Riccardo Frisenda

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Bandgap engineering of two-dimensional semiconductor materials. Npj 2D Materials and Applications, 2020, 4, .	7.9	528
2	Recent progress in the assembly of nanodevices and van der Waals heterostructures by deterministic placement of 2D materials. Chemical Society Reviews, 2018, 47, 53-68.	38.1	473
3	Atomically thin pâ€“n junctions based on two-dimensional materials. Chemical Society Reviews, 2018, 47, 3339-3358.	38.1	231
4	Signatures of Quantum Interference Effects on Charge Transport Through a Single Benzene Ring. Angewandte Chemie - International Edition, 2013, 52, 3152-3155.	13.8	204
5	Biaxial strain tuning of the optical properties of single-layer transition metal dichalcogenides. Npj 2D Materials and Applications, 2017, 1, .	7.9	191
6	Mechanically controlled quantum interference in individual Ï€-stacked dimers. Nature Chemistry, 2016, 8, 1099-1104.	13.6	190
7	Large negative differential conductance in single-molecule break junctions. Nature Nanotechnology, 2014, 9, 830-834.	31.5	170
8	The role of traps in the photocurrent generation mechanism in thin InSe photodetectors. Materials Horizons, 2020, 7, 252-262.	12.2	164
9	A strain tunable single-layer MoS2 photodetector. Materials Today, 2019, 27, 8-13.	14.2	161
10	Thickness-Dependent Differential Reflectance Spectra of Monolayer and Few-Layer MoS2, MoSe2, WS2 and WSe2. Nanomaterials, 2018, 8, 725.	4.1	156
11	Thicknessâ€Dependent Refractive Index of 1L, 2L, and 3L MoS₂, MoSe₂, WS₂, and WSe₂. Advanced Optical Materials, 2019, 7, 1900239.	7.3	155
12	Singleâ€Molecule Spin Switch Based on Voltageâ€Triggered Distortion of the Coordination Sphere. Angewandte Chemie - International Edition, 2015, 54, 13425-13430.	13.8	138
13	Micro-reflectance and transmittance spectroscopy: a versatile and powerful tool to characterize 2D materials. Journal Physics D: Applied Physics, 2017, 50, 074002.	2.8	125
14	Kondo Effect in a Neutral and Stable All Organic Radical Single Molecule Break Junction. Nano Letters, 2015, 15, 3109-3114.	9.1	117
15	Stretching-Induced Conductance Increase in a Spin-Crossover Molecule. Nano Letters, 2016, 16, 4733-4737.	9.1	96
16	Localized and Dispersive Electronic States at Ordered FePc and CoPc Chains on Au(110). Journal of Physical Chemistry C, 2010, 114, 21638-21644.	3.1	91
17	Naturally occurring van der Waals materials. Npj 2D Materials and Applications, 2020, 4, .	7.9	75
18	Electrical properties and mechanical stability of anchoring groups for single-molecule electronics. Beilstein Journal of Nanotechnology, 2015, 6, 1558-1567.	2.8	69

