

Alexei Barinov

List of Publications by Year in descending order

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121
papers

5,201
citations

108046

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70
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125
all docs

125
docs citations

125
times ranked

9716
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Moiré Superlattice Effects and Band Structure Evolution in Near-30-Degree Twisted Bilayer Graphene. ACS Nano, 2022, 16, 1954-1962. | 7.3 | 6 |
| 2 | Large anomalous Hall effect induced by weak ferromagnetism in the noncentrosymmetric antiferromagnet CoNb_3S_6 . Physical Review B, 2022, 105, . | 1.1 | 16 |
| 3 | Nanoscope correlations from curve fitting of photoelectron spectroscopy data cubes of lead zirconate titanate films. Results in Physics, 2022, 36, 105436. | 2.0 | 2 |
| 4 | Observation of flat bands in twisted bilayer graphene. Nature Physics, 2021, 17, 189-193. | 6.5 | 144 |
| 5 | Visualization of the electronic phase separation in superconducting $\text{KxFe}_2\text{ySe}_2$. Nano Research, 2021, 14, 823-828. | 5.8 | 4 |
| 6 | Observation and control of the weak topological insulator state in ZrTe_5 . Nature Communications, 2021, 12, 406. | 5.8 | 43 |
| 7 | Evidence for a higher-order topological insulator in a three-dimensional material built from van der Waals stacking of bismuth-halide chains. Nature Materials, 2021, 20, 473-479. | 13.3 | 98 |
| 8 | Atomic and electronic structure of two-dimensional $\text{Mo}(1-x)\text{W}_x\text{S}_2$ alloys. JPhys Materials, 2021, 4, 025004. | 1.8 | 7 |
| 9 | Fermi Surface Geometry and Inhomogeneous Electronic States in $\text{Pr}_{1.3}\text{La}_{0.7}\text{Ce}_x\text{CuO}_4$ ($x = 0.05$) with Small Superconducting Volume Fraction. Journal of the Physical Society of Japan, 2021, 90, 054704. | 0.7 | 0 |
| 10 | Observation of topological superconductivity in a stoichiometric transition metal dichalcogenide 2M-WS_2 . Nature Communications, 2021, 12, 2874. | 5.8 | 43 |
| 11 | Surface Electronic States and Inclining Surfaces in MoTe_2 Probed by Photoemission Spectromicroscopy. Journal of the Physical Society of Japan, 2021, 90, 084704. | 0.7 | 1 |
| 12 | Moving Dirac nodes by chemical substitution. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 7 |
| 13 | Ghost anti-crossings caused by interlayer umklapp hybridization of bands in 2D heterostructures. 2D Materials, 2021, 8, 015016. | 2.0 | 8 |
| 14 | Field-Dependent Band Structure Measurements in Two-Dimensional Heterostructures. Nano Letters, 2021, , . | 4.5 | 2 |
| 15 | Observation of Topological Electronic Structure in Quasi-1D Superconductor TaSe_3 . Matter, 2020, 3, 2055-2065. | 5.0 | 26 |
| 16 | Determination of interatomic coupling between two-dimensional crystals using angle-resolved photoemission spectroscopy. Nature Communications, 2020, 11, 3582. | 5.8 | 10 |
| 17 | Atomic reconstruction in twisted bilayers of transition metal dichalcogenides. Nature Nanotechnology, 2020, 15, 592-597. | 15.6 | 245 |
| 18 | Scanning Photoelectron Microscopy: Past, Present and Future. Springer Handbooks, 2020, , 427-448. | 0.3 | 1 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Visualizing electrostatic gating effects in two-dimensional heterostructures. Nature, 2019, 572, 220-223. | 13.7 | 135 |
| 20 | Inhomogeneous charge distribution in a self-doped EuFBiS ₂ superconductor. Physical Review B, 2019, 100, . | 1.1 | 7 |
| 21 | Indirect to Direct Gap Crossover in Two-Dimensional InSe Revealed by Angle-Resolved Photoemission Spectroscopy. ACS Nano, 2019, 13, 2136-2142. | 7.3 | 63 |
| 22 | A weak topological insulator state in quasi-one-dimensional bismuth iodide. Nature, 2019, 566, 518-522. | 13.7 | 119 |
| 23 | Metallic phase in stoichiometric CeOBiS ₂ revealed by space-resolved ARPES. Scientific Reports, 2018, 8, 2011. | 1.6 | 15 |
| 24 | Single crystalline electronic structure and growth mechanism of aligned square graphene sheets. APL Materials, 2018, 6, . | 2.2 | 2 |
| 25 | Photoelectron microscopy at Elettra: Recent advances and perspectives. Journal of Electron Spectroscopy and Related Phenomena, 2018, 224, 59-67. | 0.8 | 18 |
| 26 | Gold Dispersion and Activation on the Basal Plane of Single-Layer MoS ₂ . Journal of Physical Chemistry C, 2018, 122, 267-273. | 1.5 | 16 |
| 27 | Temperature dependent percolation mechanism for conductivity in $\text{Ca}_{0.37}\text{TiO}_3$ revealed by a microstructure study. Materials Research Express, 2018, 5, 126101. | 0.8 | 2 |
