Curriculum Vitae
Dr.Davinder Kaur Walia

Date of birth: December 9, 1966
Present Designation: Professor
Address for Correspondence: Department of Physics & Centre for Nanotechnology
Indian Institute of Technology Roorkee, Roorkee
Roorkee-247667, Uttarakhand , India

Telephone: +91 1332 285407(O), +91 1332285474(R), +91 9760031912
E-Mail: dkaurfph@iitr.ac.in
dkaurfph@gmail.com

EDUCATIONAL QUALIFICATIONS

DEGREE	INSTITUTION	DIVISION	YEAR
Ph.D. Physics	National Physical Laboratory, Delhi & Delhi Univ. **(High-T_c Superconducting Thin Films & Josephson Junctions)**	-	1993
Qualified NET	**" CSIR-UGC" JRF National Eligibility Test**	-	1988
M.Sc. Physics **(Specialization: Electronics)**	University of Delhi	First	1988
B.Sc. (Hons.)Physics	University of Delhi	First	1986

PROFESSIONAL & ACADEMIC EXPERIENCE

Teaching Experience: 25 Years Research Experience: 28 Years

- **Professor** Indian Institute of Technology Roorkee, India April 2014- Present
- **Associate Professor** Indian Institute of Technology Roorkee, India Dec 2009 -April2014
- **Assistant Professor** Indian Institute of Technology Roorkee, India Dec 2001 - Dec 2009
- **Lecturer** Guru Nanak Dev University, Amritsar, India Oct 1991 - Dec 2001

- **Research Fellow** National Physical Laboratory, Delhi Sept 1988- June 1993
- **Visiting Scientist** Atomic Institute Vienna, Austria May 1997 - June 1997
- **Gestafesson Fellow** Royal Institute of Science & Technology Stockholm, Sweden July 1997 - Aug 1998
- **Guest Scientist** Oak Ridge National lab, USA April 1998 - May1998
- **Post doc Fellow** Imperial College, London, U.K. March1999 - Oct 1999
- **Visiting Scientist** T.I.F.R, Mumbai, India May 2004 - July 2004

AWARDS

- **V.N.M.M Research Award** for **Innovative work in Nanostructured Thin FilmDevices** (2012).
- **Star Performer Award** for **Best Teaching & Research Performance** at I.I.T Roorkee(2004).
- **Major Research Project of Rs. 4.84 Crore** from Ministry of Information Technology, India to Work on **Nanotechnology Initiative Program** of National Importance (2008-2013).
- **Best Poster Paper Award** In International Conference IUMRS-ICAM (2007).
- **Scroll of Merit** from Indian Cryogenics **for Best Research Work on *High-T_c SQUIDs*** (1990).
- **Gestafesson Fellowship** At Royal Institute of Science & Technology, Stockholm Sweden (1997).
- **Commonwealth Fellowship** at U.K.(1995).

AREAS OF RESEARCH: NANOSTRUCTURED THIN FILMS & DEVICES

- **Functional Nanomaterials for MEMS & Optoelectronic Applications**
- **Multiferroic Heterostructures & Multilayers for RT Electronics**
- **Superhard Nanocomposite Coatings for Industrial Applications**
- **Resistive Memory Switching & High Temperature Electronics**
- **Low Dimensional Semiconductor Nanostructures**
- **Superconducting Microwave Resonators & Josephson Junction Devices**

MAJOR RESEARCH PROJECTS — Total Grant : Rs. 749.00 Lacs

- **Principle Investigator**
  Development of Multiferroic heterostructures integrated on Silicon for MERAM and magnetic sensor applications
  Department of Science & Technology (DST), Budget: Rs. 50.87 Lacs, 2017- 2020

- **Principle Investigator**
  Synthesis & Characterization Of Functional Nanostructures For MEMS And Optoelectronics
  Ministry of Information Technology (MIT) Budget: Rs. 4.84 Crore, 2008-2013

- **Principle Investigator**
  Fabrication of Nanostructured Multiferroic Thin Films and Multilavers for RT Etectronic
  Defence Research & Development Organisation, Budget: Rs.47.99 Lacs, 2012- 2015

- **Principle Investigator**
  Fabrication of SMA/PZT Heterostructures for Smart Systems**.**
  Defence Research & Development Organisation, Budget: Rs. 9.89 Lacs, 2008- 2011

- **Principle Investigator**
  Functional Nanocomposites: Synthesis, Characterization & Applications
  Department of Science & Technology, Budget: Rs. 94.15 Lacs, 2006- 2009

- **Principle Investigator**
  Fabrication of Superhard Nanocomposite Coatings of Transition Metal Nitrides
  Defence Research & Development Organisation, Budget: Rs. 9.97 Lacs, 2004- 2007

- **Principle Investigator**
  Development of High-T_c Superconducting Coated Conductors
  Council of Scientific & Industrial Research, Budget: Rs. 12.26 Lacs , 2003-2006

- **Co-Principle Investigator**
  To Study Mechanical Properties Of Nanophase Materials
  Department of Science & Technology, Budget : Rs. 24.00 Lacs, 2005-2008

- **Co-Principle Investigator**
  Nanostructured Hydrophobic Coatings
  Council of Scientific & Industrial Research, Budget: Rs. 16.10 Lacs , 2009-2012

RESEARCH GUIDANCE:

- **Ph. D Thesis : 13 (Awarded) + 02 (Submitted)+ 06 (In Progress)**
- **M. Tech Thesis: 32 (Awarded) + 02 (In Progress)**
- **M.Sc. Projects: 25 (Awarded) + 01 (In Progress)**

RESEARCH PUBLICATIONS :

Research Papers Published In Full in Refereed Journals : 131
Papers Presented In National/International Conferences : 87
Scientific/Technical Reports : 05
Invited Talks: : 31

Citation indices	Till (Feb 2017)	Since 2011
Citations	1965	1415
h-index	23	19
i10-index	54	45

https://scholar.google.co.in/citations?user=dm-ZzwMAAAAJ&hl=en

SIGNIFICANT RESEARCH OUTPUT:

Design(s) and Prototype(s) Developed :

- **Prototype of Electrochemical Dopamine sensor with physiological importance in Parkinson's Disease associated with neurodegenerative disorders of central nervous system has been fabricated & demonstrated.**
- **Developed new approach for vibration damping at Nano-Micron scale in Micro Electro Mechanical Systems (MEMS) useful for ballistic missiles and army munition systems.**
- **Developed Superconducting Microwave Resonator Device with low surface resistance.**
- **Developed High Temperature Superconducting Josephson Junctions and Superconducting Tapes on metallic substrates using novel and low cost deposition.**
- **Developed Nanostructured Shape Memory Thin Films & Heterostructures for Potential MEMS Applications**

- **Developed Antibacterial & Non Cytotoxic Cu3N/NiTiCu Shape memory thin film heterostructures for Bio MEMS applications.**

- **Developed muliferroic tunnel junctions for magnetic sensors & MERAM applications.**

- **Developed Superhard Nanocomposite Coatings with mechanical hardness higher than 50GPa for Industrial and Turbine blades applications.**

- **Developed SiC and AlN based MIM structures for Resistive Switching and High Temperature Electronics.**

COURSES TAUGHT B.Tech, M.Tech, B.Sc., M.Sc.

Semiconductor Microelectronics
Science & Technology of Thin Films
Material Characterization
Optoelectronics
Nanomaterials &Nanotechnology
Superconductivity
Semiconductor Devices
Magnetic Materials

ASSOCIATION WITH PROFESSIONAL BODIES

- **Executive Member of Electron Microscope Society of India (EMSI), Delhi 2012-cont.**
- **Member, Steering committee of 17th International Workshop on The Physics of Semiconductor Devices (IWPSD), 2013, Amity University.**
- **Member, National Advisory Committee, International Conference on Nanostructured Ceramics & Nanomaterials (ICWNCN-2012), Dept.of Physics & Astro, Delhi Univ., 13-16 March 2012**
- **Member, Institute Academic Programme Committee (IAPT) ,I.I.T Roorkee, 2012-Cont.**

REVIEWER

Reviewed number of manuscripts for publication in several international Journals as Sensors and Actuators:A, Applied Physics Letter, ACS Nano interfaces, Journal of Applied Physics, Thin Solid Films, Surface and Coating Technology, Current Applied Physics, Journal of Crystal Growth etc.

