

Curriculum Vitae



Personal information

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Nationality Pakistani
Year of birth 1976
Gender Male

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<https://scholar.google.com.pk/citations?hl=en&user=BOAVaOEAAAJ>

Work experience

Dates	12 July, 2012 – to date
Occupation or position held	Assistant Professor
Main activities and responsibilities	Teaching and research in areas of Applied Physics especially optoelectronic properties of thin film devices
Name and address of the employer	Dept. of Physics, International Islamic University, Sector H-10, 44000 Islamabad (Pakistan)
Dates	01 Dec 2015 – 30 Nov, 2017
Occupation or position held	Post-Doctoral Fellow
Main activities and responsibilities	Research in Organic electronics (Organic electrochromic devices, OLEDs, OTFTs, OSCs)
Name and address of the employer	Key Lab for Flexible Electronics & Institute of Advanced Materials, Jiangsu, National Synergistic Innovation Centre for Advanced Materials (SICAM), Nanjing Tech University, 30 South Puzhu Road, Nanjing, 211816, P. R. China in collaboration with School of Advanced Materials, Peking University Shenzhen Graduate School, Peking University, Shenzhen (China)
Dates	19 August, 2011 – 11 July, 2012
Occupation or position held	Assistant Professor

Main activities and responsibilities	Teaching and research in Applied Physics
Name and address of the employer	Dept. of Electrical Engineering, COMSATS Institute of Information Technology Kamra Road, 43600 Attock (Pakistan)
Dates	25 February, 2011 – 18 August, 2011
Occupation or position held	Lecturer
Main activities and responsibilities	Teaching Applied Physics
Name and address of employer	Dept. of Electrical Engineering, COMSATS Institute of Information Technology Kamra Road, 43600 Attock (Pakistan)
Dates	15 February, 2010 – 31 July, 2010
Occupation or position held	Researcher
Main activities and responsibilities	Impedance Spectroscopic analysis of Organic semiconductor thin film devices based on Phthalocyanines.
Name and address of employer	Dept. of Physics and Atmospheric Science, Dalhousie University 6310 Coburg Road, b3h 3j5 Halifax (Canada)
Dates	08 January, 2001 – 30 June, 2005
Occupation or position held	Senior Teacher
Main activities and responsibilities	Teaching Physics from O-levels to undergraduate level.
Name and address of employer	Army Public School and Degree College Warsak Road, 25000 Peshawar (Pakistan)
Membership (s)	<ul style="list-style-type: none"> ➤ HEC Pakistan's Approved Supervisor ➤ Patron National Academy of Young Scientist (NAYS), IIUI Chapter ➤ Senior Member of the International Association of Computer Science and Information Technology (IACSIT)
Education and training	
Dates	03 June 2008 - 02 June 2011
Title of qualification awarded	PhD in Applied Physics
Title of Dissertation	Fabrication and Electrical Characterization of Organic semiconductor Phthalocyanine-Based Electronic Devices
Name of organisation providing education and training	Ghulam Ishaq Institute of Engineering Sciences and Technology 23640 Topi (Pakistan)
Dates	01 September 2006 - 02 June 2008
Title of qualification awarded	MS in Engineering Sciences/Applied Physics
Title of Thesis	Electrical Properties of Organic semiconductor Copper Phthalocyanine-Metal schottky type junction