| 28 | VUV Pump and Probe of Phase Separation and Oxygen Interstitials in La ₂ NiO _{4+y} Using Spectromicroscopy. Condensed Matter, 2018, 3, 6. | 0.8 | 2 |
| 29 | Tuning electronic properties by oxidation-reduction reactions at graphene-ruthenium interfaces. Carbon, 2018, 138, 271-276. | 5.4 | 2 |
| 30 | Determination of band offsets, hybridization, and exciton binding in 2D semiconductor heterostructures. Science Advances, 2017, 3, e1601832. | 4.7 | 293 |
| 31 | Electronic band structure for occupied and unoccupied states of the natural topological superlattice phase Sb_2Te_3 . Physical Review B, 2017, 95, . | 1.1 | 4 |
| 32 | Substrate Doping Effect and Unusually Large Angle van Hove Singularity Evolution in Twisted Bi ₂ C ₂ and Multilayer Graphene. Advanced Materials, 2017, 29, 1606741. | 11.1 | 43 |
| 33 | Long-range magnetic interaction in Mn _x Ge _{1-x} : structural, spectromicroscopic and magnetic investigations. Journal of Materials Science, 2017, 52, 3309-3320. | 1.7 | 4 |
| 34 | Inhomogeneous electronic states associated with charge-orbital order/disorder in BaV ₁₀ O ₁₅ probed by photoemission spectromicroscopy. Physical Review B, 2017, 96, . | 1.1 | 3 |
| 35 | Electronic structure of self-doped layered $\text{EuF}_4\text{Bi}_2\text{S}_4$ material revealed by x-ray absorption spectroscopy and photoelectron spectromicroscopy. Physical Review B, 2017, 95, . | 1.1 | 15 |
| 36 | Laterally Selective Oxidation of Large-Scale Graphene with Atomic Oxygen. Journal of Physical Chemistry C, 2017, 121, 27915-27922. | 1.5 | 18 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | Polarization landscape effects in soft X-ray-induced surface chemical decomposition of lead zirconate, evidenced by photoelectron spectromicroscopy. <i>Nanoscale</i> , 2017, 9, 11055-11067. | 2.8 | 13 |
| 38 | Evolution of the Valley Position in Bulk Transition-Metal Chalcogenides and Their Monolayer Limit. <i>Nano Letters</i> , 2016, 16, 4738-4745. | 4.5 | 80 |
| 39 | The nature of the Fe-graphene interface at the nanometer level. <i>AIP Conference Proceedings</i> , 2016, , . | 0.3 | 0 |
| 40 | Band structure characterization of WS ₂ grown by chemical vapor deposition. <i>Applied Physics Letters</i> , 2016, 108, . | 1.5 | 40 |
| 41 | Mesoscopic Stripes in Antiferromagnetic Fe Chalcogenide Probed by Scanning Photoelectron Spectromicroscopy. <i>Journal of the Physical Society of Japan</i> , 2016, 85, 033702. | 0.7 | 4 |
| 42 | Spectroscopic characterization of charge carrier anisotropic motion in twisted few-layer graphene. <i>Scientific Reports</i> , 2015, 5, 16388. | 1.6 | 11 |
| 43 | Oxygen Reduction by Lithiated Graphene and Graphene-Based Materials. <i>ACS Nano</i> , 2015, 9, 320-326. | 7.3 | 28 |
| 44 | Comparing Graphene Growth on Cu(111) versus Oxidized Cu(111). <i>Nano Letters</i> , 2015, 15, 917-922. | 4.5 | 107 |
| 45 | Spin-orbit coupling in the band structure of monolayer WSe ₂ . <i>Journal of Physics Condensed Matter</i> , 2015, 27, 182201. | 0.7 | 67 |
| 46 | Photoelectron spectroscopy and spectro-microscopy of Pb(Zr,Ti)O ₃ (1 1 1) thin layers: Imaging ferroelectric domains with binding energy contrast. <i>Applied Surface Science</i> , 2015, 352, 73-81. | 3.1 | 16 |
| 47 | Substrate interactions with suspended and supported monolayer MoS ₂ : Angle-resolved photoemission spectroscopy. <i>Physical Review B</i> , 2015, 91, . | 1.1 | 56 |
| 48 | The nature of the Fe-graphene interface at the nanometer level. <i>Nanoscale</i> , 2015, 7, 2450-2460. | 2.8 | 44 |
| 49 | Spectro-microscopic photoemission evidence of charge uncompensated areas in Pb(Zr,Ti)O ₃ (001) layers. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 509-520. | 1.3 | 43 |
| 50 | High-resolution characterization of microstructural evolution in Rb _x Bi _{1-x} on annealing. <i>Physical Review B</i> , 2014, 90, . | 1.1 | 15 |
| 51 | Electronic structure of LaO _{1-x} FxBiSe ₂ (x=0.18) revealed by photoelectron spectromicroscopy. <i>Physical Review B</i> , 2014, 90, . | 1.1 | 15 |
| 52 | Spectromicroscopy of electronic phase separation in KxFe ₂ Se ₂ superconductor. <i>Scientific Reports</i> , 2014, 4, 5592. | 1.6 | 35 |
| 53 | Is graphene on copper doped?. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013, 7, 643-646. | 1.2 | 30 |
| 54 | Microscopic characterisation of suspended graphene grown by chemical vapour deposition. <i>Nanoscale</i> , 2013, 5, 9057. | 2.8 | 10 |

