Rafik Addou

List of Publications by Year
in descending order

84 papers	7,441 citations	76196 40 h-index	54797 84 g-index
85 all docs	85 docs citations	85 times ranked	10835 citing authors

#	Article	IF	Citations
1	Enhanced Visible-Light-Driven Hydrogen Production through MOF/MOF Heterojunctions. ACS Applied Materials & Interfaces, 2021, 13, 14239-14247.	4.0	73
2	Operando study of the preferential growth of SiO2 during the dry thermal oxidation of Si0.60Ge0.40(001) by ambient pressure x-ray photoelectron spectroscopy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, 053202.	0.9	1
3	Molecular-scale investigation of the oxidation behavior of chromia-forming alloys in high-temperature CO2. Npj Materials Degradation, 2021, 5, .	2.6	13
4	Contribution of the Subâ€Surface to Electrocatalytic Activity in Atomically Precise La_{0.7}Sr_{0.3}MnO₃ Heterostructures. Small, 2021, 17, e2103632.	5.2	4
5	Scalable BEOL compatible 2D tungsten diselenide. 2D Materials, 2020, 7, 015029.	2.0	41
6	Modification of the Electronic Transport in Atomically Thin WSe₂ by Oxidation. Advanced Materials Interfaces, 2020, 7, 2000422.	1.9	11
7	Origins of Fermi Level Pinning between Tungsten Dichalcogenides (WS2, WTe2) and Bulk Metal Contacts: Interface Chemistry and Band Alignment. Journal of Physical Chemistry C, 2020, 124, 14550-14563.	1.5	19
8	Atomically Controlled Tunable Doping in Highâ€Performance WSe₂ Devices. Advanced Electronic Materials, 2020, 6, 1901304.	2.6	46
9	Surface chemistry of 2-propanol and O2 mixtures on SnO2(110) studied with ambient-pressure x-ray photoelectron spectroscopy. Journal of Chemical Physics, 2020, 152, 054713.	1.2	10
10	Effect of Ambient Conditions on Radiation-Induced Chemistries of a Nanocluster Organotin Photoresist for Next-Generation EUV Nanolithography. ACS Applied Nano Materials, 2020, 3, 2266-2277.	2.4	17
11	Light soaking in metal halide perovskites studied via steady-state microwave conductivity. Communications Physics, 2020, 3, .	2.0	20
12	<i>In situ</i> exfoliated 2D molybdenum disulfide analyzed by XPS. Surface Science Spectra, 2020, 27, .	0.3	21
13	Impact of Etch Processes on the Chemistry and Surface States of the Topological Insulator Bi₂Se₃. ACS Applied Materials & Interfaces, 2019, 11, 32144-32150.	4.0	9
14	Origins of Fermi-Level Pinning between Molybdenum Dichalcogenides (MoSe₂,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 227 Physical Chemistry C, 2019, 123, 23919-23930.	1.5	20
15	WSe _(2â^' <i>x</i>) Te _{<i>x</i>} alloys grown by molecular beam epitaxy. 2D Materials, 2019, 6, 045027.	2.0	20
16	Engineering the interface chemistry for scandium electron contacts in WSe₂ transistors and diodes. 2D Materials, 2019, 6, 045020.	2.0	13
17	Enhancing Interconnect Reliability and Performance by Converting Tantalum to 2D Layered Tantalum Sulfide at Low Temperature. Advanced Materials, 2019, 31, e1902397.	11.1	35
18	High-Îº Dielectric on ReS2: In-Situ Thermal Versus Plasma-Enhanced Atomic Layer Deposition of Al2O3. Materials, 2019, 12, 1056.	1.3	14

