PROGRAM DETAILS (PLD 2013)

Keynote Lecture
Pulsed Laser Deposition – 25 Years Young
Richard Pinto

Invited Review Talks

IRT 1.1 Strain control of physical properties in PLD grown films
A. K. Raychaudhuri

IRT 1.2 Atomically engineered oxide interfaces using pulsed laser deposition
Ariando

IRT 1.3 Disorder induced quantum effects in PLD grown doped thin films of ZnOL.
M. Kukreja and Amit K. Das

IRT 1.4 Optical Properties of Semiconductor Hetero and Nanostructures Grown by Pulsed Laser Deposition
Samit K. Ray

IRT 1.5 High-energy optical conductivity and anomalous spectral weight transfer in correlated electron systems
Andrivo Rusydi

IRT 1.6 Laser generation of multicomponent nanoparticles in liquids
R.K. Soni

IRT 1.7 Artificial Ferroic Superlattices
S.B. Krupanidhi

IRT 1.8 From Superconductor thin films to metal-oxide nanostructures: 25 glorious years of PLD
M.S. Ramachandra Rao

Invited Talks

IT-1 High quality ZnO-based transparent conducting oxides thin films prepared by pulsed laser deposition technique
Durga Basak and Arindam Mallick

IT-2 Mirror like thin films of heavy metals via PLD for First Mirror application in Tokamk
Alika Khare and A T T Mostako

IT-3 Temperature Dependent Effects of Mn-doping on Charge-Transport of NdNiO3 Thin Films
Mahesh Chandra, Rakesh Rana, Fozia Aziz, D. S. Rana, K. R. Mavani,

IT-4 Photoelectron Spectroscopy studies on PLD grown ZnO/Ge and ZnO/GaP systems
Tapas Ganguli, S. D. Singh, R. S. Ajimsha, Vikas Sahu, Ravi Kumar, P. Misra,
D.M. Phase, S. M. Oak, L. M. Kukreja and S. K. Deb

IT-5 Physics of PLD grown epitaxial TiN(Ni)/p-Si heterojunction
T. K. Nath

IT-6 Pulsed laser ablation of metallic thin films and multilayers
P.S. Anil Kumar
Growth of complex oxide epitaxial films and nanowires by Pulsed Laser Deposition and tuning of physical properties controlling growth parameters
Barnali Ghosh (Saha)

Pulsed Laser Deposited Nanocrystalline and Iso-Epitaxial Tugston Trioxide Thin Films For Electrochromic And Gas Sensing Applications
A.S.Swapna Smitha and O.M.Hussain

Multiferroicity in oxide films
S. Giri

Studies on synthesizing Ni-Ti SMA thin films using Pulsed Laser Deposition (PLD) for the development of micro-pump
I.A. Palani

Excimer laser technology trends and developments for thin film fabrication
Burkhard Fechner, Ralph Delmdahl

Thermal Expansion Behaviour of Multilayer Oxide Films Prepared by Pulsed Laser Deposition
P. Kuppusami

Resonant Photoemission spectroscopic study of pulsed laser deposited thin films of dilute magnetic semiconductors.
D.M. Phase

Wide Range Temperature Sensing using ZnO as Non-contact Optical Probe
Satish Laxman Shinde and Karuna Kar Nanda

Growth and characterization of conducting transparent titanium dioxide thin films
Pratima K. Mishra

Poster Presentations

PP 1.1 Hole Transport Properties of a Hybrid Material based Thin Films
R. N. Jana, A. Bhattacharya, D. Naskar, S. Chatterjee

PP 1.2 Fabrication process for multiferroic PbTi_{0.56}Fe_{0.4}O_{3} based micro-cantilevers
Seeraz Nawaz, K. Bose, S.Cahkrabarti and V.R. Palkar

PP1.3 Magnetization reversal mechanism in hard magnetic epitaxial bilayers: SmCo5/PrCo.
A.K. Patra,F. Fleischhauer,S. Oswald, L. Schultz,V. Neu

PP1.4 Effect of Al Doping on Electronic, Magnetic and Transport properties of pulsed laser deposited La0.7Ca0.3MnO3 Thin Films
Manish Kumar, R. J. Choudhary and D. M. Phase