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19	Polarizationâ€Sensitive and Broadband Photodetection Based on a Mixedâ€Dimensionality TiS₃/Si pâ€“n Junction. Advanced Optical Materials, 2018, 6, 1800351.	7.3	64
20	InSe: a two-dimensional semiconductor with superior flexibility. Nanoscale, 2019, 11, 9845-9850.	5.6	64
21	Strain engineering in single-, bi- and tri-layer MoS2, MoSe2, WS2 and WSe2. Nano Research, 2021, 14, 1698-1703.	10.4	63
22	Revisiting the Buckling Metrology Method to Determine the Young's Modulus of 2D Materials. Advanced Materials, 2019, 31, e1807150.	21.0	59
23	A reference-free clustering method for the analysis of molecular break-junction measurements. Applied Physics Letters, 2019, 114, .	3.3	57
24	Statistical analysis of singleâ€molecule breaking traces. Physica Status Solidi (B): Basic Research, 2013, 250, 2431-2436.	1.5	56
25	A Comprehensive Study of Extended Tetrathiafulvalene Cruciform Molecules for Molecular Electronics: Synthesis and Electrical Transport Measurements. Journal of the American Chemical Society, 2014, 136, 16497-16507.	13.7	55
26	Gate tunable photovoltaic effect in MoS₂ vertical pâ€“n homostructures. Journal of Materials Chemistry C, 2017, 5, 854-861.	5.5	50
27	Toward Air Stability of Thin GaSe Devices: Avoiding Environmental and Laserâ€Induced Degradation by Encapsulation. Advanced Functional Materials, 2018, 28, 1805304.	14.9	49
28	Quantum interference effects at room temperature in OPV-based single-molecule junctions. Nanoscale Research Letters, 2013, 8, 234.	5.7	48
29	Superlattices based on van der Waals 2D materials. Chemical Communications, 2019, 55, 11498-11510.	4.1	48
30	Thickness determination of MoS2, MoSe2, WS2 and WSe2 on transparent stamps used for deterministic transfer of 2D materials. Nano Research, 2019, 12, 1691-1695.	10.4	46
31	Effect of Metal Complexation on the Conductance of Single-Molecular Wires Measured at Room Temperature. Journal of the American Chemical Society, 2014, 136, 8314-8322.	13.7	45
32	Characterization of highly crystalline lead iodide nanosheets prepared by room-temperature solution processing. Nanotechnology, 2017, 28, 455703.	2.6	45
33	Progress on Black Phosphorus Photonics. Advanced Optical Materials, 2018, 6, 1800365.	7.3	44
34	InSe Schottky Diodes Based on Van Der Waals Contacts. Advanced Functional Materials, 2020, 30, 2001307.	14.9	44
35	Highly responsive UV-photodetectors based on single electrospun TiO₂ nanofibres. Journal of Materials Chemistry C, 2016, 4, 10707-10714.	5.5	41
36	Quantum Transport through a Single Conjugated Rigid Molecule, a Mechanical Break Junction Study. Accounts of Chemical Research, 2018, 51, 1359-1367.	15.6	40

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37	Large birefringence and linear dichroism in TiS₃ nanosheets. Nanoscale, 2018, 10, 12424-12429.	5.6	40
38	Mechanical and liquid phase exfoliation of cylindrite: a natural van der Waals superlattice with intrinsic magnetic interactions. 2D Materials, 2019, 6, 035023.	4.4	38
39	Tracking molecular resonance forms of donorâ€“acceptor pushâ€“pull molecules by single-molecule conductance experiments. Nature Communications, 2015, 6, 10233.	12.8	36
40	Transition from Strong to Weak Electronic Coupling in a Single-Molecule Junction. Physical Review Letters, 2016, 117, 126804.	7.8	36
41	Ultra-broad spectral photo-response in FePS3 air-stable devices. Npj 2D Materials and Applications, 2021, 5, .	7.9	35
42	MoS₂-on-paper optoelectronics: drawing photodetectors with van der Waals semiconductors beyond graphite. Nanoscale, 2020, 12, 19068-19074.	5.6	34
43	In-plane anisotropic optical and mechanical properties of two-dimensional MoO3. Npj 2D Materials and Applications, 2021, 5, .	7.9	33
44	Gateâ€Switchable Photovoltaic Effect in BP/MoTe₂ van der Waals Heterojunctions for Selfâ€Driven Logic Optoelectronics. Advanced Optical Materials, 2021, 9, 2001802.	7.3	32
45	Biaxial versus uniaxial strain tuning of single-layer MoS2. Nano Materials Science, 2022, 4, 44-51.	8.8	30
46	Anisotropic buckling of few-layer black phosphorus. Nanoscale, 2019, 11, 12080-12086.	5.6	29
47	Microheater Actuators as a Versatile Platform for Strain Engineering in 2D Materials. Nano Letters, 2020, 20, 5339-5345.	9.1	29
48	Charge transport through conjugated azomethine-based single molecules for optoelectronic applications. Organic Electronics, 2016, 34, 38-41.	2.6	28
49	Optical contrast and refractive index of natural van der Waals heterostructure nanosheets of franckeite. Beilstein Journal of Nanotechnology, 2017, 8, 2357-2362.	2.8	27
50	Symmetry Breakdown in Franckeite: Spontaneous Strain, Rippling, and Interlayer MoirÃ©. Nano Letters, 2020, 20, 1141-1147.	9.1	25
51	An inexpensive system for the deterministic transfer of 2D materials. JPhys Materials, 2020, 3, 016001.	4.2	25
52	A Versatile Scanning Photocurrent Mapping System to Characterize Optoelectronic Devices based on 2D Materials. Small Methods, 2017, 1, 1700119.	8.6	24
53	Dielectrophoretic assembly of liquid-phase-exfoliated TiS₃ nanoribbons for photodetecting applications. Chemical Communications, 2017, 53, 6164-6167.	4.1	22
54	Giant Piezoresistive Effect and Strong Bandgap Tunability in Ultrathin InSe upon Biaxial Strain. Advanced Science, 2020, 7, 2001645.	11.2	22

