Dr. Rana Muhammad Arif Khalil
E-mail Address: muhammadarif@bzu.edu.pk
Associate Professor, Institute of Physics,
Bahauddin Zakariya University, Multan.
H Index :31 as per Web of Science
Top 2% Scientists, Stanford/Elsevier List 2025 Ranked 154325.

PhD DISSERTATION TITLE:

"*Ab*-initio Studies of the Structural, Dynamical and Thermodynamical Properties of Graphitic and Hydrogenated Graphitic Materials and their Potential for use in hydrogen storage" supervised by Professor Ian Morrison, Director of Physics, University of Salford, Greater Manchester, UK.

MEMBERSHIP OF ORGANIZATIONS:

- Life member of "The Pakistan Institute of Physics (PIP)".
- Life Member of the Zakariyan Alumni Association of Physicists (ZAAP).

COURSES TAUGHT TO BS/M.Phil/PhD LEVEL CLASSES:

Electricity and Magnetism, Solid State Physics, Mechanics, Quantum Mechanics, Conduction in Solids, Waves and Oscillations, Material Science, Dielectric Properties of Materials, Structural Analysis and Crystallography, Mathematical Methods of Physics, Nuclear Physics, Computational Physics, Heat and Thermodynamics.

ADMINISTRATIVE RESPONSIBILITIES:

1. Member Board of Studies, University of Okara, Okara
2. Member Board of Studies, Institute of Physics, BZU Multan.
3. Member Admission Committee, Department of Physics, B.Z. University, Multan from July, 2017 to date.
4. Deputy Director of Student Affairs Department of Physics, B.Z. University, Multan.
5. Stock Taking of Teaching and Research Laboratories.
6. Assistance in Curriculum Development for Undergraduate and Postgraduate Level Courses.

CONFERENCES/ WORKSHOPS/ MEETINGS ATTENDED:

1. Attended International Conference-2006 organized by Pakistan Institute of Physics UET Lahore in March 13-16, 2006.
2. Attended 1st meeting of Nobel Laureates with Pakistani students/Young Scholars in Islamabad from 27-28 March 2006.
3. Participated in the International School on "Surface, Thin Films, Nanostructures and Applications" COMSATS Lahore Oct 27-Nov 01 2006.

4. Attended 58th Nobel Laureates meeting held at Lindau ,Germany (June 29th to July 4th 2008)
5. R. M. A. Khalil and I. Morrison, oral presentation, titled "Atomistic Studies of Radiation Damage in Silicon Carbide" 1st CSE Conference at University of Salford, UK November 17, 2010. ISBN: 978-1-905732-0.
6. R. M. A. Khalil and I. Morrison, CASTEP Workshop, Poster Presentation entitled "Structural and Dynamical Properties of Graphite incorporating Dispersion Correction" University of Oxford, UK, August 19-23, 2013.
7. R. M. A. Khalil and I. Morrison, oral presentation, titled "Structural and Dynamical Studies of Graphitic Materials" 4th CSE Doctoral School Postgraduate Conference, Salford, UK, November 13, 2013. ISBN: 978-1-907842-50-4.
8. R. M. A. Khalil and I. Morrison, Poster Presentation entitled "An Accurate Dispersion Corrected Studies of Structural and Vibrational Properties of Graphite" Dean's Annual Research Show Case Salford, UK June 18, 2014.
9. Participated in National workshop on Physics Education, Challenges & Prospects, NCP Islamabad November 26-27, 2015.
10. COMSTECH-CIIT Joint International Workshop on Rational Design of Materials for Energy Needs: Computation and Experimentation, COMSTECH Islamabad, Pakistan May 22-26, 2017.
11. Participated to organize Seminar on EU Research and Innovation Programme, Horizon 2020, Bahauddin Zakariya University Multan, August 24, 2017.
12. Participated in 1st National Conference on Emerging Trends in Material Science, Department of Physics Abbotabad University of Science and Technology, October, 5-7, 2017.
13. Oral Presenter in Conference entitled "Strongly Correlated Systems and Nanotechnology" held at Department of Physics Women University Multan, January, 15-17, 2019.
14. Invited Speaker in iiScience International Conference entitled "Light Generation, Sensing and Energy Resources held at Department of Physics Women University Multan, March 2-4, 2020.
15. Invited Speaker in 4th International Conference on Materials Science & Nanotechnology MSNANO held at Government College University Faisalabad at March 3-5, 2020.
16. Participant in International E-Conference on Emerging Trends and Innovations in Nanotechnology held at Department of Physics Ripah International Unviersity, Lahore, April 9-11,2021.
17. Participant in International Workshop on Nanomaterials of Energy Conversion Emerging Photovoltaic and Optoelectronic Technologies (NEEPO-2021) at NCP, Islamabad September,21-22,2021

18. Oral Presenter in 1st International conference on Applied Physics and Engineering at Department of Physics NED Karachi, September,16-17,2021.
19. Speaker in International Symposium Modern Trends in Physics held at Government College University Faisalabad at March 17-18, 2021.
20. Participant in Level 1 Training Program Cohort II organized by ORIC BZU, Multan, May,26-29,2025.

RESEARCH PUBLICATIONS

International Publications in impact factor Journals

1. **R.M.Arif Khalil**, Muhammad Iqbal Hussain, Ali Raza, Rabail Fatima, Fayyaz Hussain, Manawwer Alam, Rizwan Wahab, Muhammad Ali, Jamal Abdul Nasir Computational investigation of the phase stability, electronic, optical, phonon spectrum, and elastic behavior of layered perovskites Ca2XO4 (X = Zr, Hf) for optoelectronic applications "Journal of Molecular Modeling" (2025) 31:4 https://doi.org/10.1007/s00894-024-06216-4 (IF:2.1)
2. R.Fatima, **R.M.Arif Khalil**,Muhammmad Iqbal Hussain, Fayyaz Hussain,"Computational study of the structural, optoelectronic and thermoelectric properties of scandium-based ternary chalcogenides XScSe2 (X = Li, Rb) for applications in photovoltaic cell"Journal of Computational Electronics 23 (2024) 82. DOI: 10.1007/s10825-023-02110-z (IF:2.2)
3. R.Fatima, **R.M.Arif Khalil**, M.I.Hussain, Fayyaz Hussain "DFT insight into the phase stability, optoelectronic, elastic, vibrational, and thermodynamic properties of metal chalcogenides RbKM (M = S, Se, Te) for energy harvesting technology"Materials Science in Semiconductor Processing 184 (2024) 1. DOI: 10.1016/j.mssp.2024.108854 (IF:4.2)
4. **R.M. Arif Khalil**, Muhammad Iqbal Hussain, Mushahid Hussain Shah, Tahani. Al Muhimeed, Ghazanfar Nazir, Fayyaz Hussain, Umair Mumtaz, "The exploration of physical properties of 2D MXenes M3N2 (M= Ti, Hf, Zr, Mo) through the first principles approach: The energy harvesting materials" Computational Materials Science 238 (2024) 112947 DOI: 10.1016/j.commatsci.2024.112947.(IF_:4.2)
5. **R.M. Arif Khalil**, Mushahid Hussain Shah, Muhammad Iqbal Hussain, Nouf H. Alotaibi, Saikh Mohammad, Fayyaz Hussain, Ghulam Meeladi, "Ab-initio study about the structural, optoelectronic, magnetic, and elastic properties of novel combinations of 2D MXenes M3C2 (M= Zr, Mo) for energy harvesting applications" Physica B:

Condensed Matter (2024) Volume 685 (2024) 416016 DOI: 10.1016/j.physb.2024.416016. (IF:2.8)

6. Ibrar Ali Shah, Muhammad Imran, Fayyaz Hussain, Umbreen Rasheed, Ammar Mohamed Tighezza, **R.M.A. Khalil**, Muhammad Shoaib, Muhammad Fahad Ehsan,"Exploration of lead-free novel double perovskite halides Na2TlBiX6 (X = Cl, Br, I) for flexible memory devices: Using DFT approach" Materials Chemistry and Physics (2024) 324 (2024) 129680 DOI: 10.1016/j.matchemphys.2024.129680 (IF:4.3)
7. **R.M.A. Khalil**, Muhammad Iqbal Hussain, Shumaila Zafaí, Rabail Fatime, Nouf H. Alotaibi, Saikh Mohammad, Fayyaz Hussain, Ayesha Asma, Jamal Abdul Nasií "Comprehensive analysis of the phase stability, optoelectíonic, mechanical, theímodynamic, and vibíational píopeíties foí píospective optoelectíonic applications of novel combinations of chalcogenides XScl'e2 (X = Li, Rb) by employing density functional theory" May 2024 Journal of Materíals Science 59(2024)1 DOI:10.1007/s10853-024-09677-3 (IF:3.5).
8. Mushahid Hussain Shah, **R.M.A. Khalil**, Muhammad Usman, Muhammad Iqbal Hussain, Fayyaz Hussain, Muniíah Albaqami, Saikh Mohammad, Jamal Abdul Nasií "Fírst- Píinciples píediction of the stíuctuíal stability, optoelectíonic, magnetic píopeíties and mechanical íesponse of olivine type LiMPO4 (M = Ni, Cu) phosphate materials for energy storage applications"Computational and Theoretical Chemistry 1235(2024):11457 DOI:10.1016/j.comptc.2024.114579.(IF:3.0)
9. Muhammad Ali, **R. M. Arif Khalil**, Muhammad Iqbal Hussain, Fayyaz Hussain "Exploration of the structural, optoelectronic, magnetic, elastic, vibrational, and thermodynamic properties of molybdenum-based chalcogenides A2MoSe4 (A =Li, K) for photovoltaics and spintronics applications: a first-principle study" Journal of Molecular Modeling (2023) 29:347 https://doi.org/10.1007/s00894-023-05751-w.
10. Muhammad Sajid, Maria Ishaque, Muhammad Imran, Niaz Ahmad Niaz, Fayyaz Hussain, Umbreen Rasheed, R. M. Arif Khalil, Syed Mansoor Ali, Sardar Sikandar Hayat, Muhammad Shoaib "Theoretical occurrence of quantized chemistry of conduction mechanism in layered perovskite for the application of Resistive Random Access Memory devices International Journal of Quantum Chemistry (2023)27281 https://doi.org/10.1002/qua.27281.
11. Shoaib Muhammad, G. Murtaza, Abida Azam, H. H. Raza, R. M. Arif Khalil, Muhammad Iqbal Hussain, and M. Waqas Iqbal "Tailoring magnesium-based hydrides

as potential and reversible materials for solid-state hydrogen storage: A first-principles study International Journal of Modern Physics B (2023)10:1142. https://www.worldscientific.com/doi/10.1142/S0217979224503582.

12. Niaz Ahmad Niaz , Abdul Shakoor, Fayyaz Hussain, Syed Mansoor Ali, Umar Mahmood, Atsushi Inoishi4, Rana Muhammad Arif Khalil and Duncan H. Gregory" Improved structural, electronic, and electrochemical properties of MoS2/graphene oxide composite for Li-ion batteries applications" J Mater Sci: Mater Electron (2023) 34:1942 J Mater Sci: Mater Electron (2023) 34:1942 https://doi.org/10.1007/s10854-023-11212-0

13. Rabail Fatima, **R. M. Arif Khalil**, Muhammad Iqbal Hussain, Fayyaz Hussain, Computational study of structural, optoelectronics and thermoelectric properties of scandium-based ternary chalcogenides $XScSe_2$ (X = Li, Rb) for applications in photovoltaic cell, Journal of Computational Electronics (2023) https://doi.org/10.1007/s10825-023-02110-z.

14. **R. M. Arif Khalil**, Muhammad Iqbal Hussain, Bushra Karim , Hind Albalawi,Khalid I.Hussein, Fayyaz Hussain, **"**DFT-based systematic study on the structural, optoelectronic, thermodynamic, vibrational, and mechanical behavior of Ruddlesden Popper perovskites Sr_2XO_4 (X = Zr, Hf) for optoelectronic applications"International Journal of Quantum Chemistry(2023)e27216 **https://doi.org/10.1002/qua.27216**

15. Malik Shafqat Hayat, **R.M. Arif Khalil** "Ab-initio exploration of unique and substantial computational properties of double hydrides Cs_2CaTlH_6, Cs_2SrTlH_6, & Cs_2BaTlH_6, for the computational manufacturing of hydrogen fuel cell: A DFT study" Journal of Molecular Graphics and Modelling 125 (2023) 108600 A**https://doi.org/10.1016/j.jmgm.2023.108600**

16. Farhana Kousar, Umbreen Rasheed, Muhammad Imran, Fayyaz Hussain, Niaz Ahmad Niaz , Syed Mansoor Ali , Muhammad Ali Shar, **R.M. Arif Khalil,** Muhammad Naeem Ashiq, Sadia Khalid "First principle investigation of metallic ion conduction mechanisms in oxide materials for optical responsive storage devices" PhysicaB:Condensed Matter 665 (2023) 415070 DOI **10.1016/j.physb.2023.415070**

