Hasan SahIn

List of Publications by Citations

141 papers	11,197 citations	45 h-index	105 g-index
144 ext. papers	12,610 ext. citations	4.4 avg, IF	6.67 L-index

#	Paper	IF	Citations
141	Two- and one-dimensional honeycomb structures of silicon and germanium. *Physical Review Letters*, **2009**, 102, 236804	7.4	2380
140	Monolayer honeycomb structures of group-IV elements and III-V binary compounds: First-principles calculations. *Physical Review B*, **2009**, 80,	3.3	1401
139	Stable, Single-Layer MX2 Transition-Metal Oxides and Dichalcogenides in a Honeycomb-Like Structure. *Journal of Physical Chemistry C*, **2012**, 116, 8983-8999	3.8	992
138	Monolayer behaviour in bulk ReS2 due to electronic and vibrational decoupling. *Nature Communications*, **2014**, 5, 3252	17.4	728
137	Mechanical and Electronic Properties of MoS2 Nanoribbons and Their Defects. *Journal of Physical Chemistry C*, **2011**, 115, 3934-3941	3.8	391
136	Anomalous Raman spectra and thickness-dependent electronic properties of WSe2. *Physical Review B*, **2013**, 87,	3.3	341
135	Tuning the optical, magnetic, and electrical properties of ReSe2 by nanoscale strain engineering. *Nano Letters*, **2015**, 15, 1660-6	11.5	293
134	Adsorption of alkali, alkaline-earth, and 3d transition metal atoms on silicene. *Physical Review B*, **2013**, 87,	3.3	259
133	Tuning of the electronic and optical properties of single-layer black phosphorus by strain. *Physical Review B*, **2014**, 90,	3.3	235
132	Structures of fluorinated graphene and their signatures. *Physical Review B*, **2011**, 83,	3.3	222
131	Phonon softening and direct to indirect band gap crossover in strained single-layer MoSe2. *Physical Review B*, **2013**, 87,	3.3	162
130	Adsorption and absorption of boron, nitrogen, aluminum, and phosphorus on silicene: Stability and electronic and phonon properties. *Physical Review B*, **2013**, 87,	3.3	157
129	Graphene coatings: An efficient protection from oxidation. *Physical Review B*, **2012**, 85,	3.3	153
128	Environmental Changes in MoTe2 Excitonic Dynamics by Defects-Activated Molecular Interaction. *ACS Nano*, **2015**, 9, 5326-32	16.7	144
127	Electronic and magnetic properties of graphane nanoribbons. *Physical Review B*, **2010**, 81,	3.3	122
126	Formation and stability of point defects in monolayer rhenium disulfide. *Physical Review B*, **2014**, 89,	3.3	118
125	Chlorine Adsorption on Graphene: Chlorographene. *Journal of Physical Chemistry C*, **2012**, 116, 24075-24083	3.8	118

124	Magnetization of graphane by dehydrogenation. *Applied Physics Letters*, **2009**, 95, 222510	3.4	105
123	Frictional figures of merit for single layered nanostructures. *Physical Review Letters*, **2012**, 108, 126103	7.4	94
122	Realization of a p-n junction in a single layer boron-phosphide. *Physical Chemistry Chemical Physics*, **2015**, 17, 13013-20	3.6	93
121	Structural Transitions in Monolayer MoS2 by Lithium Adsorption. *Journal of Physical Chemistry C*, **2015**, 119, 10602-10609	3.8	92
120	First-principles calculations of spin-dependent conductance of graphene flakes. *Physical Review B*, **2008**, 78,	3.3	87
119	Stone-Wales defects in silicene: Formation, stability, and reactivity of defect sites. *Physical Review B* , **2013**, 88,	3.3	86
118	Hexagonal AlN: Dimensional-crossover-driven band-gap transition. *Physical Review B*, **2015**, 91,	3.3	86
117	Mechanical properties of monolayer GaS and GaSe crystals. *Physical Review B*, **2016**, 94,	3.3	82
116	Mechanical properties of monolayer sulphides: a comparative study between MoS2, HfS2 and TiS3. *Physical Chemistry Chemical Physics*, **2015**, 17, 27742-9	3.6	78
115	Stable half-metallic monolayers of FeCl2. *Applied Physics Letters*, **2015**, 106, 192404	3.4	77
114	Pentagonal monolayer crystals of carbon, boron nitride, and silver azide. *Journal of Applied Physics*, **2015**, 118, 104303	2.5	69
113	Structural, mechanical, and electronic properties of defect-patterned graphene nanomeshes from first principles. *Physical Review B*, **2011**, 84,	3.3	69
112	Tuning Carrier Confinement in the MoS2/WS2 Lateral Heterostructure. *Journal of Physical Chemistry C*, **2015**, 119, 9580-9586	3.8	65
111	Janus single layers of In2SSe: A first-principles study. *Physical Review B*, **2018**, 97,	3.3	65
110	Quantum properties and applications of 2D Janus crystals and their superlattices. *Applied Physics Reviews*, **2020**, 7, 011311	17.3	64
109	Structural and phononic characteristics of nitrogenated holey graphene. *Physical Review B*, **2015**, 92,	3.3	63
108	Spintronic properties of zigzag-edged triangular graphene flakes. *Journal of Applied Physics*, **2010**, 108, 074301	2.5	61
107	Doping of rhenium disulfide monolayers: a systematic first principles study. *Physical Chemistry Chemical Physics*, **2014**, 16, 16771-9	3.6	56

