

# Dongxia Shi

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

112  
papers

7,289  
citations

39  
h-index

85  
g-index

118  
ext. papers

8,561  
ext. citations

9.2  
avg, IF

5.54  
L-index

| #   | Paper   | IF   | Citations |
|-----|---|------|-----------|
| 112 | Spatially indirect intervalley excitons in bilayer WSe <sub>2</sub> . <i>Physical Review B</i> , <b>2022</b> , 105,   | 3.3  | 2         |
| 111 | Interlayer exciton complexes in bilayer MoS <sub>2</sub> . <i>Physical Review B</i> , <b>2022</b> , 105,  | 3.3  | 3         |
| 110 | Hot-Pressed Two-Dimensional Amorphous Metals and Their Electronic Properties. <i>Crystals</i> , <b>2022</b> , 12, 616   | 2.3  |           |
| 109 | A Reliable All-2D Materials Artificial Synapse for High Energy-Efficient Neuromorphic Computing. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2011083   | 15.6 | 20        |
| 108 | Wafer-Scale Oxygen-Doped MoS Monolayer.. <i>Small Methods</i> , <b>2021</b> , 5, e2100091   | 12.8 | 6         |
| 107 | Emergence of Chern Insulating States in Non-Magic Angle Twisted Bilayer Graphene. <i>Chinese Physics Letters</i> , <b>2021</b> , 38, 047301   | 1.8  | 6         |
| 106 | Thermally induced band hybridization in bilayer-bilayer MoS <sub>2</sub> /WS <sub>2</sub> heterostructure*. <i>Chinese Physics B</i> , <b>2021</b> , 30, 057801   | 1.2  | 2         |
| 105 | Inside Back Cover: Wafer-Scale Oxygen-Doped MoS <sub>2</sub> Monolayer (Small Methods 6/2021). <i>Small Methods</i> , <b>2021</b> , 5, 2170026  | 12.8 |           |
| 104 | Artificial Synapses: A Reliable All-2D Materials Artificial Synapse for High Energy-Efficient Neuromorphic Computing (Adv. Funct. Mater. 27/2021). <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2170197 | 15.6 | 1         |
| 103 | Ultra-low friction and edge-pinning effect in large-lattice-mismatch van der Waals heterostructures. <i>Nature Materials</i> , <b>2021</b> ,  | 27   | 21        |
| 102 | Employing defected monolayer MoS as charge storage materials. <i>Nanotechnology</i> , <b>2020</b> , 31, 235710  | 3.4  |           |
| 101 | Correlated states in twisted double bilayer graphene. <i>Nature Physics</i> , <b>2020</b> , 16, 520-525   | 16.2 | 194       |
| 100 | High-order minibands and interband Landau level reconstruction in graphene moiré superlattices. <i>Physical Review B</i> , <b>2020</b> , 102,   | 3.3  | 1         |
| 99  | Artificial Synapse Based on van der Waals Heterostructures with Tunable Synaptic Functions for Neuromorphic Computing. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 11945-11954                | 9.5  | 43        |
| 98  | Precise control of the interlayer twist angle in large scale MoS homostructures. <i>Nature Communications</i> , <b>2020</b> , 11, 2153  | 17.4 | 55        |
| 97  | Scratching lithography for wafer-scale MoS <sub>2</sub> monolayers. <i>2D Materials</i> , <b>2020</b> , 7, 045028   | 5.9  | 4         |
| 96  | A review of experimental advances in twisted graphene moiré superlattice. <i>Chinese Physics B</i> , <b>2020</b> , 29, 128104   | 1.2  | 2         |