17. Bisma Tariq , G. Murtaza , Hassan Ali , Samia Razzaq , **R.M. Arif Khalil** , Muhammad IqbalHussain , Khawar Ismail , Ghazanfar Nazir , Nouf

H. Alotaibi "First principles study of the structural, half-metallic ferromagnetism, magnetic, and transport properties of KXO_2 (X = Pr, Nd, and Pm) hexagonal oxides" Solid State Communications 370 (2023)115229370 **https://doi.org/10.1016/j.ssc.2023.115229**

18. Saira Kiran, Umair Mumtaz,be Aymen Mustafa,d Muhammad Imran, Fayyaz Hussain, Umbreen Rasheed, **R. M. A. Khalil**, Ejaz Ahmad Kheraf and Alia Nazira "Correction: An ab initio investigation of the structural, mechanical, electronic, optical, and thermoelectric characteristics of novel double perovskite halides Cs_2 $CaSnX_6$ (X = Cl, Br, I) for optically influenced RRAM devices" Royal Society of chemistry 13(19)(2023)12925-12925 https://doi.org/10.1039/D3RA00078H

19. Malik Shafqat Hayat **, R.M. Arif Khalil "**A DFT engineering of double halide type perovskites Cs_2SiCl_6, Cs_2GeCl_6, Cs_2SnCl_6 for optoelectronic applications" Solid State Communications 361 (2023) 115064 https://doi.org/10.1016/j.ssc.2023.115064

20. Ejaz Ahmad Khera, Fayyaz Hussain, **Rana Muhammad Arif Khalil** "The Structural, Electronic, and Optical Characteristics of $Sb_{2-x}M_xO_3$ (M = Cu, Ni, Zn; $x = 0.25$) for Optoelectronic and Allied Applications: First-Principles Study" Physical Status Solidi (b) 260(2023)2200520**. https://doi.org/10.1002/pssb.202200520**

21. Shafqat Hayat**, R. M. Arif Khalil**, Muhammad Iqbal Hussain, Fayyaz Hussain, Anwar Manzoor Rana · "A DFT study of perovskite type halides KBeBr3, RbBeBr3, and CsBeBr3 in triclinic phase for advanced optoelectronic devices" Solid State Communications 344(2022)114674.https://doi.org/10.1016/j.ssc.2022.114674 (IF:1.840)

22. R. M. Arif Khalil, Muhammad Iqbal Hussain, Fayyaz Hussain, Nadia Luqman Anwar Manzoor Rana "DFT based study of the structural, optoelectronic, mechanical and magnetic properties of Ti3AC2 (A=P, As, Cd) for coating applications" Royal Society of Chemistry Advances ***12*** (2022) 4395-4407. https://doi.org/10.1039/D1RA07856A (IF:3.361)

23. R. M. Arif Khalil, Muhammad Iqbal Hussain, Saba Arshad, Fayyaz Hussain, Anwar Manzoor Rana ,Hafiz M.Asif Javed "FIRST-PRINCIPLES SIMULATION: STUDY OF THE STRUCTURAL, ELECTRONIC, MECHANICAL AND OPTICAL PROPERTIES OF DISULFIDE XS_2 (X=Ta, Ti) COMPOUNDS FOR

OPTOELECTRONIC APPLICATIONS" Surface Review and Letters 29 .06(2022) 2250083. https://doi.org/10.1142/S0218625X22500834 (IF:1.152)

24. Ejaz Ahmad Khera, Chandreswar Mahata, Muhmmad Imran Niaz Ahmad Niaz Fayyaz Hussain, R. M. Arif Khalil, Umbreen Rasheed and SungjunKim "Improved resistive switching characteristics of a multi-stacked $HfO_2/Al_2O_3/HfO_2$ RRAM structure for neuromorphic and synaptic applications: experimental and computational study" ***RSC Adv.***, 12 (2022) 11649-11656. https://doi.org/10.1039/D1RA08103A

25. Ejaz Ahmad Khera, Ubreen Rasheed, Muhmmad Imran, Hafeez Ulllah, Fayyaz Hussain, R. M. Arif Khalil, Farhana Kousar,Muhammad Qasim, An insight into structural, electronic and optical characteristics of $Mo_{1-x}M_xO_3$ (M = Zr, Y, ZrY) for the formation of conducting filaments in optoelectronic memory devices: A first principles study OPTIK 258 (2022)168913. https://doi.org/10.1016/j.ijleo.2022.168913.

26. S. Kiran , U. Rasheed , M. Imran , F. Hussainb , N. A. Niazb , E. A. Kherad , R. M. A. Khalilb , A. Nazir "Theoretical investigation of doped LiMg1-xYxN (Y = Ag, Cu, Mn, Zn) for RRAM application" J.Ovonic Research 18 (2022)301-315. https://doi.org/10.15251/JOR.2022.183.301 . (IF:0.892).

27. Syed Awais Rouf, Muhammad Iqbal Hussain, Umair Mumtaz, Hafiz Tariq Masood, Hind Albalawi, Abdul Mannan Majeed, R M Arif Khalil and Q Mahmood "An *ab-initio* study of electronic and optical properties of $RhXO_3$ (X = Ga, Ag) perovskites" Physica Scripta 97,2 (2022). http://dx.doi.org/10.1088/1402-4896/ac4b34.

28. R. M. Arif Khalil, Muhammad Iqbal Hussain,A.M.Rana, Fayyaz Hussain, Neelam Inam,H.H.Somaily, Shafqat Hayat First principles study of the structural, optoelectronic and mechanical properties of $XLaS_2$ (X=Cu, Zn) for optoelectronic applications 258 (2022)168940 https://doi.org/10.1016/j.ijleo.2022.168940.

