2456- 0979		2016

	Dhruv , Ashwini D Joshi, NA Shah, JK Bhimani	stacked microstrip patch antenna	Multidisci p.					
20.	Davit Dhruv , Zalak Joshi, Keval Gadani, Hetal Boricha, DD Pandya, PS Solanki, AD Joshi	Investigations on rectifying behavior of Y { 0.95} Ca {0.05} MnO {3}/Si junction	AIP Conferenc e Proceedin gs	1728			https://doi. org/10.10 63/1.4946 576	2016
21.	Jay Pala, Meet Mordiya, Dhruv Virpariya, Ankita Dangodara, Pinal Gandha, Chirag R Savaliya, Joyce Joseph, Tulshi Shiyani, Davit Dhruv , JH Markna	Analysis and design optimization of organic dye sensitized solar cell based on simulation	AIP Conferenc e Proceedin gs	1837			http://dx.d oi.org/10. 1063/1.49 82082	2017
22.	Davit Dhruv , Zalak Joshi, Sapana Solanki, Khushal Sagapariya, Pratima Makwana, SB Kansara, AD Joshi, DD Pandya, PS Solanki, NA Shah	Temperature dependent dielectric behavior of sol–gel grown Y0. 95Ca0. 05MnO3/Si junctio	AIP Conferenc e Proceedin gs	1837			http://dx.d oi.org/10. 1063/1.49 82140	2017
23.	Solanki Sapana, Davit Dhruv , Zalak Joshi, Keval Gadani, KN Rathod, Hetal Boricha, VG Shrimali, RK Trivedi, AD Joshi, DD Pandya, PS Solanki, NA Shah	Studies on structural and electrical properties of nanostructured RMnO3 (R= Gd & Ho)	AIP Conferenc e Proceedin gs	1837			: http://dx.d oi.org/10. 1063/1.49 82113	2017
24.	Mahesh Chauhan, Davit Dhruv , SA Solanki, Nikesh Shah	Theoretical and Experimental Analysis of Monocrystalline Solar Cell	Kalpa Publicatio ns in Engineeri ng	1	478- 484			2017

25.	Keval Gadani, M.J. Keshvani, Davit Dhruv , Hetal Boricha, K.N. Rathod, Pooja Prajapati, A.D. Joshi, D.D. Pandya, N.A. Shah, P.S. Solanki	Low Field Magnetoelectric and Magneto transport Properties of Sol–Gel Grown Nanostructured LaMnO ₃ Manganites	Journal of Alloys and Compounds	719	47–57	0925-8388	http://dx.doi.org/10.1016/j.jallcom.2017.05.165	2017
26.	Davit Dhruv , Zalak Joshi, KevalGadani, Sapana Solanki, J.H. Markna, A.D. Joshi, K. Asokan, P.S. Solanki, N.A. Shah	Transport Properties of Y _{0.95} Ca _{0.05} MnO ₃ /Si Thin Film Junction	Physica B: Condensed Matter	518	33–38	0921-4526	http://dx.doi.org/10.1016/j.physb.2017.05.016	2017
27.	K.N. Rathod, KinnariThakrar, KevalGadani, Zalak Joshi, Davit Dhruv , HetalBoricha, Sanjay Kansara, D.D. Pandya, K. Asokan, P.S. Solanki, N.A. Shah	Structural, Microstructural and Dielectric Behavior of Sol–Gel Grown Nanostructured Y _{0.95} Zr _{0.05} MnO ₃	Materials Chemistry and Physics	198	200–208	0254-0584	http://dx.doi.org/10.1016/j.matchemphys.2017.06.004	2017
28.	K.N. Rathod, Davit Dhruv , KevalGadani, HetalBoricha, Sapana Solanki, A.D. Joshi, D.D. Pandya, K. Asokan, P.S. Solanki, N.A. Shah,	Comparison of Charge Transport Studies of Chemical Solution and Pulsed Laser Deposited Manganite–Based Thin Film Devices	Applied Physics A	123	558:1–8	0947-8396	10.1007/s00339-017-1172-2	2017
29.	D.D. Pandya, Zalak Joshi, Davit Dhruv , KevalGadani, HetalBoricha, K.N. Rathod, Sanjay	Structural and Transport Studies on Mixed Valent Rare Earth	Transactions on Indian Ceramic Society	76	1–6		10.1080/0371750X.2017.1296784	2017