Name of organisation providing education and training	GhulamIshaq Khan Institute of Engineering Sciences and Technology 23640 Topi (Pakistan)																																					
Dates	1997 - 1999																																					
Title of qualification awarded	MSc																																					
Field	Physics																																					
Name of organisation providing education and training	University of Peshawar 25000 Peshawar (Pakistan)																																					
Areas of Expertise	Solar Energy Technology (solar energy, organic solar cells, photovoltaic devices) Surface, Interface and Thin Films (nanostructured organic surface, ultra-thin films, metal/organic interface) Molecular Electronics (photovoltaic devices, organic sensors)																																					
Native language(s)	Urdu, Hindko, Pashto																																					
Other language(s)	English																																					
Self-assessment <i>European level (*)</i>	<table border="1"> <thead> <tr> <th colspan="4">Understanding</th> <th colspan="4">Speaking</th> <th colspan="2">Writing</th> </tr> <tr> <th colspan="2">Listening</th> <th colspan="2">Reading</th> <th colspan="2">Spoken interaction</th> <th colspan="2">Spoken production</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>C2</td> <td>Proficient user</td> <td>C2</td> <td>Proficient user</td> <td>C1</td> <td>Proficient user</td> <td>C1</td> <td>Proficient user</td> <td>C2</td> <td>Proficient user</td> </tr> </tbody> </table>								Understanding				Speaking				Writing		Listening		Reading		Spoken interaction		Spoken production				C2	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C2	Proficient user
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	(*) <u>Common European Framework of Reference (CEF) level</u>																																					
Awards	<ul style="list-style-type: none"> ➤ Higher Education Commission Pakistan, Ms Leading to PhD Scholarship. ➤ GIK Institute of Engineering Sciences and Technology, Topi, Pakistan, Highest CGPA in both Ms and PhD course work. (CGPA=3.62 and 3.67 in Ms and PhD respectively) ➤ Six months research scholarship under International Research Support Initiative Program (IRSIP) offered by Higher Education Commission Pakistan. 																																					

Courses Taught at BS, MS and PhD levels

- Solid State Electronic Devices (PHY 324)
- Material Science I (PHY 710)
- Experimental Techniques in Nanotechnology (PHY 617)
- Conducting Polymers (PHY 640)
- Physics of Lasers (PHY 622)
- Atomic and Molecular Physics (PHY 423)
- Nano chemistry (PHY 464)
- Surface Physics (PHY 713)

Courses developed for MS and PhD levels

- Organic Semiconductor Devices
- Photovoltaic Energy and its Applications

Equipment /Apparatus Expertise

- Thermal Evaporator
- UV/VIS/NIR Spectrometer
- AFM
- SEM
- Glove Box
- Differential Scanning Calorimeter
- Optoelectronic Data Acquisition Systems
- Annealing Ovens
- Ellipsometer
- Hydraulic press
- Spin coater

.....and many more

Published Journal Papers (Total IF = 162.613)

1. Yilin Wang, Weishuo Li, Yitong Guo, Jupeng Cao, **Imran Murtaza**, Ahmed Shuja, Yaowu He, and Hong Meng. *Recombination Strategy for Processable Ambipolar Electroactive Polymers in Pseudocapacitors. Macromolecules*, 51, pp 5258–5266, 2018 (IF = 5.914)
2. Yanan Zhu, Xiuru Xu, Xuepeng Zhang, Yaowu He, Xianzhe Zeng, **Imran Murtaza**, Hong Meng. *Computational screening and molecular design of anthracene-based semiconductors. Organic Electronics*, 61, pp 87-95, 2018 (IF = 3.680)
3. Shenghui Guo, Yaowu He, **Imran Murtaza**, Jiahui Tan, Junyou Pan, Yitong Guo, Yanan Zhu, Yu He, Hong Meng. *Alkoxy substituted [1]benzothieno[3,2-b][1]benzothiophene derivative with improved performance in organic thin film transistors. Organic Electronics*, 56, pp 68-75, 2018 (IF = 3.399)
4. Zhao Hu, Jingsheng Miao, Tingting Li, Ming Liu, **Imran Murtaza** and Hong Meng. *Reduced interface losses in inverted perovskite solar cells by using a simple dual-functional phenanthroline derivative. Nano Energy*, 43, pp 72-80, 2018 (IF = 12.343)