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55	A system for the deterministic transfer of 2D materials under inert environmental conditions. 2D Materials, 2020, 7, 025034.	4.4	21
56	Scalable and low-cost fabrication of flexible WS2 photodetectors on polycarbonate. Npj Flexible Electronics, 2022, 6, .	10.7	21
57	Biaxial strain tuning of interlayer excitons in bilayer MoS₂. JPhys Materials, 2020, 3, 015003.	4.2	20
58	High Throughput Characterization of Epitaxially Grown Single-Layer MoS2. Electronics (Switzerland), 2017, 6, 28.	3.1	16
59	Strongly Anisotropic Strainâ€Tunability of Excitons in Exfoliated ZrSe₃. Advanced Materials, 2022, 34, e2103571.	21.0	16
60	Direct growth of graphene-MoS2 heterostructure: Tailored interface for advanced devices. Applied Surface Science, 2022, 581, 151858.	6.1	16
61	Drawing WS₂ thermal sensors on paper substrates. Nanoscale, 2020, 12, 22091-22096.	5.6	14
62	Tunable Photodetectors via In Situ Thermal Conversion of TiS3 to TiO2. Nanomaterials, 2020, 10, 711.	4.1	14
63	Probing the local environment of a single OPE3 molecule using inelastic tunneling electron spectroscopy. Beilstein Journal of Nanotechnology, 2015, 6, 2477-2484.	2.8	12
64	Robotic assembly of artificial nanomaterials. Nature Nanotechnology, 2018, 13, 441-442.	31.5	12
65	Single-Molecule Break Junctions Based on a Perylene-Diimide Cyano-Functionalized (PDI8-CN2) Derivative. Nanoscale Research Letters, 2015, 10, 1011.	5.7	11
66	Enhanced Separation Concept (ESC): Removing the Functional Subunit from the Electrode by Molecular Design. European Journal of Organic Chemistry, 2019, 2019, 5334-5343.	2.4	11
67	Thickness Identification of Thin InSe by Optical Microscopy Methods. Advanced Photonics Research, 2020, 1, 2000025.	3.6	11
68	Optical microscopyâ€"based thickness estimation in thin GaSe flakes. Materials Today Advances, 2021, 10, 100143.	5.2	9
69	Integrating van der Waals materials on paper substrates for electrical and optical applications. Applied Materials Today, 2021, 23, 101012.	4.3	9
70	Lithography-free electrical transport measurements on 2D materials by direct microprobing. Journal of Materials Chemistry C, 2017, 5, 11252-11258.	5.5	6
71	Integrating superconducting van der Waals materials on paper substrates. Materials Advances, 2021, 2, 3274-3281.	5.4	6
72	Stretching ReS2 along different crystal directions: Anisotropic tuning of the vibrational and optical responses. Applied Physics Letters, 2022, 120, .	3.3	6

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73	Photodiodes based in La _{0.7} Sr _{0.3} MnO ₃ /single layer MoS ₂ hybrid vertical heterostructures. 2D Materials, 2017, 4, 034002.	4.4	5
74	A system to test 2D optoelectronic devices in high vacuum. JPhys Materials, 2020, 3, 036001.	4.2	5
75	Strain creates a trion factory. Nature Photonics, 2020, 14, 269-270.	31.4	4
76	Biaxial strain in atomically thin transition metal dichalcogenides. , 2017, , .		4
77	Paper-supported WS2 strain gauges. Sensors and Actuators A: Physical, 2021, 332, 113204.	4.1	4
78	Strain induced lifting of the charged exciton degeneracy in monolayer MoS₂ on a GaAs nanomembrane. 2D Materials, 2022, 9, 045006.	4.4	4
79	Direct Transformation of Crystalline MoO3 into Few-Layers MoS2. Materials, 2020, 13, 2293.	2.9	2
80	Fiber-coupled light-emitting diodes (LEDs) as safe and convenient light sources for the characterization of optoelectronic devices. Open Research Europe, 0, 1, 98.	2.0	2
81	Fiber-coupled light-emitting diodes (LEDs) as safe and convenient light sources for the characterization of optoelectronic devices. Open Research Europe, 0, 1, 98.	2.0	0