Dumitru O Dumcenco

List of Publications by Year
in descending order

47 papers	5,950 citations	304368 22 h-index	276539 41 g-index
48 all docs	48 docs citations	48 times ranked	9690 citing authors

#	Article	IF	Citations
1	Atomic mechanism of the semiconducting-to-metallic phase transition in single-layered MoS2. Nature Nanotechnology, 2014, 9, 391-396.	15.6	1,146
2	Single-layer MoS2 nanopores as nanopower generators. Nature, 2016, 536, 197-200.	13.7	830
3	Large-Area Epitaxial Monolayer MoS₂. ACS Nano, 2015, 9, 4611-4620.	7.3	712
4	Tunable Band Gap Photoluminescence from Atomically Thin Transition-Metal Dichalcogenide Alloys. ACS Nano, 2013, 7, 4610-4616.	7.3	543
5	Identification of single nucleotides in MoS2 nanopores. Nature Nanotechnology, 2015, 10, 1070-1076.	15.6	409
6	High Responsivity, Large-Area Graphene/MoS₂ Flexible Photodetectors. ACS Nano, 2016, 10, 8252-8262.	7.3	275
7	Properties of Individual Dopant Atoms in Singleâ€Layer MoS₂: Atomic Structure, Migration, and Enhanced Reactivity. Advanced Materials, 2014, 26, 2857-2861.	11.1	258
8	Two-Dimensional Molybdenum Tungsten Diselenide Alloys: Photoluminescence, Raman Scattering, and Electrical Transport. ACS Nano, 2014, 8, 7130-7137.	7.3	208
9	Visualization and quantification of transition metal atomic mixing in Mo1â^'xWxS2 single layers. Nature Communications, 2013, 4, 1351.	5.8	202
10	Observation of ionic Coulomb blockade inÂnanopores. Nature Materials, 2016, 15, 850-855.	13.3	175
11	Composition-dependent Raman modes of Mo_{1â^'x}W_xS₂ monolayer alloys. Nanoscale, 2014, 6, 2833-2839.	2.8	142
12	Micro-reflectance and transmittance spectroscopy: a versatile and powerful tool to characterize 2D materials. Journal Physics D: Applied Physics, 2017, 50, 074002.	1.3	125
13	Persistence of Magnetism in Atomically Thin MnPS₃ Crystals. Nano Letters, 2020, 20, 2452-2459.	4.5	117
14	Disorder engineering and conductivity dome in ReS2 with electrolyte gating. Nature Communications, 2016, 7, 12391.	5.8	109
15	Determining the phase diagram of atomically thin layered antiferromagnet CrCl3. Nature Nanotechnology, 2019, 14, 1116-1122.	15.6	99
16	Geometrical Effect in 2D Nanopores. Nano Letters, 2017, 17, 4223-4230.	4.5	87
17	Evolution of the Valley Position in Bulk Transition-Metal Chalcogenides and Their Monolayer Limit. Nano Letters, 2016, 16, 4738-4745.	4.5	80
18	Large-area MoS ₂ grown using H ₂ S as the sulphur source. 2D Materials, 2015, 2, 044005.	2.0	78

