

11th Oct. 2017 to 13th Oct. 2017

Program Schedule of 4th International Conference on Nano structuring by Ion Beams (ICNIB 2017)

Welcome Dinner: Tuesday 10th Oct. 2017 (at 19:00 hrs.)

Registration: 16:00 hrs Onwards

Wednesday 11th Oct. 2017

8:00-9:00 Registration

9:00-9.30 Opening Remarks and welcome address

9:30-10:30 Key Note address : Dr. Ashok Ganguli : , Session Chair Dr. D. Kanjilal

Topic: Nanoscience and Nanotechnology: Present and Future

10.30-11.00 Tea

11:00-13:06		Theory and Fundamental : Session Chair Dr. Ajit Sinha
I-1	Nanoscale pattern formation: an interplay between hard and soft condensed matter physics	Rodolfo Cuerno <i>Departamento de Matemáticas and Grupo Interdisciplinar de Sistemas Complejos (GISC), Universidad Carlos III de Madrid, 28911 Leganés, Spain</i>
I-2	Nonlinear theory of ion induced solid flow	Javier Muñoz-García <i>Departamento de Matemáticas and Grupo Interdisciplinar de Sistemas Complejos (GISC), Universidad Carlos III de Madrid, 28911 Leganés, Spain</i>
I-3	Employing Density Functional Theory in Swift Heavy Ion-Matter Interaction	S. K. Srivastava <i>Department of Physics, Indian Institute of Technology Kharagpur, Kharagpur 721302, India.</i>
O-1	100 MeV Ag Ion Induced Silver Nanoparticles Embedded in Hafnium Oxide Matrix	M. Dhanunjaya , K. Vinod, S.A. Khan, A. P. Pathak, D. Kabiraj and S. V. S. Nageswara Rao*, <i>School of Physics, University of Hyderabad, Hyderabad- 500046, India.</i>
O-2	Nanofiber network using 50 keVAr+ ion irradiation on gallium antimonide surface	Satish Kumar Aman Arora, Anshu Goyal, Puspashree Mishra*, A.K. Mahapatro, <i>Solid State Physics Laboratory, Lucknow Road, Timarpur, Delhi, 110054, India</i>
O-3	Ion beam induced uniformly distributed self-organised nano-cones on gold and silicon surfaces	Bhaveshkumar Kamaliya , Rakesh G. Mote**, M. Aslam, Jing Fu, <i>IITB-Monash Research Academy, Indian Institute of Technology Bombay, Mumbai 400076, India</i>
13:06-14:00 LUNCH		
14:00-15:12 Ion beam Synthesis : Session Chair Dr. D.K. Avasthi		
I-04	Novel Mechanisms of Ion Induced Surface Pattern Formation	Hans, Hofsaess , <i>2nd Institute of Physics, University Göttingen, Göttingen, 37077, Germany</i>
I-05	Ion-atom collision processes in DNA-base molecules at Bragg peak energy	Lokesh C Tribedi , <i>Tata Institute of Fundamental Research, Mumbai 400005, India</i>
O-4	Influence of mean free path of electron and phonon on electronic sputtering of Au nanostructures,	Udai B. Singh **, Compesh Pannu, Tanuj Deswal, D. C. Agarwal, S. Ojha, Santanu Ghosh and D. K. Avasthi <i>Department of Physics, Indian Institute of Technology, HauzKhas, New Delhi 110016, India</i>
15:12-15:30 Tea Break		
15:30-17:00 Modification and Damage-I Session Chair: Dr. H. Hofsaess		
I-06	Sequential He ⁺⁺ and H ⁺ ion implantation in silicon: factors affecting blistering	N Cherkashin ., N. Daghbouj, A. Claverie <i>CEMES-CNRS and Université de Toulouse, Toulouse, 31055, France</i>

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I-07	Nano-Science and Nanotechnology using energetic ion beams/gamma radiation/lasers	Anand P Pathak , <i>University of Hyderabad, India.</i>
I-08	Tailoring of switching characteristics of semiconductor devices by swift heavy ion-irradiation.	P.S.Bhave, S.T.Chavan, P.Sathyavathi, N.S.Shinde, S.D.Dhole and V.N.Bhoraskar [†] . <i>Department of Physics, S.P. Pune University, Pune-411007, INDIA.</i>
17:00-19:00	Poster Session from P1-P70 Coffee Will be served	
19:30	Conference Dinner	

