

National Institute of Technology, Hamirpur (HP)

Department of Physics



List of research publications of the present faculty in Journals

Year	Subhash Chand	Arvind Kumar	Kuldeep Kumar Sharma	Rajesh Kumar Sharma	Vimal Sharma	Total
NUMBER OF PAPERS PUBLISHED	26	15	20	15	13	89

Year wise publications of faculty members:

Year	Subhash Chand	Arvind Kumar	Kuldeep Kumar Sharma	Rajesh Kumar Sharma	Vimal Sharma	Total
2013	2	-	-	5	4	11
2012	1	2	2	-	1	6
2011	3	1	6	-	1	11
2010	2	2	3	-	1	8
2009	2	-	-	2	1	5
2008	1	1	-	-	2	4
2007	1	-	-	-	2	3
2006	1	-	-	1	1	3
2005	2	-	-	2	-	4
2004	1	1	-	1	-	3
2003	-	1	-	3	-	4
2002	1	-	-	1	-	2
2001	-	1	-	-	-	1
2000	1	2	-	-	-	3
1999	-	4	4	-	-	8
1998	-	-	-	-	-	-
1997	3	-	5	-	-	8
1996	3	-	-	-	-	3
1995	2	-	-	-	-	2
1980-1994	-	-	-	-	-	-
TOTAL	26	15	20	15	13	89

Year wise publications details:

Year	No.	Authors: "Title of the Research Paper". "Name of the Journal"(Country), Vol. No., Page Nos.
2013	1.	Current voltage characteristics of Schottky diode simulated using semiconductor device equations Priyanka Kaushal, Subhash Chand, and Jozef Osvald International Journal of Electronics, 100 (2013) 686-96.
	2.	Numerical simulation study of Schottky diode characteristics with inverse doped surface layer Subhash Chanda, Priyanka Kaushala and Jozef Osvald Materials Science in Semiconductor Processing, 16 (13) 454-60.
	3.	Shagun Thakur, Sushil kumar & Rajesh kumar Study of Alpha Decay chains of super heavy Nuclei and Magic number beyond Z=82 and N=126 Brazilian Journal of Physics Publisher Springer 2013
	4.	Shagun Thakur, Rajesh kumar, K.R. Vijayaraghavan, M. Balasubramaniam <u>Alpha accompanied ternary Fission of Superheavy Nuclei</u> International journal of Modern physics E, vol.22, (2013) World scientific
	5.	Vinod kumar, Yogesh kumar, Rajesh kumar, Dinesh.K.Shukla, S.K.Arora, I.V.Shvet and Ravi Kumar <u>Structural, magnetic and X-ray absorption studies of NdCo_{1-x}Ni_xO₃ (0 ≤ x ≤ 0.5)</u> Journal of applied Physics, volume 113, 043913 (2013) American Institute of Physics (AIP)
	6.	Viond Kumar, Rajesh Kumar, D.K. Shukla and Ravi Kumar <u>Disorder controlled electrical transport properties of Nd Co_{1-x} Ni_x O₃</u> Journal of alloys and compounds publisher elsevier
	7.	Viond Kumar, Rajesh Kumar, D.K. Shukla, Sanjeev Gautam, Keun Hwa Chae and Ravi Kumar Electronic Structure and Electrical Transport Properties of LaCo _{1-x} Ni _x O ₃ (0 ≤ x ≤ 0.5) Journal of Applied Physics 114, 073704, (2013), American Institute of Physics
	8.	Rohan Samkaria · Vimal Sharma Effect of Y ³⁺ substitution on the structural, dielectric, and electrical properties of nanosized ZnAl ₂ O ₄ spinel Applied Physics A Materials science & processing Springer , 2013
	9.	Rohan samkari & Vimal Sharma Effect of rare earth yttrium substitution on the structural, dielectric and electrical properties of nano sized Nickel aluminate Materials Science & Engineering B, Elsevier, 2013
	10.	Rohan Samkaria & Vimal Sharma Structural, dielectric and electrical studies of MgAl _{2-2x} Y _{2x} O ₄ (x = 0.00-0.05) cubic spinel nano aluminate. Journal of electro-ceramics, Vol. 30, 2013, Springer
	11.	ROHAN SAMKARIA and VIMAL SHARMA STRUCTURAL AND DIELECTRIC PROPERTIES OF MgAl _{2-2x} Y _{2x} O ₄ NANOPARTICLES Int. J. Mod. Phys. B Conf. Ser. 22, 361 (2013) World Scientific
2012	12.	Effect of inverse doped surface layer in Schottky barrier modification: A numerical study Subhash Chand, Priyanka Kaushal and Jozef Osvald Journal of Electronic Materials, 41 (12) 3387-92.

