

# Lei Liu

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5854201/publications.pdf>

Version: 2024-02-01

44  
papers

2,271  
citations

394421

19  
h-index

243625

44  
g-index

45  
all docs

45  
docs citations

45  
times ranked

4171  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Heteroepitaxial Growth of Two-Dimensional Hexagonal Boron Nitride Templated by Graphene Edges. <i>Science</i> , 2014, 343, 163-167.  | 12.6 | 479       |
| 2  | Universal mechanical exfoliation of large-area 2D crystals. <i>Nature Communications</i> , 2020, 11, 2453.   | 12.8 | 394       |
| 3  | Synthesis of Millimeter-Size Hexagon-Shaped Graphene Single Crystals on Resolidified Copper. <i>ACS Nano</i> , 2013, 7, 8924-8931.   | 14.6 | 178       |
| 4  | Nanosphere Lithography for the Fabrication of Ultranarrow Graphene Nanoribbons and On-Chip Bandgap Tuning of Graphene. <i>Advanced Materials</i> , 2011, 23, 1246-1251.  | 21.0 | 126       |
| 5  | Bandgap engineering of graphene: A density functional theory study. <i>Applied Physics Letters</i> , 2009, 95, .   | 3.3  | 121       |
| 6  | Three-dimensional monolithic micro-LED display driven by atomically thin transistor matrix. <i>Nature Nanotechnology</i> , 2021, 16, 1231-1236.  | 31.5 | 120       |
| 7  | Electrical Conductivity, Chemistry, and Bonding Alternations under Graphene Oxide to Graphene Transition As Revealed by <i>In Situ</i> TEM. <i>ACS Nano</i> , 2011, 5, 4401-4406.  | 14.6 | 98        |
| 8  | Direct observation of highly confined phonon polaritons in suspended monolayer hexagonal boron nitride. <i>Nature Materials</i> , 2021, 20, 43-48.   | 27.5 | 84        |
| 9  | Spatially resolved one-dimensional boundary states in graphene-hexagonal boron nitride planar heterostructures. <i>Nature Communications</i> , 2014, 5, 5403.  | 12.8 | 71        |
| 10 | Unusual role of epilayer-substrate interactions in determining orientational relations in van der Waals epitaxy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 16670-16675.              | 7.1  | 64        |
| 11 | Tunneling characteristics in chemical vapor deposited graphene-hexagonal boron nitride-graphene junctions. <i>Applied Physics Letters</i> , 2014, 104, .   | 3.3  | 49        |
| 12 | Wet-Chemistry-Assisted Nanotube-Substitution Reaction for High-Efficiency and Bulk-Quantity Synthesis of Boron- and Nitrogen-Codoped Single-Walled Carbon Nanotubes. <i>Journal of the American Chemical Society</i> , 2011, 133, 13216-13219. | 13.7 | 39        |
| 13 | Controlled oxidative functionalization of monolayer graphene by water-vapor plasma etching. <i>Carbon</i> , 2012, 50, 3039-3044.   | 10.3 | 35        |
| 14 | High-efficiency modulation of coupling between different polaritons in an in-plane graphene/hexagonal boron nitride heterostructure. <i>Nanoscale</i> , 2019, 11, 2703-2709.   | 5.6  | 24        |
| 15 | Four-dimensional vibrational spectroscopy for nanoscale mapping of phonon dispersion in BN nanotubes. <i>Nature Communications</i> , 2021, 12, 1179.   | 12.8 | 24        |
| 16 | Carbon nanotube transistors with graphene oxide films as gate dielectrics. <i>Science China: Physics, Mechanics and Astronomy</i> , 2010, 53, 828-833.   | 5.1  | 23        |
| 17 | Ferroelectric Gated Electrical Transport in CdS Nanotetrapods. <i>Nano Letters</i> , 2011, 11, 1913-1918.  | 9.1  | 23        |
| 18 | Visualizing grain boundaries in monolayer MoSe <sub>2</sub> using mild H <sub>2</sub> O vapor etching. <i>Nano Research</i> , 2018, 11, 4082-4089.   | 10.4 | 22        |