Thursday, 12th Oct. 2017

9:00-11:06 Nanostructure Formation and its applications-I Session Chair: Dr. Sankar Dhar		
I-09	Engineering of nanostructures by energetic ions and applications	D. K. Avasthi <i>Amity Institute of Nanotechnology, Amity University, Noida-201313, INDIA.</i>
I-10	Low energy Helium ion irradiation effects in thorium oxide	S. Amirthapandian , <i>Materials Science Group, Indira Gandhi Centre for Atomic Research, HBNI, Kalpakkam-603102, India</i>
I-11	Isolated nano-structure formation by self-masking ion implantation	Prasanta Karmakar ¹ <i>RIB Laboratory, Variable Energy Cyclotron Centre, 1/AF, Bidhannagar, Kolkata 700 064, India.</i>
O-05	Structural Transitions of DNA on nano-patterned TiO ₂ surfaces created after ion irradiation,	Indrani Mishra , Shalik Ram Joshi, Asish Mana ¹ , U Subudhi, Shikha Varma* <i>Institute of Physics, Bhubaneswar, 751005, India</i>
O-06	Transport and Raman Spectroscopic studies on swift heavy ion irradiated NdMnO ₃ films,	Malay Udeshi , Brinda Vyas, Hetal Kundalia ¹ , Fouran Singh and D.G. Kuberkar, <i>Department of Physics, Saurashtra University, Rajkot - 360 001, India</i>
O-07	Ion-Beam Synthesized GaN nanocrystals Ultraviolet Photodetectors	Saravanan Rajamani ^{**} , Alexey Mikhaylov, Alexey Belov, Dmitry Korolev, David Tetelbaum, Mahesh Kumar, <i>Department of Electrical Engineering, Indian Institute of Technology Jodhpur, 342011 Jodhpur, India</i>
11:06-11:20 Tea Break		
11:20-13:00 Magnetic Modification and Application -I: Session Chair: Dr. Ajay Gupta		
I-12	Treating advanced magnetic materials with light ion irradiation for spintronic applications	L.Herrera Diez and D.Ravelosona <i>Center for Nanoscience and Nanotechnology (C2N), Université Paris Sud, CNRS, 91405 Orsay, France</i> <i>Spin-Ion Technologies, 91405 Orsay France</i>
I-13	Self-Assembly of Metal Nanoparticles On Ripple Patterned Surface and Induced Optical/Magnetic Anisotropy	Mukesh Ranjan , <i>FCIPT, Institute for Plasma Research, Gandhinagar, 382044, Gujarat, India</i>
O-08	Appearance of exchange bias effect by F ⁺ ion implantation in Bcc Fe thin film	Sagar Sen , Ajay Gupta, V Reddy, Ratnesh Gupta, <i>School of Instrumentation DAVV Indore 452001, India</i>
O-09	Effect of 80 MeV Carbon beam on Graphene oxide film,	Chetna Tyagi ^{**} , Ambuj Tripathi, DK Avasthi, Materials Science division, <i>Inter University Accelerator Centre, ArunaAsaf Ali Marg, New Delhi, India 110067</i>
O-10	Electronic excitation induced anomalous band gap enhancement in NixCd _{1-x} O thin films,	Arkaprava Das ^{**} , Fouran Singh, <i>Inter-University Accelerator Centre, Aruna Asaf Ali Marg, New Delhi-110067, India</i>
13:00-14:00 LUNCH		

