

Abdelkarim Ouerghi

List of Publications by Year in descending order

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59
papers

2,279
citations

218677

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59
docs citations

59
times ranked

4027
citing authors

#	ARTICLE	IF	CITATIONS
1	Band Alignment and Minigaps in Monolayer MoS ₂ -Graphene van der Waals Heterostructures. Nano Letters, 2016, 16, 4054-4061.	9.1	288
2	van der Waals Epitaxy of GaSe/Graphene Heterostructure: Electronic and Interfacial Properties. ACS Nano, 2016, 10, 9679-9686.	14.6	154
3	Tunable quasiparticle band gap in few-layer GaSe/graphene van der Waals heterostructures. Physical Review B, 2017, 96, .	3.2	99
4	Large-Area and High-Quality Epitaxial Graphene on Off-Axis SiC Wafers. ACS Nano, 2012, 6, 6075-6082.	14.6	97
5	Epitaxial Graphene on 4H-SiC(0001) Grown under Nitrogen Flux: Evidence of Low Nitrogen Doping and High Charge Transfer. ACS Nano, 2012, 6, 10893-10900.	14.6	95
6	Evidence for Flat Bands near the Fermi Level in Epitaxial Rhombohedral Multilayer Graphene. ACS Nano, 2015, 9, 5432-5439.	14.6	92
7	Tunable Doping in Hydrogenated Single Layered Molybdenum Disulfide. ACS Nano, 2017, 11, 1755-1761.	14.6	86
8	Large area molybdenum disulphide- epitaxial graphene vertical Van der Waals heterostructures. Scientific Reports, 2016, 6, 26656.	3.3	73
9	Direct observation of the band structure in bulk hexagonal boron nitride. Physical Review B, 2017, 95, .	3.2	65
10	Electronic band structure of Two-Dimensional WS_2 /Graphene van der Waals Heterostructures. Physical Review B, 2018, 97, .	3.2	63
11	Atomically Sharp Interface in an h-BN-epitaxial graphene van der Waals Heterostructure. Scientific Reports, 2015, 5, 16465.	3.3	62
12	Intrinsic Properties of Suspended MoS ₂ on SiO ₂ /Si Pillar Arrays for Nanomechanics and Optics. ACS Nano, 2018, 12, 3235-3242.	14.6	62
13	Reconfigurable 2D/0D p-n Graphene/HgTe Nanocrystal Heterostructure for Infrared Detection. ACS Nano, 2020, 14, 4567-4576.	14.6	60
14	Interface dipole and band bending in the hybrid MoS ₂ /GaSe heterojunction. Physical Review B, 2017, 96, .	3.2	57
15	Van der Waals epitaxy of two-dimensional single-layer h-BN on graphite by molecular beam epitaxy: Electronic properties and band structure. Applied Physics Letters, 2018, 112, .	3.3	50
16	Charge Dynamics and Optoelectronic Properties in HgTe Colloidal Quantum Wells. Nano Letters, 2017, 17, 4067-4074.	9.1	48
17	Valence band inversion and spin-orbit effects in the electronic structure of monolayer GaSe. Physical Review B, 2018, 98, .	3.2	47
18	Flat electronic bands in long sequences of rhombohedral-stacked graphene. Physical Review B, 2018, 97, .	3.2	46

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19	Electrolytic phototransistor based on graphene-MoS ₂ van der Waals p-n heterojunction with tunable photoresponse. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	41
20	HgSe Self-Doped Nanocrystals as a Platform to Investigate the Effects of Vanishing Confinement. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 36173-36180.	8.0	40
21	Strong interlayer hybridization in the aligned SnS ₂ /WSe ₂ hetero-bilayer structure. <i>Npj 2D Materials and Applications</i> , 2019, 3, .	7.9	39
22	Probing Charge Carrier Dynamics to Unveil the Role of Surface Ligands in HgTe Narrow Band Gap Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2018, 122, 859-865.	3.1	37
23	Indirect to direct band gap crossover in two-dimensional WS ₂ (1-x)Se _{2x} alloys. <i>Npj 2D Materials and Applications</i> , 2021, 5, .	7.9	31
24	Metallic Functionalization of CdSe 2D Nanoplatelets and Its Impact on Electronic Transport. <i>Journal of Physical Chemistry C</i> , 2016, 120, 12351-12361.	3.1	29
25	Large area graphene nanomesh: an artificial platform for edge-electrochemical biosensing at the sub-attomolar level. <i>Nanoscale</i> , 2016, 8, 15479-15485.	5.6	28
26	Bandgap inhomogeneity of MoS ₂ monolayer on epitaxial graphene bilayer in van der Waals p-n junction. <i>Carbon</i> , 2016, 110, 396-403.	10.3	27
27	Evidence for a narrow band gap phase in 1Tâ€² WS ₂ nanosheet. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	25
28	Wave-Function Engineering in HgSe/HgTe Colloidal Heterostructures To Enhance Mid-infrared Photoconductive Properties. <i>Nano Letters</i> , 2018, 18, 4590-4597.	9.1	24
29	Ionic Glassâ€“Gated 2D Materialâ€“Based Phototransistor: MoSe ₂ over LaF ₃ as Case Study. <i>Advanced Functional Materials</i> , 2019, 29, 1902723.	14.9	24
30	Self-organized metal-semiconductor epitaxial graphene layer on off-axis 4H-SiC(0001). <i>Nano Research</i> , 2015, 8, 1026-1037.	10.4	23
31	Field-Effect Transistor and Photo-Transistor of Narrow-Band-Gap Nanocrystal Arrays Using Ionic Glasses. <i>Nano Letters</i> , 2019, 19, 3981-3986.	9.1	23
32	Electronic structure of CdSe-ZnS 2D nanoplatelets. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	21
33	Stacking fault and defects in single domain multilayered hexagonal boron nitride. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	20
34	Reversible Charge-Transfer Doping in Graphene due to Reaction with Polymer Residues. <i>Journal of Physical Chemistry C</i> , 2014, 118, 13890-13897.	3.1	19
35	Wettability effect of graphene-based surfaces on silicon carbide and their influence on hydrophobicity of nanocrystalline cerium oxide films. <i>Journal of Colloid and Interface Science</i> , 2015, 441, 71-77.	9.4	19
36	Strategy to overcome recombination limited photocurrent generation in CsPbX ₃ nanocrystal arrays. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	19