PP1.5 Magnetoresistance properties in polycrystalline Gd0.7Ca0.3MnO3
Sanjay Biswas and Sudipta Pal

PP1.6 Magnetism in PLD grown Fe and Al co-doped ZnO Films
Savan Katba, Malay Udeshi, Sadaf Jethva, Priyanka Trivedi, M.J. Keshvani, Ashish Ravalia, Megha Vagadia, P.S. Solanki, N.A. Shah, R.J. Choudhary, D.M. Phase and D.G. Kuberkar

PP1.7 A simplified analysis on the photoemission from quantum confined structure of optoelectronic nanostructured materials
Singha roy and S. Singha Roy
| PP 1.8 | Laser Ablated Plasma Plume Diagnostics of Cerium Oxide: Effect of Oxygen Partial Pressure |
| PP 1.9 | Effect of Incorporation of Manganese Oxide on the Structural, Morphological and Optical Properties of Nanostructured Zinc Oxide Thin Films Prepared by Pulsed Laser Deposition |
| PP 1.10 | Effect of Annealing on the Structural and Optical Properties of Laser Ablated Nanostructured Barium Tungstate Thin Films |
| PP 1.11 | A comparative morphological analysis of nano-structured carbon films obtained by pulsed laser deposition and laser molecular beam epitaxy |
| PP 1.12 | Effect of Tin oxide Doping on the Properties of Laser Ablated Nanostructured Indium oxide Films |
| PP 1.13 | Electronic transmission in a comb-shaped quasi-periodic nanostructure |
| PP 1.14 | In-plane antiferromagnetic and out-of-plane ferromagnetic exchange coupling in \( \text{SrRuO}_3/\text{La}_{0.8}\text{Sr}_{0.2}\text{MnO}_3 \) superlattices |
| PP 1.15 | Studies of Microstructures, Optical, Nanomechanical and Thermal Expansion Properties of \( \text{Y}_2\text{O}_3, \text{ZrO}_2, \text{CeO}_2 \) and \( \text{Gd}_2\text{O}_3 \) Thin films and \( \text{Y}_2\text{O}_3/\text{ZrO}_2 \) and \( \text{CeO}_2/\text{Gd}_2\text{O}_3 \) Multilayers Prepared by Pulsed Laser Deposition |
| PP 1.16 | 2D growth of \( \text{LaAlO}_3/\text{SrTiO}_3 \) heterointerface using in-situ RHEED |
| PP 1.17 | Pulsed Laser Heating of Gold Nanoparticles for Photothermal Therapy |
| PP 1.18 | Constricted magnetic hysteresis loop in zinc ferrite nanocrystallites |
| PP 1.19 | Pulsed laser deposition of CdS shell layer on Si nanowire core to form Si/CdS radial heterojunction for high efficiency photodetectors |
| PP 1.20 | Ferroelectric and dielectric properties of pure and Fe doped BaSnO3 nanostructures |
| PP 1.21 | Optical Properties of Laser Generated Pd and Au@Pd Nanoparticles |
Influence of silver doping on the structural and optical properties of zinc sulfide thin films prepared by pulsed laser deposition
S.R. Chalana, R. Reshami Krishnan, R. Sreeja Sreedharan, R. Jolly Bose, R. Vinodkumar, V. Ganesan and V.P. Mahadevan Pillai

Synthesis and water oxidation property of cobalt oxide magnetic colloids synthesized by PLA
B. K. Pandey A. K. Shahi and R. Gopal

Epitaxial ZnO on GaP(1 1 1) substrate grown by using pulsed laser deposition

Growth of oriented thin films and nanorods of WO$_3$ by Pulsed Laser Deposition and observation of large photo conductive response at room temperature
Samik Roy Moulik, Sudeshna Samanta, Barnali Ghosh

Effect of Co doping in epitaxial La$_{1.85}$Sr$_{0.15}$CuO$_4$ thin films
P. K. Rout and R. C. Budhani

Growth and annealing studies of HfO$_2$ on Si (100)
R.R. Mohanta, V.R.R. Medicherla, Nimai C. Naik

Pulsed Laser Deposition of CrO$_2$ Thin Films on Lattice-matched TiO$_2$ Layers
S. Dwivedi, V. Chavan and S. Biswas