	Kansara, J.H. Markna, P.S. Solanki, N.A. Shah	Manganite Ceramics						
30.	Keval Gadani, M.J. Keshvani, BhargavRajyaguru, Davit Dhruv , B.R. Kataria, A.D. Joshi, K. Asokan, N.A. Shah, P.S. Solanki	Current–Voltage Characteristics and Electroresistance in LaMnO_3 – $\delta\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ / LaAlO_3 Thin Film Composites,	Physical Chemistry Chemical Physics	19	2929 4– 2930 4	1463- 9084	10.1039/c 7cp03187 d	2017
31.	V.G. Shrimali, K.N. Rathod, Davit Dhruv , AlpaZankat, KhushalSagapariya, Sapana Solanki, P.S. Solanki, N.A. Shah, B.R. Kataria	Magnetoelectric Properties of Co– doped BiFeO_3 Nanoparticles	Internatio nal Journal of Modern Physics B	32	1850 143: 1–9	0217- 9792	: 10.1142/S 02179792 18501436	2018
32.	Zalak Joshi, Davit Dhruv , K.N. Rathod, J.H. Markna, A. Satyaprasad, A.D. Joshi, P.S. Solanki, N.A. Shah	Size Effects on Electrical Properties of Sol– Gel Grown Chromium Doped Zinc Oxide Nanoparticles	Journal Materials Science Technolog y	34	488– 495	1005- 0302	https://doi. org/10.10 16/j.jmst.2 017.01.02 0	2018
33.	K.N. Rathod, Zalak Joshi, Davit Dhruv , KevalGadani, HetelBoricha, A.D. Joshi, P.S. Solanki, N.A. Shah, 5	Size Effects on Electrical Properties of Chemically Grown Zinc Oxide Nanoparticles	Materials Research Express	5	0350 40:1 –10	2053- 1591	https://doi. org/10.10 88/2053- 1591/aab5 ec	32018
34.	Zalak Joshi, Davit Dhruv , K.N. Rathod, HetelBoricha, KevalGadani, D.D. Pandya, A.D. Joshi,	Low Field Magnetoelectric Studies on Sol– Gel Grown Nanostructured	Progress in Solid State Chemistry	49	23- 36	0079- 6786	https://doi. org/10.10 16/j.progs olidstche m.2017.12 .001	2018

	P.S. Solanki, N.A. Shah	YMnO ₃ Manganites						
35.	Zalak Joshi, Davit Dhruv , KN Rathod, Keval Gadani, AD Joshi, PS Solanki, NA Shah	Magnetoelectric properties of nanostructured YMnO ₃ prepared by sol–gel technique	Materials Today: Proceedings	5	9922 - 9926	2214-7853		2018
36.	Keval Gadani, KN Rathod, Zalak Joshi, Davit Dhruv , AD Joshi, K Asokan, NA Shah, PS Solanki	Effect of swift heavy ion irradiation on dielectric properties of manganite based thin films	Materials Today: Proceedings	5	9916 - 9921	2214-7853		2018
37.	KN Rathod, Keval Gadani, Zalak Joshi, Davit Dhruv , K Asokan, PS Solanki, NA Shah	Transport properties of calcium doped YMnO ₃ thin film	Materials Today: Proceedings	5	9804 - 9810	2214-7853		2018
38.	N. A. Shah Davit Dhruv , P. S. Solanki	Investigations on Structural, Optical And Electrical Property of Chemically Grow ZnO-CdO Nano Composite	International Journal of Emerging Technology and Advanced Engineering	8	273 - 275			2018
39.	Meet A Moradiya, AnkitaDangodara, Jay Pala, Chirag R Savaliya, Davit Dhruv , V.R. Rathod, A.D Joshi, N.A. Shah, D.D. Pandya, J.H. Markna	A natural tomato slurry as a photosensitizer for dye–sensitized solar cells with TiO ₂ /CuO composite thin films	Separation Science and Technology	54	207			2019