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19	2D bismuth telluride analyzed by XPS. Surface Science Spectra, 2019, 26, .	0.3	6
20	2D topological insulator bismuth selenide analyzed by in situ XPS. Surface Science Spectra, 2019, 26, 024014.	0.3	3
21	Engineering the Palladiumâ€“WSe2 Interface Chemistry for Field Effect Transistors with High-Performance Hole Contacts. ACS Applied Nano Materials, 2019, 2, 75-88.	2.4	24
22	Using photoelectron spectroscopy in the integration of 2D materials for advanced devices. Journal of Electron Spectroscopy and Related Phenomena, 2019, 231, 94-103.	0.8	5
23	One dimensional metallic edges in atomically thin WSe ₂ induced by air exposure. 2D Materials, 2018, 5, 025017.	2.0	47
24	2D Materials: Tuning the Electronic and Photonic Properties of Monolayer MoS2 via In Situ Rhenium Substitutional Doping (Adv. Funct. Mater. 16/2018). Advanced Functional Materials, 2018, 28, 1870105.	7.8	1
25	Tuning the Electronic and Photonic Properties of Monolayer MoS₂ via In Situ Rhenium Substitutional Doping. Advanced Functional Materials, 2018, 28, 1706950.	7.8	137
26	Covalent nitrogen doping in molecular beam epitaxy-grown and bulk WSe2. APL Materials, 2018, 6, .	2.2	21
27	Realizing Large-Scale, Electronic-Grade Two-Dimensional Semiconductors. ACS Nano, 2018, 12, 965-975.	7.3	172
28	Molecular Beam Epitaxy of Transition Metal Dichalcogenides. , 2018, , 515-531.		19
29	Dislocation driven spiral and non-spiral growth in layered chalcogenides. Nanoscale, 2018, 10, 15023-15034.	2.8	24
30	Highâ€Mobility Helical Tellurium Fieldâ€Effect Transistors Enabled by Transferâ€Free, Lowâ€Temperature Direct Growth. Advanced Materials, 2018, 30, e1803109.	11.1	71
31	Fermi Level Manipulation through Native Doping in the Topological Insulator Bi₂Se₃. ACS Nano, 2018, 12, 6310-6318.	7.3	37
32	Wâ€‰Te ₂ thin films grown by beam-interrupted molecular beam epitaxy. 2D Materials, 2017, 4, 025044.	2.0	48
33	New Mo₆Te₆ Subâ€Nanometerâ€Diameter Nanowire Phase from 2Hâ€MoTe₂. Advanced Materials, 2017, 29, 1606264.	11.1	64
34	WSe ₂ -contact metal interface chemistry and band alignment under high vacuum and ultra high vacuum deposition conditions. 2D Materials, 2017, 4, 025084.	2.0	77
35	(Invited) Integration of 2D Materials for Advanced Devices: Challenges and Opportunities. ECS Transactions, 2017, 79, 11-20.	0.3	7
36	Carbon-assisted chemical vapor deposition of hexagonal boron nitride. 2D Materials, 2017, 4, 025117.	2.0	54

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37	Intrinsic air stability mechanisms of two-dimensional transition metal dichalcogenide surfaces: basal versus edge oxidation. 2D Materials, 2017, 4, 025050.	2.0	87
38	Schottky Barrier Height of Pd/MoS₂ Contact by Large Area Photoemission Spectroscopy. ACS Applied Materials & Interfaces, 2017, 9, 38977-38983.	4.0	36
39	Nucleation and growth of WSe ₂ : enabling large grain transition metal dichalcogenides. 2D Materials, 2017, 4, 045019.	2.0	96
40	In Situ Heating Study of 2H-MoTe2 to Mo6Te6 Nanowire Phase Transition. Microscopy and Microanalysis, 2017, 23, 1764-1765.	0.2	2
41	Defects and Surface Structural Stability of MoTe₂ Under Vacuum Annealing. ACS Nano, 2017, 11, 11005-11014.	7.3	117
42	Tuning electronic transport in epitaxial graphene-based van der Waals heterostructures. Nanoscale, 2016, 8, 8947-8954.	2.8	21
43	Covalent Nitrogen Doping and Compressive Strain in MoS₂ by Remote N₂ Plasma Exposure. Nano Letters, 2016, 16, 5437-5443.	4.5	323
44	Surface Analysis of WSe₂ Crystals: Spatial and Electronic Variability. ACS Applied Materials & Interfaces, 2016, 8, 26400-26406.	4.0	73
45	Electronic properties of MoS2/MoOx interfaces: Implications in Tunnel Field Effect Transistors and Hole Contacts. Scientific Reports, 2016, 6, 33562.	1.6	40
46	Contact Metalâ€“MoS₂ Interfacial Reactions and Potential Implications on MoS₂-Based Device Performance. Journal of Physical Chemistry C, 2016, 120, 14719-14729.	1.5	114
47	Partially Fluorinated Graphene: Structural and Electrical Characterization. ACS Applied Materials & Interfaces, 2016, 8, 5002-5008.	4.0	82
48	Recombination Kinetics and Effects of Superacid Treatment in Sulfur- and Selenium-Based Transition Metal Dichalcogenides. Nano Letters, 2016, 16, 2786-2791.	4.5	233
49	Surface Defects on Natural MoS₂. ACS Applied Materials & Interfaces, 2015, 7, 11921-11929.	4.0	303
50	(Invited) Excellent Wetting Behavior of Yttria on 2D Materials. ECS Transactions, 2015, 69, 325-336.	0.3	2
51	Wet-transfer of CVD-grown graphene onto sulfur-protected W(110). Surface Science, 2015, 634, 9-15.	0.8	5
52	Direct Observation of Interlayer Hybridization and Dirac Relativistic Carriers in Graphene/MoS₂ van der Waals Heterostructures. Nano Letters, 2015, 15, 1135-1140.	4.5	163
53	Seeding Atomic Layer Deposition of Alumina on Graphene with Yttria. ACS Applied Materials & Interfaces, 2015, 7, 2082-2087.	4.0	15
54	HfO ₂ on UVâ€“O ₃ exposed transition metal dichalcogenides: interfacial reactions study. 2D Materials, 2015, 2, 014004.	2.0	98