Growth of Highly Oriented Topological Insulator Bi$_2$Se$_3$ Thin Films by Pulsed Laser Deposition
Biswaajit Saha, Pragati Chaturvedi and Swaroop Ganguly

Pulsed Laser Ablated WO$_3$ Nanocrystalline and Iso-epitaxial Thin Films For Electrochromic And Gas Sensing Applications
A.S. Swapna Smitha and O.M. Hussain

Growth and characterization of PLD grown Sb doped ZnO thin films
Joyanarayan Mukherjee, M. Ramanjaneyulu and M. S. Ramachandra Rao

Structural and optical properties of aluminum doped zinc oxide: formation of nanorods
Sanjeev Kumar, Fouran Singh, A. Kapoor

Temperature dependent dielectric properties of Fe$_3$BO$_4$ nanoplates
K. Kumari, S. Ram and R. K. Kotnala

Spectroscopic study of interaction between casein and biosynthesized silver nanoparticles
Swarup Roy and Tapan Kumar Das

Plasmonic Properties of Pulsed Laser Deposited Nanoisland Silver Thin Film
Mahima Arya and Anirban Mitra

Dual acceptor doping in ZnO to realize a stable $p$-type ZnO
M. Ramanjaneyulu, Nandita DasGupta and M.S. Ramachandra Rao

Growth and Characterization of PbZr$_x$Ti$_{1-x}$O$_3$ thin films on SrRuO$_3$ buffered Si by pulsed laser deposition
Martando Rath, Brajesh Tiwari and M.S. Ramachandra Rao

Frequency - temperature dielectric response of electromagnetic BiFeO$_3$ Ceramics
Trisha Karan and Shanker Ram
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.40</td>
<td>Comparative study of conventionally and microwave heated dysprosia stabilized zirconia (DySZ)</td>
<td>Mukul Pastor, A.C. Pandey and K. Biswas</td>
</tr>
<tr>
<td>1.41</td>
<td>Pulsed Laser deposition growth of superconducting/ferromagnetic (HoBa2Cu3O7-x/La2/3Ca1/3MnO3) multilayered thin films</td>
<td>A. I. Mallick and M. S. Ramachandra Rao</td>
</tr>
<tr>
<td>1.42</td>
<td>A New SRR Type Metamaterial Design with Negative Index Band</td>
<td>Raghvendra P. Chaudhary, Sumit Saxena and Shobha Shukla</td>
</tr>
<tr>
<td>1.43</td>
<td>Fabrication of SiOx thin films by Pulsed Laser Deposition Technique in O2 ambient pressure</td>
<td>Partha P Dey and Alika Khare</td>
</tr>
<tr>
<td>1.44</td>
<td>Optical and morphological studies on laser ablated V2O5 thin films</td>
<td>K. V. Madhuri, K. Srinivasa Rao, O. M. Hussain</td>
</tr>
<tr>
<td>1.45</td>
<td>Preparation, characterization and optical properties of Gadolinium doped ceria thin films by pulsed laser deposition technique</td>
<td>P. Nagaraju, Y. Vijaya Kumar, C. Vishnuvardhan Reddy, M. V. Ramana reddy, D. M. Phase and V. Raghavendra Reddy</td>
</tr>
<tr>
<td>2.1</td>
<td>Diamond Like Carbon Films Deposited by Pulsed Laser Ablation of Graphite Target</td>
<td>Indrajeet Kumar and Alika Khare</td>
</tr>
<tr>
<td>2.2</td>
<td>Plasmon Enhanced Frequency Upconversion in Er3+/Yb3+ doped Y2O3 Thin Film by Using Gold Film</td>
<td>Kaushal Kumara, Manoj Kumar Mahataa &amp; Ram Janay Choudharyb</td>
</tr>
<tr>
<td>2.3</td>
<td>Nanocrystalline diamond coatings on Ti for biomedical applications</td>
<td>Dinesh Kumar, Maneesh Chandran, and M.S. Ramachandra Rao</td>
</tr>
<tr>
<td>2.4</td>
<td>Dielectric, Impedance and Electrical Conductivity of (Zn,Sr)TiO3 composite</td>
<td>P. Jayabal, V. Sasirekha, V. Ramakrishnan</td>
</tr>
<tr>
<td>2.5</td>
<td>Ferroelectricity and ferromagnetism near room temperature: a multilayer engineering of SmFeO3-BaTiO3</td>
<td>A. Ghosh, K. Dey, S. Majumdar, and S. Giri</td>
</tr>
<tr>
<td>2.6</td>
<td>Structural, morphological, optical and gas sensing properties of platinum incorporated laser ablated nanostructured tungsten oxide films</td>
<td>R. Jolly Bose, Navas I.K., S. Tan, Usman Ilyas, R. S. Rawat, Murukeshan Vadakke Matham and V. P. Mahadevan Pillai1</td>
</tr>
<tr>
<td>2.8</td>
<td>Effect of annealing on Ferromagnetic resonance in FePt/MgO thin films</td>
<td>Himanshu Pandey, R. K. Rakshit, K. K. Maurya, Anurag Gupta, R. P. Pant, and R. C. Budhani</td>
</tr>
</tbody>
</table>
Effect of preparation method on photocatalytic properties of titanium dioxide (TiO2) thin films
R. Lavanya and V. Vasu