THESIS EXAMINER

I.I.T Delhi, Delhi University, CSIO Chandigarh, BIDS Pilani, G.N.D.University, Amritsar, Jammu University

ORGANISER

Organised AICTE Sponsored Short Term Course On NANOMATERIALS: SYNTHESIS & CHARACTERIZATION Under QIP Programme 16.2. 2009- 20.2.2009.

Organized Several Training program on Functional Nanomaterials for M.Tech , M.Sc. and B.Tech students.

OTHER RESPONSIBILITIES AT IITR

(1) Member of Institute Academic Programme Committee (IAPT).
(2) Core Member of Centre for Nanotechnology.
(3) worked as warden in Girls Hostel, IITR.
(4) Office in Charge (BTech Lab, M.Tech Lab, Electronics Lab etc.)
(5) Office in Charge (Library)
(6) Faculty Adviser
(7) Institute Representative to conduct JEE, GATE & JAM examinations.

SIGNIFICANT RESEARCH OUTPUT:

A. Developed High Temperature Superconducting Microwave Resonators

For the first time micro structural correlation of superconducting microwave penetration depth has been probed by Atomic Force Microscopy. Microwave Resonators were fabricated using photolithography on Superconducting YBCO thin films grown by Pulsed Laser Deposition. A minimum microwave surface resistance value of 215 μΩ at 77K has been obtained for film thickness of about 300nm which is one hundred times lower than copper at 10GHz. The low value of surface resistance of superconducting resonators results in lower noise, higher speed, wider bandwidth and makes them attractive for microwave applications.

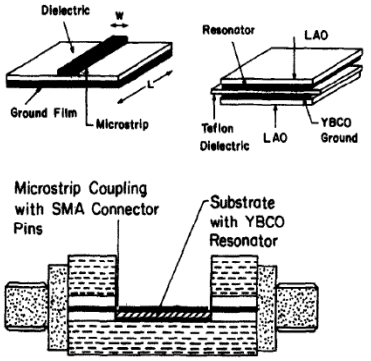


Fig. 1. Schematic diagram of YBCO thin film microstrip resonator with measurement jig.

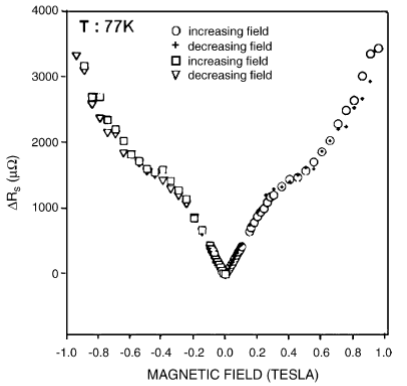


Fig. 9. Hysteresis of surface resistance in magnetic field varying from −1 to +1 T and at 77 K.

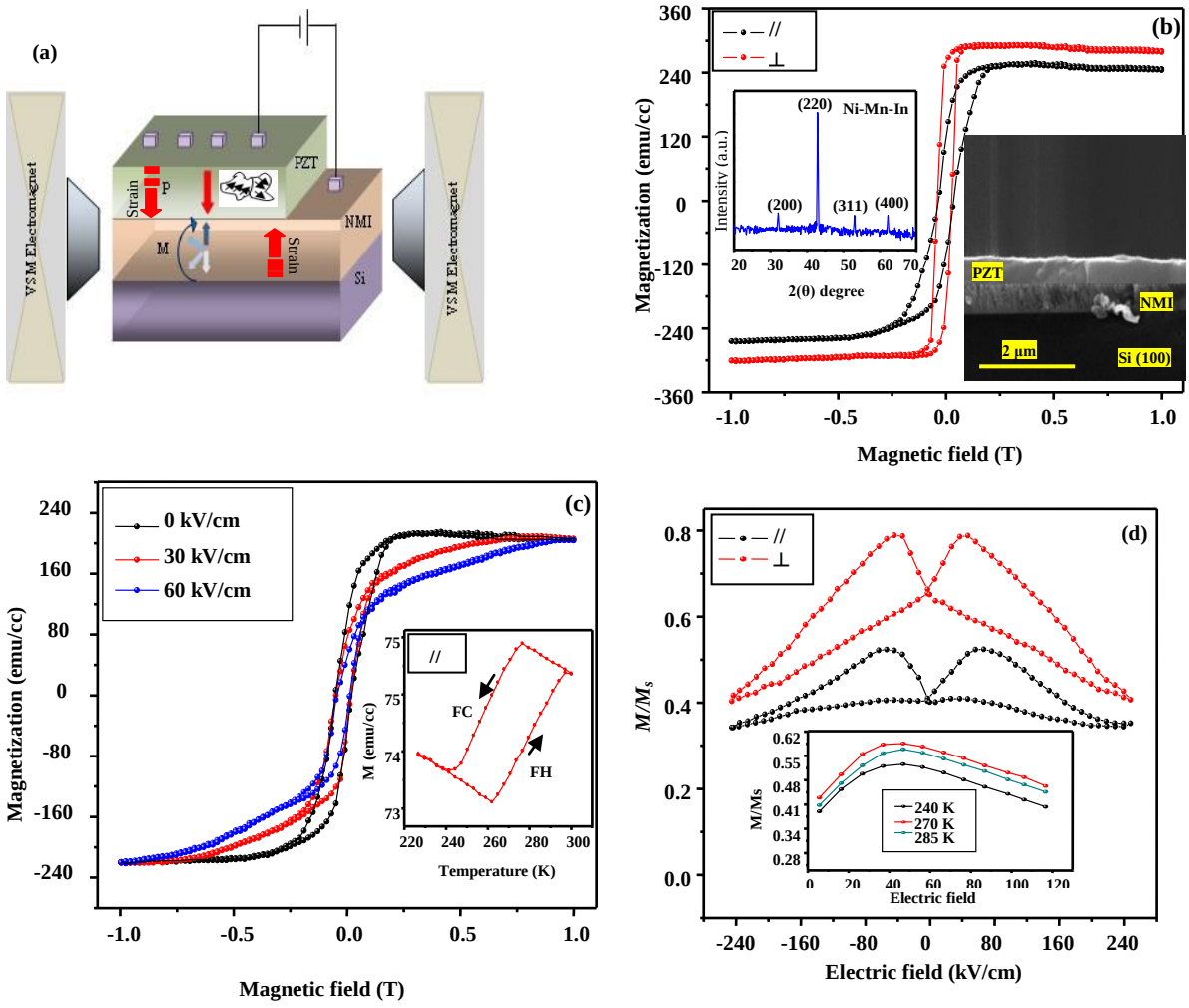
B. Developed High Temperature Superconducting Josephson Junctions and Superconducting Tapes on metallic substrates using novel and low cost deposition method.

In an another attempt we have fabricated for the first time Josephson junctions on c- axis oriented High-T_c superconducting YBCO and BSCCO thin films prepared via spray pyrolysis technique and both dc and ac Josephson effect have been demonstrated experimentally. Further attempts were made to fabricate superconducting tapes using this scalable and low cost deposition technique.

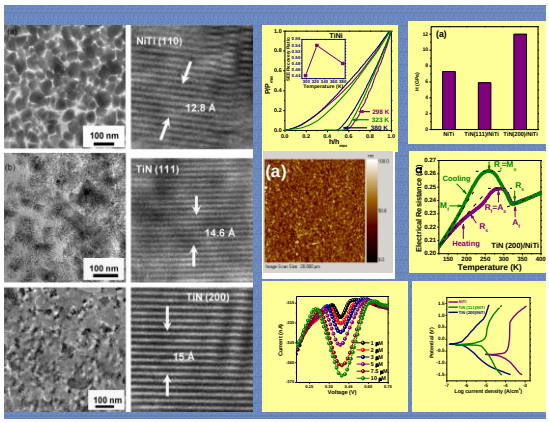
C. PZT/Ni-Mn-In based multifferoic heterostructures for magnetoelectric random access memory (MERAM) applications.