29. Samia Razzaq, G.Murtza, R.M.Arif Khalil. Nazir Ahmad, Hafiz Hamid "Ab-initio calculation of electronic, mechanical, optical and phonon properties of ZrXH 3 (X = Co, Ni and Cu): A key towards potential hydrogen storage materials" Interntional Journal of Modern Physics B (2022) http://dx.doi.org/10.1142/S0217979222500904;

30. Hina Gul, Hafiz Muhammad Asif Javed, Muhammad Awais, Muhammad Yasar Javaid, M. Ijaz Khan, Muhammad Arif, Mohammad Y. Alshahrani, **Rana Muhammad Arif**

Khalil, Falak Sher Khan & Ahmed M. "TiO2 nanoparticles functionalized with marigold for antioxidant role to enhance the skin protection" Biomass Conversion and Biorefinery (2022) https://doi.org/10.1007/s13399-022-02433-0

31. Amjad Ali, Sajid Munir, Mubushar Majeed, **Arif Khalil**, Muhammad Iqbal Hussain, and Rizwan Raza "Effect of Manganese Catalysts on the Performance of Anodes in Direct Carbon Fuel Cells" ACS Appl. Energy Mater. 2022,5,6,6878(2022)6878-6885. https://doi.org/10.1021/acsaem.2c00450

32. **R. M. Arif Khalil**, Muhammad Iqbal Hussain, Nyla Saeed, Fayyaz Hussain, Anwar Manzoor Rana, Amjad Ali,H.H.Somaily "Exploration of the structural, optoelectronic and vibrational behavior of Sb2S3 through the first principles approach for phenomenal applications in solar cells" Optical and Quantum Electronics **54 779 (2022).**

33. Muhammad Iqbal Hussain and **R.M.Arif Khalil** "Density functional theory studies of the structural, optoelectronic, bond stiffness and lattice dynamical properties of double perovskite oxides M2YVO6 (M= Mg, Sr): Promising candidates for optoelectronic applications" Materials Science in Semiconductor Processing 152(28) (2022)107050.

34. Ayesha Zia G.Murtaza, Khawar Ismail R.M. ArifKhalil Muhammad Iqbal Hussain "Ab-initio calculations of the structural, electronic and optical response of $KXCl_3$ (X = be, Ca and Sr) for optoelectronic applications" Computational Condensed Matter HYPERLINK "https://www.sciencedirect.com/journal/computational-condensed-matter/vol/33/suppl/C" 33, (2022), e00737. https://doi.org/10.1016/j.cocom.2022.e00737

35. Umbreen Rasheed, Muhammad Imran, R.M.ArifKhalil. Muhammad Naeem Ashiq Chandreswar Mahata, Fayyaz Hussain "Theoretical expolartion of site selective Perovskites for the application of electronic and optoresponsive memory devices" Physica E 145 (2023) 115514.

36. Umbreen Rasheed ,Muhammad Imran ,Abdul Shakoor ,Niaz Ahmad Niaz ,Fayyaz Hussain ,Rana Muhammad Arif Khalil ,Mohammad Alkhedher and Sayed M. Eldin "Theoretical Investigation of Origin of Quantized Conduction in 2D Layered Ruddleson–Popper Perovskite Heterostructure for the RRAM Applications" *Energies* **2022**, *15*(24), 9410. https://doi.org/10.3390/en15249410

37. **R. M. Arif Khalil**, Muhammad Iqbal Hussain, Nyla Saeed, Anwar Manzoor Rana · Fayyaz Hussain "The prediction of structural, electronic, optical and vibrational behavior of ThS2 for nuclear fuel applications: a DFT study" Optical and Quantum Electronics (2021) 53:11 https://doi.org/10.1007/s11082-020-02698-7 (IF:1.842)

38. **R. M. Arif Khalil,** Muhammad Iqbal Hussain Anwar Manzoor Rana, Fayyaz Hussain"DFT based first principles study of novel combinations of perovskite-type hydrides XGaH3 (X = Rb, Cs, Fr) for hydrogen storage applications" AIP Advances 11, 025032(2021) https://doi.org/10.1063/5.0037790. (IF:1.456)

39. Umbreen Resheed, Turki Alsuwian, Muhammad Imran, Hassan Algadi, Ejaz Ahmad Khera, **R. M. Arif Khalil**, Chandreswar Mahata, Fayyaz Hussain "Density functional theory insight into metal ions and vacancies for improved performance in storage devices" International Journal of Energy Research 45 (2021)10882 https://doi.org/10.1002/er.6572.(IF:3.741) (IF:3.741).

40. **R.M. Arif Khalil**, Muhammad Iqbal Hussain, Muhammad Imran, Fayyaz Hussain, Nyla Saeed, G. Murtaza, Anwar Manzoor Rana, and Chandreswar Mahta "First-Principles Simulation of Structural, Electronic and Optical Properties of Cerium Trisulfide (Ce2S3) Compound" Journal of Electronic Materials 50 (2021) 1637-1641 https://doi.org/10.1007/s11664-020-08478-z . (IF:1.774).

41. **R. M. Arif Khalil,** Muhammad Iqbal Hussain, Ayesha Batool, ,Fayyaz Hussain, Anwar Manzoor Rana, Nadia Luqman "Computational study of TbMn2O5 and Tb2MnCoO6 to probe the structural, vibrational and optoelectronic properties using PBE + U Functional" OPTIK- International Journal of Light and Electron Optics 241 (2021) 166835. https://doi.org/10.1016/j.ijleo.2021.166835. (IF:2.187)

42. Marriam Zahra. Amjad Ali **Arif Khalil** , Saif Ur Rehman, Naveed Mushtaq Muhammad Akbar, Rizwan Raza "Studies of electrical and optical properties of cadmium-doped zinc oxide for energy conversion devices" Fuel Cells 21 (2021) 164 https://doi.org/10.1002/fuce.202000026.(IF:1.876)

43. Shafqat Hayat**, R. M. Arif Khalil,** Muhammad Iqbal Hussain Anwar Manzoor Rana ,Fayyaz Hussain, "First-principles investigations of the structural, optoelectronic, magnetic and thermodynamic properties of hydride perovskites XCuH3 (X = Co, Ni, Zn) for hydrogen storage applications" OPTIK-International Journal of Light and

Electron Optics 228 (2021)166187. https://doi.org/10.1016/j.ijleo.2020.166187 (IF:2.187)

44. G. Murtaza , Thamraa Alshahrani , R.M. Arif Khalil , Q. Mahmood , Tahani H. Flemban , Hind Althib , A. Laref "Lead Free Double Perovsites Halides X2AgTlCl6 (X = Rb, Cs) for solar cells and renewable energy applications" Journal of Solid State Chemistry 297 (2021) 121988. https://doi.org/10.1016/j.jssc.2021.121988 (IF:2.726)

45. Ejaz Ahmad Khera , Hafeez Ullah, Muhammad Imran, Niaz Ahmad Niaz , Fayyaz Hussain , **R.M. Arif Khalil** , Umbreen Resheed , Anwar Manzoor Rana , Muhammad Iqbal Hussain , Chandreswar Mahata , Sungjun Kim "ab initio study of oxygen vacancy effects on structural, electronic and thermoelectric behavior of AZr1-xMxO3 (A = Ba, Ca, Sr; M =Al, Cu, x =0.25) for application of memory devices" Journal of Molecular Graphics and Modelling 103 (2021) 107825. https://doi.org/10.1016/j.jmgm.2020.107825 (IF:2.079)