5. Naeem Ahmad, Fahad Hassan, Suleman Khan, Abdul Majid, Affan Safeer, Ahmad Saeed, **Imran Murtaza**, S. Ahmed, X. F. Han. *Mobility and perpendicular magnetic anisotropy in electrodeposited $\text{Co}_{32}\text{Fe}_{67}\text{B}_1$ thin films using boric acid as boron source*. Journal of Magnetism and Magnetic Materials, 458, pp 156-163, 2018 (IF = 2.630)
6. Yingshuang Zhang, **Imran Murtaza** and Hong Meng. *Development of fullerenes and their derivatives as semiconductors in field effect transistors: exploring the molecular design*. Journal of Materials Chemistry C, 6, pp 3514-3537, 2018 (IF = 5.256)
7. Mo Chen, Yanan Zhu, Chao Yao, Dongwei Zhang, Xingwei Zeng, **Imran Murtaza**, Haibiao Chen, Seiya Kasai, Hong Meng, Osamu Goto. *Intrinsic charge carrier mobility in single-crystal OFET by "fast trapping vs. slow detrapping" model*. Organic Electronics, 54, pp 237-244, 2018 (IF = 3.399)
8. Yaowu He, Wenjun Xu, **Imran Murtaza**, Chao Yao, Yanan Zhu, Aiyuan Li, Chao He and Hong Meng. *A chrysene-based liquid crystalline semiconductor for organic thin-film transistors*. Journal of Materials Chemistry C, 6, pp 3683-3689, 2018 (IF = 5.256)
9. Mengyun Chen, Lijia Yan, Yang Zhao, **Imran Murtaza**, Hong Meng and Wei Huang. *Anthracene-based semiconductors for organic field-effect transistors*. Journal of Materials Chemistry C, 6, pp 7416-7444, 2018 (IF = 5.256)
10. Ghulam Murtaza, Shahid Mehmood, Shahid Rasul, **Imran Murtaza**, Ehsan Ullah Khan. *Dosimetric effect of limited aperture multileaf collimator on VMAT plan quality: A study of prostate and head-and-neck cancers*. Reports of Practical Oncology and Radiotherapy, 23, pp 189-198, 2018 (IF = 0.690)
11. Sen Peng, Jingsheng Miao, **Imran Murtaza**, Liang Zhao, Zhao Hu, Ming Liu, Tingbin Yang, Yongye Liang, Hong Meng and Wei Huang. *An efficient and thickness insensitive cathode interface material for high performance inverted perovskite solar cells with 17.27% efficiency*. Journal of Materials Chemistry C, 5, pp 5949-5955, 2017 (IF = 5.256)
12. Aiyuan Li, Lijia Yan, Ming Liu, **Imran Murtaza**, Chao He, Dongwei Zhang, Yaowu He and Hong Meng. *Highly responsive phototransistors based on 2,6-bis(4-methoxyphenyl)anthracene single crystal*. Journal of Materials Chemistry C, 5, pp 5304-5309, 2017 (IF = 5.256)
13. **Imran Murtaza**, Zhongcheng Zhu, Hong Meng and Wei Huang. *Thin film transistors based on two-dimensional graphene and graphene/semiconductor heterojunctions*. RSC Advances, 7, pp 17387-17397, 2017 (IF = 3.289)
14. Ting Xu, Jun-Gui Zhou, Chen-Chao Huang, Lei Zhang, Man Keung Fung, **Imran Murtaza**, Hong Meng, and Liang-Sheng Liao. *Highly Simplified Tandem Organic Light-emitting Devices Incorporating a Green Phosphorescence Ultrathin Emitter within a Novel Interface Exciplex for High Efficiency*. ACS Applied Materials and Interfaces, 9, pp 10955-10962, 2017 (IF = 7.145)
15. Wenjun Xu, Yaowu He, **Imran Murtaza**, Dongwei Zhang, Aiyuan Li, Zhao Hu, Xingwei Zeng, Yitong Guo, Yanan Zhu, Ming Liu and Hong Meng. *Phenyl substitution in tetracene: a promising strategy to boost charge mobility in thin film transistors*. Journal of Materials Chemistry C, 5, pp 2852-2858, 2017 (IF = 5.066)