40.	Bhagyashree Udeshi, Hetel Boricha, Bhargav Rajyaguru, Keval Gadani, K.N. Rathod, Davit Dhruv , S.B. Kansara, R.K. Trivedi, D.D. Pandya, K. Asokan, P.S. Solanki, N.A. Shah	Electrical Behavior and Structure– Property Correlations in $\text{La}_{1-x}\text{Pr}_x\text{MnO}_3$ ($0 \leq x \leq 1$) Ceramics	Ceramics Internatio nal	45	1098 - 1109	0272- 8842	https://doi.org/10.1016/j.ceramint.2018.09.291	2019
41.	Khushal Sagapariya, Keval Gadani, K.N. Rathod, Zalak Joshi, Hetel Boricha, Davit Dhruv , M.J. Keshvani, Bhargav Rajyaguru, S.B. Kansara, A.D. Joshi, K. Asokan, P.S. Solanki, N.A. Shah	Charge Transport in Chemically Grown Manganite Based Heterostructure	Materials Chemistry and Physics	224	229– 237	0254- 0584	https://doi.org/10.1016/j.matchemphys.2018.12.020	2019
42.	M.V. Kanani, Davit Dhruv , H.K. Rathod, BhargavRajyaguru, A.D. Joshi, P.S. Solanki, N.A. Shah, (2019)	Investigations on Structural, Optical and Electrical Property of ZnO– CuO Core–Shell Nano–Composite	Scripta Materialia	165	25– 28	1359- 6462	https://doi.org/10.1016/j.scriptamat.2019.01.027	2019
43.	Keval Gadani, K.N. Rathod, Davit Dhruv , Hetel Boricha, Khushal Sagapariya, A.D. Joshi, D.D. Pandya, K. Asokan, P.S. Solanki, N.A. Shah	Defect Dynamics in the Resistive Switching Characteristics of $\text{Y}_{0.95}\text{Sr}_{0.05}\text{MnO}_3$ Films Induced by Electronic Excitations	Journal of Alloys and Compoun ds	788	819– 830	0925- 8388	https://doi.org/10.1016/j.jallcom.2019.02.221	2019
44.	Pratima Makwana, Davit Dhruv , Sapana Solanki,	Modifications in Structural, Optical and Electrical	Journal of Sol–Gel Science	89	866– 875	0928- 0707	https://doi.org/10.1007/s10971	2019

	HetalBoricha, A. Satyaprasad, M. Ranjan, P.S. Solanki, N.A. Shah	Properties of Nanocrystalline CdO: Role of Sintering Temperature	and Technology				-018-4876-7 ORIGINAL PAPER: NANO-STR	
45.	K.N. Rathod, Keval Gadani, Davit Dhruv , HetalBoricha, Alpa Zankat, A.D. Joshi, J.P. Singh, K.H. Chae, K. Asokan, P.S. Solanki, N.A. Shah	Investigations on the Electronic Excitations Through Spectroscopic Measures for Resistive Switching Character of Manganite Thin Films,	Physica Status Solidi B	256	1900 264: 1–9	1521-3951.	DOI: 10.1002/pssb.201900264	2019
46.	Manan Gal, KevalGadani, Davit Dhruv , Zalak Joshi, AlpaZankat, BhargavRajyaguru, A.D. Joshi, K. Asokan, P.S. Solanki, N.A. Shah	Thermionic Emission Driven Resistive Switching Behavior in Ca and Sr Doped YMnO ₃ Thin Film Devices	Solid State Communications	303–304	1137 37:1–8	0038-1098	https://doi.org/10.1016/j.ssc.2019.113737	2019
47.	K.N. Rathod, KevalGadani, HetalBoricha, KhushalSagapariya, Ajay Vaishnani, Davit Dhruv , A.D. Joshi, J.P. Singh, K.H. Chae, K. Asokan, P.S. Solanki, N.A. Shah	Extraction of Switching Parameters for Sr–Doped YMnO ₃ Thin Film	Physica Status Solidi A	216	1900 780: 1–5	1862-6300	DOI: 10.1002/pssa.201900780	2019

48.	V.G. Shrimali, KevalGadani, BhargavRajyaguru, HardikGohil, D.K. Chudasama, Davit Dhruv , A.D. Joshi, D.D. Pandya, P.S. Solanki, N.A. Shah	Size Dependent Dielectric, Magnetic, Transport and Magnetodielectric Properties of $\text{BiFe}_{0.98}\text{Co}_{0.02}\text{O}_3$ Nanoparticles	Journal of Alloys and Compoun ds	817	1526 85:1 –12	0925- 8388	https://doi.org/10.1016/j.jallcom.2019.152685	2020
49.	V.G. Shrimali, KevalGadani, BhargavRajyaguru, HimanshuDadhich, VivekPachchigar, Davit Dhruv , A.D. Joshi, M. Ranjan, P.S. Solanki, N.A. Shah	Effects of Annealing Treatment on Microstructure, Electrical and Magnetodielectric Properties of $\text{BiFe}_{0.98}\text{Co}_{0.02}\text{FeO}_3$ /Al–Doped ZnO Layered Thin Films Prepared by Chemical Solution Deposition	Journal of Alloys and Compoun ds	827	1542 78:1 –12	0925- 8388	https://doi.org/10.1016/j.jallcom.2020.154278	2020
50.	Bhagyashree Udeshi, Keval Gadani, K.N. Rathod, Hetal Boricha, V.G. Shrimali, Sapana Solanki, Alpa Zankat, V.S. Vadgama, Manan Gal, Davit Dhruv , A.D. Joshi, R.K. Trivedi, P.S. Solanki, N.A. Shah	Effect of Annealing Environments on Structural and Electrical Properties of $\text{La}_{0.5}\text{Nd}_{0.5}\text{MnO}_3$ Manganites	Materials Chemistry and Physics	247	1228 33:1 –8	0254- 0584	https://doi.org/10.1016/j.matchemphys.2020.122833	2020
51.	Sapana Solanki, Davit Dhruv , HetelBoricha, AlpaZankat, K.N. Rathod, BhargavRajyaguru, R.K. Trivedi, A.D.	Charge Transport Mechanisms and Magnetoresistanc e Behavior of $\text{La}_{0.6}\text{Pr}_{0.1}\text{Ca}_{0.3}\text{MnO}_3$ Manganite	Journal of Solid State Chemistry	288	1214 46:1 –11	0022- 4596	https://doi.org/10.1016/j.jssc.2020.121446	2020