PZT/Ni-Mn-In thin film heterostructures exhibits giant room temperature magneto-electric coupling (DME and CME). The first order room temperature structural transformation of Ni-Mn-In in combination with large DME ($\Delta P_s/\Delta M \sim 60\ \mu C/cm^2 \times T$) makes the heterostructure suitable for magnetic sensors. The large piezostrain along with differently distinctive ground states of PZT causes the non volatile switching of magnetization through a small electric field via strain and charge co-mediated ME coupling in ultra thin PZT/Ni-Mn-In (30 nm/ 80 nm) thin film heterostructure. The shape memory effect of Ni-Mn-In helps in improving the ferroelectric characteristics of PZT like: fatigue, tunability, etc. The interfacial interaction between two layers

can be tuned with temperature and magnetic field (by varying the magnitude of applied magnetic field or by performing the measurements in-plane and out-of plane axis of heterostructure) due to magnetostrictive nature of Ni-Mn-In. The strong CME coupling and excellent ferroelectric behavior of PZT indicates that Ni-Mn-In/PZT/Ni-Mn-In/BFO structure can behave as next generation power efficient magneto-electric random access memory (MERAM).



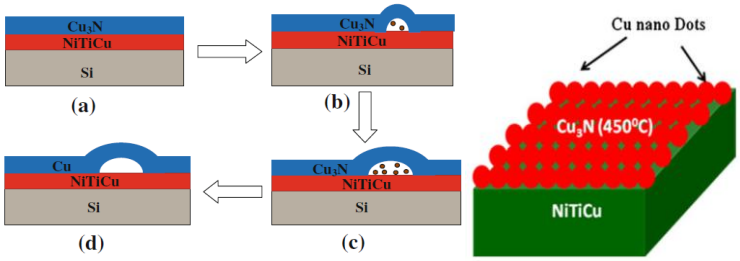
D. Prototype of Electrochemical Dopamine sensor with physiological importance in Parkinson's Disease associated with neurodegenerative disorders of central nervous system has been fabricated & demonstrated



For the first time we have added a new dimension to the application of SMA thin film heterostructures in electrochemical sensing. In the present research hard and adherent nanostructured TiN of approximate thickness 100 nm were insitu grown to improve the texture, electrical, mechanical and wear properties of SMA thin films without sacrificing the shape memory effect. Further the electrodes modified with TiN/NiTi/Si heterostructure has been used for the electrochemical **sensing of Dopamine , which has a critical physiological importance in Parkinson's disease associated with neurodegenerative disorders of central nervous system**. The disease occurs when there is a sharp decline in dopamine level.

E. Developed Antibacterial & Non Cytotoxic Cu3N/NiTiCu Shape memory thin film heterostructures for Bio MEMS applications.

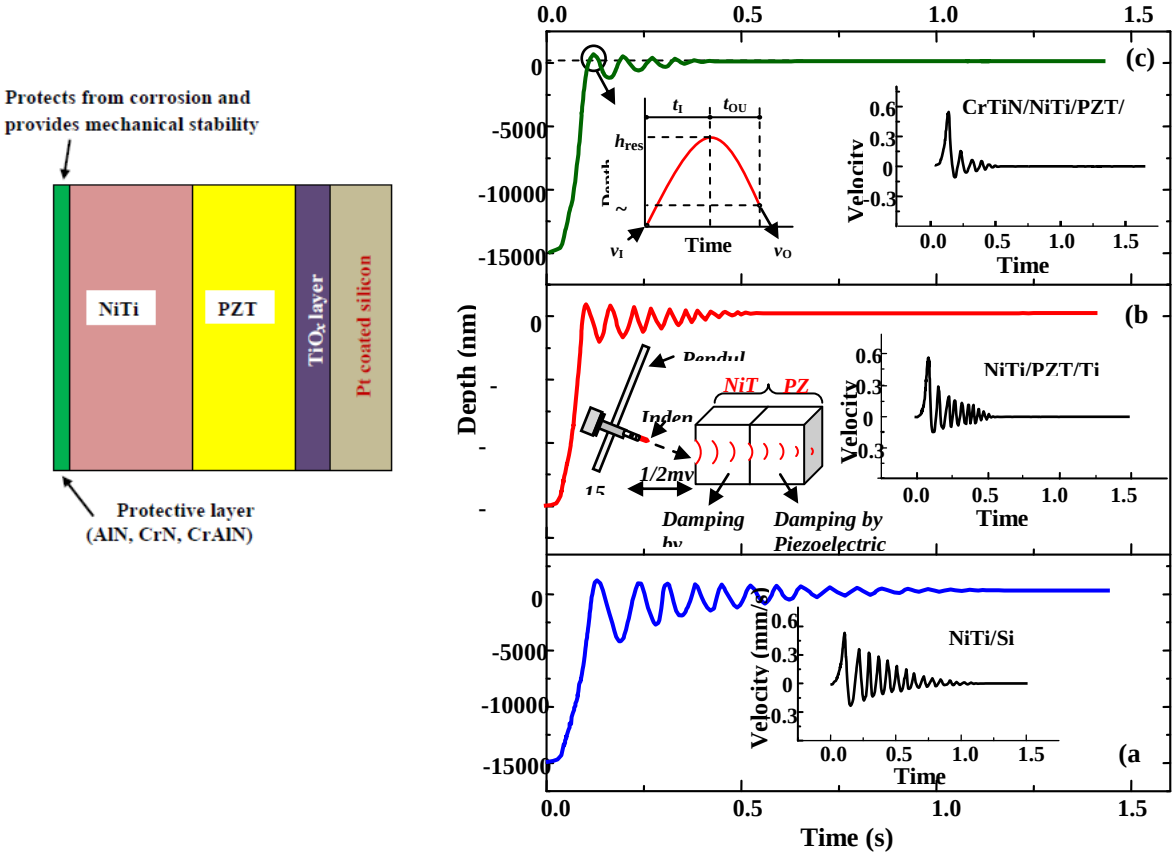
For the first time Nanocrystalline copper nitride and copper nanodots (20 nm) were subsequently deposited on the surface of ternary NiTiCu shape memory thin films which show low corrosion current density with higher corrosion potential and, better corrosion resistance (4528.7 ± 0.166 kQ cm^2). The concentration of Ni released from the Cu3N/NiTiCu samples was reduced to the factor of about one-ninth. The antibacterial and cytotoxicity investigated through green fluorescent protein expressing E. coli bacteria and human embryonic kidney cells show the strong antibacterial property and non cytotoxicity of Cu3N/ NiTiCu heterostructure. This work is of immense technological importance due to variety of BioMEMS applications.



F.Developed Piezo based smart systems for vibration damping in MEMS

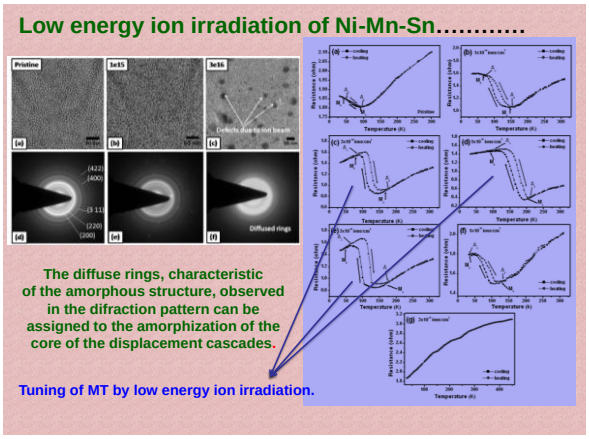
In an another attempt we have developed insitu **PZT and AlN based smart systems** which can be advantageous for suppression of stress and acoustic waves resulting from air blasts and explosives.

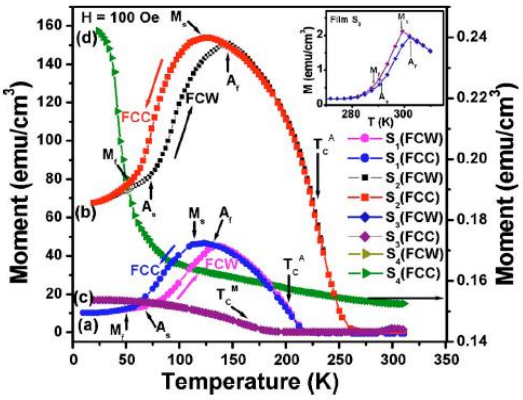
These heterostructures have become increasingly important for next generation ballistic missiles and army munition system. In present study a successful vibration damping device used to mitigate the effect of spurious vibrations was achieved by the development of a heterostructure composite bilayer configuration composed of piezoelectric and shape memory alloy thin films. Higher hardness (19.8 GPa), lowest coefficient of restitution (e = 0.205), highest damping capacity and excellent figure of merit (0.751), makes them very attractive damping material for microelectromechanical systems (MEMS).