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|----|--|------|-----------|
| 55 | Weak mismatch epitaxy and structural Feedback in graphene growth on copper foil. Nano Research, 2013, 6, 99-112. | 5.8 | 73 |
| 56 | Reactivity of Carbon in Lithium-Oxygen Battery Positive Electrodes. Nano Letters, 2013, 13, 4697-4701. | 4.5 | 262 |
| 57 | Microscopic View on a Chemical Vapor Deposition Route to Boron-Doped Graphene Nanostructures. Chemistry of Materials, 2013, 25, 1490-1495. | 3.2 | 130 |
| 58 | Photoelectron spectromicroscopy study of metal-insulator transition in Na WO ₃ . Solid State Communications, 2013, 166, 66-69. | 0.9 | 2 |
| 59 | Photoemission microscopy study of the two metal-insulator transitions in Cr-doped V ₂ O ₃ . Applied Physics Letters, 2012, 100, 014108. | 1.5 | 9 |
| 60 | Electrochemical activation of molecular nitrogen at the Ir/YSZ interface. Physical Chemistry Chemical Physics, 2011, 13, 3394. | 1.3 | 18 |
| 61 | Nitrogen-Doped Graphene: Efficient Growth, Structure, and Electronic Properties. Nano Letters, 2011, 11, 5401-5407. | 4.5 | 685 |
| 62 | Mg and Si dopant incorporation and segregation in GaN. Physica Status Solidi (B): Basic Research, 2011, 248, 1810-1821. | 0.7 | 8 |
| 63 | Contactless monitoring of the diameter-dependent conductivity of GaAs nanowires. Nano Research, 2010, 3, 706-713. | 5.8 | 25 |
| 64 | Surface Patterning of Silver using an Electron-or Photon-Assisted Oxidation Reaction. ChemPhysChem, 2010, 11, 1525-1532. | 1.0 | 5 |
| 65 | Angle-resolved photoemission spectroscopy and imaging with a submicrometre probe at the SPECTROMICROSCOPY-3.2L beamline of Elettra. Journal of Synchrotron Radiation, 2010, 17, 445-450. | 1.0 | 124 |
| 66 | The electron density decay length effect on surface reactivity. Journal of Physics Condensed Matter, 2010, 22, 015001. | 0.7 | 9 |
| 67 | A microscopic view on the Mott transition in chromium-doped V ₂ O ₃ . Nature Communications, 2010, 1, 105. | 5.8 | 129 |
| 68 | Imaging and Spectroscopy of Multiwalled Carbon Nanotubes during Oxidation: Defects and Oxygen Bonding. Advanced Materials, 2009, 21, 1916-1920. | 11.1 | 85 |
| 69 | Synchrotron-based photoelectron microscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 601, 195-202. | 0.7 | 36 |
| 70 | Initial Stages of Oxidation on Graphitic Surfaces: Photoemission Study and Density Functional Theory Calculations. Journal of Physical Chemistry C, 2009, 113, 9009-9013. | 1.5 | 224 |
| 71 | Chapter 4 X-Ray Photoelectron Spectroscopy for Investigation of Heterogeneous Catalytic Processes. Advances in Catalysis, 2009, , 213-272. | 0.1 | 105 |
| 72 | Nanoscale morphology and oxidation of ion-sputtered Rh(110) and Ru(0001). Journal of Electron Spectroscopy and Related Phenomena, 2008, 166-167, 89-93. | 0.8 | 9 |