	Joshi, S. Mukherjee, P.S. Solanki, N.A. Shah							
52.	Keval Gadani, K.N. Rathod, V.G. Shrimali, Bhargav Rajyaguru, Bhagyashree Udeshi, V.S. Vadgama, Davit Dhruv , A.D. Joshi, D.D. Pandya, K. Asokan, P.S. Solanki, N.A. Shah,	Effect of 200 MeV Ag ⁺¹⁵ Ion Irradiation on Structural, Microstructural and Dielectric Properties of Y _{0.95} Sr _{0.05} MnO ₃ Manganite Films	Solid State Communi cations	318	1139 75:1 –8	0038- 1098	https://doi. org/10.10 16/j.ssc.20 20.113975	2020
53.	Hetal Boricha, S.B. Kansara, Bhargav Rajyaguru, Sapana Solanki, K.N. Rathod, Davit Dhruv , P.S. Solanki, N.A. Shah	Charge Conduction Mechanisms and MR Behavior of Sol–Gel Grown Nanostructured La _{0.6} Nd _{0.1} Sr _{0.3} Mn O ₃ Manganites	Bulletin of Materials Science	43	252: 1–12	0250- 4707	https://doi. org/10.10 07/s12034 -020- 02220-5 Sadhana(0 12345678 9(),- volV)FT3](012345 6789(),- volV)	2020
54.	K.N. Rathod, KevalGadani, Davit Dhruv , V.G. Shrimali, Sapana Solanki, A.D. Joshi, J.P. Singh, K.H. Chae, K. Asokan, P.S. Solanki, N.A. Shah	Effect of Oxygen Vacancy Gradient on Ion–Irradiated Ca–Doped YMnO ₃ Thin Films	Journal of Vacuum Science and Technolog y B	38	0622 08:1 –10	2166- 2746	10.1116/6. 0000507	2020
55.	KevalGadani, K.N. Rathod, Davit Dhruv , V.G. Shrimali, BhargavRajyaguru,	Defects Induced Resistive Switching Behavior in Ca Doped YMnO ₃ –	Materials Science in Semicond ucting	121	1053 47:1 –14	1369- 8001	https://doi. org/10.10 16/j.mssp. 2020.1053 47	2021

	Joyce Joseph, A.D. Joshi, D.D. Pandya, K. Asokan, P.S. Solanki, N.A. Shah	Based Non-Volatile Memory Devices Through Electronic Excitations	Processing					
56.	Davit Dhruv , V.G. Shrimali, KannariThakrar, Zalak Joshi, Sapana Solanki, A.D. Joshi, P.S. Solanki, N.A. Shah	Investigations on the Electrical Properties of Sol-Gel Grown Nanostructured GdMnO ₃	Ferroelectrics	571	230–237	0015-0193	https://doi.org/10.1080/00150193.2020.1853758	2021
57.	Amiras Donga, K.N. Rathod, KevalGadani, Davit Dhruv , V.G. Shrimali, A.D. Joshi, K. Asokan, P.S. Solanki, N.A. Shah	Thermal Effects on Resistive Switching in manganite – Silicon Thin Film Device	Bulletin of Materials Science	44	71:1–12	0250-4707	https://doi.org/10.1007/s12034-021-02357-x	2021
58.	Hetal Boricha, Keval Gadani, K.N. Rathod, V.G. Shrimali, Sapana Solanki, Khushal Sagapariya, Alpa Zankat, Davit Dhruv , A.D. Joshi, D.D. Pandya, S. Mukherjee, P.S. Solanki, N.A. Shah	Resistive and Magnetoresistance Behaviors of BiFeO ₃ Incorporated La _{0.7} Ca _{0.3} MnO ₃ Composites	Materials Chemistry and Physics	267	124605:1–11	0254-0584	https://doi.org/10.1016/j.matchemphys.2021.124605	2021
59.	K.N. Rathod, Hetal Boricha, KhushalSagapariya, BharaviHirpara, Davit Dhruv , A.D. Joshi, D.D. Pandya, J.P. Singh, K.H. Chae, K. Asokan,	Probing Charge Transport in Manganite Film Through Switching Parameters	Current Applied Physics	28	98–103	1567-1739	https://doi.org/10.1016/j.cap.2021.05.002	2021