Electrical characterisation of flexible organic light emitting diodes with Al doped ZnO electrodes deposited by Laser pulse deposition
Rajesh Awasthy, J.K. Sharma, R. Swami, Swati Sahu, A.K. Verma and Sanjay Tiwari

Magnetic diode behavior of Mn_{0.01}Sn_{0.99}O_{2-x} /p-Si heterojunction
S. Bhaumik, S. K. Ray and A. K. Das

Influence of substrate temperature on Zinc Sulphide thin films by RF magnetronsputtering technique for photovoltaic applications
T.S. Shyju and P. Kuppusami

Deposition and characterization of nanocrystalline copper indium disulphide thin films by photochemical method for Solar cell applications
R. Suriakarthick, V. Nirmalkumar, T.S. Shyju, R. Gopalakrishnan

CdSe nanoparticles produced by liquid phase pulse laser ablation
A. K. Shahi, B. K. Pandey and R. Gopal

Light emission from Er doped Ge nanocrystals embedded in Al2O3 matrix
R. Aluguri, S. Manna, and S. K. Ray

Unusual metal like nature in nanosized Zn_{0.5}Ni_{0.5}Fe_{2}O_{4} with reduced dielectric constant
D. Vanidha, A. Arunkumar and R. Kannan

The influence of thickness on the Band Gap of vacuum evaporated CuSbS2 thin films for solar cell applications
Thiruvenkadam Sa, Leo Rajesh

Synthesis and characterization of SnO2 based thin films prepared by pulsed laser deposition for functional applications
S. K. Sinha, S. K. Ray, I. Manna

Tuning the Curie temperature to an unprecedented maximum in La0.5Sr0.5CoO3 thin films
Kaustuv Manna, D. Samal, Suja Elizabeth and P. S. Anil Kumar

Growth and characterization of ZnO-SnO2 composite thin films
T. Rakshit, I. Manna, and S. K. Ray

Effect of Substrate Induced Stress on Structure and Band Gap of Cobalt Ferrite Thin Films
Venkata Ravindra A, Bhaskar Chandra Behera, Prahallad Padhan and Wilfrid Prellier

Si/znS radial heterojunction fabricated by pulsed laser deposition for white light emission

Ion Beam Studies of Ultra-small Silicon Nanoparticles prepared by Ultrafast Laser Ablation

Giant low temperature positive junction magnetoresistance in PLD grown CoFe2O4/SiO2/p-Si Magnetic diode like heterojunction
Jaganandha Panda, A. Santhosh Kumar and Tapan Kumar Nath
PP 2.25  Strain induced first order magnetic phase transition in epitaxial Sm0.55Sr0.45MnO3 thin film
S. K. Giri, P. T. Das and T. K. Nath

PP 2.26  Studies on Yttria Stabilized Zirconia Coating Developed by Pulsed Laser Deposited
Subhasisa Nath, Indranil Manna, S. K. Ray and Jyotsna Dutta Majumdar

PP 2.27  Synthesis of Quantum Critical Pd_{1-x}Ni_{x} Nanoalloys
P. Swain, Sunee K. Srivastava and Sanjeev K. Srivastava