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14:00-15:12		Ion Beam Engineering : Session Chair: Dr. B.K. Panigrahi
I-14	Ion beam induced hybrid nanodots synthesis from metal-semiconductor thin films,	Pratap K. Sahoo, <i>School of Physical Sciences, National Institute of Science Education and Research (NISER), HBNI, Jatni, 752050, Odisha, India</i>
I-15	Low energy ion-beam fabricated self-organized silicon nanofacets for cold cathode electron emission sites	Tapobrata Som, <i>¹SUNAG Laboratory, Institute of Physics, Sachivalaya Marg, Bhubaneswar 751 005, Bhubaneswar, INDIA.</i>
O-11	Molecular sensing using nanoparticle arrays on ion beam patterned substrates,	Sooraj K P**, Mukesh Ranjan, Subroto Mukherjee, <i>Institute for Plasma Research, Gandhinagar, 382044, India</i>
15:12-15:30		Tea Break
15:30-16:45		Application of Synchrotron Radiation in Nanostructures : Session Chair Dr. S.N. Jha
I-16	Angle dispersive X-ray diffraction beamline, Indus-2: Potentials and perspectives	Archna Sagdeo, Anuj Upadhyay, M. N. Singh and Anil K Sinha, <i>Synchrotron Utilization Section, Raja Rammanna Centre for Advanced technology, Indore, India.</i>
I-17	Heavy ions as a tool for controlled modification of thin films and multilayers at nanometer length scale	Ajay Gupta, <i>Amity Centre for Spintronic Materials, Amity University U.P., Noida 201313, INDIA</i>
O-12	Laser-driven ion source	Jens Hartmann**, Daniel Haffa, Martin Speicher, Jianhui Bin, Franz Englbrecht, Ying Gao, Johannes Gebhard, Sebastian Herr, Peter Hilz, Christian Kreuzer, Sebastian Lehrack, Florian H. Lindner, Tobias M. Ostermayr,, Enrico Ridente, Thomas F. Rösch, Matthias Würll, Rong Yang, Paul R. Bolton, Katia Parodi, Jörg Schreiber, <i>Ludwig-Maximilians-Universität, Garching b. München, 85748, Germany</i>
16:45-18:30		Poster Session : P71- P 140 Coffee Will be Served
18:30-19:00		General Body Meeting of IBSI
19:00-20:30		Indian Classical Dance by Internationally Recognized Group
20:30		Dinner

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9:00-11:06	Magnetic Modification and Applications –II Session Chair: Dr. Javier Muñoz-García	
I-18	Swift heavy ion modifications in multiferroic / magneto-electric RFeO ₃ thin films	V. Raghavendra Reddy <i>UGC-DAE Consortium for Scientific Research, Khandwa Road, Indore – 452 001, INDIA.</i>
I-19	Effect of 200 MeV Ag ion irradiation on electrical, magnetic and magneto-transport properties of functional magnetic oxides films	R. J. Choudhary <i>UGC-DAE Consortium for Scientific Research, Indore, INDIA.</i>
I-20	Ion beam engineering of multifunctional hybrid nanostructures and plasmonic nanocomposites for photocatalytic applications	Satyabrata Mohapatra <i>University School of Basic and Applied Sciences, Guru Gobind Singh Indraprastha University, New Delhi, India</i>
O-13	Effects of ion irradiation on the structural and electrical properties of HfO ₂ /SiON/Si systems,	N. Manikanthababu* , K. Prajna, A. P. Pathak, S. V. S. Nageswara Rao and B. K. Panigrahi, <i>Materials Science Group, Indira Gandhi Center for Atomic Research, Kalpakkam, India 603 102.</i>
O-14	Structural and Optical Properties of PEDOT: PSS/CdS Nano-Composite Thin Films: Prepared by Spin Coating and Low Energy Ar ⁺⁺ ion implantation,	Sharad Tripathi* , V S Upadhyaya, S. K. Dubey and L C Tribedi, <i>Department of Physics, G. N. Khalsa College, Matunga, Mumbai, India</i>
O-15	Slow ions: A tool for welding ceramic nanomaterials	Satyanarayan Dhal, Pritam Das, Manoj K Rajbhar and Shyamal Chatterjee** <i>School of Basic Sciences, Indian Institute of Technology Bhubaneswar, Khordha, 752050, India</i>
11:06-11:25	Tea Break	
11:25-13:18	Device Applications : Session Chair: L.C. Tribedi	
I-21	Ion beam engineering of TiO ₂ -based resistive switching devices	Aloke Kanjilal, <i>Department of Physics, School of Natural Sciences, Shiv Nadar University, Dadri, Uttar Pradesh, India.</i>
I-22	Thin films under swift heavy ions: Nano-crystallization to ultra-sensitive photodiode	Fouran Singh, <i>IUAC, New Delhi, India.</i>
O-16	RGO-PANI electrodeposited microdisk electrodes for Human gastric cancer cell (MKN-1) growth and analysis	Ajay Kumar Yagati, Sunghee Chung, Junhong Min*, <i>School of Integrative Engineering, Chung-Ang University, Heuseok-dong, Dongjak-gu, Seoul 06974, South Korea</i>
O-17	Carbon Implanted Vertically Aligned ZnO Nanorod Arrays: Enhancement of Visible Photocatalytic Activity	D. Ranjith Kumar, K.S. Ranjith , K. Asokan, R. T. Rajendrakumar <i>Department of Nanoscience and Technology, Bharathiar University, Coimbatore, India</i>
O-18	Irradiation induced modification of Medium Range Order in nano crystalline Metallic Glass using Synchrotron Diffraction,	K. Gehlot, A. K. Sinha, L. K. Varga, D. K. Avasthi, S. N. Kane, <i>Magnetic Materials Lab., School of Physics, D. A. University, Khandwa road, Indore-452001, India</i>
O-19	Ion beam modification of MoS ₂ and graphene	Mukesh Tripathi ¹ , Roland Kozubek ² , Maria O'Brien ³ , Ursula Ludacka ¹ , Roman Böttger ⁴ , Lukas Madauß ² , Niall McEvoy ³ , Stefan Facsko ⁴ , Georg S. Duesberg ³ , Marika Schleberger ² , Toma Susi ¹ , Jani Kotakoski ¹ <i>1 University of Vienna, Faculty of Physics, Vienna, Austria</i> <i>2 University of Duisburg-Essen, Faculty of Physics, Duisburg,</i>