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60.	Akshay Surani, Davit Dhruv , Divyarajsinh Zala, D.K. Chudasama, Kush Vachhani, Faizal Mirza, Himanshu Dadhich, P.S. Solanki, N.A. Shah, A.D. Joshi	Investigations on structural, microstructural and electrical properties of sol-gel spin coated Bi _{0.85} La _{0.15} FeO ₃ thin film	Physica B: Physics of Condensed Matter	639	4139 82:1 –10	0921-4526	https://doi.org/10.1016/j.physb.2022.413982	2022
61.	Divyarajsinh Zala Davit Dhruv , Faizal Mirza, Neeta A. Bhammar, HardikGohil, Himanshu Dadhich, Alpa Zankat, K.N. Rathod, Sanjay Kansara, A.D. Joshi, P.S. Solanki, N.A. Shah	Preparation and characterization of CdO-ZnO core shell nano particles: Prepared by two step wet chemical method	Optical Materials	131	1126 84	0925-3467/	https://doi.org/10.1016/j.optmat.2022.112684	2022
62.	Sangita Chavda, NehanshiLimbasiya, Poonam Vamja, Ajay Vaishnani, Kush Vachhani, Bharavi Hirpara, Manjula Kandoliya, Keval Gadani, Davit Dhruv , A. D. Joshi, P. S. Solanki, N. A. Shah	Studies on optical and electrical properties of CdO/Al ₂ O ₃ composites	Journal of Sol-Gel Science and Technology	104	169-177	0928-0707	https://doi.org/10.1007/s10971-022-05921-x	2022
63.	Smit Kacha, Siddharth Shah, Davit Dhruv	Investigating characteristics of expansive soil of Rajkot modified	Materials Today: Proceedings	63	314-319	2214-7853	https://doi.org/10.1016/j.matpr.2022.03.141	2022

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64.	Khushal Sagapariya, Davit Dhruv , Bhagyashree Udeshi, DD Pandya, AD Joshi, PS Solanki, NA Shah	Irradiation effect on structural and electrical properties of YMnO ₃ /ITO/glass thin film	Materials Today Communications	36		2352-4928	https://doi.org/10.1016/j.mtcomm.2023.106806	2023
65.	Bhargav Rajyaguru, Keval Gadani, Davit Dhruv , V Ganesan, K Asokan, NA Shah, PS Solanki	Tunable resistive nature of LaMnO ₃ /Nd _{0.7} Sr _{0.3} MnO ₃ interfaces: Role of swift heavy ion irradiation	Ceramics International	49	23912-23939	0272-8842	https://doi.org/10.1016/j.ceramint.2023.04.242	2023
66.	DK Chudasama, VG Shrimali, Ajay Vaishnani, CM Panchasara, NisargRaval, Urvashi Jambukiya, A Amouri, Davit Dhruv , AD Joshi, PS Solanki, NA Shah, DD Pandya	Investigation on Structural, optical and electrical properties of BiFeO ₃ : ZnO nano-micro particles-matrix composite	Journal of Alloys and Compounds	960	170771	0925-8388	https://doi.org/10.1016/j.jallcom.2023.170771	2023
67.	DK Chudasama, VG Shrimali, Sangita Chavda, Payal Joshi, Urvashi Jambukiya, VS Vadgama, Davit Dhruv , PS Solanki, AD Joshi, NA Shah, DD Pandya	Characterization of BiFeO ₃ -Al ₂ O ₃ nano-composites: A study of structural, microstructural, electrical, and magnetic properties	Journal of Alloys and Compounds	965	171510	0925-8388	https://doi.org/10.1016/j.jallcom.2023.171510	2023
68.	Urvashi Jambukiya, Mayur Parmar, Neeta A Bhammar, KN Rathod, Debashish	Investigation on various properties of Dy _{0.7} Ca _{0.3} MnO ₃ : TiO ₂	Journal of Alloys and	967	171532	0925-8388	https://doi.org/10.1016/j.jallcom.2023.171532	2023