46. Yu-Ming Chu,Hafiz Muhammad Asif Javed ,Muhammad Awais ,Muhammad Ijaz Khan,Sana Shafqat,Falak Sher Khan ,Muhammad Salman Mustafa,Dawood Ahmed Sami Ullah Khan and **Rana Muhammad Arif Khalil** "Photocatalytic Pretreatment of Commercial Lignin Using TiO2-ZnO Nanocomposite-Derived Advanced Oxidation Processes for Methane Production Synergy in Lab Scale Continuous Reactors" Catalysts 11 (2021) 54. https://doi.org/10.3390/catal11010054 .(IF:3.520)

47. Muhammad Iqbal Hussain, **R. M. Arif Khalil**, Fayyaz Hussain "Computational Exploration of Structural, Electronic, and Optical Properties of Novel Combinations of Inorganic Ruddlesden–Popper Layered Perovskites Bi_2XO_4 (X = Be, Mg) using Tran and Blaha-Modified Becke–Johnson Approach for Optoelectronic Applications" Energy Technology 9 (2021) 2001026. https://doi.org/10.1002/ente.202001026 (IF:3.404)

48. Ejaz Ahmed Khera, Hafez ullah, Muhammad Imran**, R. M. Arif Khalil**, Fayyaz Hussain "Theoretical Investigation of CsBX3 (B = Pb, Sn; X = I, Br, Cl) Using Tran–Blaha Modified Becke–Johnson Approximation for Flexible Photoresponsive Memristor" Advanced Theory and Simulation (2021) https://doi.org/10.1002/adts.202100011 (IF:2.951)

49. Umbreen Rasheed,Hojeong Ryu,Chandreswar Mahata, **Rana M. Arif Khalil**,Muhammad Imran,Anwar Manzoor Rana, Farhana Kousar,Boram Kim,Yoon Kim, Seongjae Cho, Fayyaz Hussain and Sungjun Kim" Resistive switching characteristics and theoretical simulation of a Pt/a-Ta2O5/TiN synaptic device for neuromorphic applications**"** J.Alloys and Compounds 877 (2021) 160204 https://doi.org/10.1016/j.jallcom.2021.160204 (IF:4.650)

50. Farhana Kousar, Umbreen Rasheed , **R. M. Arif Khalil** , Niaz Ahmad Niaz, Fayyaz Hussain, Muhammad Imran, Umema Shakoor , Hassan Algadi , Naeem Ashiq " First principles investigation of oxygen vacancies filaments in polymorphic Titania and their role in memristor's applications" Chaos, Solitons and Fractals 148 (2021) 111024.. https://doi.org/10.1016/j.chaos.2021.111024 (IF:3.764)

51. Turki Alsuwian, Farhana Kousar, Umbreen Rasheed, Muhammad Imran, Fayyaz Hussain, **R.M. Arif Khalil**, Hassan Algadi, Najaf Batool , Ejaz Ahmad Khera, Saira Kiran , Muhammad Naeem Ashiq "First principles investigation of physically conductive bridge filament formation of aluminum doped perovskite materials for neuromorphic memristive applications" Chaos, Solitons and Fractals 150 (2021) 111111.. https://doi.org/10.1016/j.chaos.2021.111111 (IF:3.764)

52. R.M. Arif Khalil, Muhammad Iqbal Hussain, Rabail Fatima, Fayyaz Hussain, Anwar Manzoor Rana, H.H. Hegazy, Abeer Mera "Effect of dopants on the structural, optoelectronic and magnetic properties of pristine AgGaO3 perovskite: A first principles study" Optik - International Journal for Light and Electron Optics 244 (2021) 167555. https://doi.org/10.1016/j.ijleo.2021.167555 (IF:2.187)

53. Farhana Kousar , Umbreen Rasheed , Muhammad Imran, , Niaz Ahmad Niaz , Fayyaz Hussain , R.M. Arif Khalil , M. Atif Sattar , Muhammad Naeem Ashiq , Anwar Manzoor Rana , Chandreswar Mahata "First principle investigation of polaronic resistive switching behavior in titania based memristors with different charge states" Physica E 134 (2021) 114857 . https://doi.org/10.1016/j.physe.2021.114857 (IF:3.570)

54. Ejaz Ahmed Khera, Hafez ullah, Muhammad Imran**,** Hasan Algadhi**.** Fayyaz Hussain**, R. M. Arif Khalil**, "THE FIRST PRINCIPLE STUDY OF COMPARISON OF DIVALENT AND TRIVALENT IMPURITY IN RRAM DEVICES USING GGA+U"

Surface Review and Letters, Vol. 28, No. 6 (2021) 2150039 DOI: 10.1142/S0218625X21500396(IF: 0.835)

55. Shafqat Hayat**, R. M. Arif Khalil,** Muhammad Iqbal Hussain A.M. Rana ,Fayyaz Hussain "Abinitio study of the structural, optoelectronic, magnetic, hydrogen storage properties and mechanical behavior of novel combinations of hydride perovskites LiXH3 (X=Cr, Fe, Co, & Zn) for hydrogen storage applications" Journal of Computational Electronics (2021)1-16 DOI: 10.1007/s10825-021-01807-3 (IF: 1.532)

56. R. M. Arif Khalil, Muhammad Iqbal Hussain Fayyaz Hussain Anwar Manzoor Rana G. Murtaza Muhammad Shakeel Hafiz M. Asif Javed " Structural, vibrational, mechanical, and optoelectronic properties of LiBH4 for hydrogen storage and optoelectronic devices: First-principles study " International Journal of Quantum Chemistry121 (2020). https://doi.org/10.1002/qua.26444. (IF:2.170)

57. Muhammad Iqbal Hussain**, R. M. Arif Khalil,** Fayyaz Hussain, Anwar Manzoor Rana "DFT based insight into the magnetic and thermoelectric characteristics of XTaO3 (X = Rb, Fr) ternary perovskite oxides for optoelectronic applications" International Journal of Energy Research (2020) https://doi.org/ HYPERLINK "https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.1002%2Fer.5968"10.1002/er.5968 (IF:3.290).

