

Alberto F Morpurgo

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7647737/publications.pdf>

Version: 2024-02-01

118
papers

20,765
citations

18436

62
h-index

18606

119
g-index

119
all docs

119
docs citations

119
times ranked

22591
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. <i>Nanoscale</i> , 2015, 7, 4598-4810. | 2.8 | 2,452 |
| 2 | Gate-induced insulating state in bilayer graphene devices. <i>Nature Materials</i> , 2008, 7, 151-157. | 13.3 | 1,495 |
| 3 | Magnetic 2D materials and heterostructures. <i>Nature Nanotechnology</i> , 2019, 14, 408-419. | 15.6 | 1,109 |
| 4 | Bipolar supercurrent in graphene. <i>Nature</i> , 2007, 446, 56-59. | 13.7 | 1,095 |
| 5 | Tunable Fröhlich polarons in organic single-crystal transistors. <i>Nature Materials</i> , 2006, 5, 982-986. | 13.3 | 529 |
| 6 | Organic single-crystal field-effect transistors. <i>Physica Status Solidi A</i> , 2004, 201, 1302-1331. | 1.7 | 516 |
| 7 | Colloquium: Electronic transport in single-crystal organic transistors. <i>Reviews of Modern Physics</i> , 2006, 78, 973-989. | 16.4 | 509 |
| 8 | Quantitative Determination of the Band Gap of WS_2 with Ambipolar Ionic Liquid-Gated Transistors. <i>Nano Letters</i> , 2012, 12, 5218-5223. | 4.5 | 473 |
| 9 | Very large tunneling magnetoresistance in layered magnetic semiconductor CrI_3 . <i>Nature Communications</i> , 2018, 9, 2516. | 5.8 | 472 |
| 10 | Electrostatic modification of novel materials. <i>Reviews of Modern Physics</i> , 2006, 78, 1185-1212. | 16.4 | 465 |
| 11 | Mono- and Bilayer WS_2 Light-Emitting Transistors. <i>Nano Letters</i> , 2014, 14, 2019-2025. | 4.5 | 424 |
| 12 | Trilayer graphene is a semimetal with a gate-tunable band overlap. <i>Nature Nanotechnology</i> , 2009, 4, 383-388. | 15.6 | 407 |
| 13 | Intervalley Scattering, Long-Range Disorder, and Effective Time-Reversal Symmetry Breaking in Graphene. <i>Physical Review Letters</i> , 2006, 97, 196804. | 2.9 | 390 |
| 14 | Metallic conduction at organic charge-transfer interfaces. <i>Nature Materials</i> , 2008, 7, 574-580. | 13.3 | 354 |
| 15 | Probing magnetism in 2D materials at the nanoscale with single-spin microscopy. <i>Science</i> , 2019, 364, 973-976. | 6.0 | 347 |
| 16 | Indirect-to-Direct Band Gap Crossover in Few-Layer $MoTe_2$. <i>Nano Letters</i> , 2015, 15, 2336-2342. | 4.5 | 339 |
| 17 | Tunneling Spin Valves Based on $Fe_3GeTe_2/hBN/Fe_3GeTe_2$ van der Waals Heterostructures. <i>Nano Letters</i> , 2018, 18, 4303-4308. | 4.5 | 319 |
| 18 | Strong interface-induced spin-orbit interaction in graphene on WS_2 . <i>Nature Communications</i> , 2015, 6, 8339. | 5.8 | 314 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 19 | Controlled fabrication of metallic electrodes with atomic separation. Applied Physics Letters, 1999, 74, 2084-2086. | 1.5 | 299 |
| 20 | Gate-induced superconductivity in atomically thin MoS2 crystals. Nature Nanotechnology, 2016, 11, 339-344. | 15.6 | 297 |
| 21 | Accessing the transport properties of graphene and its multilayers at high carrier density. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13002-13006. | 3.3 | 282 |
| 22 | Influence of the gate dielectric on the mobility of rubrene single-crystal field-effect transistors. Applied Physics Letters, 2004, 85, 3899-3901. | 1.5 | 278 |
| 23 | Reversing the direction of the supercurrent in a controllable Josephson junction. Nature, 1999, 397, 43-45. | 13.7 | 273 |