G. Developed Ultrthin ferromagnetic shape memory thin films for magnetic read heads and magnetic sensors

For the first time the martenistic transformation behaviour of ferromagnetic shape memory thin films has been shown to be dependent on microstructure and dimensional constraint of the films. Below a critical grain size of 10.8 nm of the films, the complete suppression of martensite transformation has been demonstrated. Further exchange bias and magnetocaloric effect has been demonstrated in NiMnSb/ CrN heterostructures making them promising candidate for refrigeration. The films were bombarded with 200 MeV Au ions and 450 keV Ar ions in order to acquire a better control on the properties of films using ion irradiation which is important for investigating the acceptable radiation limits for the applications of these materials in radiation zones such as in space or nuclear reactors.





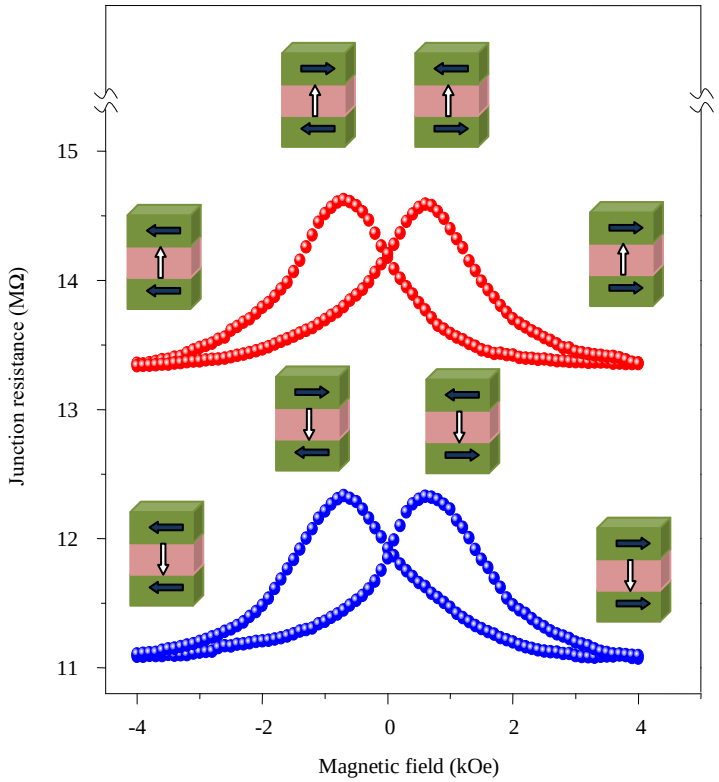
H. Grain size refinement and improved mechanical properties (Hardness 32GPa) of Shape memory thin films for MEMS applications

Room Temperature Austenite and Room Temperature Martensite NiTi nanostructured thin films were developed by varying the deposition conditions. Insitu Hot Stage Atomic Force Microscope was used to investigate the micro-structural changes during phase transformation in these films. The films exhibit a very interesting martensite to austenite phase transformation as crystal structure changes from monoclinic to cubic upon heating close to room temperature. The characteristics of this transformation are of immense technological importance due to a variety of MEMS applications. These nanostructured room temperature Austenite SMA thin films exhibit low surface roughness (2.5nm), high hardness (32.9 ± 0.5GPa), high reduced elastic modulus (134 ± 5.0GPa) and better wear behaviour (0.062± 0.005), better Superelastic Energy Recovery ratio (0.43 ± 0.03), Corrosion Potential (-3.64 ± 0.031), Nickel Release (0.014 ± 0.004) with strong antibacterial activity against E.Coli , Non cytotoxic nature and are ready to be use for MEMS applications. **In the present study for the first time the remarkable improvement in mechanical properties has been achieved in NiTiW shape memory thin films.** This is done by adding W into the matrix of NiTi by Co-sputtering of NiTi and W targets. Addition of W [varied from 2.6 – 33.6 at%] into NiTi above its solid solubility limit induces B2–R single step transformation having much less thermal hysteresis. Hardness and elastic modulus increase with increasing W reaching maximum values of 32.87 ± 2.76 GPa and 167.837 ± 8.64 GPa respectively.

Crystallite Size:	**2.76nm - 7.16nm**
Average Roughness:	**2.4 nm – 3.53 nm**
Austenite Finish Temperature (A_f):	**328-332K**
Hysteresis width:	**11-13 K**
Mechanical Hardness:	**32.8 GPa ± 2.76**
Reduced Elastic Modulus:	**167.83 GPa ± 8.64**
Dissipation Energy:	**45pJ ± 3.2**
Superelastic Energy Recovery Ratio:	**0.69 ± .02**
Wear:	**1.25 ± .376**

I. Multiferroic Tunnel Junction of $Ni_{50.3}Mn_{36.9}Sb_{12.8}/BiFeO_3/Ni_{50.3}Mn_{36.9}Sb_{12.8}$

A Multiferroic tunnel junction composed of two ferromagnetic shape memory alloy electrodes separated by a multiferroic barrier was fabricated from $Ni_{50.3}Mn_{36.9}Sb_{12.8}$/ $BiFeO_3/Ni_{50.3}Mn_{36.9}Sb_{12.8}$ trilayer. Large exchange bias field (H_{EB}) of ~ 59 Oe at room temperature was found for this trilayer. Besides the exchange bias effect in this multiferroic tunnel junction, one of the most interesting result was magnetoelectric effect which is manifested by the transfer of strain from $Ni_{50.3}Mn_{36.9}Sb_{12.8}$ electrodes to $BiFeO_3$ tunnel barrier. The magnetic field dependence of the junction resistance was observed at room temperature after aligning the ferroelectric polarization of $BiFeO_3$ barrier with poling voltage of ±3V. A change of junction resistance was also observed between the magnetic parallel and antiparallel states of electrodes, suggesting an entire flip of the magnetic domains against the magnetic field. After reversing the polarization of $BiFeO_3$barrier between the two directions, the entire R-H curve was shifted so that both parallel and antiparallel resistances switched to different values. Hence, after applying positive and negative voltages, two parallel and two antiparallel states, i.e., a distinct four-states were observed. It will encode quaternary information by both ferromagnetic and ferroelectric order-parameters, to read non-destructively by resistance measurement as shown in following figure. The corresponding TEMR value was 17% in our MFTJ structure at room temperature.These finding may helpful towards reconfigurable logic spintronics architectures in next generation magneto-electric random access memory (MERAM) devices.



Total Publications in Refereed Journals: 131

2017

131. Room temperature magnetocaloric effect in Ni-Mn-In-Cr ferromagnetic shape memory alloy thin films
Harish Sharma Akkera, Inderdeep Singh, **Davinder Kaur**
Journal of Magnetism & Magnetic Materials 424, (2017) 194-198 ; Impact Factor: 2.36

2016

130. Multiferroic tunnel junction of Ni50.3Mn36.9Sb12.8/BiFeO3/Ni50.3Mn36.9Sb12.8 for magneto-electric random access memory devices
Rahul Barman and Davinder Kaur
Applied Physics Letter 108, (2016) 092404 - 092409; Impact Factor: 3.29

129. Shape Memory alloy thin films and heterostructures for MEMS applications
Nitin Choudhary**, Davinder Kaur**
Sensors & Actuators: A. Physical 242 (2016) 162-181 ; Impact Factor: 2.143

128. Improved photovoltaic effect in CuO/Zn1 xMgxO heterojunction solar cell by pulsed laser deposition
Rashmi Bhardwaj, Rahul Barman, **Davinder Kaur**
Materials Letters 185 (2016) 230–234; Impact Factor: 2.4

127. Quantification of Charge to Strain Mediated Interface Coupling Transfiguration in FE/FSMA Heterostructures
Kirandeep Singh, **Davinder Kaur**
Journal of Physics D: Applied Physics 49 (2016) 035004 ; Impact Factor: 2.721

126. Improved electrical transport properties in high quality nanocrystalline silicon carbide (nc-SiC) thin films for microelectronic applications
Narendra Singh, Kirandeep Singh, Akhilesh Pandey, **Davinder Kaur**
Materials Letters 164 (2016) 28-31; Impact factor: 2.489

125. Tunable multiferroic properties of Mn substituted $BiFeO_3$ thin films
Kirandeep Singh, S.K.Singh, **Davinder Kaur**
Ceramic International 42 (2016) 13333-14298; Impact factor: 3.02

124. Dislocation density investigation on MOCVD-grown GaN epitaxial layers using wet selective etching
Akhilesh Pandey, Brajesh S. Yadav, D. V. Sridhara Rao, **Davinder Kaur**, Ashok Kumar Kapoor
Applied Physics A (2016) 122:614

123. Growth and evolution of residual stress of AlN films on silicon (100) wafer
Akhilesh Pandey , Shankar Dutta, Ravi Prakash , Sandeep Dalal , R. Raman , A.K. Kapoor, **Davinder Kaur**
Materials Science in Semiconductor Processing 52 (2016) 16–23.

