

Profile Page

Research Interests :

Microelectronic Device Fabrication, Organic and Flexible Electronics, Thin Film Deposition Processes, Thin Film Sensors and Devices, Thin Film Transistors and Circuits

Other Profile Links :

Google Scholar Link :

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Journal Publications :

Year	Journal	Publication
2019	Synthetic Metals, Accepted	TIPS-pentacene/Copper (II)Phthalocyanine Bi-layer Photo Sensitive Organic Field-Effect Transistors, Ajay Kumar Mahato, Vivek Raghuvanshi, Deepak Bharti, Ishan Varun, Narottam Prasad, Mahesh Saran Roy, and Shree Prakash Tiwari
2018	Synthetic Metals, Vol. 236, Pages 54-60	Semiconductor:Polymer Blend Ratio Dependent Performance and Stability in Low Voltage Flexible Organic Field-Effect Transistors, Vivek Raghuvanshi, Deepak Bharti, Ajay Kumar Mahato, Ishan Varun, and Shree Prakash Tiwari
2018	Solid State Ionics, Vol. 325, Pages 196-200	Investigation of Resistive Switching in PVP and Ultra-Thin HfO _x Based Bilayer Hybrid RRAM, Ishan Varun, Deepak Bharti, Vivek Raghuvanshi, and Shree Prakash Tiwari
2017	IEEE Sensors Journal, Vol. 17, Pages 3689-3697, 2017	Photo-response of a low voltage flexible TIPS-pentacene field effect transistors, Deepak Bharti, Vivek Raghuvanshi, Ishan Varun, Ajay Kumar Mahato, and Shree Prakash Tiwari
2017	Superlattices and Microstructures, Vol. 109, Pages 538-544	Effect of UV irradiation on low voltage flexible TIPS-pentacene organic field-effect transistors, Deepak Bharti, Vivek Raghuvanshi, Ishan Varun, Ajay Kumar Mahato, and Shree Prakash Tiwari
2017	Solid State Ionics, Vol. 309, Pages 86-91	Multi-Temperature Deposition Scheme for Improved Resistive Switching Behavior of Ti/AlO _x /Ti MIM Structure, Ishan Varun, Deepak Bharti, Vivek Raghuvanshi, and Shree Prakash Tiwari
2017	ACS Applied Materials & Interfaces, Vol. 9 (31), Pages 26226–26233	Directional solvent vapor annealing for crystal alignment in solution processed organic semiconductors, Deepak Bharti, Vivek Raghuvanshi, Ishan Varun, Ajay Kumar Mahato, and Shree Prakash Tiwari
2016	Organic Electronics, Vol.31, Pages 177-182	Flexible organic field-effect transistors with TIPS-Pentacene crystals exhibiting high electrical stability upon bending, Vivek Raghuvanshi, Deepak Bharti, and Shree Prakash Tiwari
2016	Synthetic Metals, Vol. 215, Pages 1-6	Crystallinity and performance improvement in solution processed organic field-effect transistors due to structural dissimilarity of the additive solvent, Deepak Bharti and Shree Prakash Tiwari
2016	Organic Electronics, Vol. 34, Pages 284-288	Performance enhancement in mechanically stable flexible organic field-effect transistors with TIPS-pentacene:polymer blend, Vivek Raghuvanshi, Deepak Bharti, Ishan Varun, Ajay Kumar Mahato, and Shree Prakash Tiwari

2016	IEEE Electron Device Letters, Vol. 37, Pages 1215-1218	High performance and electro-mechanical stability in small molecule:polymer blend flexible organic field-effect transistors
2016	Synthetic Metals, Vol. 221, Pages 186-191	Phase Separation Induced High Mobility and Electrical Stability in Organic Field-Effect Transistors, Deepak Bharti and Shree Prakash Tiwari

Conference Publications :

Year	Conference	Publication
2017	12th IEEE Nanotechnology Materials and Devices Conference (IEEE NMDC 2017), Singapore.	Comprehensive Analysis of TIPS-Pentacene: Polymer Blend Organic Field-Effect Transistor for Device and Circuit Simulation, Ajay Kumar Mahato, Deepak Bharti, Vipin Joshi, Vivek Raghuwanshi, and Shree Prakash Tiwari
2017	12th IEEE Nanotechnology Materials and Devices Conference (IEEE NMDC 2017), Singapore.	Effect of Thermal Annealing on Electrical Stability of TIPS-Pentacene Flexible OFETs, Vivek Raghuwanshi, Deepak Bharti, Ajay Kumar Mahato, Ishan Varun, and Shree Prakash Tiwari
2016	3rd IEEE International Conference on Emerging Electronics (ICEE 2016), Mumbai, India.	TIPS-pentacene:polymer Blend Inverters with Improved Gain, Ajay Kumar Mahato, Deepak Bharti, Vivek Raghuwanshi, and Shree Prakash Tiwari
2016	3rd IEEE International Conference on Emerging Electronics (ICEE 2016), Mumbai, India.	Low Voltage Resistive Switching Behavior of Al/HfO _x /Au structure on Ultra Flexible Polyimide Substrate, Ishan Varun, Deepak Bharti, and Shree Prakash Tiwari
2016	74th Device Research Conference, University of Delaware, Newark, Delaware, USA.	Performance enhancement in TIPS-pentacene:PS blend organic field effect transistors by solvent vapor annealing, Deepak Bharti, Ishan Varun, and Shree Prakash Tiwari
2015	15th International Conference on Nanotechnology (IEEE Nano 2015), Rome, Italy.	Improved alignment and crystallinity of TIPS-Pentacene thin films by off-center spin coating, Deepak Bharti, and Shree Prakash Tiwari
2015	15th International Conference on Nanotechnology (IEEE Nano 2015), Rome, Italy	Improved properties of MIM capacitors using ALD Al ₂ O ₃ by multi-temperature technique, Deepak Bharti, and Shree Prakash Tiwari
2012	International Conference on Matlab Applications in Engineering and technology (ICMAET-2012), Bangalore, India.	A Novel Multi-Planar Band Structure Algorithm: Planar Region Matrix Approach, Deepak Bharti and Abhijit R. Asati
2012	International Conference on Materials Science and Technology (ICMST 2012), Kottayam, India.	Device Matrix Algorithm: A New Semiconductor Modeling Approach for Plotting Band Structures, Deepak Bharti and Abhijit R. Asati
2012	IEEE Students' Conference on Electrical, Electronics and Computer Science, Bhopal, India.	3-D Device Matrix Approach: A New Algorithm for Plotting Energy Band Diagrams in Semiconductors, Deepak Bharti and Abhijit R. Asati
2012	3rd International Symposium on Electronic System Design, Kolkata, India	Design of a Static Current Simulator Using Device Matrix Approach, Deepak Bharti and Abhijit R. Asati

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
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Principal Investigator	Sponsored	diF-TES-AD T Based High Performance Organic Field-Effect Transistors for Ultra-violet Light and Humidity Sensing Applications	TEQIP-III	03-12-18	03-12-19	1 Lakh	Ongoing	NA
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