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69.	VR Chandegara, Payal Joshi, Sangita Chavda, HM Oza, Mayur Parmar, Davit Dhruv , PS Solanki, DD Pandya, AD Joshi, NA Shah, RK Trivedi	Studies on properties of green synthesised CuO/ZnO nano particle/nano rod composites in PVA matrix	Optical Materials	145	1143 69	0925- 3467	https://doi.org/10.1016/j.optmat.2023.114369	2023
70.	Bhargav Rajyaguru, KevalGadani, MJ Keshvani, Davit Dhruv , AD Joshi, K Asokan, RJ Choudhary, DM Phase, NA Shah, PS Solanki	Enormous electroresistance and field effect studies on LaMnO ₃ - δ /LaO. 7CaO. 3MnO ₃ /LaAlO ₃ manganite- manganite composite structure	Materials Research Bulletin	170	1125 48	0025- 5408/	https://doi.org/10.1016/j.materresbull.2023.112548	2024
71.	Manan Gal, Mayur Parmar, Payal Joshi, Sangita Chavda, CM Panchasara, Neeta A Bhammar, PS Solanki, Davit Dhruv , AD Joshi, NA Shah	Electrical and surface properties of chemically deposited SrTiO ₃ films on ITO/glass substrate	Chemical Physics		1123 63	0301- 0104	https://doi.org/10.1016/j.chemphys.2024.112363	2024
72.	Nisarg Raval, Bharavi Hirpara, CM Panchasara, Bhargav Rajyaguru, MR Gonal, Davit Dhruv , AD Joshi, PS Solanki, NA Shah	Investigations on structural and electrical properties of YMnO ₃ based mixed valent manganites	Chemical Physics Letters		1414 11	0009- 2614	https://doi.org/10.1016/j.cplett.2024.141411	2024
73.	Keval Gadani, Faizal Mirza, Davit Dhruv ,	Charge transport studies on pulsed	Applied Physics A	130	278			2024

	K Asokan, PS Solanki, NA Shah, AD Joshi	laser deposited grown manganite based thin film device						
74.	Bhargav Rajyaguru, Keval Gadani, Himanshu Dadhich, Davit Dhruv , V Ganesan, K Asokan, NA Shah, PS Solanki	Influence of swift heavy ion irradiation on charge transport and conduction mechanisms across the interface of LaMnO ₃ and La _{0.7} Ca _{0.3} MnO ₃ manganites	Ceramics International	50	1661 5-1663 8	0272-8842	https://doi.org/10.1016/j.ceramint.2024.02.151	2024
75.	Hardik Gohil, Keval Gadani, Hetal Boricha, Bhargav Rajyaguru, Himanshu Dadhich, Nisarg Raval, Davit Dhruv , VR Rathod, NP Barde, PP Bardapurkar, RJ Gohel, K Asokan, NA Shah, PS Solanki	Sensing characteristics and EPIR Studies on composite manganites: Role of nanoparticles in the micron sized matrix lattice	Materials Research Bulletin	173	1126 80	0025-5408	https://doi.org/10.1016/j.materresbull.2024.112680	2024
76.	Keval Gadani, Faizal Mirza, Davit Dhruv , AD Joshi, K Asokan, PS Solanki, NA Shah	Thickness dependent structural and electrical properties of pulsed laser deposited Y _{0.95} Ca _{0.05} MnO ₃ thin films and the effect of high energy oxygen ion irradiation	Applied Physics A	130	716	0947-8396	https://doi.org/10.1007/s00339-024-07886-w	2024

77.	Shivani Punj, Rajib Mondal, Souvik Chatterjee, Davit B Dhruv , Ashok Kumar, Alesh Kumar, Jashandeep Singh	Structural, magnetic, dielectric properties of double perovskite- La ₂ NiFeO ₆ synthesized by wet chemical route	Applied Physics A	131	109	0947-8396	https://doi.org/10.1007/s00339-024-08212-0	2025
78.	HK Rathod, Davit Dhruv , MV Kanani, Alpa Zankat, RK Trivedi, AD Joshi, PS Solanki, NA Shah	Investigation on optical illumination effect on transport properties and resistive switching of polycrystalline BiFeO ₃ /ITO heterojunction	Chemical Physics		112782	0301-0104	https://doi.org/10.1016/j.chemphys.2025.112782	2025
79.	Krutik Joshi, VR Chandegara, HC Kamdar, Sangita Chavda, Urvashi Jambukiya, Ajay Vaishnani, Jaspreet Singh, Neeta A Bhammar, PS Solanki, Davit Dhruv , NA Shah	Structural, Electrical, and Optical Studies of sol-gel synthesized nanostructured NiO in micro ZnO matrix	Next Research		100461	3050-4759	https://doi.org/10.1016/j.nexres.2025.100461	2025
80.	Nisarg Raval, Himriti Trivedi, CM Panchasara, Bhargav Rajyaguru, Keval Gadani, Davit Dhruv , AD Joshi, PS Solanki, NA Shah	Positive colossal electroresistance and field effect studies of bilayered metal oxide/manganite p-n junction heterostructure under different measurement protocols	Surfaces and Interfaces		107149	2468-0230	https://doi.org/10.1016/j.surfins.2025.107149	2025