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|----|--|------|-----|
| 95 | Vertical Integration of 2D Building Blocks for All-2D Electronics. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000550   | 6.4  | 10  |
| 94 | Observation of logarithmic Kohn anomaly in monolayer graphene. <i>Physical Review B</i> , <b>2020</b> , 102,   | 3.3  | 3   |
| 93 | In Situ Oxygen Doping of Monolayer MoS for Novel Electronics. <i>Small</i> , <b>2020</b> , 16, e2004276  | 11   | 21  |
| 92 | Large-scale flexible and transparent electronics based on monolayer molybdenum disulfide field-effect transistors. <i>Nature Electronics</i> , <b>2020</b> , 3, 711-717  | 28.4 | 90  |
| 91 | Wafer-Scale Highly Oriented Monolayer MoS with Large Domain Sizes. <i>Nano Letters</i> , <b>2020</b> , 20, 7193-7199   | 11.5 | 69  |
| 90 | Current-driven magnetization switching in a van der Waals ferromagnet FeGeTe. <i>Science Advances</i> , <b>2019</b> , 5, eaaw8904  | 14.3 | 119 |
| 89 | Atomic Layer Deposition: Atomic Layer Deposition of Al <sub>2</sub> O <sub>3</sub> Directly on 2D Materials for High-Performance Electronics (Adv. Mater. Interfaces 10/2019). <i>Advanced Materials Interfaces</i> , <b>2019</b> , 6, 1970065 | 4.6  | 1   |
| 88 | Strongly distinct electrical response between circular and valley polarization in bilayer transition metal dichalcogenides. <i>Physical Review B</i> , <b>2019</b> , 99,   | 3.3  | 10  |
| 87 | Strong and tunable interlayer coupling of infrared-active phonons to excitons in van der Waals heterostructures. <i>Physical Review B</i> , <b>2019</b> , 99,  | 3.3  | 6   |
| 86 | Boundary activated hydrogen evolution reaction on monolayer MoS. <i>Nature Communications</i> , <b>2019</b> , 10, 1348   | 17.4 | 168 |
| 85 | Atomic Layer Deposition of Al <sub>2</sub> O <sub>3</sub> Directly on 2D Materials for High-Performance Electronics. <i>Advanced Materials Interfaces</i> , <b>2019</b> , 6, 1802055   | 4.6  | 14  |
| 84 | Nonvolatile Memory: New Floating Gate Memory with Excellent Retention Characteristics (Adv. Electron. Mater. 4/2019). <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1970018  | 6.4  | 3   |
| 83 | Pressure-mediated contact quality improvement between monolayer MoS <sub>2</sub> and graphite. <i>Chinese Physics B</i> , <b>2019</b> , 28, 017301   | 1.2  | 2   |
| 82 | Band evolution of two-dimensional transition metal dichalcogenides under electric fields. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 083104   | 3.4  | 4   |
| 81 | Robust circular polarization of indirect Q-K transitions in bilayer 3RWS <sub>2</sub> . <i>Physical Review B</i> , <b>2019</b> , 100,  | 3.3  | 7   |
| 80 | Lattice Dynamics, Phonon Chirality, and SpinPhonon Coupling in 2D Itinerant Ferromagnet Fe <sub>3</sub> GeTe <sub>2</sub> . <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1904734   | 15.6 | 33  |
| 79 | Giant Valley Coherence at Room Temperature in 3R WS with Broken Inversion Symmetry. <i>Research</i> , <b>2019</b> , 2019, 6494565  | 7.8  | 7   |
| 78 | New Floating Gate Memory with Excellent Retention Characteristics. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800726   | 6.4  | 25  |