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37	Optoelectronic properties of methyl-terminated germanane. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	18
38	Evidence of direct electronic band gap in two-dimensional van der Waals indium selenide crystals. <i>Physical Review Materials</i> , 2019, 3, .	2.4	18
39	Single step fabrication of N-doped graphene/Si ₃ N ₄ /SiC heterostructures. <i>Nano Research</i> , 2014, 7, 835-843.	10.4	17
40	Gate tunable vertical geometry phototransistor based on infrared HgTe nanocrystals. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	16
41	Charge transfer and band gap opening of a ferrocene/graphene heterostructure. <i>Carbon</i> , 2019, 153, 557-564.	10.3	15
42	Tuning the work function of monolayer graphene on 4H-SiC (0001) with nitric acid. <i>Nanotechnology</i> , 2015, 26, 445702.	2.6	13
43	Nanostructures in suspended mono- and bilayer epitaxial graphene. <i>Carbon</i> , 2017, 125, 162-167.	10.3	13
44	Phase Transition in a Memristive Suspended MoS ₂ Monolayer Probed by Opto- and Electro-Mechanics. <i>ACS Nano</i> , 2020, 14, 13611-13618.	14.6	13
45	HgTe Nanocrystal-Based Photodiode for Extended Short-Wave Infrared Sensing with Optimized Electron Extraction and Injection. <i>ACS Applied Nano Materials</i> , 2022, 5, 8602-8611.	5.0	13
46	Time-Resolved Photoemission to Unveil Electronic Coupling between Absorbing and Transport Layers in a Quantum Dot-Based Solar Cell. <i>Journal of Physical Chemistry C</i> , 2020, 124, 23400-23409.	3.1	12
47	Evidence for highly p-type doping and type II band alignment in large scale monolayer WSe ₂ /Se-terminated GaAs heterojunction grown by molecular beam epitaxy. <i>Nanoscale</i> , 2022, 14, 5859-5868.	5.6	12
48	Investigation of structural and electronic properties of epitaxial graphene on 3C-SiC(100)/Si(100) substrates. <i>Nanotechnology, Science and Applications</i> , 2014, 7, 85.	4.6	10
49	Revealing the Band Structure of FAPI Quantum Dot Film and Its Interfaces with Electron and Hole Transport Layer Using Time Resolved Photoemission. <i>Journal of Physical Chemistry C</i> , 2020, 124, 3873-3880.	3.1	10
50	Strain and Spin-Orbit Coupling Engineering in Twisted WS ₂ /Graphene Heterobilayer. <i>Nanomaterials</i> , 2021, 11, 2921.	4.1	10
51	High carrier mobility in single-crystal PtSe ₂ grown by molecular beam epitaxy on ZnO(0001). <i>2D Materials</i> , 2022, 9, 015015.	4.4	10
52	2D Monolayer of the 1Tâ€™ Phase of Alloyed WSSe from Colloidal Synthesis. <i>Journal of Physical Chemistry C</i> , 2021, 125, 11058-11065.	3.1	9
53	Nanomechanical Strain Concentration on a Two-Dimensional Nanobridge within a Large Suspended Bilayer Graphene for Molecular Mass Detection. <i>ACS Applied Nano Materials</i> , 2018, 1, 6752-6759.	5.0	6
54	Structural and electronic transitions in few layers of isotopically pure hexagonal boron nitride. <i>Physical Review B</i> , 2020, 102, .	3.2	6

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55	Multi-order phononic frequency comb generation within a MoS ₂ electromechanical resonator. Applied Physics Letters, 2021, 119, .	3.3	6
56	Graphene FETs Based on High Resolution Nanoribbons for HF Low Power Applications. Electronic Materials Letters, 2018, 14, 133-138.	2.2	5
57	Electronic coupling in the F4-TCNQ/single-layer GaSe heterostructure. Physical Review Materials, 2019, 3, .	2.4	5
58	Ferromagnetism and Rashba Spin-Orbit Coupling in the Two-Dimensional (V,Pt)Se ₂ Alloy. ACS Applied Electronic Materials, 2022, 4, 259-268.	4.3	5
59	Electronic band gap of van der Waals $\hat{\pm}$ -As ₂ Te ₃ crystals. Applied Physics Letters, 2021, 119, .	3.3	4