81.	Manan Gal, Mayur Parmar, HM Oza, Bharavi Hirpara, Ajay Vaishnani, Keval Gadani, PS Solanki, Davit Dhruv , AD Joshi, NA Shah	Electrical and transport properties of chemically deposited YMnO ₃ /Si thin film	Chemical Physics		112879	0301-0104	https://doi.org/10.1016/j.chemphys.2025.112879	2025
82.	Faizal Mirza, Zalak Joshi, Hetal Boricha, Urvashi Jambukiya, Davit Dhruv , Keval Gadani, DD Pandya, PS Solanki, NA Shah, AD Joshi	Magnetic and transport properties of doped YMnO ₃ thin films	Physica B: Condensed Matter	714	417426	0921-4526	https://doi.org/10.1016/j.physb.2025.417426	2025
83.	Manan Gal, Mayur Parmar, Payal Joshi, VR Chandegara, Nisarg Raval, Kush Vachhani, TC Pandya, PS Solanki, AD Joshi, Davit Dhruv , NA Shah	Temperature Effect on Resistive Switching Properties of Amorphous La _{0.7} Ca _{0.3} MnO ₃ /ITO Thin Film	Physica B: Condensed Matter		417933	0921-4526	https://doi.org/10.1016/j.physb.2025.417933	2025
84.	DK Chudasama, VG Shrimali, Sangita Chavda, Payal Joshi, HK Rathod, PS Solanki, AD Joshi, Davit Dhruv , NA Shah, DD Pandya	Structural, Optical, Magnetic, and Electric Properties of BiFeO ₃ -SiO ₂ Nanocomposites with Varying Concentrations of Amorphous Silica	Materials Today Communications		114323	2352-4928	https://doi.org/10.1016/j.mtcomm.2025.114323	2025
85.	Nisarg Raval, Himriti Trivedi, Mayur Parmar, CM Panchasara, Bharavi Hirpara, Keval Gadani, Sukriti Hans, M Ranjan, Sanjay	Thickness-dependent charge transport across CdO/La _{0.3} Ca _{0.7} MnO ₃ n-n junction interfaces	Materials Science in Semiconductor Processing	200	110011	1369-8001	https://doi.org/10.1016/j.mssp.2025.110011	2025

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86.	Mayur Parmar, Nisarg Raval, VR Chandegara, Sangita Chavda, HC Kamdar, TC Pandya, PS Solanki, AD Joshi, Davit Dhruv , Jashandeep Singh, NA Shah, DD Pandya	Dual-mode (light/dark) electrical and microstructural characterization of CdO//Gd _{0.3} Sr _{0.7} MnO ₃ //STO n-n heterojunctions	Applied Physics A	131	946	0947- 8396	https://doi.org/10.1007/s00339-025-09044-2	2025
87.	Sangita Chavda, Payal Joshi, HM Oza, VR Chandegara, Jashandeep Singh, PS Solanki, Davit Dhruv, DD Pandya, AD Joshi, NA Shah, RK Trivedi	Dielectric and conductivity response of Sol- Gel derived Mn ₃ O ₄ nanoparticles to frequency and temperature variations	Journal of Electrocer amics		1-10		https://doi.org/10.1007/s10832-025-00434-9	2025
88.	Shivani Punj, Davit B Dhruv, Jashandeep Singh, Anand Somvanshi, Alesh Kumar, Kasim Sakran Abass	Exploring the interplay of lattice distortion, magnetic ordering, and dielectric behavior in Dy ₂ NiFeO _{6-δ} synt hesized via solution chemistry	Scientific Reports			2045- 2322	https://doi.org/10.1038/s41598-026-38284-2	2026
89.	Urvashi Jambukiya, Khushal Sagapariya, Sangita Chavda, Krina Ramani, Hetal Gohil, Kush	Structural, microstructural, electrical and magnetic properties of DyO.	Ceramics Internatio nal				https://doi.org/10.1016/j.ceramint.2026.04.092	2026

	Vachhani, PS Solanki, Davit Dhruv, NA Shah, AD Joshi	7Ca0. 3MnO3: SiO2 nanocomposites						
90.	Kush Vachhani, Manan Gal, Mayur Parmar, HC Kamdar, HM Oza, VR Chandegara, Sangita Chavda, Ramcharan Meena, PS Solanki, Davit Dhruv, NA Shah, AD Joshi	Swift heavy ion induced modifications in structural and electrical properties of LSMO/ITO thin films	Next Materials	12	1024 00		https://doi.org/10.1016/j.nxmat.2026.102400	2026