122. Structural, corrosion, and mechanical properties of sputtered deposited chromium tungsten nitride (Cr1-xWxN) nanocomposite thin films
Ravi Prakash, R. Jayaganthan and **Davinder Kaur**
Advanced Material Letters 7 (2016) 100-150

121. Effect of Cr addition on the structural, magnetic and mechanical properties of magnetron sputtered Ni–Mn–In ferromagnetic shape memory alloy thin films
Harish Sharma Akkera, Davinder Kaur
Applied Physics A (2016) 122:996

2015

120. Direct and converse magneto-electric coupling in ferromagnetic shape memory alloys based thin film multiferroic heterostructures**.**
Kirandeep Singh **and Davinder Kaur**
Applied Physics Letter 107, (2015) 262901-262905; Impact Factor: 3.29

119. Manifestation of martensitic phase transformation and magneto-caloric properties in high quality magnetron sputtered Ni-Mn-In/Si ultra thin films
Kirandeep Singh, **Davinder Kaur**
Sensors & Actuators: A. Physical 236 (2015) 247-256 ; Impact Factor: 2.143

118. Structural phase transition and enhanced ferroelectricity in $Bi(Fe_{1-x}Mn_x)O_3$ thin films deposited by Pulsed Laser deposition
Rahul Barman, S.K. Singh, **Davinder Kaur**
Thin Solid Films 594 (2015) 80-87 ; Impact factor: 2.038

117. Structural and Optical properties of (ool) oriented Vanadium Pentaoxide Nanorods
Vibhu Goyal, Nitin Choudhary, Kirandeep Singh, **Davinder Kaur**
Nanomaterials and Energy 3 February (2015) 1-10

116. Vibration Damping Materials and Their Applications in Nano/Micro-Electro-Mechanical Systems:
Nitin Choudhary and **Davinder Kaur**
Journal of Nanoscience and Nanotechnology Vol. 15, March (2015) 1907-1924

115. Martensitic phase transformation of magnetron sputtered nanostructured Ni-Mn-In ferromagnetic shape memory alloy thin films
Harish Sharma Akkera**,** Inderdeep Singh and **Davinder Kaur**
Journal of Alloys and Compounds 642 (2015) 53–62; Impact factor: 2.999

114. Martensitic phase transformations and magnetocaloric effect in Al co-sputtered Ni–Mn–Sb alloy thin films
Harish Sharma Akkera**,** Nitin Choudhary and **Davinder Kaur**
Materials Science and Engineering B 198 (2015) 113–119; Impact factor: 2.122

113. Leakage current behavior of BiFeO3/BiMnO3 multilayer fabricated by pulsed laser deposition
Rahul Barman, **Davinder Kaur**
Journal of Alloys and Compounds 644 May (2015) 506–512; Impact factor: 2.999

112. Improved magnetocaloric effect in magnetron sputtered NiMn-Sb-Al ferromagnetic shape memory alloy thin films
Rahul Barman, Davinder Kaur
Vacuum 120 October (2015) 22-26; Impact factor: 1.858

111. Electrical, Surface Morphology and Magneto-capacitance Properties of Pb free Multiferroic (BiFeO3)1−x(BaTiO3)x Solid Solutions
M. Shariq, **D. Kaur**, V. S. Chandel and M. A. Siddiqui
Acta Physica polonica A, 127 (2015) 1675-1679

110. Structural and optical properties of pulsed laser deposited ZnO/TiO2 and TiO2/ZnO thin films
Praveen K. Jain, Mohammad Salim, Davinder Kaur
Optik-International Journal for Light and Electron Optics 126 (2015) 3260-3262.

2014

109. Strain mediated coupling in magnetron sputtered multiferroic PZT/Ni-Mn-In/Si thin film heterostructure
Kirandeep Singh, Sushil Kumar Singh, and Davinder Kaur
Journal of Applied Physics 116, September (2014) 114103-9 ; Impact factor: 2.259

108. Enhanced exchange bias in magnetron-sputtered Ni–Mn–Sb–Al ferromagnetic shape memory thin films
Rahul Barman, Sushil Kumar Singh, Davinder Kaur
Current Applied Physics14 December (2014)1755-1759; **Impact factor: 2.212**

107. Room temperature nanoindentation creep of nanograined NiTiW shape memory alloy thin films
Navjot Kaur, Davinder Kaur
Surface Coating Technology 260 December (2014) 260-265; **Impact factor: 2.453**

106. Thickness dependent exchange bias in co-sputter deposited Ni-Mn-Al Heusler alloy nanostructured thin films
A. Mishra, S.K. Srivastava, , A. Kumar, P. Dubey, S. Chauhan, Amit Kumar, **D. Kaur,** R.Chandra
Thin Solid Films **572 December (2014) 142-146; Impact factor: 2.038**

105. NiTiCu/AlN/NiTiCu shape memory thin film heterostructures for vibration damping in MEMS
Navjot Kaur, Davinder Kaur
Journal of Alloys and Compounds 590 March (2014) 116–124; Impact factor: 2.999

104. Electrical transport behavior of lead-free BZT-BCT thin film grown on LaNiO3/Si by laser deposition
Chandan Bhardwaj, **Davinder Kaur**
Journal of Alloys and Compounds 595 May (2014) 158-163 ; Impact factor: 2.999

2013

103. Exchange bias effect in NiMnSb/CrN heterostructures deposited by magnetron sputtering
Harish Sharma, Rahul Barman, Navjot Kaur, Nitin Choudhary, and **Davinder Kaur**
Journal of Applied Physics 113, 17D723 May (2013) ; Impact factor: 2.259

102. NiTi/Pb($Zr_{0.52}Ti_{0.48}$)O_3 thin film heterostructures for vibration damping in MEMS
Nitin Choudhary, D.K. Kharat, J. Van Humbeeck, Davinder Kaur
Sensors and Actuators A 193 April (2013) 30– 34; Impact factor: 2.143

101. Magnetron sputtered Cu_3N/NiTiCu shape memory thin film heterostructures for MEMS applications.
Navjot Kaur , N. Choudhary, Rajendra N. Goyal, S. Viladkar, I.Matai, P.Gopinath, S.Chokalingam and **Davinder kaur**
Journal of Nanoparticle Research 15 April (2013) 1468; Impact factor: 2.278

100. Structural and magnetic properties of La_2NiMnO_6 thin films on $LaAlO_3$ substrate with varying thickness
Deepak Kumar **and Davinder Kaur**
Journal of Alloys and Compounds 554 March (2013) 277- 283; Impact factor: 2.999

99. Electrochemical investigations of mometasone furoate, a corticosteroid, in micellar medium
Rajendra N. Goyal, **Davinder Kaur** , Bharati Agrawal , Saurabh Kumar Yadav
Journal of Electroanalytical Chemistry 695 (2013) 17–23; Impact factor: 2.676

98. Energetic ion irradiation induced crystallization of Ni-Mn-Sn ferromagnetic shape memory thin film
R. Vishnoi, R. Singhal, K. Asokan, J.C. Pivin, D. Kanjilal**, D. Kaur**
Vacuum 89 March (2013) 190-196 ;Impact factor: 1.858

97. Grain refinement of NiTi shape memory alloy thin films by W addition
Navjot Kaur , **Davinder kaur**
Material Letters 91 January (2013) 202-205; Impact factor: 2.489

