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	21	13	12	10	6	53

Year wise publications of faculty members:

Year	Subhash Chand	Arvind Kumar	Kuldeep Kumar Sharma	Rajesh Kumar Sharma	Vimal Sharma	Total
2011	1	1	-	-	-	2
2010	2	2	3	-	-	7
2009	2	-	-	2	2	6
2008	1	1	-	-	2	4
2007	1	-	-	-	1	2
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	21	13	12	10	6	62

Year wise publications details:

Year	No.	Authors: "Title of the Research Paper". "Name of the Journal"(Country), Vol. No., Page Nos.
2011	1.	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).
	2.	Arvind 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* (01 February 2011)
2010	3.	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).**
	4.	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)
	5.	J. N. Sharma, **K. K. Sharma** and Ashwani Kumar, Surface waves in a piezoelectric-semiconductor composite structure **International Journal of Solids and Structures,** 47, 816-826, (2010).
	6.	Naresh Dhiman, Ankita Sharma, Arvind K. Gathania ISST Journal of applied physics **Synthesis and microstructure of silica particles** Pages 53-55 (2010).
	7.	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** Volume 519, Issue 3, Pages 1047-1051 (30 November 2010)
	8.	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).
	9.	Atul Kapil, Manish Taunk and **Subhash Chand**; "Preparation and charge transport studies of chemically synthesized polyaniline" J Mater Sci : Mater. Electron. **21,** 399-404 (2010).
2009	**10.**	**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)
	11.	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.
	12.	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.
	13.	**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
	14.	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)
	15.	Atul Kapil, Manish Taunk and **Subhash Chand**; "Preparation and characterization of chemically synthesized poly(N-methylaniline)" Synthetic Metals **159**, 1267 (**2009**).
2008	**16.**	**SHARMA Vimal**; THAKUR Nagesh; SHARMA D. R.; RANGRA V. S.; NEGI N. S.; Dielectric relaxation studies of binary mixtures of Ethyl alcohol and N, N-Dimethylacetamide in benzene solution from microwave absorption data. Indian J. Pure & Appl. Phys., 46, (2008) 212 – 214. (India
	17.	**Vimal Sharma** and Nagesh Thakur Dielectric relaxation studies of binary mixtures of Ethanol and Chlorobenzene in benzene solution from microwave absorption data. Z. Naturforsch., 63a, (2008) 93 – 97 (Germany)
	18.	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.
	19.	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	**20.**	**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)

	21.	**Subhash Chand** and Saroj Bala: "Simulation studies of current transport in metal–insulator–semiconductor Schottky barrier diodes". Physica B: Condensed Matter, **390(1-2),** 179-184 **(2007)**.
2006	**22.**	**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)
	23.	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 $^{116}Ba^{*}$ nucleus produced in the low-energy $^{58}Ni+^{58}Ni$ reaction". J. Phys. G: Nucl. Part. Phys., **32,** 345-361 **(2006)**.
	24.	**Subhash Chand** **"**Theoretical evidence for random variation of series resistance of elementary diodes in inhomogeneous Schottky contacts". Physica B: Condensed Matter, **373(2),** 284-290 **(2006).**
2005	**25.**	**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)**.
	26.	R.K. Gupta, M. Balasubramaniam, **R. Kumar,** N. Singh, M. Manhas, and W. Greiner: "Optimum orientations of deformed nuclei for cold synthesis of superheavy elements and the role of higher multipole deformations". J. Phys. G: Nucl. Part. Phys., **31,** 631-644 **(2005)**.
	27.	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 $^{32}S+^{24}Mg\rightarrow^{56}Ni^{*}$ reaction". Phys. Rev. C, **71** 014601 (1-13) **(2005)**.
	28.	**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)**.
2004	**29.**	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)**.
	30.	**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).**
	31.	**Subhash Chand:** **"**On intersecting behaviour of current-voltage characteristics of inhomogeneous Schottky diodes at low

		temperatures". Semiconductor Science & Technology, **19,** 82-86 **(2004)**.
2003	**32.**	M. Balasubramaniam, **R. Kumar,** R.K. Gupta, C. Beck and W. Scheid: "Emission of intermediate mass fragments from hot $^{116}Ba^{*}$ formed in low-energy $^{58}Ni + ^{58}Ni$ reaction". J. Phys. G: Nucl. Part. Phys., **29** 2703-2719 **(2003)**.
	33.	R.K. Gupta, S. Dhauta, **R. Kumar,** M. Balasubramaniam, G. M unzenberg 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)**.
	34.	R.K. Gupta, **R. Kumar,** N.K. Dhiman, M. Balasubramaniam, W. Scheid and C.Beck: "Cluster-decay of hot $^{56}Ni^{*}$ formed in $^{32}S + ^{24}Mg$ reaction". Phys. Rev. C, **68** 014610 (1-13) **(2003)**.
	35.	**Arvind K. Gathania** and K.K. Raina: "Field induced effects in an eutectic nematic liquid crystal mixture". Canadian J. of Physics, **81(12)**, 1427-1432 **(2003).**
2002	**36.**	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 $^{293}118$". J. Phys. G: Nucl. Part. Phys., **28,** 2875-2884 **(2002)**.
	37.	**Subhash Chand:** **"**An accurate approach for analyzing inhomogeneous Schottky diodes with a Gaussian distribution of barrier heights". Semiconductor Science & Technology, **17,** L36-L40 **(2002)**.
2001	**38.**	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).**
2002	**39.**	**Arvind K. Gathania,** J.K. Ahuja and K.K. Raina: "Polarization switching and dielectric relaxations in ferroelectric liquid crystal mixtures". Indian J. of Engineering & Materials Sciences, **7(5 & 6),** 429-432 **(2000).**
	40.	**Arvind K. Gathania**, J.K. Ahuja,, B .Singh and K.K. Raina: "Relaxation modes in a surface stabilized ferroelectric liquid crystal mixture". J. of Punjab academy of Sciences, **2,** 282-287 **(2000).**
	41.	**Subhash Chand** and Jitendra Kumar: "Origin of non-linear current-voltage characteristics of metal -Semiconductor contacts: A numerical study". Indian Journal of Engg and Materials Sciences, **7,** 268-273 **(2000)**.
1999	**42.**	**K. K. Sharma,** R.C. Verma and A. Sharma:

		"A $Q\overline{Q}$-potential extracted from quarkonium spectroscopic data". Ind. J. of Pure & Applied Phys., **37,** 75-86 **(1999).**
	43.	**K. K. Sharma** and A.C. Katoch: "An isospin analysis of nonfactorizable contributions to hadronic decays of bottom mesons". Mod. Phys. Letts. A, **14,** 1841-1853 **(1999).**
	44.	**K. K. Sharma** and R.C. Verma: **"**Rare decays of ψ and Υ". Int. J. Mod. Phys. A, **14,** 937-945 **(1999).**
	45.	**K. K. Sharma** and R.C. Verma: "A study of weak mesonic decays of Λ_C and Ξ_C baryons on the basis of HQET results". Eur. Phys. J. C, **7,** 217-224 **(1999).**
	46.	K.K. Raina, **Arvind K. Gathania** and B. Singh: "Effects of dichroic dye on the dielectric properties of ferroelectric liquid crystal mixtures". J. of Physics – Condensed Matter, **11,** 7061-7070 **(1999).**
	47.	K.K. Raina, **Arvind K. Gathania** and B. Singh: "Observation of relaxation modes in a room temperature ferroelectric liquid crystal mixture". Pramana- J. of Physics, **52(4),** 443-451 **(1999).**
	48.	**Arvind K. Gathania**, B. Singh and K.K. Raina: "Dielectric properties of a surface stabilized ferroelectric liquid crystal mixture – effect of dichroic dye". Ind. J. of Pure and Applied Physics, **11(37),** 657-666 **(1999).**
	49.	**Arvind K. Gathania,** B. Singh and K.K. Raina: "Dielectric relaxation in a room temperature ferroelectric liquid crystal mixture". J. of Physics – Condensed Matter **(UK), 11(20),** 3813-22 **(1999).**
1997	**50.**	A.C. Katoch and **K. K. Sharma:** **"**Nonfactorizable contributions to hadronic decays of charm mesons in the Cabibbo-Suppressed modes". Z. Phys. C, **75,** 651-656 **(1997).**
	51.	A.C. Katoch**, K. K. Sharma** and R.C. Verma: **"**Isospin analysis of nonfactorizable contributions to hadronic decays of charm mesons". J. Phys. G : Nucl., **23,** 807-822 **(1997).**
	52.	**K. K. Sharma**, A. C. Katoch and R.C. Verma: "Nonfactorizable contributions to charm meson ($D \rightarrow PP$) decays". Z. Phys. C, **76,** 311-318 **(1997).**
	53.	**K. K. Sharma,** A.C. Katoch and R.C. Verma: "Nonfactorizable contributions to weak $D \rightarrow PV$ decays". Z. Phys. C, **75,** 253-264 **(1997).**
	54.	**K. K. Sharma** and R.C. Verma:

		" $SU(3)_{flavor}$ analysis of two-body weak decays of charmed baryons". Phys. Rev. D, **55,** 7067-7074 **(1997).**
	55.	**Subhash Chand** and Jitendra Kumar: "Effects of barrier height distribution on the behavior of a Schottky diode". Journal of Applied Physics, **82,** 5005-10 **(1997)**.
	56.	**Subhash Chand** and Jitendra Kumar: "Simulation and analysis of current-voltage characteristics of Schottky diodes containing barrier inhomogeneities". Semiconductor Science & Technology, **12,** 899-906 **(1997)**.
	57.	**Subhash Chand** and Jitendra Kumar: "Electron transport and barrier inhomogeneities in palladium silicide Schottky diodes". Applied Physics A, **65,** 497-503 **(1997)**.
1996	**58.**	**Subhash Chand** and Jitendra Kumar: "Evidence for the double distribution of barrier heights in Pd2Si/n-Si Schottky diodes from I-V-T measurements". Semiconductor Science & Technology **11,** 1203-1208 **(1996)**.
	59.	**Subhash Chand** and Jitendra Kumar: "On the Existence of a barrier heights distribution in Pd2Si/Si Schottky diodes". Journal of Applied Physics, **80,** 288-294 **(1996)**.
	60.	**Subhash Chand** and Jitendra Kumar: "Current-transport in Pd_2Si/n-Si(100) Schottky barrier diodes at low temperatures". Applied Physics A, **63,** 171-178 **(1996)**.
1995	**61.**	**Subhash Chand** and Jitendra Kumar: "Current-voltage characteristics and barrier parameters of Pd2Si/p-Si(111) Schottky diodes in a wide temperature range". Semiconductor Science & Technology, **10,** 1680-1688 **(1995)**.
	62.	**Subhash Chand** and Jitendra Kumar: "Current-voltage characteristics of Pd2Si based Schottky diodes on p-type (111) silicon and evaluation of their barrier heights". Solid State Electronics, **38,** 1103-1104 **(1995).**
	63.	