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| 73 | In-situ study of operating SOFC LSM/YSZ cathodes under polarization by photoelectron microscopy. Solid State Ionics, 2008, 179, 891-895. | 1.3 | 130 |
| 74 | Spectromicroscopy for Addressing the Surface and Electron Transport Properties of Individual 1-D Nanostructures and Their Networks. ACS Nano, 2008, 2, 1993-2000. | 7.3 | 86 |
| 75 | MgO-Supported Rhodium Particles and Films: Size, Morphology, and Reactivity. Journal of Physical Chemistry C, 2008, 112, 9040-9044. | 1.5 | 15 |
| 76 | Chemical patterning of Ag(111): Spatially confined oxide formation induced by electron beam irradiation. Applied Physics Letters, 2008, 93, 233117. | 1.5 | 7 |
| 77 | Initial stages of heteroepitaxial Mg growth on W(110): Early condensation, anisotropic strain, and self-organized patterns. Physical Review B, 2007, 75, . | 1.1 | 13 |
| 78 | Defect-Controlled Transport Properties of Metallic Atoms along Carbon Nanotube Surfaces. Physical Review Letters, 2007, 99, 046803. | 2.9 | 31 |
| 79 | Monitoring in situ catalytically active states of Ru catalysts for different methanol oxidation pathways. Physical Chemistry Chemical Physics, 2007, 9, 3648-3657. | 1.3 | 48 |
| 80 | Oxidation and Reduction of Ultrathin Nanocrystalline Ru Films on Silicon: A Model System for Ru-Capped Extreme Ultraviolet Lithography Optics. Journal of Physical Chemistry C, 2007, 111, 10988-10992. | 1.5 | 25 |
| 81 | Oxidation of methanol on Ru catalyst: Effect of the reagents partial pressures on the catalyst oxidation state and selectivity. Catalysis Today, 2007, 124, 71-79. | 2.2 | 28 |
| 82 | RECENT ADVANCES IN IMAGING WITH SPECTROSCOPIC ANALYSIS AT ELETTRA. , 2007, , 301-316. | | 0 |
| 83 | Degradation of organic light-emitting diode. , 2006, 6192, 442. | | 0 |
| 84 | Surface segregation of Si and Mg dopants in MOVPE grown GaN films revealed by X-ray photoemission spectro-microscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1725-1728. | 0.8 | 5 |
| 85 | Spectro-microscopy of Si doped GaN films. Nuclear Instruments & Methods in Physics Research B, 2006, 246, 79-84. | 0.6 | 3 |
| 86 | Catalytically active states of Ru(0001) catalyst in CO oxidation reaction. Journal of Catalysis, 2006, 239, 354-361. | 3.1 | 87 |
| 87 | Spectroscopic identification and imaging of surface processes occurring at microscopic and mesoscopic scales. Journal of Electron Spectroscopy and Related Phenomena, 2005, 144-147, 361-366. | 0.8 | 3 |
| 88 | Photoemission microscopy study of the temperature evolution of a Pd film deposited on a polycrystalline Ni substrate. Physical Review B, 2005, 72, . | 1.1 | 0 |
| 89 | Mechanism of dark-spot degradation of organic light-emitting devices. Applied Physics Letters, 2005, 86, 041105. | 1.5 | 53 |
| 90 | Initial Oxidation of a Rh(110) Surface Using Atomic or Molecular Oxygen and Reduction of the Surface Oxide by Hydrogen. Journal of Physical Chemistry B, 2005, 109, 13649-13655. | 1.2 | 48 |