	13.	<p>Naresh Dhiman, Bhanu P. Singh, and Arvind K. Gathania, "Fabrication and optical study of dye doped TiO₂ –SiO₂ multilayer colloidal structures" Colloids Surf. A: Physicochem. Eng. Aspects (2012) Volume 409, 5 September 2012, Pages 69–73</p>
	14.	<p>Naresh Dhiman, Bhanu P. Singh, and Arvind K. Gathania , "Synthesis and characterization of dye-doped TiO₂ -SiO₂ core-shell composite microspheres" Journal of Nanophotonics Vol. 6, 2012. Journal of Nanophotonics 6(1), 063511</p>
	15.	<p>Hardeep Thakur, K K Sharma, Ravi Kumar, Pardeep Thakur, A. P. Singh, Yogesh Kumar, S. Gautam and K. H. Chae, On the optical properties of Ag+15 ion-beam irradiated TiO₂ and SnO₂ thin films Journal of the Korran Physicsl Society, Volume 61, Issue 10, pp. 1609-1614 2012</p>
	16.	<p>Sharma KK and Katoch A.C. Nonfactorizable Contributions to Week D→[III] Decay Modes World Academy of Science, Engineering and Technology, 72, 156-159 (2012)</p>
	17.	<p>Hemant Pal, Vimal Sharma, Rajesh Kumar & Nagesh Thakur Facile synthesis & electrical conductivity of carbon Nanotube reinforced nanosilver composite Z. Naturforsch A, 67a (2012) 679-684 Verlag der Zeitschrift für Naturforschung (Germany)</p>
2011	18.	<p>Current voltage characteristics of Schottky diode simulated using semiconductor device equations International Jorunal of Electronic, (Communicated) 2011 Publisher: Taylor & Francis.</p>
	19.	<p>Study of synthesis and temperature dependence of dc conductivity in the low temperature range for Poly(N-methylaniline) Journal of Electronic Materials (2011) Publisher: Elsevier Science Ltd.</p>
	20.	<p>Manish Taunk, Atul Kapil and Subhash Chand Chemical synthesis and low temperature electrical transport in polypyrrole doped with sodium bis(2-ethylhexyl) sulfosuccinate. J Mater Sci : Mater. Electron. 22, 136-142 (2011).</p>
	21.	<p>Arvind K. Gathania, Naresh Dhiman, Ankita Sharma, B. P. Singh Development and Annealing of Colloidal Multilayer Structures of Silica Microspheres Colloids and Surfaces A: Physicochemical and Engineering Aspects vol. 378, 34–37, 2011.</p>
	22.	<p>Irradiation induced ferromagnetism at room temperature in TiO₂ thin films: x-ray magnetic circular dichroism characterizations Hardeep Thakur, P. Thakur, Ravi Kumar, N. B. Brookes, K K Sharma, A. P. Singh, Yogesh Kumar, S. Gautam and K. H. Chae Applied Physics Letters 98, 192512 (2011).</p>
	23.	<p>Surface wave characteristics at the interface of welded elastic half spaces J. N. Sharma, K. K. Sharma and Ashwani Kumar, Open Journal of Acoustics, 01, 01-08 (2011).</p>