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19	Self-sensing, tunable monolayer MoS2 nanoelectromechanical resonators. Nature Communications, 2019, 10, 4831.	5.8	65
20	Defect Healing and Charge Transfer-Mediated Valley Polarization in MoS₂/MoSe₂/MoS₂ Trilayer van der Waals Heterostructures. Nano Letters, 2017, 17, 4130-4136.	4.5	56
21	Strongly Coupled Coherent Phonons in Single-Layer MoS₂. ACS Nano, 2020, 14, 5700-5710.	7.3	44
22	Intervalley Scattering of Interlayer Excitons in a MoS₂/MoSe₂/MoS₂ Heterostructure in High Magnetic Field. Nano Letters, 2018, 18, 3994-4000.	4.5	27
23	Quantitative Nanoscale Absorption Mapping: A Novel Technique To Probe Optical Absorption of Two-Dimensional Materials. Nano Letters, 2020, 20, 567-576.	4.5	22
24	Air and Waterâ€Stable nâ€Type Doping and Encapsulation of Flexible MoS₂ Devices with SU8. Advanced Electronic Materials, 2019, 5, 1800492.	2.6	18
25	High Throughput Characterization of Epitaxially Grown Single-Layer MoS2. Electronics (Switzerland), 2017, 6, 28.	1.8	16
26	THz timeâ€domain spectroscopy and IR spectroscopy on MoS₂. Physica Status Solidi (B): Basic Research, 2016, 253, 2499-2504.	0.7	12
27	Impact of photodoping on inter- and intralayer exciton emission in a MoS2/MoSe2/MoS2 heterostructure. Applied Physics Letters, 2018, 113, 062107.	1.5	12
28	Determining alloy composition in Mo_xW_(1Ââ^'Âx)S₂ from low wavenumber Raman spectroscopy. Journal of Raman Spectroscopy, 2017, 48, 773-776.	1.2	10
29	Quantitative Mapping of the Charge Density in a Monolayer of MoS₂ at Atomic Resolution by Off-Axis Electron Holography. ACS Nano, 2020, 14, 524-530.	7.3	10
30	Free-standing electronic character of monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> van der Waals epitaxy. Physical Review B, 2016, 94, .	1.1	9
31	Piezoreflectance and Raman Characterization of Mo_{1â^'x}W_xS₂ Layered Mixed Crystals. Solid State Phenomena, 2011, 170, 55-59.	0.3	8
32	Composition Dependent Band Gaps of Single Crystal Cu₂ZnSn(S_xSe_{1-x})₄ Solid Solutions. Solid State Phenomena, 0, 194, 139-143.	0.3	6
33	Field-induced charge separation dynamics in monolayer MoS 2. 2D Materials, 2017, 4, 035017.	2.0	6
34	Magnetization dependent tunneling conductance of ferromagnetic barriers. Nature Communications, 2021, 12, 6659.	5.8	6
35	Optical and photothermal investigations of Zn_{1â^'xâ^'y}Be_xMn_ySe solid solutions. Physica Status Solidi (B): Basic Research, 2010, 247, 1402-1404.	0.7	5
36	Growth of van der Waals magnetic semiconductor materials. Journal of Crystal Growth, 2020, 548, 125799.	0.7	5

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37	Correlating chemical and electronic states from quantitative photoemission electron microscopy of transition-metal dichalcogenide heterostructures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	5
38	A robust molecular probe for Ã...ngstrom-scale analytics in liquids. Nature Communications, 2016, 7, 12403.	5.8	4
39	Structural and Band-Edge Properties of Cu(Al_xIn_{1-X})S₂ (0â‰xâ‰1) Series Chalcopyrite Semiconductors. Solid State Phenomena, 2012, 194, 133-138.	0.3	3
40	Growth and characterization of Zn_{1â€“xâ€“y}Be_xMg_ySe solid solutions with luminescence and photoacoustic methods. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1463-1465.	0.8	2
41	High-Temperature Optical Characterization of Transition Metal Dichalcogenides by Piezoreflectance Measurements. Solid State Phenomena, 0, 194, 158-161.	0.3	1
42	Doping Properties and Phase Transition in Single-Layer MoS2. Microscopy and Microanalysis, 2014, 20, 1750-1751.	0.2	1
43	High-quality synthetic 2D transition metal dichalcogenide semiconductors. , 2016, , .		1
44	Characterization of Zn_{0.95â€‹x}Be_x Mn_{0.05}Se mixed crystals by photoluminescence and contactless electroreflectance. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1460-1462.	0.8	0
45	Raman scattering characterization of Zn_{1â€xâ€y}Mg_yBe_xSe mixed crystals. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1752-1755.	0.8	0
46	Optical characterization of Zn0.35Cd0.44Mg0.21Se crystalline alloy by polarization-dependent contactless electroreflectance measurements. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1756-1759.	0.8	0
47	Excitonic Effects in Single Layer MoS2 Probed by Broadband Two-Dimensional Electronic Spectroscopy. , 2019, , .		0