58. Amjad Ali**,** Rizwan Raza**, M. Arif Khalil** and M. Iqbal Hussain "Electrochemical Analysis of a Titanate-Based Anode for Direct Carbon Fuel Cells**"** ACS Appl. Energy Mater. 3,9 **(2020)** 9182. https://doi.org/10.1021/acsaem.0c01532 (IF:4.473)

59. Muhammad Iqbal Hussain, **R. M. Arif Khalil**, Fayyaz Hussain, Anwar Manzoor Rana"Ab initio prediction of the structural, electronic and optical behavior of novel combinations of ternary perovskite oxides $ATiO_3$ (A = Rb, Cs, Fr) using the Hubbard 'U' correction for optoelectronic devices**"** Journal of Computational Electronics 19 (2020) 1380-1388. .https://doi.org/ HYPERLINK "https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.1007%2Fs10825-020-01571-w"10.1007/s10825-020-01571-w (IF:1.620)

60. Muhammad Iqbal Hussain, **R. M. Arif Khalil**, Fayyaz Hussain, Anwar Manzoor Rana, G.Murtaza and Muhammad Imran "Probing the Structural, Electronic, Mechanical Strength and Optical Properties of Tantalum based oxide pervovskites ATaO3

(A=Rb,Fr) for Optoelectronic Applications" Optik - International Journal for Light and Electron Optics 219 (2020) 165027 .https://doi.org/10.1016/j.ijleo.2020.165027.(IF**:** 1.914**)**

61. Muhammad Iqbal Hussain, **R. M. Arif Khalil**, Fayyaz Hussain, Muhammad Imran, Anwar Manzoor Rana "Ab-initio prediction of mechanical, magnetic and thermoelectric behaviour of perovskite oxides using XGaO3 (X = Sc,Ti,Ag) using LDA+U functional :for optoelectronic devices" Journal of Molecular Graphics and Modelling 99 (2020) 107621. https://doi.org/10.1016/j.jmgm.2020.107621 (IF:1.580)

62. Ejaz Ahmad Kheraa, Hafeez Ullaha, Muhammad Imran, N. A. Niazc, Fayyaz Hussain, **R. M. Arif Khalil**, UmbreenRasheed, M. Atif Sattar, Fasial Iqbal, Chandreswar Mahta, Anwar Manzoor Rana and Sungjun Kim "Structural, electronic and optical properties of transition metal doped Hf1-xTMxO2 (TM = Co, Ni and Zn) using modified TB-mBJ potential for optoelectronic memristors devices**"** Optik International Journal for Light and Electron Optics (2020) 164677 https://doi.org/10.1016/j.ijleo.2020.164677 (IF:1.914).

63. Muhammad Iqbal Hussain, **R. M. Arif Khalil**, Fayyaz Hussain, Muhammad Imran, Anwar Manzoor Rana, Sungjum Kim: "Investigation of structural, electronic and optical properties of $YIno_3$(Y=Rb, Cs, Fr) perovskite oxides using mBJ approximation for optoelectronic applications: A first principles study", Materials Science in Semiconductor processing 113 (2020) 105064. HYPERLINK "%20https://doi.org/10.1016/j.mssp.2020.105064"https://doi.org/10.1016/j.mssp.2020.105064 (IF:2.722).

64. Muhammad Iqbal Hussain, **R. M. Arif Khalil**, Saima Boota, Fayyaz Hussain, Muhammad Imran, G. Murtaza, Anwar Manzoor Rana, M.A. Sattar: "The structural, electronic and dynamical investigations of $NdMn_2O_5$ and La_2CoMnO_6 for optoelectronic applications: A first principles study", Optik - International Journal for Light and Electron Optics 204 (2020) 164165 pp.09. https://doi.org/10.1016/j.ijleo.2019.164165 (IF: 1.914)

65. R. M. Arif Khalil, Fayyaz Hussain, Muhammad Iqbal Hussain, Afshan Parveen, Muhammad Imran, G.Murtaza, M.A.Sattar, Anwar Manzoor Rana, Sungjun Kim: "The

Investigation of The investigation of optoelectronic, magnetic and dynamical properties of Ce and Ti doped 2D blue phosphorene: A dispersion corrected DFT study", Journal of Alloys and Compounds 827 (2020) 154255. https://doi.org/10.1016/j.jallcom.2020.154255. (IF:4.175)

66. Ejaz Ahmad Khera, Hafeez Ullah, Muhammad Imran, Fayyaz Hussain, **R. M. Arif Khalil**, M. Atif Sattar, Anwar Manzoor Rana, Chandreswar Mahata, Sungjun Kim: "Investigation of structural and electronic properties of doped ceria $Ce_{1-x}M_xO_2$ (M=Hf,Ti,Ba,Mg,Nb,Vx=0.25%) for ReRAM applications: A first principles study", Physica E: Low-dimensional Systems and Nanostructures 119 (2020) 114025. https://doi.org/10.1016/j.physe.2020.114025.(IF:3.176)

67. Muhammad Iqbal Hussain, **R. M. Arif Khalil**, Fayyaz Hussain, Muhammad Imran, Anwar Manzoor Rana and Sungjun Kim, "Investigations of Structural, Electronic and Optical properties of TM-GaO_3 (TM= Sc, Ti, Ag) Perovskite Oxides for Optoelectronic applications: A First Principles study", Materials Research Express, 7 (2020) 015906. https://doi.org/10.1088/2053-1591/ab619c (IF:1.449)

68. Niaz Ahmad Niaz, Fayyaz Hussain, **R. M. Arif Khalil**, M.Imran, A.Shakoor,N.R.Khalid, Bushra Chaudhry,M.Abdullah Khan:"Hybrid Nanocomposites of Multi-walled Carbon Nanotubes (MWCNTs) and CuO as Electrode Materials for Energy Storage Devices", Sungjun Kim, Journal of Electronic Materials 49 (2020),1096-1103. https://doi.org/10.1007/s11664-019-07849-5 (IF:1.676)

69. B. Sabir, G. Murtaza, **R. M. Arif Khalil,** Ab-initio prediction of structure stability, electromagnetic, optical and thermoelectric behavior of orthorhombic $LaXO_3$ (X= Cr, Mn, Fe): For device application, Journal of molecular Graphics and Modelling 94 (2020) 107482. https://doi.org/10.1016/j.jmgm.2019.107482 (IF: 1.863).