| 24 | Integrated nanotube circuits: Controlled growth and ohmic contacting of single-walled carbon nanotubes. Applied Physics Letters, 1999, 75, 627-629. | 1.5 | 272 |
| 25 | Field-effect transistors on tetracene single crystals. Applied Physics Letters, 2003, 83, 4345-4347. | 1.5 | 265 |
| 26 | Electric Field Control of the Metal-Insulator Transition in Ultrathin NdNiO ₃ Films. Advanced Materials, 2010, 22, 5517-5520. | 11.1 | 265 |
| 27 | High Electron Mobility in Vacuum and Ambient for PDIF-CN ₂ Single-Crystal Transistors. Journal of the American Chemical Society, 2009, 131, 2462-2463. | 6.6 | 257 |
| 28 | Band-Like Electron Transport in Organic Transistors and Implication of the Molecular Structure for Performance Optimization. Advanced Materials, 2012, 24, 503-508. | 11.1 | 255 |
| 29 | Gate-tuned normal and superconducting transport at the surface of a topological insulator. Nature Communications, 2011, 2, 575. | 5.8 | 246 |
| 30 | Two-Dimensional Quantum Oscillations of the Conductance at LaAlO_3 . Physical Review Letters, 2010, 105, 236802. | 2.9 | 227 |
| 31 | Observation of Aharonov-Bohm conductance oscillations in a graphene ring. Physical Review B, 2008, 77, . | 1.1 | 220 |
| 32 | Gate-Controlled Superconducting Proximity Effect in Carbon Nanotubes. Science, 1999, 286, 263-265. | 6.0 | 218 |
| 33 | Shot Noise in Ballistic Graphene. Physical Review Letters, 2008, 100, 196802. | 2.9 | 214 |
| 34 | Ensemble-Average Spectrum of Aharonov-Bohm Conductance Oscillations: Evidence for Spin-Orbit-Induced Berry's Phase. Physical Review Letters, 1998, 80, 1050-1053. | 2.9 | 159 |
| 35 | Surface transport and band gap structure of exfoliated 2H-MoTe ₂ crystals. 2D Materials, 2014, 1, 021002. | 2.0 | 151 |
| 36 | Electrostatically Induced Superconductivity at the Surface of WS ₂ . Nano Letters, 2015, 15, 1197-1202. | 4.5 | 140 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 37 | Origin and Magnitude of "Designer" Spin-Orbit Interaction in Graphene on Semiconducting Transition Metal Dichalcogenides. <i>Physical Review X</i> , 2016, 6, . | 2.8 | 140 |
| 38 | Space charge limited transport and time of flight measurements in tetracene single crystals: A comparative study. <i>Journal of Applied Physics</i> , 2004, 95, 1196-1202. | 1.1 | 137 |
| 39 | Electrostatic confinement of electrons in graphene nanoribbons. <i>Physical Review B</i> , 2009, 80, . | 1.1 | 135 |
| 40 | Tuning magnetotransport in a compensated semimetal at the atomic scale. <i>Nature Communications</i> , 2015, 6, 8892. | 5.8 | 133 |
| 41 | Hot electron tunable supercurrent. <i>Applied Physics Letters</i> , 1998, 72, 966-968. | 1.5 | 127 |
| 42 | Band-Like Electron Transport with Record-High Mobility in the TCNQ Family. <i>Advanced Materials</i> , 2015, 27, 2453-2458. | 11.1 | 122 |
| 43 | Ambipolar Cu- and Fe-phthalocyanine single-crystal field-effect transistors. <i>Applied Physics Letters</i> , 2005, 86, 262109. | 1.5 | 121 |
| 44 | Persistence of Magnetism in Atomically Thin MnPS ₃ Crystals. <i>Nano Letters</i> , 2020, 20, 2452-2459. | 4.5 | 117 |
| 45 | Observation of Even Denominator Fractional Quantum Hall Effect in Suspended Bilayer Graphene. <i>Nano Letters</i> , 2014, 14, 2135-2139. | 4.5 | 113 |
| 46 | Charge Noise in Graphene Transistors. <i>Nano Letters</i> , 2010, 10, 1563-1567. | 4.5 | 109 |