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		<p><i>Germany</i> 3 School of Chemistry and AMBER, Trinity College, Dublin, Ireland 4 Ion Beam Center, Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany</p>
13:20-14:20	Lunch	
14:20-16:10	Nanoparticle Formation and its Applications-2 Session Chair: V. Ganeshan	
I-23	Fabrication of Pt nanoparticles incorporated polymer nanowires by high energy ion and electron beam irradiation	S. Seki, <i>Department of Applied Chemistry, Graduate School of Engineering, Osaka University, 2-1 Yamada-oka, Suita, Osaka 565-0871, Japan .</i>
I-24	Alloying of metal nanoparticles by ion-beam induced sputtering,	Binaya Kumar Panigrahi <i>Indira Gandhi Centre for Atomic Research, Kalpakkam, India.</i>
O-20	Transitional morphology in binary mixtures via low energy ion beams,	Basanta Kumar Parida, Subhendu Sarkar, <i>Department of Physics, Indian Institute of Technology, Ropar, Punjab-140001, India</i>
O-21	Pre-damage dependent nano-patterning of semiconductor under ion irradiation,	Tanuj Deswal**, Udai B. Singh, Vandana, Jyoti, S. Ojha, D. Kanjilal, <i>Department of Nanosciences and Materials, Central University of Jammu, RahyaSuchani, Jammu and Kashmir 181143, India</i>
O-22	Ion Beam Induced Surface Modification of Nano-Bio-Ceramic Thick films for Gas Sensing Application,	Ravindra U. Mene, Megha P. Mahabole, Rajendra S. Khairnar, PDEA's, <i>Annasaheb Waghire College of Science, Arts & Commerce, Otur, 412409 (M.S.), India</i>
O-23	120 MeV Au+9 Ions Induced Resistive Switching in Cr-doped SrZrO ₃ /LaNiO ₃ Heterostructures	K.H. Bhavsar**, Nirav C. Pandya, D.K. Avasthi and U.S. Joshi, <i>Department of Physics, School of Sciences, Gujarat University, Ahmedabad-380 009, India.</i>
16:10-16:30	Tea Break	
16:30 onwards	Panel Discussion: Ion Beam for Societal applications Followed by Concluding Session and Prize Distribution, Chaired by D. Kanjilal	
19:00	Dinner	