Bin Amin

List of Publications by Citations

75 papers	2,059 citations	24 h-index	44 g-index
80 ext. papers	2,623 ext. citations	3.2 avg, IF	5.45 L-index

#	Paper	IF	Citations
75	Strain engineering of WS2, WSe2, and WTe2. *RSC Advances*, **2014**, 4, 34561	3.7	216
74	Heterostructures of transition metal dichalcogenides. *Physical Review B*, **2015**, 92,	3.3	146
73	Layered graphene/GaS van der Waals heterostructure: Controlling the electronic properties and Schottky barrier by vertical strain. *Applied Physics Letters*, **2018**, 113, 171605	3.4	141
72	Ab initio study of the bandgap engineering of Al1−xGaxN for optoelectronic applications. *Journal of Applied Physics*, **2011**, 109, 023109	2.5	129
71	Rashba spin splitting and photocatalytic properties of GeCMSSe (M=Mo, W) van der Waals heterostructures. *Physical Review B*, **2019**, 100,	3.3	92
70	Graphene/WSeTe van der Waals heterostructure: Controllable electronic properties and Schottky barrier via interlayer coupling and electric field. *Applied Surface Science*, **2020**, 507, 145036	6.7	92
69	Investigation of structural and optoelectronic properties of BaThO3. *Optical Materials*, **2011**, 33, 553-557	3.3	87
68	Optoelectronic and solar cell applications of Janus monolayers and their van der Waals heterostructures. *Physical Chemistry Chemical Physics*, **2019**, 21, 18612-18621	3.6	77
67	Materials properties of out-of-plane heterostructures of MoS2-WSe2 and WS2-MoSe2. *Applied Physics Letters*, **2016**, 108, 063105	3.4	60
66	Electronic structure, optical and photocatalytic performance of SiC-MX (M = Mo, W and X = S, Se) van der Waals heterostructures. *Physical Chemistry Chemical Physics*, **2018**, 20, 24168-24175	3.6	60
65	Interfacial characteristics, Schottky contact, and optical performance of a graphene/Ga2SSe van der Waals heterostructure: Strain engineering and electric field tunability. *Physical Review B*, **2020**, 102,	3.3	55
64	Structural and electronic properties of a van der Waals heterostructure based on silicene and gallium selenide: effect of strain and electric field. *Physical Chemistry Chemical Physics*, **2018**, 20, 27856-27864	3.6	54
63	Van der Waals heterostructures of P, BSe, and SiC monolayers. *Journal of Applied Physics*, **2019**, 125, 094301	2.5	45
62	Interlayer coupling and electric field controllable Schottky barriers and contact types in graphene/PbI2 heterostructures. *Physical Review B*, **2020**, 101,	3.3	45
61	Van der Waals graphene/g-GaSe heterostructure: Tuning the electronic properties and Schottky barrier by interlayer coupling, biaxial strain, and electric gating. *Journal of Alloys and Compounds*, **2018**, 750, 765-773	5.7	45
60	First principles study of the electronic properties and Schottky barrier in vertically stacked graphene on the Janus MoSeS under electric field. *Computational Materials Science*, **2018**, 153, 438-444	3.2	45
59	Intriguing electronic structures and optical properties of two-dimensional van der Waals heterostructures of Zr2CT2 (T = O, F) with MoSe2 and WSe2. *Journal of Materials Chemistry C*, **2018**, 6, 2830-2839	7.1	43