| 47 | Design of van der Waals interfaces for broad-spectrum optoelectronics. <i>Nature Materials</i> , 2020, 19, 299-304. | 13.3 | 106 |
| 48 | Topological origin of subgap conductance in insulating bilayer graphene. <i>Nature Physics</i> , 2011, 7, 38-42. | 6.5 | 105 |
| 49 | Random Strain Fluctuations as Dominant Disorder Source for High-Quality On-Substrate Graphene Devices. <i>Physical Review X</i> , 2014, 4, . | 2.8 | 102 |
| 50 | Nanometer-spaced electrodes with calibrated separation. <i>Applied Physics Letters</i> , 2002, 80, 321-323. | 1.5 | 100 |
| 51 | Nanospintronics with carbon nanotubes. <i>Semiconductor Science and Technology</i> , 2006, 21, S78-S95. | 1.0 | 99 |
| 52 | Determining the phase diagram of atomically thin layered antiferromagnet CrCl ₃ . <i>Nature Nanotechnology</i> , 2019, 14, 1116-1122. | 15.6 | 99 |
| 53 | Transport through Graphene on SrTiO ₃ . <i>Physical Review Letters</i> , 2011, 107, 225501. | 2.9 | 93 |
| 54 | Mobile ionic impurities in organic semiconductors. <i>Journal of Applied Physics</i> , 2003, 93, 2082-2090. | 1.1 | 89 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 55 | A ballistic pn junction in suspended graphene with split bottom gates. Applied Physics Letters, 2013, 102, . | 1.5 | 87 |
| 56 | Magnetotransport through graphene nanoribbons. Physical Review B, 2010, 81, . | 1.1 | 82 |
| 57 | Single-crystal organic charge-transfer interfaces probed using Schottky-gated heterostructures. Nature Materials, 2012, 11, 788-794. | 13.3 | 76 |
| 58 | Electronic Correlations in Oligo-acene and -Thiophene Organic Molecular Crystals. Physical Review Letters, 2004, 93, 146405. | 2.9 | 74 |
| 59 | Correlation between Molecular Orbitals and Doping Dependence of the Electrical Conductivity in Electron-Doped Metal-Phthalocyanine Compounds. Journal of the American Chemical Society, 2005, 127, 12210-12211. | 6.6 | 72 |
| 60 | Ambipolar Light-Emitting Transistors on Chemical Vapor Deposited Monolayer MoS ₂ . Nano Letters, 2015, 15, 8289-8294. | 4.5 | 67 |
| 61 | Electroluminescence from indirect band gap semiconductor ReS ₂ . 2D Materials, 2016, 3, 045016. | 2.0 | 66 |
| 62 | Low-temperature monoclinic layer stacking in atomically thin CrI ₃ crystals. 2D Materials, 2020, 7, 015007. | 2.0 | 65 |
| 63 | Tunnelling spectroscopy of gate-induced superconductivity in MoS ₂ . Nature Nanotechnology, 2018, 13, 483-488. | 15.6 | 62 |
| 64 | Influence of surface traps on space-charge limited current. Physical Review B, 2005, 72, . | 1.1 | 58 |
| 65 | Induced superconductivity in graphene. Solid State Communications, 2007, 143, 72-76. | 0.9 | 58 |
| 66 | High-performance n-type organic field-effect transistors with ionic liquid gates. Applied Physics Letters, 2010, 97, . | 1.5 | 58 |
| 67 | In-plane electronic confinement in superconducting LaAlO ₃ /SrTiO ₃ nanostructures. Applied Physics Letters, 2012, 101, . | 1.5 | 58 |
| 68 | Quantitative analysis of density-dependent transport in tetramethyltetraselenafulvalene single-crystal transistors: Intrinsic properties and trapping. Physical Review B, 2009, 80, . | 1.1 | 57 |
| 69 | Microscopic Origin of the Valley Hall Effect in Transition Metal Dichalcogenides Revealed by Wavelength-Dependent Mapping. Nano Letters, 2017, 17, 5719-5725. | 4.5 | 54 |
| 70 | Electron-hole collision limited transport in charge-neutral bilayer graphene. Nature Physics, 2017, 13, 1207-1214. | 6.5 | 54 |