96. Pulsed laser deposition and characterization of highly tunable BZT-BCT thin films grown on $LaNiO_3$/Si substrate
Chandan Bhardwaj , B.S.S. Daniel , **Davinder Kaur**
Journal of Physics and Chemistry of Solids 74 January (2013) 94-100; Impact factor: 1.527

95. Electronic excitation induced phase transformation in FSMA thin film
R. Singhal , R. Vishnoi , K. Asokan , D. Kanjilal , **D. Kaur**
Vacuum 89 March (2013) 215-219;Impact factor: 1.858

94. Investigation on multiferroic properties of BiFeO3 ceramics
M. SHARIQ, **D. KAUR**, M.A. SIDDIQUI
Materials Science-Poland, 31(3), 2013, pp. 471-475

2012

93. Effect of Ti addition on the structural, mechanical and damping properties of magnetron sputtered Ni-Mn-Sn ferromagnetic shape memory alloy thin films
Nitin Choudhary, **Davinder Kaur**
Journal of Physics D: Applied Physics 45 Dec(2012) Issue 49 495304; Impact factor: 2.721

92. Highly tunable compositionally graded BZT-BCT multilayer with low temperature capacitance coefficients
Chandan Bhardwaj , B.S.S. Daniel , **Davinder Kaur**
Materials Letters 87 November (2012) 172–175; Impact factor: 2.489

91. Variation in phase transformation paths of NiTi films as a function of film thickness
Ashvani Kumar, Devendra Singh, **Davinder Kaur**
Sensors and Actuators A 178 May (2012) 57– 63 ; Impact factor: 2.143

90. Phase transformation in Ni-Mn-Sn ferromagnetic shape memory alloy thin films induced by dense ionization
R. Vishnoi, R. Singhal, K. Asokan, D. Kanjilal and **Davinder Kaur**
Applied Physics A : Material Science 107 June (2012) 925–934 ; Impact factor: 1.694.

89. Relaxor characteristics of highly tunable BZT-BCT thin film grown on $LaNiO_3$/Si by pulsed laser deposition,
Chandan Bhardwaj, **Davinder Kaur**
Current Applied Physics 12 September (2012) , 1239-1243 ; Impact factor: 2.212.

88. Improved electrical and mechanical properties of NiTi/TiO_x/PZT/TiO_x thin film heterostructures
Nitin Choudhary, D. K. Kharat, **Davinder Kaur**
Solid State Phenomena Vol. 185 (2012) 25-27

87. Influence of buffer layer on structural, electrical and mechanical properties of PZT/NiTi heterostructures
Nitin Choudhary, **Davinder Kaur**
Journal of Alloys and Compounds 536 September (2012) 56-65; Impact factor: 2.999

86. Independent gate SRAM based on asymmetric gate to source/drain overlap-underlap device FinFET
N Kaushik, BK Kaushik, **D Kaur**, MK Majumder
Progress in VLSI Design and Test, (2012) 373-374

2011

85. Surface modification of NiTi/PZT heterostructures using various protective layers for potential MEMS applications
Nitin Choudhary, D.K. Kharat and **Davinder Kaur**
Surface and Coatings Technology, 206 December (2011) 1735; Impact factor: 2.453.

84. Ion irradiation induced modifications of nanostructured Ni–Mn–Sn ferromagnetic shape memory thin films
R. Vishnoi , R. Singhal , K. Asokan , D. Kanjilal, **Davinder Kaur**,
Thin Solid Films 520 December (2011) 1631–1637; Impact factor: 2.038

83. Thickness dependent phase transformation of magnetron-sputtered Ni–Mn–Sn ferromagnetic shape memory thin films
Ritu Vishnoi, Rahul Singhal & DavinderKaur
Journal of Nanoparticle Research 13 September (2011) 3975- 3990; Impact factor: 2.278.

82. Exchange bias behaviour in magnetron sputtered $Ni_{49.8}Mn_{36.1}Sn_{13}$. ferromagnetic shape memory thin film
Ritu Vishnoi, **Davinder Kaur**
Journal Of Alloys And Compounds 509 February (2011) 2833–2837; Impact factor: 2.790.

81. Structural, electrical and mechanical properties of magnetron sputtered NiTi/PZT/TiO_x thin film heterostructures
Nitin Choudhary, D.K. Kharat, **Davinder Kaur**
Surface & Coatings Technology 205 February (2011) 3387–3396; Impact factor: 2.453.

80. Effect of oxygen partial pressure and VO_2 content on hexagonal WO_3 thin films synthesized by pulsed laser deposition technique
Ajay Kaushal and Davinder Kaur
Journal of Nanoparticle Research 13 June (2011) 2485–2496 ; Impact factor: 2.278.

79. Pulsed laser deposition of transparent ZnO/MgO multilayers
Ajay Kaushal, **Davinder Kaur**
Journal Of Alloys And Compounds 509 January (2011) 200–205; Impact factor: 2.999.

78. Influence of reactive gas on structural properties of magnetron sputtered CrSiN coatings
Hetal N. Shah, R. Jayaganthan, **Davinder Kaur**
Applied Surface Science 257April (2011) 5535–5543; Impact factor: 2.538.

77. Influence of Mo Concentration on Properties of Pulsed Laser Deposited Nanostructured $Sr_2FeMo_xW_{1-x}O_6$
Deepak Kumar and **Davinder Kaur**
Advanced Science Letters, Vol. 4, January (2011) 29-35.

76. VO_2–WO_3 nanocomposite thin films synthesized by pulsed laser deposition technique
Ajay Kaushal, Nitin Choudhary, Navjot Kaur, **Davinder Kaur**
Applied Surface Science 257 August (2011) 8937-8944; Impact factor: 2.71.

75. Exchange biasing in SFMO/SFWO double perovskite multilayer thin films
Deepak Kumar, **Davinder Kaur**
Journal of Alloys and Compounds 509 July (2011) 7886– 7890; Impact factor: 2.999.

74. Fingerprint recognition using image segmentation
Sangram bana, N.Ahlawat and **Davinder Kaur**
International Journal of Advanced Engineering Sciences and Technologies 9 (2011), 146-158

73. Antiferromagnetic thickness dependence of blocking temperature in SFMO/SFWO multilayer
Deepak Kumar, **Davinder Kaur**
Materials Chemistry and Physics 129 October (2011) 802– 804; Impact factor: 2.427.

72. Structural, optical & magnetic properties of Nd-doped $BiFeO_3$ films prepared by pulsed laser
Anshu Gaur**,** Kirandeep Singh**,** Navjot Kaur **and** Davinder Kaur
Physica B 406 May (2011) 1877–1882; Impact factor: 1.327.

71. 200 Mev Ag+ Ion Beam Induced Modifications In $AgInSe_2$ Films Deposited By Hot Wall Vacuum Evaporation
Dinesh Pathak, R. K. Bedi, **Davinder Kaur**
Chalcogenide Letters Vol. 8, March (2011), 213 – 222.

70. Structural, optical and magnetic properties of $Bi_{0.9-y}Sm_yLa_{0.1}FeO_3$ thin films deposited by laser deposition technique
Ajay Kaushal, Neeraj Kumar and **Davinder Kaur**
Optoelectronics And Advanced Materials Vol. 5, May (2011), 545 – 550.

69. Image segmentation schemes applied to microscopic images
Sangram bana, N.Ahlawat and **Davinder Kaur**
International Journal of Advanced Engineering Sciences and Technologies 9 (2011), 146-158

2010

68. Structural and magnetic properties of magnetron sputtered Ni–Mn–Sn ferromagnetic shape memory thin films
Ritu Vishnoi and **Davinder Kaur**
Journal of Applied Physics 107, May (2010) 103907; Impact factor: 2.259.

67. Size dependence of martensite transformation in nanostructured Ni–Mn–Sn ferromagnetic shape memory
Ritu Vishnoi, **Davinder Kaur**
Surface & Coatings Technology 204 August (2010) 3773–3782; Impact factor: 2.453.

66. Influence of sputtering parameters and gases on microstructure of Chromium Nitride films
Hetal N. Shah, R. Jayaganthana, **Davinder Kaur**
Thin Solid Films 518 August (2010) 5762-5768; Impact factor: 2.038.