Books Publications:

Sr.No	Title of book	Name of the Publisher With Address	Year of Publication	ISBN
1	Introduction to Nanotechnology in Electronics	J. K. Print Shop	2017	978-81-934661-8-6
2	The Art of Creation: Fabrication of Nano Devices	Shree Avdhut Education Trust Sabarkantha , Gujarat	2015	978-93-84485-63-4
3	The Art of Vision : Characterization of Nanomaterials	Green Flag Foundation	2014	978-93-83579-57-0

Project Details:

Sr. No	Title of Project	Funding Agency	Project Amount	Status	Period
1.	Synthesis and characterization of carbon Nano – dot based dye sensitized solar cell	Gujarat Council Of Science and Technology	7,90,000/-	Approved	2 Years (June-2016 to June-2018)

2.	Influence of swift heavy ion irradiation effect on poly(3-hexyl thiophene) and nanostructure TiO ₂ composite based thin film for solar cell applications	Inter University Accelerator Centre (IUAC) – New Delhi	Provide Facility	Approved	2 Years (July 2017 To July 2019)
3	Investigation on Photocatalyst properties of Nano Composite on Flexible Substrate	Saurashtra university	1 Lakh	Approved	2 years (2024-2026)

Patents: -

Sr NO	Title	Application Number	Date
1	Carbon Nano-Dot Based Lycopersicum Solar Cell”	201721000819	10/02/2017
2	A Novel Process Of Preparing Alumina Nano Powder	202121012255	29/11/2023
3	A Super Hydrophobic Coating Liquid Composition	202121000483	29/07/2022
4	A Multipurpose Cryostat Probe For Measuring Electrical Properties	202121034926	03/02/2023

Short Information

Dr. Davit B. Dhruv is an Assistant Professor at Department of Physics, Saurashtra University, Rajkot. He holds B.Sc. (2008) and M.Sc. (2011) in Physics from Saurashtra University. He has completed PhD in the area of material science on the subject of ‘Studies on Structural, Transport, Electronic and Magnetic properties of Functional Oxides’ in 2015 from Department of Physics, Saurashtra University, Rajkot. He holds **4** national patents and is an author of **3** books on nanomaterials and electronics. He has published **90** research articles in peer reviewed international journals and conference proceedings. His research aims at understanding the properties of various functional materials, nanocomposites and multiferroics. He has capability to work with various synthesis methods and fabrication techniques such as solid-state reaction route, sol–gel method, co– precipitation, chemical solution deposition, pulsed laser deposition.

Dr. Dhruv is mainly focused on emerging applications of functional nanomaterials like photocatalysis and flexible electronics. His current research deals with carbon nanomaterials-based composites, polymeric composites and environment friendly green synthesis of nanomaterials. Dr. Dhruv has received some prestigious and felicitations awards including best research paper presentation in national event. Which includes been awarded by ‘Gandhian Young Innovation Award’ in 2016, 1st rank winner 6th national science symposium-2013 on “recent trend in science and technology and 7th national science symposium-2014 on “recent trend in science and technology”. Best poster award

at Global Green Nanotechnology Conclave (GiGaNTiC 2015) Ahmedabad, Silver Award in Applied Science + Pharmacy organized by Maker Fest – Vadodara 2022 Hackathon - 2022 Selected for regional round and Grand Finale Round organized by SSIP & Gujarat Knowledge Society-7-8 Oct 2022 to 10-11 Feb 2023.

He served as Co-Principal investigator on a research project based on dye sensitized solar cell funded by Gujarat Council of Science and Technology and as a Principal investigator of project on nanostructured composite based thin film solar cell applications from Inter University Accelerator Center- New Delhi. In addition, he served as a project guide at the undergraduate level at Gujarat Technological University for projects such as "Application of Nano Material to Analyse The Strength of Concrete," "Making of Brick Using Nanomaterials 2015-2016," and "Green Synthesis of Gold Nanoparticles Using Citric Acid 2016-2017." He has also given a number of expert talks at national events, including "Importance and scope in nanotechnology" at M.D. Science College, Porbandar, "Physics Breath of Engineering" at Parul Polytechnic University, Vadodara, "Expert Talk On Nano Core-Shell Composites an Interesting Advance Magnetic Materials and Their Properties" at Savitribai Phule Pune University, Pune, and several talks at UGC- HRDC, events Saurashtra University, Rajkot. He was also honoured with some of the corticates **Adventure Certificate of Youngest Tracking Range Camp at Goa by Saurashtra University, Rajkot**