16. Ke Li, Ming Liu, Shuai Yang, Yantong Chen, Yaowu He, **Imran Murtaza**, Osamu Goto, Clifton Shen, Hong Meng, Gufeng He. *Substitution effect of super hydrophobic units: A new strategy to design deep blue fluorescent emitters*. *Dyes and Pigments*, 139, pp 747-755, 2017 (IF = 4.055)
17. Yantong Chen, Chao Li, Xiuru Xu, Ming Liu, Yaowu He, **Imran Murtaza**, Dongwei Zhang, Chao Yao, Yongfeng Wang and Hong Meng. *Thermal and Optical Modulation of the Carrier Mobility in OTFTs Based on an Azo-anthracene Liquid Crystal Organic Semiconductor*. *ACS Applied Materials and Interfaces*, 9, pp 7305-7314, 2017 (IF = 7.145)
18. Mengmeng Zhu, Jingsheng Miao, Zhao Hu, Yantong Chen, Ming Liu, **Imran Murtaza**, Hong Meng. *A novel A-D-A small molecule with 1,8-naphthalimide as a potential non-fullerene acceptor for solution processable solar cells*. *Dyes and Pigments*, 142, pp 39-50, 2017 (IF = 4.055)
19. Chao Yao, Xiaolong Chen, Yaowu He, Yitong Guo, **Imran Murtaza** and Hong Meng. *Design and characterization of methoxy modified organic semiconductors based on phenyl[1]benzothieno[3,2-b][1]benzothiophene*. *RSC Advances*, 7, pp 5514-5518, 2017 (IF = 3.289)
20. Yingshuang Zhang, **Imran Murtaza**, Dong Liu, Rui Tan, Yanan Zhu, Hong Meng. *Understanding the mechanism of improvement in practical specific capacity using halogen substituted anthraquinones as cathode materials in lithium batteries*. *Electrochimica Acta*, 224, pp 622-627, 2017 (IF = 4.803)
21. Yang Zhao, Lijia Yan, **Imran Murtaza**, Xiao Liang, Hong Meng, Wei Huang. *A thermally stable anthracene derivative for application in organic thin film transistors*. *Organic Electronics*, 43, pp 105-111, 2017 (IF = 3.471)
22. Aiyuan Li, Lijia Yan, Chao He, Yanan Zhu, Dongwei Zhang, **Imran Murtaza**, Hong Meng and Osamu Goto. *In-plane Isotropic Charge Transport Characteristics of Single-crystal FETs with High Mobility Based on 2,6-bis(4-methoxyphenyl)anthracene: Experimental Cum Theoretical Assessment*. *Journal of Materials Chemistry C*, 5, pp 370-375, 2017 (IF = 5.066)
23. Mengyun Chen, Yang Zhao, Lijia Yan, Shuai Yang, Yanan Zhu, **Imran Murtaza**, Gufeng He, Hong Meng and Wei Huang. *A Unique Blend of 2-Fluorenyl-2-anthracene and 2-Anthryl-2-anthracene Showing White Emission and High Charge Mobility*. *Angewandte Chemie International Edition*, 56, pp 722-727, 2017 (IF = 11.709)
24. Shan Shao, Jingjing Shi, **Imran Murtaza**, Panpan Xu, Yaowu He, Sanjay Ghosh, Xiaosi Zhu, Igor F Perepichka and Hong Meng. *Exploring the electrochromic properties of poly(thieno[3,2-b]thiophene)s decorated with electron-deficient side groups*. *Polymer Chemistry*, 8, pp 769-784, 2017 (IF = 5.687)
25. Jingjing Shi, **Imran Murtaza**, Shan Shao, Xiaosi Zhu, Yang Zhao, Mengmeng Zhu, Osamu Goto, Hong Meng. *Tetra-EDOT substituted 3D electrochromic polymers with lower band gaps*. *Science China Chemistry*, 60, pp 90-98, 2017 (IF = 2.429)
26. Yaowu He, Wenjun Xu, **Imran Murtaza**, Dongwei Zhang, Chao He, Yanan Zhu and Hong Meng. *Molecular Phase Engineering of Organic Semiconductors Based on [1]Benzothieno[3,2-b][1]benzothiophene Core*. *RSC Advances*, 6, pp 95149-95155, 2016 (IF = 3.289)