106	Anisotropic electronic, mechanical, and optical properties of monolayer WTe2. *Journal of Applied Physics*, **2016**, 119, 074307	2.5	56
105	Structural, electronic and phononic properties of PtSe2: from monolayer to bulk. *Semiconductor Science and Technology*, **2018**, 33, 085002	1.8	55
104	Nanoribbons: From fundamentals to state-of-the-art applications. *Applied Physics Reviews*, **2016**, 3, 041302	17.3	55
103	Single-Layer Janus-Type Platinum Dichalcogenides and Their Heterostructures. *Journal of Physical Chemistry C*, **2019**, 123, 4549-4557	3.8	54
102	Unusual lattice vibration characteristics in whiskers of the pseudo-one-dimensional titanium trisulfide TiS. *Nature Communications*, **2016**, 7, 12952	17.4	54
101	Adsorption of carbon adatoms to graphene and its nanoribbons. *Journal of Applied Physics*, **2011**, 109, 013704	2.5	53
100	TiS3 nanoribbons: Width-independent band gap and strain-tunable electronic properties. *Physical Review B*, **2015**, 92,	3.3	51
99	Angle resolved vibrational properties of anisotropic transition metal trichalcogenide nanosheets. *Nanoscale*, **2017**, 9, 4175-4182	7.7	49
98	Strong dichroic emission in the pseudo one dimensional material ZrS. *Nanoscale*, **2016**, 8, 16259-16265	7.7	48
97	Monolayers of MoS2 as an oxidation protective nanocoating material. *Journal of Applied Physics*, **2014**, 116, 083508	2.5	47
96	CsPbBr3 perovskites: Theoretical and experimental investigation on water-assisted transition from nanowire formation to degradation. *Physical Review Materials*, **2018**, 2,	3.2	45
95	Vacancy Formation and Oxidation Characteristics of Single Layer TiS3. *Journal of Physical Chemistry C*, **2015**, 119, 10709-10715	3.8	44
94	Graphane. *Wiley Interdisciplinary Reviews: Computational Molecular Science*, **2015**, 5, 255-272	7.9	39
93	Unusual dimensionality effects and surface charge density in 2D Mg(OH)2. *Scientific Reports*, **2016**, 6, 20525	4.9	38
92	Mg(OH)2/WS2 van der Waals heterobilayer: Electric field tunable band-gap crossover. *Physical Review B*, **2016**, 94,	3.3	35
91	Bilayers of Janus WSSe: monitoring the stacking type via the vibrational spectrum. *Physical Chemistry Chemical Physics*, **2018**, 20, 17380-17386	3.6	34
90	Bilayer SnS2: Tunable stacking sequence by charging and loading pressure. *Physical Review B*, **2016**, 93,	3.3	33
89	Electronic and vibrational properties of PbI2: From bulk to monolayer. *Physical Review B*, **2018**, 98,	3.3	33