58	Electronic structure of cubic perovskite SnTaO3. *Intermetallics*, **2012**, 31, 287-291	3.5	41
57	Strain engineering of electronic structures and photocatalytic responses of MXenes functionalized by oxygen. *Physical Chemistry Chemical Physics*, **2017**, 19, 14738-14744	3.6	40
56	Cr-Doped III-V Nitrides: Potential Candidates for Spintronics. *Journal of Electronic Materials*, **2011**, 40, 1428-1436	1.9	38
55	Band alignment and optical features in Janus-MoSeTe/X(OH) (X = Ca, Mg) van der Waals heterostructures. *Physical Chemistry Chemical Physics*, **2019**, 21, 25849-25858	3.6	36
54	Tailoring the structural and electronic properties of an SnSe/MoS van der Waals heterostructure with an electric field and the insertion of a graphene sheet. *Physical Chemistry Chemical Physics*, **2019**, 21, 22140-22148	3.6	32
53	Vertical strain and electric field tunable electronic properties of type-II band alignment C2N/InSe van der Waals heterostructure. *Chemical Physics Letters*, **2019**, 716, 155-161	2.5	30
52	Electronic properties and enhanced photocatalytic performance of van der Waals heterostructures of ZnO and Janus transition metal dichalcogenides. *Physical Chemistry Chemical Physics*, **2020**, 22, 10351-10359	3.6	26
51	CsNaGaBr: a new lead-free and direct band gap halide double perovskite.. *RSC Advances*, **2020**, 10, 17444-17451	3.7	23
50	Major enhancement of the thermoelectric performance in Pr/Nb-doped SrTiO3 under strain. *Applied Physics Letters*, **2013**, 103, 031907	3.4	23
49	Theoretical exploration of the potential applications of Sc-based MXenes. *Physical Chemistry Chemical Physics*, **2017**, 19, 32253-32261	3.6	23
48	Electric field tunable electronic properties of P-ZnO and SiC-ZnO van der Waals heterostructures. *Computational Materials Science*, **2019**, 164, 166-170	3.2	20
47	Theoretical investigation of electronic structure and thermoelectric properties of MX2 (M=Zr, Hf; X=S, Se) van der Waals heterostructures. *Journal of Physics and Chemistry of Solids*, **2019**, 126, 304-309	3.9	19
46	Molecular distortion and charge transfer effects in ZnPc/Cu(111). *Scientific Reports*, **2013**, 3,	4.9	17
45	Effects of different surface functionalization on the electronic properties and contact types of graphene/functionalized-GeC van der Waals heterostructures. *Physical Chemistry Chemical Physics*, **2020**, 22, 7952-7961	3.6	15
44	Strain and electric field tunable electronic properties of type-II band alignment in van der Waals GaSe/MoSe2 heterostructure. *Chemical Physics*, **2019**, 521, 92-99	2.3	15
43	Theoretical investigation of half-metallicity in Co/Ni substituted AlN. *International Journal of Quantum Chemistry*, **2012**, 112, 882-888	2.1	12
42	Electronic structure, optoelectronic properties and enhanced photocatalytic response of GaN-GeC van der Waals heterostructures: a first principles study.. *RSC Advances*, **2020**, 10, 24127-24133	3.7	11
41	van der Waals heterostructures based on MSSe (M = Mo, W) and graphene-like GaN: enhanced optoelectronic and photocatalytic properties for water splitting. *Physical Chemistry Chemical Physics*, **2020**, 22, 20704-20711	3.6	11

40	Influence of strain on specific features of MoX2 (X = S, Se, Te) monolayers. *Physica B: Condensed Matter*, **2018**, 545, 113-118	2.8	11
39	Tri-layered van der Waals heterostructures based on graphene, gallium selenide and molybdenum selenide. *Journal of Applied Physics*, **2019**, 125, 225304	2.5	10
38	Effects of electric field and strain engineering on the electronic properties, band alignment and enhanced optical properties of ZnO/Janus ZrSSe heterostructures.. *RSC Advances*, **2020**, 10, 9824-9832	3.7	9
37	A first-principles study of electronic structure and photocatalytic performance of GaN-MX (M = Mo, W; X= S, Se) van der Waals heterostructures.. *RSC Advances*, **2020**, 10, 24683-24690	3.7	9
36	Robust half-metallicity of AlCoN and AlNiN. *International Journal of Quantum Chemistry*, **2012**, 112, 2668-2674	2.2	9
35	Van der Waals heterostructures of SiC and Janus MSSe (M = Mo, W) monolayers: a first principles study.. *RSC Advances*, **2020**, 10, 25801-25807	3.7	8
34	ELECTRONIC BAND STRUCTURE, OPTICAL, THERMAL AND BONDING PROPERTIES OF XMg2O4(X = Si, Ge) SPINEL COMPOUNDS. *International Journal of Modern Physics B*, **2013**, 27, 1350082	1.1	8
33	STRUCTURAL, ELASTIC, ELECTRONIC, CHEMICAL BONDING AND OPTICAL PROPERTIES OF M2Se (M = Li, Na, K, Rb) THROUGH FIRST PRINCIPLE STUDY. *International Journal of Modern Physics B*, **2013**, 27, 1350170	1.1	8
32	Structural, elastic, thermal and electronic properties of M2X (M = Sr, Ba and X = Si, Ge, Sn) compounds in anti-fluorite structure: first principle calculations. *Indian Journal of Physics*, **2015**, 89, 369-375	1.4	7
31	Electronic and optoelectronic properties of van der Waals heterostructure based on graphene-like GaN, blue phosphorene, SiC, and ZnO: A first principles study. *Journal of Applied Physics*, **2020**, 127, 245302	2.5	7
30	Computational insights into structural, electronic and optical characteristics of GeC/CN van der Waals heterostructures: effects of strain engineering and electric field.. *RSC Advances*, **2020**, 10, 2967-2974	3.7	7
29	Electronic and photocatalytic properties of two-dimensional boron phosphide/SiC van der Waals heterostructure with direct type-II band alignment: a first principles study.. *RSC Advances*, **2020**, 10, 32027-32033	3.7	7
28	Type-I band alignment of BX-ZnO (X = As, P) van der Waals heterostructures as high-efficiency water splitting photocatalysts: a first-principles study.. *RSC Advances*, **2020**, 10, 44545-44550	3.7	7
27	Understanding the electronic properties, contact types and optical performances in graphene/InN heterostructure: Role of electric gating. *Diamond and Related Materials*, **2020**, 106, 107851	3.5	7
26	Thermoelectric properties of the misfit cobaltate Ca3Co4O9. *Applied Physics Letters*, **2017**, 110, 233505	3.4	6
25	Van der Waals heterostructures of blue phosphorene and scandium-based MXenes monolayers. *Journal of Applied Physics*, **2019**, 126, 143101	2.5	6
24	First-principles study of the electronic structures and optical and photocatalytic performances of van der Waals heterostructures of SiS, P and SiC monolayers.. *RSC Advances*, **2021**, 11, 14263-14268	3.7	6
23	Effect of strain on structural and electronic properties, and thermoelectric response of MXY (M=Zr, Hf and Pt; X/Y=S, Se) vdW heterostructures; A first principles study. *Journal of Solid State Chemistry*, **2021**, 299, 122189	3.3	6