65. Influence of silicon content on the microstructure and hardness of CrN coatings deposited by reactive magnetron sputtering
Hetal N. Shah, R. Jayaganthana, **Davinder Kaur**
Materials Chemistry And Physics 121 June (2010) 567–571; Impact factor: 2.427.

64. Microstructural Characterization of CrN thin films deposited on stainless steel by magnetron sputtering
Hetal N. Shah, R. Jayaganthan, **Davinder Kaur**
Bulletin of Material Science (springer) 33 April (2010) 103-110.

63. Substrate Dependent Structural and Magnetic Properties of Pulsed Laser Deposited Fe_3O_4 Films
Rajendra N. Goyal, Ashish K.Pandey, and **Davinder Kaur**
Journal Of Nanoscience And Nanotechnology, 10, Dec (2010), 8018-8025; Impact factor: 2.149.

62. Effect of Substrate Temperature on the Structural, Optical, and Electrical Properties of AgInSe by PLD
Dinesh Pathak, and R. K. Bedi, and **Davinder Kaur**
Journal of the Korean Physical Society, 56, NO. 3, (2010), 836-841.

61. Room temperature growth of nanocrystalline anatase TiO_2 thin films by dc magnetron sputtering
Preetam Singh, **Davinder Kaur**
Physica B 405 March (2010) 1258–1266; Impact factor: 1.327.

60. Effect of La doping on structural, optical and magnetic properties of BiFeO3 deposited by laser technique
N. kumar, C. Bhardwaj, **D. KAUR**
Optoelectronics And Advanced Materials – Rapid Comm. Vol. 4, No. 10, (2010) , 1497 - 1502

59. Crystalline Aginse 2 Films On Glass By Laser Ablation
D Pathak, RK Bedi, A Kaushal, D Kaur
International Journal of Modern Physics B 24 (27), (2010) 5379-5385

58. Voltammetric Sensor Based on Nano TiO_2 Powder Modified Glassy Carbon Electrode
Rajendra N. Goyal, Ashish K. Pandey and Davinder Kaur
The Open Chemical and Biomedical Methods Journal, 2010, *3*, 66-73

57. Substrate-dependent structural and magnetic properties of Sr_2FeMoO_6 nanostructured perovskite
Deepak Kumar, **Davinder Kaur**
Physica B 405 August (2010) 16, 3259-3266; Impact factor: 1.327.

56. Structural, optical and dielectric properties of $ZnTiO_3$ ceramics
P. K. Jain, D. Kumar, A. Kumar, **D. Kaur**
Optoelectronics and Advanced Materials Vol. 4, No.3, (2010), 299-304.

55. Fabrication of Densely Distributed Silver Indium Selenide Nanorods by Using Ag+ Ion Irradiation
Dinesh Pathak, R. K. Bedi, and **Davinder Kaur**
Journal of the Korean Physical Society, 57, No. 3, (2010), 474-479.

54. Characterization of AgInSe2 Films Deposited by Hot-Wall Vacuum Evaporation Method
Dinesh Pathak; R. K. Bedi**; Davinder Kaur**
Materials And Manufacturing Processes, 25: (2010), 1012–1017

53. Effect of sputtering pressure and temperature on DC magnetron sputtered CrN films
H. N. Shah, R. Jayaganthan and **Davinder Kaur**
Surface Engineering 26 (2010) 629-637 .

52. Mechanical properties of nanostructured copper/hydrogenated amorphous multilayer films grown in a low vacuum system
Neeraj Dwivedi, Sushil Kumar, **Davinder Kaur**, C. M. S. Rauthan, O. S. Panwar
Optoelectronics and Advanced Materials Vol. 4, No.4, (2010), 604-910.

51. Growth Of $AgInSe_2$ On Si (100) Substrate By Pulse Laser Ablation
D Pathak, RK Bedi**, D Kaur**
Surface Review And Letters 16 (06), (2010) 917-

2009

50. Nanoindentation and corrosion studies of TiN/NiTi thin films for biomedical applications
Ashvani Kumar and **Davinder Kaur**
Surface and Coatings Technology 204 December (2009) 1132-1136; Impact factor: 2.453.

49. Structural, electrical and optical properties of transparent $Zn_{1-x}Mg_xO$ nanocomposite thin films
Ajay Kaushal, Dinesh Pathak, R.K.Bedi and **Davinder Kaur**
Thin Solid Films 518 December (2009) 1394–1398; Impact factor: 2.038

48. Room-temperature ferromagnetism in $Sn_{1-x}Mn_xO_2$ nanocrystalline films by ultrasonic pyrolysis
Ajay Kaushal, Prerna Bansal, Ritu Vishnoi, Nitin Choudhary and **Davinder Kaur**
Physica B: Condensed Matter 404 November (2009) 3732-3738; Impact factor: 1.327.

47. Growth and characterization of iron oxide nanocrystalline films via low-cost ultrasonic Pyrolysis
R. N. Goyal, Ashish K. Pandey **and Davinder Kaur**
Materials Chemistry and Physics, 116 (2) August (2009) 638-644; Impact factor: 2.427.

46. Growth of $AgInSe_2$ on Si (100) substrate by thermal evaporation technique
Dinesh Pathak , R. K. Bedi and **Davinder Kaur**
Appl Physics A: Material Science and Processing 95 June (2009) 843-847; Impact factor: 1.694.

45. Effect of crystallographic orientation of nanocrystalline TiN on electrical & mechanical properties of TiN/NiTi films
Ashvani Kumar, Devendra Singh, Ravi Kumar and **Davinder Kaur**
Journal of Alloys and Compounds 479 1-2 June (2009) 166-172; Impact factor: 2.999.

44. Fabrication and nanoindentation properties of TiN/NiTi and applications in electrochemical sensing
Ashvani Kumar, Devendra Singh, Rajendra N Goyal and **Davinder Kaur**
Talanta 78 May (2009) 964-969; Impact factor: 3.756.

43. Grain size effect on structural, electrical and mechanical properties of NiTi thin films deposited by sputtering
Ashvani Kumar, Devendra Singh and **Davinder Kaur**
Surface & Coatings Technology 203 March (2009) 1596-1603; Impact factor: 2.453

42. Mn-Doped ZnO Nanocrystalline Thin Films Prepared by Ultrasonic Spray Pyrolysis
Preetam Singh, Ajay Kaushal and **Davinder Kaur**
Journal of Alloys and Compounds 471 March (2009) 11-15; Impact factor: 2.790.

41. Effect of Mg content on structural, electrical and optical properties of pulsed laser deposited $Zn_{1-X}Mg_xO$ nanocomposite thin films
Ajay Kaushal and **Davinder Kaur**
Solar Energy Materials & Solar Cells 93 February (2009) 193–198; Impact factor: 5.755.

40. Fabrication of Fe_2O_3 nanopowder modified glassy carbon electrode for applications in electrochemical sensing
Rajendra Goyal, A. K. Pandey, Ashvani Kumar and **Davinder Kaur**
Journal of Nanoscience and Nanotechnology 9 (3) (2009) 1278.

2008

39. Influence of film thickness on texture, electrical and optical properties of room temperature deposited nanocrystalline V_2O_5 films
Preetam Singh and Davinder Kaur
Journal of Applied Physics 103 (2008) 043507**;** Impact factor: 2.259.

38. Intrinsic magnetism in $Zn_{1-x}Co_xO$ ($0.03 > x < 0.10$) thin films prepared by ultrasonic spray pyrolysis
Preetam Singh, Deepak, A. K Pandey and **Davinder Kaur**
Journal of Physics.: Condensed Matter 20 (2008) 315005; Impact factor:2.355.

37. Structural and optical studies of nanocrystalline V_2O_5 thin films
Ashvani kumar, Preetam Singh and **Davinder Kaur**
Thin Solid Films 516 (2008) 912-918; Impact factor: 2.038.

36. ZnO nanocrystalline powder synthesized by ultrasonic mist-chemical vapour deposition
Preetam Singh, Ashvani Kumar, Deepak and **Davinder Kaur**
Optical Materials 30 (2008) 1316-1322; Impact factor: 2.075.

35. Effect of graphite and metallic impurities of C60 on determination of salbutamol in biological fluids
Rajendra N. Goyal , A. K. Pandey, Preetam Singh and **Davinder Kaur**
Talanta 75 (2008) 63–69; Impact factor: 3.756.