88	Tuning the magnetic anisotropy in single-layer crystal structures. *Physical Review B*, **2015**, 92,	3.3	33
87	Gd3+-Doped CsPbI3 Nanocrystals with Better Phase Stability and Optical Properties. *Journal of Physical Chemistry C*, **2019**, 123, 24865-24872	3.8	32
86	Strain mapping in single-layer two-dimensional crystals via Raman activity. *Physical Review B*, **2018**, 97,	3.3	32
85	Tuning electronic and magnetic properties of monolayer RuCl3 by in-plane strain. *Journal of Materials Chemistry C*, **2018**, 6, 2019-2025	7.1	31
84	2D vibrational properties of epitaxial silicene on Ag(111). *2D Materials*, **2017**, 4, 015008	5.9	27
83	Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials. *Nano Letters*, **2019**, 19, 6475-6481	11.5	26
82	Portlandite crystal: Bulk, bilayer, and monolayer structures. *Physical Review B*, **2015**, 91,	3.3	26
81	Controlled growth mechanism of poly (3-hexylthiophene) nanowires. *Nanotechnology*, **2016**, 27, 455604	3.4	23
80	Thinning CsPb2Br5 perovskite down to monolayers: Cs-dependent stability. *Physical Review B*, **2017**, 96,	3.3	22
79	Raman fingerprint of stacking order in HfS2Ca(OH)2 heterobilayer. *Physical Review B*, **2019**, 99,	3.3	22
78	Luminescence, patterned metallic regions, and photon-mediated electronic changes in single-sided fluorinated graphene sheets. *ACS Nano*, **2014**, 8, 7801-8	16.7	22
77	Introduction to the Physics of Silicene and other 2D Materials. *Lecture Notes in Physics*, **2017**,	0.8	22
76	Hydrogen-induced structural transition in single layer ReS 2. *2D Materials*, **2017**, 4, 035013	5.9	20
75	Vanadium dopant- and strain-dependent magnetic properties of single-layer VI3. *Applied Surface Science*, **2020**, 508, 144937	6.7	20
74	h-AlN-Mg(OH)2 van der Waals bilayer heterostructure: Tuning the excitonic characteristics. *Physical Review B*, **2017**, 95,	3.3	19
73	Exciton pumping across type-I gallium chalcogenide heterojunctions. *Nanotechnology*, **2016**, 27, 065203	3.4	19
72	Optical properties of GaS-Ca(OH)2 bilayer heterostructure. *Physical Review B*, **2016**, 93,	3.3	17
71	Electronic and magnetic properties of 1 T-TiSe 2 nanoribbons. *2D Materials*, **2015**, 2, 044002	5.9	16

70	Enhanced Stability of Single-Layer w-Gallenene through Hydrogenation. *Journal of Physical Chemistry C*, **2018**, 122, 28302-28309	3.8	14
69	Computing optical properties of ultra-thin crystals. *Wiley Interdisciplinary Reviews: Computational Molecular Science*, **2016**, 6, 351-368	7.9	13
68	Defect tolerant and dimension dependent ferromagnetism in MnSe. *Physical Chemistry Chemical Physics*, **2019**, 21, 16718-16725	3.6	13
67	Engineering excitonic dynamics and environmental stability of post-transition metal chalcogenides by pyridine functionalization technique. *Nanoscale*, **2015**, 7, 17109-15	7.7	12
66	Monitoring the Doping and Diffusion Characteristics of Mn Dopants in Cesium Lead Halide Perovskites. *Journal of Physical Chemistry C*, **2018**, 122, 11543-11549	3.8	12
65	Kagome-like silicene: A novel exotic form of two-dimensional epitaxial silicon. *Applied Surface Science*, **2020**, 530, 147195	6.7	12
64	Increasing solubility of metal silicates by mixed polymeric antiscalants. *Geothermics*, **2019**, 77, 106-114	4.3	12
63	Stacking-dependent excitonic properties of bilayer blue phosphorene. *Physical Review B*, **2019**, 100,	3.3	11
62	Formation and diffusion characteristics of Pt clusters on Graphene, 1H-MoS2 and 1T-TaS2. *Annalen Der Physik*, **2014**, 526, 423-429	2.6	11
61	Vertical van der Waals Heterostructure of Single Layer InSe and SiGe. *Journal of Physical Chemistry C*, **2019**, 123, 31232-31237	3.8	11
60	Single layer PbI2: hydrogenation-driven reconstructions. *RSC Advances*, **2016**, 6, 89708-89714	3.7	10
59	First-principles investigation of B- and N-doped fluorographene. *Physical Review B*, **2013**, 88,	3.3	10
58	Monitoring the crystal orientation of black-arsenic via vibrational spectra. *Journal of Materials Chemistry C*, **2019**, 7, 1228-1236	7.1	9
57	Stable single-layers of calcium halides (CaX, X = F, Cl, Br, I). *Journal of Chemical Physics*, **2020**, 152, 164116	3.9	9
56	Ferromagnetism in stacked bilayers of Pd/C60. *Journal of Magnetism and Magnetic Materials*, **2014**, 349, 128-134	2.8	9
55	Fundamental mechanisms responsible for the temperature coefficient of resonant frequency in microwave dielectric ceramics. *Journal of the American Ceramic Society*, **2017**, 100, 1508-1516	3.8	8
54	Octahedrally coordinated single layered CaF: robust insulating behaviour. *Physical Chemistry Chemical Physics*, **2020**, 22, 2949-2954	3.6	8
53	Ag and Au atoms intercalated in bilayer heterostructures of transition metal dichalcogenides and graphene. *APL Materials*, **2014**, 2, 092801	5.7	8