| 71 | Controlling the Topological Sector of Magnetic Solitons in Exfoliated Crystals. Physical Review Letters, 2017, 118, 257203. | 2.9 | 54 |
| 72 | Reproducible low contact resistance in rubrene single-crystal field-effect transistors with nickel electrodes. Applied Physics Letters, 2006, 88, 113512. | 1.5 | 53 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 73 | Microfocus Laser-Resolved Photoemission on Encapsulated Mono-, Bi-, and Few-Layer 1T-WTe ₂ . Nano Letters, 2019, 19, 554-560. | 4.5 | 52 |
| 74 | Insulating state in tetralayers reveals an even-odd interaction effect in multilayer graphene. Nature Communications, 2015, 6, 6419. | 5.8 | 50 |
| 75 | Universal Spin-Induced Time Reversal Symmetry Breaking in Two-Dimensional Electron Gases with Rashba Spin-Orbit Interaction. Physical Review Letters, 2005, 94, 186805. | 2.9 | 49 |
| 76 | Phase Conjugated Andreev Backscattering in Two-Dimensional Ballistic Cavities. Physical Review Letters, 1997, 78, 2636-2639. | 2.9 | 47 |
| 77 | Evanescent Wave Transport and Shot Noise in Graphene: Ballistic Regime and Effect of Disorder. Journal of Low Temperature Physics, 2008, 153, 374-392. | 0.6 | 47 |
| 78 | Current saturation and Coulomb interactions in organic single-crystal transistors. New Journal of Physics, 2008, 10, 033031. | 1.2 | 47 |
| 79 | Enhanced Electron-Phonon Interaction in Multivalley Materials. Physical Review X, 2019, 9, . | 2.8 | 47 |
| 80 | Tailoring the Molecular Structure to Suppress Extrinsic Disorder in Organic Transistors. Advanced Materials, 2014, 26, 1254-1260. | 11.1 | 45 |
| 81 | Influence of the gate leakage current on the stability of organic single-crystal field-effect transistors. Applied Physics Letters, 2005, 86, 032103. | 1.5 | 43 |
| 82 | On-Demand Spin-Orbit Interaction from Which-Layer Tunability in Bilayer Graphene. Nano Letters, 2017, 17, 7003-7008. | 4.5 | 42 |
| 83 | Hole Transport in Exfoliated Monolayer MoS ₂ . ACS Nano, 2018, 12, 2669-2676. | 7.3 | 41 |
| 84 | Quasi-1D Electronic Transport in a 2D Magnetic Semiconductor. Advanced Materials, 2022, 34, e2109759. | 11.1 | 40 |
| 85 | Organic Single-Crystal Schottky Gate Transistors. Advanced Materials, 2009, 21, 3689-3693. | 11.1 | 38 |
| 86 | Energy Spectroscopy of Andreev Levels between Two Superconductors. Physical Review Letters, 1997, 79, 4010-4013. | 2.9 | 37 |
| 87 | Giant anomalous Hall effect in quasi-two-dimensional layered antiferromagnet $\text{Co}_2\text{V}_2\text{O}_7$. Physical Review Research, 2020, 2, . | 1.5 | 36 |
| 88 | Scanning photocurrent microscopy reveals electron-hole asymmetry in ionic liquid-gated WS ₂ transistors. Applied Physics Letters, 2014, 104, . | 1.5 | 35 |
| 89 | Very low bias stress in <i>n</i> -type organic single-crystal transistors. Applied Physics Letters, 2012, 100, . | 1.5 | 32 |
| 90 | A family of finite-temperature electronic phase transitions in graphene multilayers. Science, 2018, 362, 324-328. | 6.0 | 32 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 91 | Band Filling and Cross Quantum Capacitance in Ion-Gated Semiconducting Transition Metal Dichalcogenide Monolayers. Nano Letters, 2019, 19, 8836-8845. | 4.5 | 32 |
| 92 | Progress in organic single-crystal field-effect transistors. MRS Bulletin, 2013, 38, 51-56. | 1.7 | 31 |
| 93 | Bias-dependent contact resistance in rubrene single-crystal field-effect transistors. Applied Physics Letters, 2007, 90, 212103. | 1.5 | 30 |