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| 91 | Identification of Subsurface Oxygen Species Created during Oxidation of Ru(0001). Journal of Physical Chemistry B, 2005, 109, 14052-14058. | 1.2 | 75 |
| 92 | Interfacial interactions at Au/Si ₃ N ₄ /Si(111) and Ni/Si ₃ N ₄ /Si(111) structures with ultrathin nitride films. Applied Physics Letters, 2004, 84, 5031-5033. | 1.5 | 15 |
| 93 | 48-Channel electron detector for photoemission spectroscopy and microscopy. Review of Scientific Instruments, 2004, 75, 64-68. | 0.6 | 74 |
| 94 | Tuning Surface Reactivity via Electron Quantum Confinement. Physical Review Letters, 2004, 93, 196103. | 2.9 | 121 |
| 95 | Effects of annealing on the structure of the Au/Si(111)-H interface. Surface Science, 2004, 564, 121-130. | 0.8 | 13 |
| 96 | Observation of single-walled carbon nanotubes by photoemission microscopy. Carbon, 2004, 42, 559-563. | 5.4 | 12 |
| 97 | Spectroscopic characterization of contaminants and interaction with gases in single-walled carbon nanotubes. Carbon, 2004, 42, 2099-2112. | 5.4 | 51 |
| 98 | Spectromicroscopy of ultrathin Pd films on W(110). Applied Surface Science, 2004, 238, 138-142. | 3.1 | 7 |
| 99 | Gas-Phase Transport during the Spreading of MoO ₃ on Al ₂ O ₃ Support Surfaces: A Photoelectron Spectromicroscopic Study. Journal of Physical Chemistry B, 2004, 108, 14223-14231. | 1.2 | 9 |
| 100 | Spectroscopic characterization of contaminants and interaction with gases in single-walled carbon nanotubes. Carbon, 2004, 42, 2099-2099. | 5.4 | 5 |
| 101 | Spectro-microscopy of ultra-thin SiN films on Si(). Nuclear Instruments & Methods in Physics Research B, 2003, 200, 79-84. | 0.6 | 10 |
| 102 | Role of gold segregation in the growth mode and the morphology of Fe/Au() magnetic thin films. Surface Science, 2003, 532-535, 63-69. | 0.8 | 3 |
| 103 | Extremely small diffusion constant of Cs in multiwalled carbon nanotubes. Journal of Applied Physics, 2002, 92, 7527-7531. | 1.1 | 15 |
| 104 | Scanning photoelectron microscopy study of laser-induced surface reactions in Pt/Si(001). Applied Physics Letters, 2002, 81, 3981-3983. | 1.5 | 5 |
| 105 | Electronic structure of carbon nanotubes studied by photoelectron spectromicroscopy. Physical Review B, 2002, 66, . | 1.1 | 36 |
| 106 | On the origin of stationary concentration patterns in the H ₂ +O ₂ reaction on a microstructured Rh(110)/Pt surface with potassium. Journal of Chemical Physics, 2002, 117, 2923-2933. | 1.2 | 15 |
| 107 | Spectral and spatial anisotropy of the oxide growth on Ru(0001). Journal of Chemical Physics, 2002, 117, 8104-8109. | 1.2 | 47 |
| 108 | THE EXPLOITATION OF MULTICHANNEL DETECTION IN SCANNING PHOTOEMISSION MICROSCOPY. Surface Review and Letters, 2002, 09, 705-708. | 0.5 | 12 |