52	Ab initio and semiempirical modeling of excitons and trions in monolayer TiS3. *Physical Review B*, **2018**, 98,	3.3	7
51	Monitoring the effect of asymmetrical vertical strain on Janus single layers of MoSSe via vibrational spectrum. *Journal of Chemical Physics*, **2018**, 149, 084707	3.9	7
50	Ultra-thin ZnSe: Anisotropic and flexible crystal structure. *Applied Surface Science*, **2017**, 409, 426-430	6.7	6
49	Theoretical and experimental investigation of conjugation of 1,6-hexanedithiol on MoS2. *Materials Research Express*, **2018**, 5, 036415	1.7	6
48	Experimental and computational investigation of graphene/SAMs/n-Si Schottky diodes. *Applied Surface Science*, **2018**, 428, 1010-1017	6.7	6
47	Quantum-Transport Characteristics of a p-n Junction on Single-Layer TiS. *ChemPhysChem*, **2016**, 17, 3985-3991	3.2	6
46	Hydrogenation-driven phase transition in single-layer TiSe. *Nanotechnology*, **2017**, 28, 495709	3.4	5
45	Prevalence of oxygen defects in an in-plane anisotropic transition metal dichalcogenide. *Physical Review B*, **2020**, 102,	3.3	5
44	Orthorhombic CsPbI3 perovskites: Thickness-dependent structural, optical and vibrational properties. *Computational Condensed Matter*, **2020**, 23, e00453	1.7	5
43	Few-layer MoS as nitrogen protective barrier. *Nanotechnology*, **2017**, 28, 415706	3.4	5
42	Stability, electronic and phononic properties of and 1T structures of SiTe (x = 1, 2) and their vertical heterostructures. *Journal of Physics Condensed Matter*, **2017**, 29, 395504	1.8	5
41	Hydrogen-induced sp2p3 rehybridization in epitaxial silicene. *Physical Review B*, **2017**, 96,	3.3	5
40	Temperature dependence of critical currents of two-gap superconductors. *EPJ Applied Physics*, **2006**, 36, 267-270	1.1	5
39	New family of graphene-based organic semiconductors: An investigation of photon-induced electronic structure manipulation in half-fluorinated graphene. *Physical Review B*, **2016**, 93,	3.3	4
38	Structural changes in a Schiff base molecular assembly initiated by scanning tunneling microscopy tip. *Nanotechnology*, **2016**, 27, 335601	3.4	4
37	Stable monolayer phase of CdTe: strain-dependent properties. *Journal of Materials Chemistry C*, **2017**, 5, 12249-12255	7.1	4
36	Parametrizing nonbonded interactions between silica and water from first principles. *Applied Surface Science*, **2020**, 504, 144359	6.7	4
35	Giant magnetic anisotropy in doped single layer molybdenum disulfide and fluorographene. *Journal of Physics Condensed Matter*, **2016**, 28, 195301	1.8	4