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|----|--|------|-----|
| 77 | Temperature-driven evolution of critical points, interlayer coupling, and layer polarization in bilayer MoS <sub>2</sub> . <i>Physical Review B</i> , <b>2018</b> , 97,                                      | 3.3  | 18  |
| 76 | Robust spin-valley polarization in commensurate MoS <sub>2</sub> /graphene heterostructures. <i>Physical Review B</i> , <b>2018</b> , 97,  | 3.3  | 20  |
| 75 | Bandgap broadening at grain boundaries in single-layer MoS <sub>2</sub> . <i>Nano Research</i> , <b>2018</b> , 11, 6102-6109   | 10   | 17  |
| 74 | Twist angle-dependent conductivities across MoS <sub>2</sub> /graphene heterojunctions. <i>Nature Communications</i> , <b>2018</b> , 9, 4068   | 17.4 | 59  |
| 73 | Electronic structure-dependent magneto-optical Raman effect in atomically thin WS <sub>2</sub> . <i>2D Materials</i> , <b>2018</b> , 5, 035028   | 5.9  | 9   |
| 72 | Magnetotransport Properties of Graphene Nanoribbons with Zigzag Edges. <i>Physical Review Letters</i> , <b>2018</b> , 120, 216601  | 7.4  | 19  |
| 71 | Strongly enhanced exciton-phonon coupling in two-dimensional WSe <sub>2</sub> . <i>Physical Review B</i> , <b>2018</b> , 97,   | 3.3  | 21  |
| 70 | Precisely Aligned Monolayer MoS Epitaxially Grown on h-BN basal Plane. <i>Small</i> , <b>2017</b> , 13, 1603005  | 11   | 73  |
| 69 | Epitaxial fabrication of two-dimensional NiSe <sub>2</sub> on Ni(111) substrate. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 113107  | 3.4  | 21  |
| 68 | Argon Plasma Induced Phase Transition in Monolayer MoS. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 10216-10219   | 16.4 | 234 |
| 67 | Graphene-Contacted Ultrashort Channel Monolayer MoS Transistors. <i>Advanced Materials</i> , <b>2017</b> , 29, 1702522   | 2.4  | 144 |
| 66 | Highly Sensitive MoS Humidity Sensors Array for Noncontact Sensation. <i>Advanced Materials</i> , <b>2017</b> , 29, 1702076  | 24   | 223 |
| 65 | A facile and efficient dry transfer technique for two-dimensional Van derWaals heterostructure. <i>Chinese Physics B</i> , <b>2017</b> , 26, 087306  | 1.2  | 7   |
| 64 | From Type-II Triply Degenerate Nodal Points and Three-Band Nodal Rings to Type-II Dirac Points in Centrosymmetric Zirconium Oxide. <i>Journal of Physical Chemistry Letters</i> , <b>2017</b> , 8, 5792-5797 | 6.4  | 49  |
| 63 | Wafer-Scale Growth and Transfer of Highly-Oriented Monolayer MoS Continuous Films. <i>ACS Nano</i> , <b>2017</b> , 11, 12001-12007   | 16.7 | 264 |
| 62 | Modulating PL and electronic structures of MoS <sub>2</sub> /graphene heterostructures via interlayer twisting angle. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 263106                             | 3.4  | 31  |
| 61 | Thermally Induced Graphene Rotation on Hexagonal Boron Nitride. <i>Physical Review Letters</i> , <b>2016</b> , 116, 126101   | 7.4  | 103 |
| 60 | Observation of Strong Interlayer Coupling in MoS <sub>2</sub> /WS <sub>2</sub> Heterostructures. <i>Advanced Materials</i> , <b>2016</b> , 28, 1950-6  | 24   | 172 |

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|----|---|------|-----|
| 59 | Patterned Peeling 2D MoS <sub>2</sub> off the Substrate. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 16546-50  | 9.5  | 28  |
| 58 | Integrated Flexible and High-Quality Thin Film Transistors Based on Monolayer MoS <sub>2</sub> . <i>Advanced Electronic Materials</i> , <b>2016</b> , 2, 1500379                                    | 6.4  | 37  |
| 57 | Gate tunable WSe <sub>2</sub> -BP van der Waals heterojunction devices. <i>Nanoscale</i> , <b>2016</b> , 8, 3254-8  | 7.7  | 50  |
| 56 | Hofstadter Butterfly and Many-Body Effects in Epitaxial Graphene Superlattice. <i>Nano Letters</i> , <b>2016</b> , 16, 2387-92  | 11.5 | 25  |
| 55 | The Effect of Twin Grain Boundary Tuned by Temperature on the Electrical Transport Properties of Monolayer MoS <sub>2</sub> . <i>Crystals</i> , <b>2016</b> , 6, 115                                | 2.3  | 15  |
| 54 | Rolling Up a Monolayer MoS <sub>2</sub> Sheet. <i>Small</i> , <b>2016</b> , 12, 3770-4  | 11   | 39  |
| 53 | Graphene nanoribbons epitaxy on boron nitride. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 113103   | 3.4  | 17  |
| 52 | Patterning monolayer graphene with zigzag edges on hexagonal boron nitride by anisotropic etching. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 053101                                       | 3.4  | 17  |
| 51 | Gate tunable MoS <sub>2</sub> Black phosphorus heterojunction devices. <i>2D Materials</i> , <b>2015</b> , 2, 034009  | 5.9  | 55  |
| 50 | Oxygen-Assisted Chemical Vapor Deposition Growth of Large Single-Crystal and High-Quality Monolayer MoS <sub>2</sub> . <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 15632-5 | 16.4 | 243 |
| 49 | Nanographene charge trapping memory with a large memory window. <i>Nanotechnology</i> , <b>2015</b> , 26, 455704  | 4.4  | 4   |
| 48 | Tunable piezoresistivity of nanographene films for strain sensing. <i>ACS Nano</i> , <b>2015</b> , 9, 1622-9  | 16.7 | 194 |
| 47 | Photoluminescence Enhancement in Monolayer Molybdenum Disulfide by Annealing in Air. <i>Acta Chimica Sinica</i> , <b>2015</b> , 73, 954   | 3.3  | 3   |
| 46 | A general route towards defect and pore engineering in graphene. <i>Small</i> , <b>2014</b> , 10, 2280-4  | 11   | 42  |
| 45 | Two-step growth of graphene with separate controlling nucleation and edge growth directly on SiO <sub>2</sub> substrates. <i>Carbon</i> , <b>2014</b> , 72, 387-392                                 | 10.4 | 38  |
| 44 | Scalable growth of high-quality polycrystalline MoS <sub>2</sub> monolayers on SiO <sub>2</sub> with tunable grain sizes. <i>ACS Nano</i> , <b>2014</b> , 8, 6024-30                                | 16.7 | 233 |
| 43 | Fabrication of high-quality all-graphene devices with low contact resistances. <i>Nano Research</i> , <b>2014</b> , 7, 1449-1456  | 10   | 14  |
| 42 | A route toward digital manipulation of water nanodroplets on surfaces. <i>ACS Nano</i> , <b>2014</b> , 8, 3955-60   | 16.7 | 28  |