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| 109 | DIRECTIONAL TRANSPORT OF K ON CATALYTIC METAL SURFACES. Surface Review and Letters, 2002, 09, 751-758. | 0.5 | 11 |
| 110 | MORPHOLOGY AND CHEMISTRY OF S-TREATED GaAs(001) SURFACES. Surface Review and Letters, 2002, 09, 413-423. | 0.5 | 1 |
| 111 | Interfacial reactions and Schottky barrier properties of composite patterned metal/GaN interfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 1918. | 1.6 | 2 |
| 112 | Surface Electromigration Patterns in a Confined Adsorbed Metal Film: Ga on GaN. ChemPhysChem, 2002, 3, 1019-1023. | 1.0 | 8 |
| 113 | Visible and UV pulsed laser processing of the Ti/Si(0 0 1) interface studied by XPS microscopy with synchrotron radiation. Surface Science, 2001, 482-485, 141-146. | 0.8 | 3 |
| 114 | Spectromicroscopy of interfacial interactions between thin Ni films and a Au α -Si surface. Applied Surface Science, 2001, 171, 265-274. | 3.1 | 4 |
| 115 | Stages of formation and thermal stability of a gold-n-GaN interface. Journal Physics D: Applied Physics, 2001, 34, 279-284. | 1.3 | 14 |
| 116 | Au/GaN interface: Initial stages of formation and temperature-induced effects. Physical Review B, 2001, 63, . | 1.1 | 21 |
| 117 | Defect-induced lateral chemical heterogeneity at Ni/GaN interfaces and its effect on the electronic properties of the interface. Applied Physics Letters, 2001, 79, 2752-2754. | 1.5 | 19 |
| 118 | Lateral heterogeneity in the surface composition after laser processing of Ti/Si interface contaminated with oxygen. Applied Physics Letters, 2001, 79, 191-193. | 1.5 | 4 |
| 119 | Thermal and pulsed laser induced surface reactions in Ti/Si(001) interfaces studied by spectromicroscopy with synchrotron radiation. Journal of Applied Physics, 2001, 90, 4361-4369. | 1.1 | 12 |
| 120 | Direct experimental evidence of insensitivity of local Schottky barriers to lateral chemical inhomogeneity in case studies of metal/GaN(0001) interfaces. Physical Review B, 2001, 64, . | 1.1 | 9 |
| 121 | Domain Dependent Fermi Arcs Observed in a Striped Phase Dichalcogenide. Advanced Quantum Technologies, 0, , 2200029. | 1.8 | 0 |