22	Strain and electric field engineering of band alignment in InSe/Ca(OH)2 heterostructure. *Chemical Physics Letters*, **2019**, 732, 136649	2.5	5
21	Electronic structures, and optical and photocatalytic properties of the BPBSe van der Waals heterostructures. *New Journal of Chemistry*, **2020**, 44, 14964-14969	3.6	5
20	Strain engineering and electric field tunable electronic properties of Ti2CO2 MXene monolayer. *Materials Research Express*, **2019**, 6, 065910	1.7	4
19	First principles study of electronic and optical properties and photocatalytic performance of GaN-SiS van der Waals heterostructure.. *RSC Advances*, **2021**, 11, 32996-33003	3.7	4
18	Strain engineering of the electro-optical and photocatalytic properties of single-layered Janus MoSSe: First principles calculations. *Optik*, **2020**, 224, 165503	2.5	4
17	Stacking effects in van der Waals heterostructures of blueP and Janus XYO (X = Ti, Zr, Hf: Y = S, Se) monolayers.. *RSC Advances*, **2021**, 11, 12189-12199	3.7	4
16	Strain engineering of Janus ZrSSe and HfSSe monolayers and ZrSSe/HfSSe van der Waals heterostructure. *Chemical Physics Letters*, **2021**, 776, 138689	2.5	4
15	Realization of noble heterobilayers with enhanced optoelectronic properties. *Applied Surface Science*, **2020**, 505, 144530	6.7	3
14	Intriguing electronic structure and photocatalytic performance of blueP-SMSe and blueP-SeMS (M = Mo, W) van der Waals heterostructures.. *RSC Advances*, **2020**, 10, 38114-38119	3.7	3
13	Optoelectronic and photocatalytic applications of hBP-XMY (M = Mo, W; (X Y) = S, Se, Te) van der Waals heterostructures. *Physical Chemistry Chemical Physics*, **2020**, 22, 23028-23037	3.6	3
12	Van der Waal heterostructure based on BY(Y As, P) and MX2 (M Mo, W; X S, Se) monolayers. *Applied Surface Science*, **2021**, 568, 150846	6.7	3
11	Electronic structure and optical performance of PbI2/SnSe2 heterostructure. *Chemical Physics*, **2020**, 533, 110736	2.3	2
10	First-principles study of metal-semiconductor contact between MX2 (M = Nb, Pt; X = S, Se) monolayers. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2019**, 383, 125867	2.3	2
9	Intriguing electronic and optical properties of M2CX2 (M = Mo, W; X = O, F) MXenes and their van der Waals heterostructures. *Chemical Physics Letters*, **2019**, 731, 136614	2.5	2
8	Intriguing electronic, optical and photocatalytic performance of BSe, MCO monolayers and BSe-MCO (M = Ti, Zr, Hf) van der Waals heterostructures.. *RSC Advances*, **2021**, 12, 42-52	3.7	2
7	Van der Waals heterostructure of Janus transition metal dichalcogenides monolayers (WSSe-WX2 (X=S, Se)). *Chemical Physics*, **2021**, 549, 111252	2.3	2
6	Effects of La and Ce doping on electronic structure and optical properties of janus MoSSe monolayer. *Superlattices and Microstructures*, **2021**, 151, 106841	2.8	1
5	Two-dimensional blue phosphoreneBAs vdW heterostructure with optical and photocatalytic properties: a first-principles study. *RSC Advances*, **2021**, 11, 13025-13029	3.7	1

4	Strain effect on the electronic and photocatalytic properties of GaN-MSSe (M=Mo, W). *Journal of Solid State Chemistry*, **2022**, 306, 122798	3.3	0
3	Van der Waal heterostructure of hBAs and XMY (M = Mo, W; (X□Y) = S, Se) monolayers. *Chemical Physics*, **2022**, 552, 111374	2.3	0
2	First principles study of optoelectronic and photocatalytic performance of novel transition metal dipnictide XP (X = Ti, Zr, Hf) monolayers.. *RSC Advances*, **2022**, 12, 11202-11206	3.7	0
1	Intriguing interfacial characteristics of the CS contact with MX (M = Mo, W; X = S, Se, Te) and MXY ((X□Y) = S, Se, Te) monolayers.. *RSC Advances*, **2022**, 12, 12292-12302	3.7	0