34	Stable Janus TaSe2 single-layers via surface functionalization. *Applied Surface Science*, **2021**, 538, 148064	6.7	4
33	Experimental and first-principles investigation of Cr-driven color change in cesium lead halide perovskites. *Journal of Applied Physics*, **2019**, 125, 225705	2.5	3
32	Color-Tunable All-Inorganic CsPbBr3 Perovskites Nanoplatelet Films for Photovoltaic Devices. *ACS Applied Nano Materials*, **2019**, 2, 5149-5155	5.6	3
31	Stable ultra-thin CdTe crystal: a robust direct gap semiconductor. *Journal of Physics Condensed Matter*, **2017**, 29, 485302	1.8	3
30	Strain Engineering of 2D Materials. *Lecture Notes in Physics*, **2017**, 87-96	0.8	3
29	Silicene as oxidation-resistant ultra-thin coating material. *Beilstein Journal of Nanotechnology*, **2017**, 8, 1808-1814	3	3
28	The effect of DOPA hydroxyl groups on wet adhesion to polystyrene surface: An experimental and theoretical study. *Materials Chemistry and Physics*, **2020**, 243, 122606	4.4	3
27	Electronic and magnetic properties of single-layer FeCl2 with defects. *Physical Review B*, **2021**, 103,	3.3	3
26	Atomic-scale understanding of dichlorobenzene-assisted poly 3-hexylthiophene-2,5-diyl nanowire formation mechanism. *Journal of Molecular Structure*, **2017**, 1134, 681-686	3.4	2
25	Fabrication of a Postfunctionalizable, Biorepellent, Electroactive Polyurethane Interface on a Gold Surface by Surface-Assisted Polymerization. *Langmuir*, **2020**, 36, 6828-6836	4	2
24	Germanene, Stanene and Other 2D Materials. *Lecture Notes in Physics*, **2017**, 63-85	0.8	2
23	Hydrogenated derivatives of hexacoordinated metallic CuSi monolayer.. *RSC Advances*, **2018**, 8, 39976-39982	3.7	2
22	Monolayer AsTe : Stable Robust Metal in 2D, 1D and 0D. *ChemPhysChem*, **2018**, 19, 2176-2182	3.2	2
21	Origin of anomalous band-gap bowing in two-dimensional tin-lead mixed perovskite alloys. *Physical Review B*, **2021**, 104,	3.3	2
20	Green fabrication of lanthanide-doped hydroxide-based phosphors: Y(OH):Eu nanoparticles for white light generation. *Beilstein Journal of Nanotechnology*, **2019**, 10, 1200-1210	3	1
19	Freestanding Silicene. *Lecture Notes in Physics*, **2017**, 13-39	0.8	1
18	Silicene on Ag Substrate. *Lecture Notes in Physics*, **2017**, 41-52	0.8	1
17	Interface-dependent phononic and optical properties of GeO/MoSO heterostructures.. *Nanoscale*, **2022**,	7.7	1

16	Interaction of Ge with single layer GaAs: From Ge-island nucleation to formation of novel stable monolayers. *Applied Surface Science*, **2020**, 505, 144218	6.7	1
15	Novel ultra-thin two-dimensional structures of strontium chloride. *Journal of Materials Chemistry C*, **2020**, 8, 12527-12532	7.1	1
14	Toward single-layer Janus crystals: Off-balance materials from synthesis to nanotechnology applications. *Journal of Applied Physics*, **2021**, 129, 160902	2.5	1
13	Structural, electronic and vibrational properties of ultra-thin octahedrally coordinated structure of EuO2. *Journal of Magnetism and Magnetic Materials*, **2020**, 493, 165668	2.8	1
12	Functionalization of single-layer TaS2 and formation of ultrathin Janus structures. *Journal of Materials Research*, **2020**, 35, 1397-1406	2.5	1
11	Cesium manganese chloride: Stable lead-free perovskite from bulk to single layer. *Journal of Magnetism and Magnetic Materials*, **2021**, 531, 167845	2.8	1
10	Electronic properties of intrinsic vacancies in single-layer CaF2 and its heterostructure with monolayer MoS2. *Journal of Applied Physics*, **2021**, 130, 055301	2.5	1
9	First-principles investigation of structural, Raman and electronic characteristics of single layer Ge3N4. *Applied Surface Science*, **2021**, 572, 151361	6.7	1
8	Vibrational and optical identification of GeO and GeO single layers: a first-principles study. *Physical Chemistry Chemical Physics*, **2021**, 23, 21307-21315	3.6	1
7	Raman and optical characteristics of van der Waals heterostructures of single layers of GaP and GaSe: a first-principles study. *Inorganic Chemistry Frontiers*, **2021**, 8, 2771-2781	6.8	1
6	Experimental modeling of antimony sulfides-rich geothermal deposits and their solubility in the presence of polymeric antiscalants. *Geothermics*, **2022**, 104, 102452	4.3	1
5	Adsorption and diffusion characteristics of lithium on hydrogenated □and □silicene. *Beilstein Journal of Nanotechnology*, **2017**, 8, 1742-1748	3	0
4	Ultra-thin structures of manganese fluorides: conversion from manganese dichalcogenides by fluorination. *Physical Chemistry Chemical Physics*, **2021**, 23, 10218-10224	3.6	0
3	A Brief History of Silicene. *Lecture Notes in Physics*, **2017**, 1-11	0.8	
2	Multilayer Silicene. *Lecture Notes in Physics*, **2017**, 53-61	0.8	
1	Analysis of Fertility in Turkey: The Importance of Future Fertility Preferences. *Sosyoekonomi*,223-234		