	24.	Orbital anisotropy in SnO ₂ thin films and its modification by swift heavy ion irradiation Hardeep Thakur, P. Thakur, Ravi Kumar, N. B. Brookes, K K Sharma, Abhinav Pratap Singh, Yogesh Kumar, S. Gautam and K. H. Chae Chemical Physics Letters 511, 322-325 (2011).
	25.	Modelling of acousto-diffusive surface waves in piezoelectric-semiconductor composite structures J. N. Sharma, K. K. Sharma and Ashwani Kumar, Journal of Mechanics of Materials and Structures, 6, 791-812 (2011).
	26.	Acousto-diffusive waves in a piezoelectric-semiconductor-piezoelectric sandwich structure J. N. Sharma, K. K. Sharma and Ashwani Kumar World Journal of Mechanics, 1, 247-255 (2011).
	27.	Modifications in structural and electronic properties of TiO ₂ thin films using swift heavy ion irradiation”, Hardeep Thakur, Ravi Kumar, P. Thakur, N. B. Brookes, K. K. Sharma, Abhinav Pratap Singh, Yogesh Kumar, S. Gautam, and K. H. Chae, Journal of Applied Physics 110, 083718 (2011).
	28.	Kameshwar Kumar, Vimal Sharma, Pankaj Sharma, Nagesh Thakur Electrical and Dielectric Properties of Te ₁₅ (Se _{100-x} Bix) ₈₅ Amorphous Glassy Alloys Defect & Diffusion Forum, 316-317, (2011) 69-80 Trans Tech Publications
2010	29.	Jagan Nath Sharma, K. K. Sharma and Ashwani Kumar Modelling of acousto-diffusive surface waves in Piezoelectric-semiconductor composite structures. International Journal of Mechanics of Materials and Structures (accepted 2010) .
	30.	J. N. Sharma, N. K. Sharma and K. K. Sharma, Advances in Applied Mathematics and Mechanics Transient waves due to mechanical loads in elasto-thermo-diffusive solids 03, 87-108, (2010)
	31.	J. N. Sharma, K. K. Sharma and Ashwani Kumar, <u>Surface waves in a piezoelectric-semiconductor composite structure</u> International Journal of Solids and Structures , 47, 816-826, (2010) .
	32.	Naresh Dhiman, Ankita Sharma, Arvind K. Gathania ISST Journal of Applied Physics Synthesis and Microstructure of Silica Particles Pages 53-55 (2010).
	33.	P. Malik, K.K. Raina, Arvind K. Gathania Effects of polymer viscosity on the polymerization switching and electro-optical properties of unaligned liquid crystal/UV curable polymer composites <i>Thin Solid Films</i> , Volume 519, Issue 3, Pages 1047-1051 (30 November 2010)
	34.	Manish Taunk, Atul Kapil, Subhash Chand Hopping and tunneling transport over a wide temperature range in chemically synthesized doped and

		undoped polypyrrole Solid State Communication 150 , 1766-1769 (2010).
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	36.	Vimal Sharma & Nagesh thakur Molecular association of tetramethylurea and chlorobenzene molecules in microwave frequency range Z. Naturforsch. 65a, pp. 854–858, (2010) Verlag der Zeitschrift für Naturforschung (Germany)
2009	37.	Sushil Kumar, Shagun Thakur and Rajesh Kumar ; Decay studies of 288–287115 alpha-decay chains J. Phys. G: Nucl. Part. Phys. 36 No 10 (2009) 105104.
	38.	Sushil Kumar, Ramna Rani and Rajesh Kumar ; Shell closure effects studied via cluster decay in heavy nuclei J. Phys. G: Nucl. Part. Phys. 36 No 1 (2009) 015110.
	39.	Vimal Sharma , Mathur, P. Thakur, A.; Singh, M. A study of low temperature sintered Mg-Mn nano-Ferrites. International Journal of Modern Physics B 23 , No. 1 (2009) 125-132
	40.	Atul Kapil, Manish Taunk and Subhash Chand ; "Low temperature charge transport study in p-toluenesulfonic acid doped polyaniline" Asian Journal of Chemistry 21 , 138-42 (2009)
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	44.	Arvind K. Gathania "Critical behaviour of the order parameters at the SmC* to SmA phase transition in a ferroelectric liquid crystal mixture" Liquid Crystal, Vol 35, No.7. 773-776, 2008.
	45.	Manish Taunk, Atul Kapil and Subhash Chand "Synthesis and electrical characterization of self-supported polypyrrole-poly(vinylidene fluoride) composite films" The Open Macromolecules Journal, 2 , 74-79 (2008).
2007	46.	Vimal Sharma , Nagesh Thakur, Dhani Ram Sharma, Nainjeet Singh Negi, and Vir Singh Rangra Dielectric relaxation study of Ethanol in benzene from microwave absorption data. Z. Naturforsch., 62a , (2007) 406 – 408. (Germany)
	47.	SHARMA Vimal ; THAKUR Nagesh ; DHANI RAM SHARMA ; NAINJEET SINGH NEGI ; VIR SINGH RANGRA ; Dielectric relaxation study of binary mixtures of Ethyl alcohol and N, N-Dimethylforamide in benzene solution from microwave absorption data. Indian J. Pure & Appl. Phys., 45 (2007) 163 – 167. (India)
	48.	Subhash Chand and Saroj Bala:

		<p>"Simulation studies of current transport in metal–insulator–semiconductor Schottky barrier diodes". Physica B: Condensed Matter, 390(1-2), 179-184 (2007).</p>
2006	49.	<p>Vimal Sharma, Nagesh Thakur, D. R. Sharma, V. S. Rangra, N.S Negi Dielectric relaxation studies of binary mixtures of Ethanol and Tetramethylurea in benzene solution from microwave absorption data. Z. Phys. Chem. 220 (2006) 325 – 333. (Germany)</p>
	50.	<p>R.K. Gupta, M. Balasubramaniam, R. Kumar, D. Singh, S.K. Arun and W. Greiner: "The dynamical cluster-decay model of preformed clusters for a hot and rotating $^{116}\text{Ba}^*$ nucleus produced in the low-energy $^{58}\text{Ni}+^{58}\text{Ni}$ reaction". J. Phys. G: Nucl. Part. Phys., 32, 345-361 (2006).</p>
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2005	52.	<p>Subhash Chand and Saroj Bala: "A comparative study of numerical and analytical approaches of simulating inhomogeneous Schottky diodes characteristics". Semiconductor Science & Technology, 20, 1143-1148 (2005).</p>
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	54.	<p>R.K. Gupta, M. Balasubramaniam, R. Kumar, D. Singh, C. Beck, and W. Greiner: "Dynamical cluster-decay model for hot and rotating light-mass nuclear systems applied to low-energy $^{32}\text{S}+^{24}\text{Mg}\rightarrow^{56}\text{Ni}$ reaction". Phys. Rev. C, 71 014601 (1-13) (2005).</p>
	55.	<p>Subhash Chand and Saroj Bala: Analysis of current-voltage characteristics of inhomogeneous Schottky diodes at low temperatures. Applied Surface Science, 252(2), 358-363 (2005).</p>
2004	56.	<p>R.K. Gupta, M. Balasubramaniam, R. Kumar, D. Singh and C. Beck: "Collective clusterization effects in light heavy ion reactions". Nucl. Phys. A, 738, 479-482 (2004).</p>
	57.	<p>Arvind K. Gathania, B. Singh and K.K. Raina: "Switching dynamics in ferroelectric liquid crystal mixture". Japanese J. of Applied Physics, 43 (12), 8168-8172, (2004).</p>
	58.	<p>Subhash Chand: "On intersecting behaviour of current-voltage characteristics of inhomogeneous Schottky diodes at low temperatures". Semiconductor Science & Technology, 19, 82-86 (2004).</p>
2003	59.	<p>M. Balasubramaniam, R. Kumar, R.K. Gupta, C. Beck and W. Scheid: "Emission of intermediate mass fragments from hot $^{116}\text{Ba}^*$ formed in low-energy $^{58}\text{Ni} + ^{58}\text{Ni}$ reaction". J. Phys. G: Nucl. Part. Phys., 29 2703-2719 (2003).</p>