PP 2.28  Facile hydrothermal synthesis of PVP assisted WO_3 nanorods
V. Rajendran, S. Gnanam, K. Anandan, J. Gajendiran, R. Vijayalakshmi, J. UmaV. Revathi, S. Usharani

PP 2.29  Effect of Laser Energy on the Electrical, Optical and photoconductivity Properties of
ZnO Thin Films Prepared by Pulsed Laser Deposition Technique
Arindam Mallick and Durga Basak

PP 2.30  Crack free DC sputtering of metal thin film on soft elastomers for thin film application
Debashis Maji and Soumen Das

PP 2.31  Carrier transport phenomena in Zn_{1-x}V_xO thin films grown by pulsed laser deposition
D. Saha, R. S. Ajimsha and L. M. Kukreja

PP 2.32  SPR and NLO Behavior of PLD Deposited Cu Thin Films
G. P. Bharti, Raja Bonia, Partha P Dey, A. T. T. Mostako Satchi Kumari and Alikaa Khare

PP 2.33  Electrical and dielectric properties of Bi_2Te_3 nanosheets: scope of novel storage of
renewable energy in nanoelectronics
Punita Srivastava and Kedar Singh

PP 2.34  Plasmonic response of silver nanoparticles in different liquid media grown by pulsed laser ablation

PP 2.35  Effect of alumina capping on plasmon resonance characteristics and stability of silver
nanoparticle films grown by pulsed laser deposition
Shweta Verma, B.Tirumala Rao, D. Reynolds, V. Ganesan and L.M. Kukreja

PP 2.36  Plasmonic characteristics of gold nanoparticle films of gradient thickness grown by
pulsed laser deposition

PP 2.37  Effect of Ambient Oxygen Pressure on the Structural, Electrical and Optical Properties
of Pulsed Laser Deposited Eu Doped ZnO Thin Films
A. Mandal, S. D. Shinde, K. P. Adhi, S. K. Adhi

PP 2.38  Pulsed Laser Deposited Praseodymium zinc Molybedate coating for anticorrosion
applications
Surendhiran Devaraj and N. Victor Jaya

PP 2.39  Optimization of process parameters for growth of stoichiometric Co_{2}FeAl thin films
using pulsed laser deposition
Deity A P, Madhusmita Baral, Soma Banik, S K Rai, Mahendra Babu, Pragya Tiwari, M
Maniraj, S R Barman, Tapas Ganguli, S K Deb and L M Kukreja

PP 2.40  Fabrication of Ga:ZnO:P:ZnO homojunction using pulsed laser deposition
PP 2.41 Giant exchange bias and ferromagnetic evidence of CaRuO$_3$ in Pr$_{0.5}$Ca$_{0.5}$MnO$_3$/CaRuO$_3$ superlattice
Sanjay Kumar, Shivendra Tripathi, V. Eswara Phanindra and D.S. Rana

PP 2.42 Bismuth ferrite/polymer based hybrid piezoelectric photovoltaic thin film
M. Dewan and S. Ram

PP 2.43 Electrical and optical properties of Mg$_x$Zn$_{1-x}$O/ZnO heterostructures
Amit K. Das, R. S. Ajimsha and L. M. Kukreja

PP 2.44 Magnetization reversal in Pr$_{1-x}$GdxMnO$_3$
Sanjay Biswas and Sudipta Pal

PP 2.45 Effect of Substrate Temperature, Film Thickness on the Structural and Electrical Properties of Pulsed Laser Deposited BaPbO$_3$ thin films deposited on Si/SiO$_2$ substrates
Satish B, M K Jayaraj

PP 2.46 Nanomechanical Properties of TiN/ZrN Multilayers Prepared by Pulsed Laser Deposition
G. Pradhaban, P. Kuppusami

PP 2.47 Evidence of ultraviolet transparency of graphene on SrTiO$_3$ induced by excitonic Fano anti-resonance

PP 2.48 Influence of oxygen partial pressure on the dielectric properties of Ba(Zr$_{0.15}$Ti$_{0.85}$)O$_3$ thin films grown on Pt(111) substrates using pulsed laser deposition
M. L. V. Mahesh, A. R. James and V. V. Bhanuprasad