| 94 | Small gap semiconducting organic charge-transfer interfaces. Applied Physics Letters, 2010, 96, 232102. | 1.5 | 28 |
| 95 | Crossover from Coulomb Blockade to Quantum Hall Effect in Suspended Graphene Nanoribbons. Physical Review Letters, 2012, 108, 266601. | 2.9 | 27 |
| 96 | High-Quality Multiterminal Suspended Graphene Devices. Nano Letters, 2013, 13, 5165-5170. | 4.5 | 26 |
| 97 | Semiconducting van der Waals Interfaces as Artificial Semiconductors. Nano Letters, 2018, 18, 5146-5152. | 4.5 | 25 |
| 98 | Organic Single Crystals: An Essential Step to New Physics and Higher Performances of Optoelectronic Devices. Advanced Functional Materials, 2016, 26, 2229-2232. | 7.8 | 24 |
| 99 | Flipping exciton angular momentum with chiral phonons in MoSe ₂ /WSe ₂ heterobilayers. 2D Materials, 2020, 7, 041002. | 2.0 | 24 |
| 100 | Interaction-induced insulating state in thick multilayer graphene. 2D Materials, 2016, 3, 045014. | 2.0 | 23 |
| 101 | Gate control of spin-valley coupling. Nature Physics, 2013, 9, 532-533. | 6.5 | 22 |
| 102 | Ionic gate spectroscopy of 2D semiconductors. Nature Reviews Physics, 2021, 3, 508-519. | 11.9 | 22 |
| 103 | Direct Observation of a Long-Range Field Effect from Gate Tuning of Nonlocal Conductivity. Physical Review Letters, 2016, 117, 176601. | 2.9 | 18 |
| 104 | Tuning the Charge Transfer in F ₁₆ CNQ/Rubrene Single-Crystal Interfaces. Advanced Functional Materials, 2016, 26, 2334-2340. | 7.8 | 18 |
| 105 | Lithium-ion conducting glass ceramics for electrostatic gating. Applied Physics Letters, 2018, 113, . | 1.5 | 17 |
| 106 | Threshold Voltage and Space Charge in Organic Transistors. Physical Review Letters, 2009, 103, 066803. | 2.9 | 16 |
| 107 | Charge Transfer, Band-Like Transport, and Magnetic Ions at F ₁₆ CoPc/Rubrene Interfaces. Advanced Materials Interfaces, 2016, 3, 1500863. | 1.9 | 13 |
| 108 | Quantitative analysis of electronic transport through weakly coupled metal/organic interfaces. Applied Physics Letters, 2008, 92, 133303. | 1.5 | 12 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 109 | Tuning the Influence of Microscopic Decoherence on the Superconducting Proximity Effect in a Graphene Andreev Interferometer. <i>Physical Review Letters</i> , 2014, 112, 126803. | 2.9 | 12 |
| 110 | Scanning Tunneling Microscopy of an Air Sensitive Dichalcogenide Through an Encapsulating Layer. <i>Nano Letters</i> , 2018, 18, 6696-6702. | 4.5 | 9 |
| 111 | Synthetic Semimetals with van der Waals Interfaces. <i>Nano Letters</i> , 2020, 20, 1322-1328. | 4.5 | 9 |
| 112 | Theory of cross quantum capacitance. <i>Physical Review Research</i> , 2021, 3, . | 1.3 | 9 |
| 113 | Dirac electrons broken to pieces. <i>Nature</i> , 2009, 462, 170-171. | 13.7 | 8 |
| 114 | Multi-frequency Shubnikov-de Haas oscillations in topological semimetal Pt ₂ HgSe ₃ . <i>2D Materials</i> , 2020, 7, 025042. | 2.0 | 7 |
| 115 | Magnetization dependent tunneling conductance of ferromagnetic barriers. <i>Nature Communications</i> , 2021, 12, 6659. | 5.8 | 6 |
| 116 | Transport Experiments on Three-Dimensional Topological Insulators. <i>Contemporary Concepts of Condensed Matter Science</i> , 2013, 6, 199-233. | 0.5 | 2 |
| 117 | Identifying atomically thin crystals with diffusively reflected light. <i>2D Materials</i> , 2021, 8, 045016. | 2.0 | 2 |
| 118 | Light sources with bias tunable spectrum based on van der Waals interface transistors. <i>Nature Communications</i> , 2022, 13, . | 5.8 | 2 |