70. Fayyaz Hussain, Muhammad Imran, **R. M. Arif Khalil**, Niaz Ahmad Niaz, Anwar Manzoor Rana, M. Atif Sattar, Muhammad Ismail, Abdul Majid, Sungjun Kim**,** Faisal Iqbal, M. Arshad Javid, Sadaf Saeed, Abdul Sattar**: "**An insight of Mg doped ZnO thin films: A comparative experimental and first-principle investigations**"** Physica E: Low-dimensional Systems and Nanostructures**,** 115 (2020) 113658 **pp.9.** https://doi.org/10.1016/j.physe.2019.113658 (IF:3.176)

71. Muhammad Shahzad Yaseen, G.Murtaza, **R. M. Arif Khalil,** First principle study of structural, electronic, optical, and transport properties of ternary compounds

$NaGaX_2$ (X = S, Se, and Te) in tetragonal chalcopyrite phase, Optical and Quantum Electronics (2019) 51:367. https://doi.org/10.1007/s11082-019-2077-4 (IF:1.547)

72. Hafiz Hamid Raza, G.Murtaza,Umm-e-Hani, **R. M. Arif Khalil**, Optoelectronic and thermal properties of Li$X$$H_3$($X$ =Ba, Sr and Cs) for hydrogen storage materials: A first principle study, , Solid State Communications, 299 (2019) 113659. https://doi.org/10.1016/j.ssc.2019.113659 (IF:1.433)

73. N.Yaqoob, B.Sabir, G.Murtaza, **R. M. Arif Khalil,** Nawaz Muhammad, A.Laref, Structural, electronic, magnetic, optical and thermoelectric response of half-metallic $AMnTe_2$ (A = Li, Na, K): An ab-initio calculations, Physica B 574(2019), 311656. https://doi.org/10.1016/j.physb.2019.08.033 (IF:1.874)

74. Muhammad Imran, Fayyaz Hussain, **R. M. Arif Khalil,** M. Atif Sattar, Hufna Mehboob, M. Arshad Javid, A. M. Rana, and S. A. Ahmad: "Anisotropic Thermal and Mechanical Characteristics of Graphene: A Molecular Dynamics Study", Journal of Experimental and Theoretical Physics, 128 (2), (2019) 259–267. (Published in Russian in Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki, 155 (2), (2019) 295–305). https://doi.org/10.1134/S1063776119020079 .(IF:1.119)

75. Fayyaz Hussain, Muhammad Imran, Umbreen Rasheed, **R. M. Arif Khalil**, Anwar Manzoor Rana, Farhana Kousar, M. Arshad Javid, S.S. Hayat: "A First Principle Study of Graphene/Metal-Oxides as Nano-Composite Electrode Materials for Supercapacitors", Journal of Electronic Materials, 48 (2019) 2343-2349. https://doi.org/10.1007/s11664-019-07064-2 (IF:1.676)

76. R. M. Arif Khalil, Fayyaz Hussain, Muhammad Imran, Umbreen Rasheed, Anwar Manzoor Rana, G. Murtaza "An ab initio study of spectroscopic and thermodynamic characteristics of MgH_2 and TiC systems", International Journal of Hydrogen Energy, 44(2019)6756-6762. https://doi.org/10.1016/j.ijhydene. 2019.01.198 (IF:4.08)

77. Muhammad Imran, Fayyaz Hussain, Sardar Sikandar Hayat, **R. M. Arif Khalil**, Tariq Munir, Muhammad Atif Sattar Abdul Rehman , Muhammad Arshad Javid, Sheikh Aftab Ahmad: "A study of surface diffusion of ternary (Cu-Ag-Zr) adatoms clusters for applications in thin film formation" Surface and Interface Analysis 51(2019) 489-497.https://doi.org/10.1002/sia.6608 (IF:1.319)

78. Fayyaz Hussain, Muhammad Imran, Anwar Manzoor Rana, Muhammad Ismail**, R. M. Arif Khalil**, M. Atif Sattar, M. Arshad Javid, Abdul Majid, Yongqing Cai: "Tailoring

magnetic characteristics of phosphorene by the doping of Ce and Ti: A DFT study", Physica E: Low-dimensional Systems and Nanostructures 106 (2019) 352–356. https://doi.org/10.1016/j.physe.2018.04.024 (IF:3.176)

79. **R. M. Arif Khalil**, Fayyaz Hussain, Anwar Manzoor Rana, Muhammad Imran, G. Murtaza "Comparative study of polytype 2H-MoS_2 and 3R-MoS_2 systems by employing DFT", Physica E: Low-dimensional Systems and Nanostructures, 106(2019)338–345. https://doi.org/10.1016/j.physe.2018.07.003 (IF:3.176)

80. B.Sabir,G. Murtaza**, R. M. Arif Khalil**,Qasim Mehmood, First principle study of electronic, mechanical, optical and thermoelectric properties of $CsMO_3$ (M = Ta, Nb) compounds for optoelectronic devices, Journal of Molecular Graphics and Modelling 86 (2019) 19-26. https://doi.org/10.1016/j.jmgm.2018.09.011 (IF:1.863)

81. **R. M. Arif Khalil**, Fayyaz Hussain, Muhammad Imran, Anwar Manzoor Rana, G. Murtaza "*ab initio* study of the exo-hydrogenated single wall carbon nanotubes", Physica B: Condensed Matter 552 (2019) 124–129. https://doi.org/10.1016/j.physb.2018.09.044 (IF:1.453)

82. Amjad Ali, Rizwan Raza, **R. M. Arif Khalil,** M. Ashfaq Ahmad, Amin ur Rehman, M.Naveed Mushtaq, Lyubov M.Belova, A potential electrolyte (Ce_{1-x} $Ca_xO_{2-\delta}$) for fuel cells:Theoretical and experimental study**,** Ceramics International, 44 (2018) 12676–12683. https://doi.org/10.1016/j.ceramint. 2018.04.068 (IF: 3.450).

83. M.S. Yaseen, G. Murtaza, **R. M. Arif Khalil**: "Ab-initio study of Li based chalcopyrite compounds $LiGaX_2$ (X= S, Se, Te) in tetragonal symmetry: A class of future materials for optoelectronic applications" Current Applied Physics 18(10) (2018)1113-1121. https://doi.org/10.1016/j.cap.2018.06.008 (IF: 2.010).