	60.	R.K. Gupta, S. Dhauta, R. Kumar , M. Balasubramaniam, G. Münzenberg and W. Scheid: "Closed-shell effects from the stability and instability of nuclei against cluster decays in the mass regions 130-158 and 180-198". Phys. Rev. C, 68 , 034321 (1-10) (2003).
	61.	R.K. Gupta, R. Kumar , N.K. Dhiman, M. Balasubramaniam, W. Scheid and C.Beck: "Cluster-decay of hot $^{56}\text{Ni}^*$ formed in $^{32}\text{S} + ^{24}\text{Mg}$ reaction". Phys. Rev. C, 68 014610 (1-13) (2003).
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2002	63.	R.K. Gupta, S. Kumar, R. Kumar , M. Balasubramaniam, and W. Scheid: "Structure effects in the region of superheavy elements via the α -decay chain of $^{293}\text{118}$ ". J. Phys. G: Nucl. Part. Phys., 28 , 2875-2884 (2002).
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2001	65.	J.K. Ahuja, Arvind K. Gathania and K.K. Raina: "Dielectric relaxation modes in ferroelectric liquid crystal mixtures". Mol. Cryst. Liq. Cryst., 66 , 271-281 (2001).
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1999	69.	K. K. Sharma , R.C. Verma and A. Sharma: "A $Q\bar{Q}$ -potential extracted from quarkonium spectroscopic data". Ind. J. of Pure & Applied Phys., 37 , 75-86 (1999).
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	72.	K. K. Sharma and R.C. Verma:

		<p>“A study of weak mesonic decays of Λ_c and Ξ_c baryons on the basis of HQET results”.</p> <p>Eur. Phys. J. C, 7, 217-224 (1999).</p>
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	75.	<p>Arvind K. Gathania, B. Singh and K.K. Raina:</p> <p>“Dielectric properties of a surface stabilized ferroelectric liquid crystal mixture – effect of dichroic dye”.</p> <p>Ind. J. of Pure and Applied Physics, 11(37), 657-666 (1999).</p>
	76.	<p>Arvind K. Gathania, B. Singh and K.K. Raina:</p> <p>“Dielectric relaxation in a room temperature ferroelectric liquid crystal mixture”. J. of Physics – Condensed Matter (UK), 11(20), 3813-22 (1999).</p>
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	78.	<p>A.C. Katoch, K. K. Sharma and R.C. Verma:</p> <p>“Isospin analysis of nonfactorizable contributions to hadronic decays of charm mesons”.</p> <p>J. Phys. G : Nucl., 23, 807-822 (1997).</p>
	79.	<p>K. K. Sharma, A. C. Katoch and R.C. Verma:</p> <p>“Nonfactorizable contributions to charm meson ($D \rightarrow PP$) decays”.</p> <p>Z. Phys. C, 76, 311-318 (1997).</p>
	80.	<p>K. K. Sharma, A.C. Katoch and R.C. Verma:</p> <p>“Nonfactorizable contributions to weak $D \rightarrow PV$ decays”.</p> <p>Z. Phys. C, 75, 253-264 (1997).</p>
	81.	<p>K. K. Sharma and R.C. Verma:</p> <p>“$SU(3)_{flavor}$ analysis of two-body weak decays of charmed baryons”.</p> <p>Phys. Rev. D, 55, 7067-7074 (1997).</p>
	82.	<p>Subhash Chand and Jitendra Kumar:</p> <p>“Effects of barrier height distribution on the behavior of a Schottky diode”.</p> <p>Journal of Applied Physics, 82, 5005-10 (1997).</p>
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1996	85.	<p>Subhash Chand and Jitendra Kumar:</p>

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1995	88.	<p>Subhash Chand and Jitendra Kumar:</p> <p>“Current-voltage characteristics and barrier parameters of Pd₂Si/p-Si(111) Schottky diodes in a wide temperature range”.</p> <p>Semiconductor Science & Technology, 10, 1680-1688 (1995).</p>
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