27. Ting Xu, Ye-Xin Zhang, Bo Wang, Chen-Chao Huang, **Imran Murtaza**, Hong Meng, and Liang-Sheng Liao. *Highly Simplified Reddish Orange Phosphorescent Organic Light-Emitting Diodes Incorporating a Novel Carrier- and Exciton-Confining Spiro-exciplex-forming Host for Reduced Efficiency Roll-off*. ACS Applied Materials and Interfaces, 9, pp 2701-2710, 2016 (IF = 7.145)
28. Xiaosi Zhu, Yanan Zhu, **Imran Murtaza**, Jingjing Shi, Yaowu He, Panpan Xu, Mengmeng Zhu, Osamu Goto and Hong Meng. *Thieno[3,2-b]thiophene Based Electrochromic Polymers: Experimental Cum Theoretical Appraisal of the EDOT Position*. RSC Advances, 6, pp 75522-75529, 2016 (IF = 3.289)
29. Panpan Xu, **Imran Murtaza**, Jingjing Shi, Mengmeng Zhu, Yaowu He, Hongtao Yu, Osamu Goto and Hong Meng. *Highly Transmissive Blue Electrochromic Polymers Based On Thieno[3,2-b]thiophene*. Polymer Chemistry, 7, pp 5351-5356, 2016 (IF = 5.687)
30. Ting Xu, Meijun Yang, Jun Liu, Xinkai Wu, **Imran Murtaza**, Gufeng He, Hong Meng. *Wide color-range tunable and low roll-off fluorescent organic light emitting devices based on double undoped ultrathin emitters*. Organic Electronics, 37, pp 93-99, 2016 (IF = 3.471)
31. Jingjing Shi, Xiaosi Zhu, Panpan Xu, Mengmeng Zhu, Yitong Guo, Yaowu He, Zhao Hu, **Imran Murtaza**, Hongtao Yu, Lijia Yan, Osamu Goto, Hong Meng. *A Redox-Dependent Electrochromic Material: Tetri-EDOT Substituted Thieno[3,2-b]thiophene*. Macromolecular Rapid Communications, 37, pp 1344–1351, 2016 (IF = 4.638)
32. Ting Xu, Lijia Yan, Jingsheng Miao, Zhao Hu, Shan Shao, Aiyuan Li, **Imran Murtaza**, Hong Meng. *Unlocking the Potential of Diketopyrrolopyrrole-based Solar Cells by a Pre-Solvent Annealing Method in All-solution Processing*. RSC Advances, 6, pp 53587-53595, 2016 (IF = 3.289)
33. N. Ali, W. A. A. Syed, **Imran Murtaza**, S. T. Hussain, N. Ahmad, S. M. Abbas, Z. Ali. *Effects of Tin Doping on the Physical Properties of Thermally Deposited Sb₂S₃ Thin Films*. Current Nanoscience, 9, pp 532-535, 2013 (IF = 1.062)
34. **Imran Murtaza**. *Illumination Time Dependent Degradation of C₆₀ solar Cell Efficiencies*. Applied Mechanics and Materials, 378, Pages 125-130, 2013
35. **Imran Murtaza**, Khasan S. Karimov. *Nickel phthalocyanine (NiPc) based sandwich type photocapacitive illumination sensors for environmental monitoring*. Arabian Journal for Science and Engineering, 37, pp 233-237, 2012 (IF = 0.865)
36. **Imran Murtaza**, Khasan S. karimov, Muhammad H. Sayyad, Ibrahim Qazi. *Optoelectronic properties of vanadylPhthalocyanine based organic-inorganic hybrid devices*. Applied Mechanics and Materials, 110-116, pp 3255-3260, 2012
37. **Imran Murtaza**, Ibrahim Qazi, Khasan S. Karimov, Muhammad H. Sayyad. *Impedance spectroscopic studies of an organic semiconductor device incorporating a thin film of highly doped ZnPc with MoO₃*. Physica B, 406 (6-7), pp 1238-1241, 2011 (IF = 1.386)