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55	Al₂O₃ on Black Phosphorus by Atomic Layer Deposition: An <i>in Situ</i> Interface Study. ACS Applied Materials & Interfaces, 2015, 7, 13038-13043.	4.0	81
56	Atomically thin resonant tunnel diodes built from synthetic van der Waals heterostructures. Nature Communications, 2015, 6, 7311.	5.8	382
57	Transition metal dichalcogenide and hexagonal boron nitride heterostructures grown by molecular beam epitaxy. Microelectronic Engineering, 2015, 147, 306-309.	1.1	46
58	Surface and interfacial study of half cycle atomic layer deposited Al2O3 on black phosphorus. Microelectronic Engineering, 2015, 147, 1-4.	1.1	15
59	Impurities and Electronic Property Variations of Natural MoS₂Crystal Surfaces. ACS Nano, 2015, 9, 9124-9133.	7.3	240
60	Manganese Doping of Monolayer MoS₂: The Substrate Is Critical. Nano Letters, 2015, 15, 6586-6591.	4.5	357
61	Near-unity photoluminescence quantum yield in MoS ₂. Science, 2015, 350, 1065-1068.	6.0	993
62	HfSe₂ Thin Films: 2D Transition Metal Dichalcogenides Grown by Molecular Beam Epitaxy. ACS Nano, 2015, 9, 474-480.	7.3	195
63	MoS2 functionalization for ultra-thin atomic layer deposited dielectrics. Applied Physics Letters, 2014, 104, .	1.5	171
64	Defect-Dominated Doping and Contact Resistance in MoS₂. ACS Nano, 2014, 8, 2880-2888.	7.3	690
65	Hole Contacts on Transition Metal Dichalcogenides: Interface Chemistry and Band Alignments. ACS Nano, 2014, 8, 6265-6272.	7.3	173
66	Interface properties of CVD grown graphene transferred onto MoS₂(0001). Nanoscale, 2014, 6, 1071-1078.	2.8	95
67	Atomically Thin Heterostructures Based on Single-Layer Tungsten Diselenide and Graphene. Nano Letters, 2014, 14, 6936-6941.	4.5	132
68	Impact of intrinsic atomic defects on the electronic structure of MoS₂monolayers. Nanotechnology, 2014, 25, 375703.	1.3	244
69	Influence of Hydroxyls on Pd Atom Mobility and Clustering on Rutile TiO₂(011)-2 Ã— 1. ACS Nano, 2014, 8, 6321-6333.	7.3	49
70	Structural investigation of Pb adsorption on the (010) surface of the orthorhombic T-Al3(Mn,Pd) crystal. Surface Science, 2013, 611, 74-79.	0.8	2
71	Combined Surface Science and DFT Study of the Adsorption of Dinitrotoluene (2,4-DNT) on Rutile TiO₂(110): Molecular Scale Insight into Sensing of Explosives. Journal of Physical Chemistry C, 2013, 117, 16468-16476.	1.5	12
72	Interface between Graphene and SrTiO3(001) Investigated by Scanning Tunneling Microscopy and Photoemission. Journal of Physical Chemistry C, 2013, 117, 21006-21013.	1.5	14

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73	Growth of a two-dimensional dielectric monolayer on quasi-freestanding graphene. Nature Nanotechnology, 2013, 8, 41-45.	15.6	88
74	Defects and Domain Boundaries in Self-Assembled Terephthalic Acid (TPA) Monolayers on CVD-Grown Graphene on Pt(111). Langmuir, 2013, 29, 6354-6360.	1.6	25
75	Charge doping of graphene in metal/graphene/dielectric sandwich structures evaluated by C-1s core level photoemission spectroscopy. APL Materials, 2013, 1, .	2.2	47
76	Preparation and characterization of Ni(111)/graphene/Y2O3(111) heterostructures. Journal of Applied Physics, 2013, 113, 194305.	1.1	17
77	Graphene on ordered Ni-alloy surfaces formed by metal (Sn, Al) intercalation between graphene/Ni(111). Surface Science, 2012, 606, 1108-1112.	0.8	35
78	Monolayer graphene growth on Ni(111) by low temperature chemical vapor deposition. Applied Physics Letters, 2012, 100, .	1.5	169
79	Atomic and electronic structure of graphene/Sn-Ni(111) and graphene/Sn-Cu(111) surface alloy interfaces. Applied Physics Letters, 2012, 101, 051602.	1.5	17
80	Graphene monolayer rotation on Ni(111) facilitates bilayer graphene growth. Applied Physics Letters, 2012, 100, .	1.5	44
81	Pseudomorphy, surface alloys and the role of elementary clusters on the domain orientations in the Cu/Al₁₃Co₄(100) system. Journal of Physics Condensed Matter, 2011, 23, 435009.	0.7	3
82	Lead adsorption on the Al₁₃Co₄(100) surface: heterogeneous nucleation and pseudomorphic growth. New Journal of Physics, 2011, 13, 103011.	1.2	17
83	Structure of the (010) surface of the orthorhombic complex metallic alloy<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">T</mml:mi><mml:msub><mml:mrow><mml:mtext>-Al</mml:mtext></mml:mrow><mml:mn>3</mml:mn></m Physical Review B, 2010, 81, .	1.1	22
84	Structure investigation of the (100) surface of the orthorhombic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Al</mml:mtext></mml:mrow><mml:mrow><mml:mn>13</mml:m Physical Review B, 2009, 80, .	1.1	43