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 19 | Microscopic Kinetics Pathway of Salt Crystallization in Graphene Nanocapillaries. <i>Physical Review Letters</i> , 2021, 126, 136001.   | 7.8  | 22        |
| 20 | Two-bit ferroelectric field-effect transistor memories assembled on individual nanotubes. <i>Nanotechnology</i> , 2009, 20, 475305.   | 2.6  | 20        |
| 21 | Electrical Control of Circular Photogalvanic Spin-Valley Photocurrent in a Monolayer Semiconductor. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 3334-3341.  | 8.0  | 19        |
| 22 | Sub-10 nm stable graphene quantum dots embedded in hexagonal boron nitride. <i>Nanoscale</i> , 2019, 11, 4226-4230.   | 5.6  | 18        |
| 23 | Synthesis of Honeycomb-Structured Beryllium Oxide via Graphene Liquid Cells. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 15734-15740.  | 13.8 | 18        |
| 24 | Towards the controlled CVD growth of graphitic B <sup>15</sup> C <sup>13</sup> N atomic layer films: The key role of B <sup>15</sup> C <sup>13</sup> delivery molecular precursor. <i>Nano Research</i> , 2016, 9, 1221-1235. | 10.4 | 16        |
| 25 | Interplay between intercalated oxygen superstructures and monolayer h-BN on Cu(100). <i>Physical Review B</i> , 2016, 94, .   | 3.2  | 16        |
| 26 | Higher-order harmonic resonances and mechanical properties of individual cadmium sulphide nanowires measured by in situ transmission electron microscopy. <i>Journal of Electron Microscopy</i> , 2010, 59, 285-289.          | 0.9  | 15        |
| 27 | Femtosecond Laser Irradiation-Mediated MoS <sub>2</sub> Metal Contact Engineering for High-Performance Field-Effect Transistors and Photodetectors. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 54246-54257.    | 8.0  | 15        |
| 28 | Experimentally determined edge orientation of triangular crystals of hexagonal boron nitride. <i>Physica Status Solidi (B): Basic Research</i> , 2017, 254, 1700069.  | 1.5  | 13        |
| 29 | Visualizing Anisotropic Oxygen Diffusion in Ceria under Activated Conditions. <i>Physical Review Letters</i> , 2020, 124, 056002.   | 7.8  | 12        |
| 30 | Direct imaging of the nitrogen-rich edge in monolayer hexagonal boron nitride and its band structure tuning. <i>Nanoscale</i> , 2019, 11, 20676-20684.  | 5.6  | 10        |
| 31 | Raman spectra evidence for the covalent-like quasi-bonding between exfoliated MoS <sub>2</sub> and Au films. <i>Science China Information Sciences</i> , 2021, 64, 1.   | 4.3  | 10        |
| 32 | Modification of the Interlayer Coupling and Chemical Reactivity of Multilayer Graphene through Wrinkle Engineering. <i>Chemistry of Materials</i> , 2021, 33, 2506-2515.  | 6.7  | 10        |
| 33 | Synthesis of centimeter-scale high-quality polycrystalline hexagonal boron nitride films from Fe fluxes. <i>Nanoscale</i> , 2021, 13, 11223-11231.  | 5.6  | 9         |
| 34 | Mapping the layer count of few-layer hexagonal boron nitride at high lateral spatial resolutions. <i>2D Materials</i> , 2018, 5, 015007.  | 4.4  | 8         |
| 35 | Graphene-based in-plane heterostructures for atomically thin electronics. <i>New Carbon Materials</i> , 2018, 33, 481-492.  | 6.1  | 8         |
| 36 | Synthesis of nitrogen-doped single-walled carbon nanotubes and monitoring of doping by Raman spectroscopy. <i>Chinese Physics B</i> , 2013, 22, 086101.   | 1.4  | 7         |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 37 | Engineering Interlayer Electron-Phonon Coupling in WS <sub>2</sub> /BN Heterostructures. Nano Letters, 2022, 22, 2725-2733.  | 9.1  | 7         |
| 38 | Laser annealing towards high-performance monolayer MoS <sub>2</sub> and WSe <sub>2</sub> field effect transistors. Nanotechnology, 2020, 31, 30LT02.                   | 2.6  | 6         |
| 39 | Isotope Effect of Hydrogen Functionalization in Layered Germanane: Implications for Germanane-Based Optoelectronics. ACS Applied Nano Materials, 2021, 4, 13708-13715. | 5.0  | 6         |
| 40 | Peculiar Plasmon Peak Position in Electron Energy Loss Spectrum of Hexagonal Boron Nitride/Graphene Double Layer. Microscopy and Microanalysis, 2015, 21, 985-986.     | 0.4  | 5         |
| 41 | Low-temperature epitaxy of transferable high-quality Pd(111) films on hybrid graphene/Cu(111) substrate. Nano Research, 2019, 12, 2712-2717.                           | 10.4 | 5         |
| 42 | Valley Polarization in Superacid-Treated Monolayer MoS <sub>2</sub> . ACS Applied Electronic Materials, 2020, 2, 1981-1988.  | 4.3  | 4         |
| 43 | Tunneling spectra of graphene on copper unraveled. Physical Chemistry Chemical Physics, 2016, 18, 17081-17090.   | 2.8  | 2         |
| 44 | Synthesis of Honeycomb-Structured Beryllium Oxide via Graphene Liquid Cells. Angewandte Chemie, 2020, 132, 15864-15870.  | 2.0  | 0         |