34. Insitu high temperature XRD studies of ZnO nanopowder
Preetam Singh and **Davinder Kaur**
Bulletin Material Science 31 (2008) 573-577.

33. Substrate effect on texture properties of nanocrystalline TiO_2 thin films
Preetam Singh, Ashvani Kumar and **Davinder Kaur**
Physica B 403 (2008) 3769-3773; Impact factor: 1.327.

32. Structural and optical properties of AgInSe2 films
R. K. Bedi, D. Pathak, Deepak and **Davinder Kaur**
Zeitschrift für Kristallographie Supplements 27 (2008) 177-183

2007

31. Growth and characterization of ZnO nanocrystalline thin films and nanopowder via low cost ultrasonic spray pyrolysis
Preetam Singh, Ashvani Kumar, Deepak and **Davinder Kaur**
Journal of Crystal Growth 306 (2007) 303-310; Impact factor: 1.752.

30. Structural and optical characterization of ZnO nanocrystalline films
A. K. Chawla, R. Chandra and **Davinder Kaur**
Optical Materials 29 (2007) 995-998; Impact factor: 2.075.

29. Effect of oxygen partial pressure on the structural and optical properties of sputter deposited zinc oxide films
Preetam Singh, Amit Kumar Chawla, **Davinder Kaur,** R.Chandra
Material Letters 61 (2007) 2050-2053; Impact factor: 2.224.

28. Structural, electrical and magnetic properties of $PrBaMnO_3$
Neeraj Panwar, S. K. Agarwal, G. L. Bhalla and **Davinder Kaur**
International Journal of Modern Physics B 21, 15 (2007) 2647-2656.

2006

27. Texture development in Ti-Si-N nanocomposite thin films
R. Chandra**, Davinder Kaur**, N. Phinichka and Z. H. Barber
Material Science & Engineering A 423 (2006) 111-115; Impact factor: 2.590.

26. Low cost synthesis of high-T_c superconducting films on metallic subs by ultrasonic spray pyrolysis
Ashvani Kumar, Preetam Singh and **Davinder Kaur**
Cryogenics 46 (2006) 749-758.

25. Electronic transport studies of rare earth nickletes ($RNiO_3$) prepared by pulsed laser deposition
Ashvani Kumar, Preetam Singh and **Davinder Kaur**
Journal of Physics D: Applied Physics 39 (2006) 5310-5315; Impact factor: 2.721.

2005

24. Microwave characterization of laser ablated YBCO thin films
Davinder Kaur
Cryogenics 45 (2005) 455-462.

23. Pulsed laser deposition of $NdNiO_3$ thin films
Davinder Kaur, J. Jesudasan and Pratap Raichaudhary
Solid state communication 136, (2005), 369-374; Impact factor: 1.781.

22. Structural, optical and electronic properties of nanocrystalline TiN films
R. Chandra**,** A. K. Chawla **Davinder Kaur** and P.Ayyub
Nanotechnology 16 (2005) 3053-3056; **Impact factor: 3.842.**

2004

21. Microstructure and temperature dependence of penetration depth of Ag-YBCO films
Davinder Kaur, S. P. Pai, J. Jesudasan and R. Pinto
Physica C: Superconductivity 405 (2004) 96-102.

2003

20. Metal-Insulator transition in BaRuO3 thin films
Davinder Kaur and K. V. Rao
Journal of Physics D: Applied Physics 36 (2003) 156-159; **Impact factor: 2.721.**

19. Microstructural & conductive properties of epitaxial $BaRuO_3$ thin films
Davinder Kaur and K. V. Rao
Solid State Communication 128 (2003) 391-395; Impact factor: 1.781

2002

18. Grain boundary Josephson Effect in BSCCO microbridges
Davinder Kaur and A. K. Gupta
Journal of Physics D: Applied Physics 35 (**2002**) **729-731 ; Impact factor:2.528.**

1998

17. Microwave penetration depth measurements of Ag-YBCO thin films
Davinder Kaur, R. Pinto and H. W. Weber
Solid State Communication 106 (1998) 231-234; Impact factor: 1.781.

16. Thickness and microstructural dependence of microwave surface resistance in Ag-$YBa_2Cu_3O_{7-\delta}$
Davinder Kaur, John Jesudassan**,** C. P. D'Souza and R. Pinto
Applied Superconductivity 6 (1998) 45-48.

1996

15. Microstructural dependence of penetration depth of YBCO thin films probed by atomic force microscopy
R. Pinto, **Davinder Kaur**, P. R. Apte, M. S. R. Rao and R. Vijayaraghavan
Applied Physics Letter 68 (1996) 1720-1722; Impact factor: 3.794.

1994

14. Preparation of high quality BSCCO thin films by spray pyrolysis
Davinder Kaur and A. K. Gupta
Indian Journal of Pure & Applied Physics 32 (1994) 147-151.

1993

13. Optimization of deposition and annealing parameters for preparation of high quality YBCO thin films
Davinder Kaur and A. K. Gupta
Indian Journal of Pure & Applied Physics 31 (1993) 696-701.

1991

12. Grain boundary Josephson Effects in YBCO films
D. K. Walia and A. K. Gupta
Superconductor Science & Technology 4 (1991) 650 ; Impact factor: 2.758.

11. Study of Josephson Effects in the microbridges made on BSCCO films.
D. K. Walia, A. K. Gupta, G.S.N Reddy, V.N.Ojha, V.S.Tomar, N.Khare, N. D. Kataria ,K.C.Nagpal
Bulletin of Material Sciences 14 (1991) 1119-1123.

10. Effective passivation of YBCO superconducting bridges
G. S. N. Reddy, A. K. Gupta, V. S. Tomar, N.Khare, N.D.Kataria ,V.N.Ojha and **D.K.Walia**
Cryogenics 31 (1991) 209-211.

9. Study of Galvanomagnetic Effects in Bi-Sr-Ca-Cu-O films.
Ramesh Chandra, N. Khare, A.k.Gupta, **D. K. Walia** , S. Chaudhary, V.N.Ojha, V.S.Tomar
Bulletin of Material Sciences 14 (1991) 1163-1166.

8. Observation of SQUID behaviour in high temperature superconductors
G. S. N. Reddy, **D. K. Walia**, V. S. Tomar , N. Khare, N. D. Kataria and A. K. Gupta
Indian Journal of Physics 61 (1991) 43-49; Impact factor: 1.785.

1990

7. Growth of oriented superconducting films of BSCCO by spray pyrolysis technique
D. K. Walia, A. K. Gupta, N. D. Kataria, N.Khare,V.N.Ojha and V. S. Tomar
Modern Physics Letters B 4 (1990) 393.

6. Laser Patterning of Microbridges and DC SQUID Structure on BSCCO Films.
N. Khare, A. K. Gupta, **D. K. Walia**, V. N. Ojha,V. S. Tomar,Y. K. Jain
Superconductor Science & Technolology 3 (1990) 191; Impact factor: 2.758.

5. Microwave frequency and power dependence of critical currents in microbridges of BSCCO films
V. N. Ojha, V. S. Tomar, A. K. Gupta, **D. K. Walia** and G. S. N. Reddy
Physica B 167 (1990) 1607-1608; Impact factor: 1.327.

4. Quantum interference effects in laser patterned BSCCO films
A. K. Gupta, N. Khare, **D. K. Walia**, V. S. Tomar,V N Ojha, H C Pandey, S K Bhatnagar,
Pramana-Journal of Physics 35 (1990) L193-L198.

1989

3. Superconductivity in BSCCO films made by spray pyrolysis
D. K. Walia, A. K. Gupta, GSN Reddy, V. S. Tomar, N. D. Kataria, V N Ojha and N.Khare
Solid State Communications 71 (1989) 987-990; Impact factor: 1.781.

2. Low resistance silver contacts on BSCCO films
N. Khare,**D. K. Walia**, GSN Reddy, V. N. Ojha,N D Kataria, V. S. Tomar and A. K. Gupta
Journal of Physics D: Applied Physics 22 (1989) 1237-1240 ; Impact factor: 2.528.

1. Growth of superconducting films of YBCO by spray pyrolysis and study of quantum interference effects
G. S. N. Reddy, A. K. Gupta, V.N. Ojha, N.D. Kataria, N.Khare, **D. K. Walia** and V. S. Tomar
Modern Physics Letters B 3 (1989) 1311-1314.