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|----|--|------|--------|
| 41 | A review of nanographene: growth and applications. <i>Modern Physics Letters B</i> , <b>2014</b> , 28, 1430009   | 1.6  | 7      |
| 40 | Defect-enhanced coupling between graphene and SiO <sub>2</sub> substrate. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 063113                             | 3-4  | 4      |
| 39 | Tunable electroluminescence in planar graphene/SiO <sub>2</sub> memristors. <i>Advanced Materials</i> , <b>2013</b> , 25, 5593-84                                | 4    | 56     |
| 38 | Epitaxial growth of single-domain graphene on hexagonal boron nitride. <i>Nature Materials</i> , <b>2013</b> , 12, 792-7   | 3-7  | 745    |
| 37 | Isolated nanographene crystals for nano-floating gate in charge trapping memory. <i>Scientific Reports</i> , <b>2013</b> , 3, 2126                               | 4-9  | 46     |
| 36 | Studies of graphene-based nanoelectromechanical switches. <i>Nano Research</i> , <b>2012</b> , 5, 82-87  | 10   | 46     |
| 35 | Identification of structural defects in graphitic materials by gas-phase anisotropic etching. <i>Nanoscale</i> , <b>2012</b> , 4, 2005-9                         | 7-7  | 33     |
| 34 | Ultra-sensitive strain sensors based on piezoresistive nanographene films. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 063112                            | 3-4  | 244    |
| 33 | Competitive Growth and Etching of Epitaxial Graphene. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 26929-38                                       | 3-8  | 169318 |
| 32 | Graphene edge lithography. <i>Nano Letters</i> , <b>2012</b> , 12, 4642-6  | 11.5 | 39     |
| 31 | Multilevel resistive switching in planar graphene/SiO <sub>2</sub> nanogap structures. <i>ACS Nano</i> , <b>2012</b> , 6, 4214-21                                | 16.7 | 95     |
| 30 | Molecular cloisonnement multicomponent organic alternating nanostructures at vicinal surfaces with tunable length scales. <i>Small</i> , <b>2012</b> , 8, 535-40 | 11   | 1      |
| 29 | Growth, characterization, and properties of nanographene. <i>Small</i> , <b>2012</b> , 8, 1429-35  | 11   | 77     |
| 28 | Identifying multiple configurations of complex molecules on metal surfaces. <i>Small</i> , <b>2012</b> , 8, 796-806, 795   | 11   | 4      |
| 27 | Surfaces: Identifying Multiple Configurations of Complex Molecules on Metal Surfaces (Small 6/2012). <i>Small</i> , <b>2012</b> , 8, 795-795                     | 11   | 1      |
| 26 | Vapour-phase graphene epitaxy at low temperatures. <i>Nano Research</i> , <b>2012</b> , 5, 258-264   | 10   | 30     |
| 25 | Restoration of graphene from graphene oxide by defect repair. <i>Carbon</i> , <b>2012</b> , 50, 2581-2587  | 10.4 | 205    |
| 24 | Reducing the contact resistance of SiNW devices by employing a heavily doped carrier injection layer. <i>Nanotechnology</i> , <b>2012</b> , 23, 305701           | 3-4  |        |