38. **Imran Murtaza**, Ibrahim Qazi, Khasan S. Karimov, Muhammad H. Sayyad. *Direct current and impedance spectroscopic studies on MoO₃ modified ZnPc/ITO Schottky diodes*. Physica B, 406, pp 533-536, 2011 (IF = 1.386)
39. **Imran Murtaza**, Ibrahim Qazi, Khasan S. karimov. *CuPc/C60 heterojunction thin film optoelectronic devices*. Journal of Semiconductors, 31, pp 064005, 2010
40. **Imran Murtaza**, Kh. S. Karimov, Zubair Ahmed, I. Qazi, M. MahroofTahir, T. A. Khan, T. Amin. *Humidity sensitive organic field effect transistor*. Journal of Semiconductors, 31, pp 054001, 2010
41. Kh. S. Karimov, Kuan Yew Cheong, M. Saleem, **Imran Murtaza**, M. Farooq, Ahmad FauziMohd Noor. *Ag/PEPC/NiPc/ZnO/Ag thin film capacitive and resistive humidity sensors*. Journal of Semiconductors, 31, pp 054002, 2010
42. Kh. S. Karimov, I. Qazi, Z. M. Karieva, T. A. Khan, **I. Murtaza**. *Electrical Properties of Orange Dye Aqueous Solution*. Kuwait Journal of Science and Engineering, 35, pp 27-36, 2008 (IF = 0.811)
43. Kh. S. Karimov, I. Qazi, S. A. Moiz, **I. Murtaza**. *Electrical Properties of Organic Semiconductor Copper Phthalocyanine Thin films Deposited from Solution at High Gravity*. Optoelectronics and Advanced Materials – RC, 2 , pp 219-223, 2008 (IF = 0.470)

Conference Proceedings

1. Poly-n-epoxypropylcarbazole complexes photocapacitive detectors. Saudi International Electronics, Communication and Photonics Conference (SIEPC). 24-26 April, 2011, Riyadh, Saudi Arabia. <http://dx.doi.org/10.1109/SIEPC.2011.5876964>.
2. Optoelectronic properties of vanadylPhthalocyanine based organic-inorganic hybrid devices. International Conference on Physics Science and Technology (ICPST). 28-30 Dec, 2010, Hong Kong. Pp. 74-77.
3. ITO/CuPc/NiPc/Al and ITO/NiPc/CuPc/Al Double Junction Photocapacitive Detectors. The International Conference for Nanotechnology Industries. 5-7 April, 2009, Riyadh, KSA. Abstract book p. 123
4. Effect of humidity on electrical properties of PEPC/NiPc/ZnO thin film. 11th International Symposium on Advanced Materials, Islamabad, Pakistan, 8-12 August, 2009.
5. Optoelectronic Properties of ITO/CuPc/NiPc/Al and ITO/NiPc/CuPc/Al Double Junction Cells. Proc. of 6th ICEENG Conference, Cairo, Egypt, 27-29 May, 2008, pp. 1014-1027.
6. Electrical Properties of Organic Semiconductor Copper Phthalocyanine-Metal Schottky Type Junction. International Conference on Nanoscience and Technology. June 4-6, 2007, Beijing China, Abstract Book, 4P-026, pp. 428-429.
7. Electrical Properties of Organic Semiconductor Copper Phthalocyanine-Metal Schottky Type Junction. Proc. of 10th International Symposium on Advanced Materials, Islamabad, Pakistan, 3-7 sep, 2007, pp. 311-319.

Books

1. **Imran Murtaza**. Organic semiconductor Phthalocyanine-based devices. Saarbrücken, Germany: LAP Lambert Academic Publishing GmbH & Co. KG, 2011. ISBN: 978-3-8454-0039-6

References

- Prof. Dr. Meng Hong, School of Advanced Materials, Peking University Shenzhen Graduate School, Peking University, Shenzhen. Email: menghong@pkusz.edu.cn
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- Prof. Dr. M. Hassan Sayyad, Faculty of Engineering Sciences, GIK Institute of Engineering Sciences and Technology, Topi 23640, Pakistan. Email: hsayyad62@gmail.com
- Prof. Dr. Khasan S. karimov, Faculty of Electrical Engineering, GIK Institute of Engineering Sciences and Technology, Topi 23640, Pakistan. Email: khasan@giki.edu.pk
- Dr. Wiqar Hussain Shah, Chairman, Department of Physics, International Islamic University, Sector H-10, Islamabad, Pakistan. Email: wiqar.hussain@iiu.edu.pk