84. Fayyaz Hussain, Muhammad Imran, Nimra Fatima, Anwar Manzoor Rana, **R. M. Arif Khalil**, Arshad Javid, Muhammad Ismail, "Induced Magnetic Properties of BN Nanotubes by the Adsorption of First-row Adatoms", Journal of Magnetics, 23(1), (2018) 18-26.https://doi.org/10.4283/JMAG.2018.23.1.018) (http://www.dbpia.co.kr/Journal/ArticleDetail/NODE07408185(IF:0.628)

85. Fayyaz Hussain, Muhammad Imran, Anwar Manzoor Rana, **R. M. Arif Khalil**, Ejaz Ahmed Khera, Saira Kiran, M. Arshad Javid, M. Atif Sattar, Muhammad Ismail: "An insight into the dopant selection for CeO_2-based resistive switching memory system: a

DFT and experimental study", Applied Nanoscience, 8 (2018) 839-851. https://doi.org/10.1007/s13204-018-0751-7 (IF:2.951)

86. **R. M. Arif Khalil,** Javed Ahmad**,** Anwar Manzoor Rana, Syed Hamad Bukhari, M. Tufiq Jamil, Umair Nissar "First Principles Investigation of Structural, Vibrational and Thermal Properties of Black and Blue Phosphorene", International Journal of Modern Physics B 32 (2018) 1850151, 8pp. https://doi.org/10.1142/S0217979218501515. (IF:0.769).

87. **R. M. Arif Khalil,** Fayyaz Hussain, Anwar Manzoor Rana and Muhammad Imran "Thermodynamics and vibrational study of hydrogenated carbon nanotubes: A DFT study", Physica B: Physics of Condensed Matter, 530 (2018) 307-311. https://doi.org/10.1016/j.physb.2017.11.084. (IF: 1.453)

88. Fayyaz Hussain, Muhammad Imran, Aisha Siddiqa, **R. M. Arif Khalil**, Anwar Manzoor Rana, M. Atif Sattar, Niaz Ahmad Niaz, Hafeez Ullah, Nadeem Ahmad "*ab initio* study of points defects in 2D graphene layer", Surface Review and Letters, 1850142 (2018) 10pp. https://doi.org/10.1142/S0218625X18501421 (IF:0.734)

89. Mehreen Firdos, Fayyaz Hussain, Muhammad Imran, Muhammad Ismail, Anwar Manzoor Rana, Arshad Javid, Abdul Majid, **R. M. Arif Khalil** , Hafeez Ullah "Ab-initio study of ceria films for resistive switching memory applications", Materials Research Express, 4 (2017) 106301. https://doi.org/10.1088/2053-1591/aa896e (IF:1.151)

90. Muhammad Imran, Fayyaz Hussain, Saba Altaf, Abdul Rehman, M. Arshad Javid, Muhammad Ismail,Muhammad Rashid, **R. M. Arif Khalil**, Abdul Sattar,S.A. Ahmad: "Dynamic characterization of Cu–Zr binary bulk metallic glasses: A molecular dynamics", Canadian Journal of Physics, 95(12), (2017): 1189-1193. https://doi.org/10.1139/cjp-2016-0926 (IF:0.983)

91. A. Ditta, M. A. Khan, M. Junaid**, R. M. Arif Khalil**, Farooq Warsi, Structural, magnetic and spectral properties of Gd and Dy co-doped dielectrically modified Co-Ni($Ni_{0.4}Co_{0.6}Fe_2O_4$) ferrites, Physica B 507 (2017) 27-34. https://doi.org/10.1016/j.physb.2016.11.030 (IF:1.453)

92. J.Ahmad, M.Sabir, M. Q.Awan, S.Anwar, M. E.Mazhar**, R. M.Arif Khalil**, S.H.Bukhari, Effect of Co^{2+} substitution on $MgAl_2O_4$ studied by infrared reflectance

spectroscopy, Optik 147 C(2017) 180-186. https://doi.org/10.1016/j.ijleo.2017.08.101 (IF:1.414)

93. **R. M. Arif Khalil** et al, Structural and dynamical properties of graphite by incorporating dispersion correction: An *ab-initio* study, Chinese Journal of Physics, 54 (2016) 890-894. https://doi.org/10.1016/j.cjph.2016.10.006 (IF:0.514)

94. M.S.Akthar,Y.G.Alghamdi,M.A.Malik**, R. M .Arif Khalil**, S.Riaz and S.Naseem, Structural, optical, magnetic and half-metallic studies of cobalt doped ZnS thin films deposited *via* chemical bath deposition, Material Chemistry C, Vol. 26, No.3, (2015) 6755-6763. https://doi.org/10.1039/C5TC00557D (IF:5.066)

95. Tahir Abbas, Mahtab-Ullah, Anwar Manzoor Rana, **R. M. Arif Khalil,** "Calculation of Short Range Order in Ni-Rh, Ni-Pd and Cu-Rh Alloys", Materials Science Poland, **25**(4), (2007)1161-1172. http://www.materialsscience.pwr.wroc.pl/index.php?id=5&vol=vol25no4&abst=27#a27 (IF: 0.854).

96. Tahir Abbas**, R. M. Arif Khalil**, Anwar Manzoor Rana and Mahtab-Ullah "Ordering Behavior of fcc and hcp Alloys in Ni-Hf and Re-Ti Systems", International Journal of Modern Physics B, **20**(17), (2006) 24252435. http://dx.doi.org/10.1142/S0217979206034807. (IF: 0.769).

T. Abbas, **R. M. Arif Khalil**, A. M. Rana, and Mahtab-ullah, calculation of short range ordering in Ni-Ti alloys, Journal of Research (Science) Bahauddin Zakariya University, Multan, Vol.16, No.2, (2005) 87-93.

Book Chapter Publications:

- Muhmmad Imran, Fayyaz Hussain, Abdul Rehman, **R. M. Arif Khalil**, Tariq Munir, M.Zeeshan Yaqoob, Sungjun kim (International Book Chapter) " Simulation Studies for Black Phosphorous: From Theory to Experiment" Engineering Materials Book Series Springer Nature Switzerland (2020) 101-115. https://doi.org/10.1007/978-3-030-29555-4.
- Umbreen Rasheed, Fayyaz Hussain,Muhammad Imran, **R.M.Arif Khalil**, Sungjun Kim, "Layered 2D Advanced Materials and Their Allied Applications", John Wiley HYPERLINK "https://www.bookdepository.com/publishers/John-Wiley-Sons-Inc"& HYPERLINK "https://www.bookdepository.com/publishers/John-Wiley-

Sons-Inc" Sons Inc New York United States (2020) 141-158. https://doi.org/10.1002/9781119655190.ch7

REVIEWED PUBLICATIONS/LAB MANUAL:

1. Various Elsevier/Wiley (Publishers) articles have been reviewed till date.
2. Reviewed Lab Manual entitled “Experiments in Analog Electronics” for BS/Master level students of Electronics Lab which has been published by the New Books N Books Multan in 2018.