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|----|--|------|-----|
| 23 | Observation of Raman g-peak split for graphene nanoribbons with hydrogen-terminated zigzag edges. <i>Nano Letters</i> , <b>2011</b> , 11, 4083-8   | 11.5 | 47  |
| 22 | Super-elastic graphene ripples for flexible strain sensors. <i>ACS Nano</i> , <b>2011</b> , 5, 3645-50   | 16.7 | 542 |
| 21 | Catalyst-free growth of nanographene films on various substrates. <i>Nano Research</i> , <b>2011</b> , 4, 315-321  | 10   | 192 |
| 20 | Patterning graphene with zigzag edges by self-aligned anisotropic etching. <i>Advanced Materials</i> , <b>2011</b> , 23, 3061-5  | 24   | 150 |
| 19 | Investigation on interface related charge trap and loss characteristics of high-k based trapping structures by electrostatic force microscopy. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 223504   | 3.4  | 18  |
| 18 | Structural Transition and Thermal Stability of a Coronene Molecular Monolayer on Cu(110). <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 11180-11184  | 3.8  | 5   |
| 17 | An anisotropic etching effect in the graphene basal plane. <i>Advanced Materials</i> , <b>2010</b> , 22, 4014-9  | 24   | 220 |
| 16 | Highly Ordered, Millimeter-Scale, Continuous, Single-Crystalline Graphene Monolayer Formed on Ru (0001). <i>Advanced Materials</i> , <b>2009</b> , 21, 2777-2780   | 24   | 351 |
| 15 | Alternating the Crystalline Structural Transition of Coronene Molecular Overlayers on Ag(110) through Temperature Increase. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 17643-17647  | 3.8  | 8   |
| 14 | Reversible, erasable, and rewritable nanorecording on an H2 rotaxane thin film. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 2204-5  | 16.4 | 70  |
| 13 | Processing of an atomically smooth Ge(001) surface on a large scale. <i>Nanotechnology</i> , <b>2006</b> , 17, 2396-2398   | 3.4  | 6   |
| 12 | Synthesis, characterization and self-assemblies of magnetite nanoparticles. <i>Surface and Interface Analysis</i> , <b>2006</b> , 38, 1063-1067  | 1.5  | 18  |
| 11 | Manipulation and four-probe analysis of nanowires in UHV by application of four tunneling microscope tips: a new method for the investigation of electrical transport through nanowires. <i>Surface and Interface Analysis</i> , <b>2006</b> , 38, 1096-1102 | 1.5  | 11  |
| 10 | Highly ordered self-assembly with large area of Fe3O4 nanoparticles and the magnetic properties. <i>Journal of Physical Chemistry B</i> , <b>2005</b> , 109, 23233-6   | 3.4  | 206 |
| 9  | Two-dimensional self-organization of 1-nonanethiol-capped gold nanoparticles. <i>Science Bulletin</i> , <b>2001</b> , 46, 996-998  |      | 11  |
| 8  | Formation of Silver Nanoparticles and Self-Assembled Two-Dimensional Ordered Superlattice. <i>Langmuir</i> , <b>2001</b> , 17, 1571-1575   | 4    | 238 |
| 7  | Synthesis and characterization of C3N4 hard films. <i>Science in China Series A: Mathematics</i> , <b>2000</b> , 43, 185-198   |      | 8   |
| 6  | A new model of phycobilisome in <i>Spirulina platensis</i> . <i>Science in China Series C: Life Sciences</i> , <b>1999</b> , 42, 74-9  |      | 5   |

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|---|---|-----|---|
| 5 | Study on surface and interface structures of nanocrystalline silicon by scanning tunneling microscopy. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , <b>1997</b> , 15, 1313 |     | 1 |
| 4 | Scanning tunneling microscope study of polyacrylonitrile-based carbon fibers. <i>Journal of Materials Research</i> , <b>1997</b> , 12, 2543-2547  | 2.5 | 4 |
| 3 | Gate-tunable large-scale flexible monolayer MoS <sub>2</sub> devices for photodetectors and optoelectronic synapses. <i>Nano Research</i> , 1   | 10  | 6 |
| 2 | Highly Stretchable MoS <sub>2</sub> -Based Transistors with Opto-Synaptic Functionalities. <i>Advanced Electronic Materials</i> , 2200238   | 6.4 | 1 |
| 1 | Rail-to-Rail MoS <sub>2</sub> Inverters. <i>ACS Applied Electronic Materials</i> ,  |     | 4 |