

Ivan Blum

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

4,828
citations

394421

19
h-index

175258

52
g-index

61
all docs

61
docs citations

61
times ranked

5354
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | <i>In Situ</i> Spectroscopic Study of the Optomechanical Properties of Evaporating Field Ion Emitters. Physical Review Applied, 2021, 15, . | 3.8 | 6 |
| 2 | Surface Microscopy of Atomic and Molecular Hydrogen from Field-Evaporating Semiconductors. Journal of Physical Chemistry C, 2021, 125, 17078-17087. | 3.1 | 4 |
| 3 | Effect of electrical conduction on the saturation of electron emission from diamond needles. , 2020, , . | | 0 |
| 4 | Detecting Dissociation Dynamics of Phosphorus Molecular Ions by Atom Probe Tomography. Journal of Physical Chemistry A, 2020, 124, 10977-10988. | 2.5 | 6 |
| 5 | Super-resolution Optical Spectroscopy of Nanoscale Emitters within a Photonic Atom Probe. Nano Letters, 2020, 20, 8733-8738. | 9.1 | 8 |
| 6 | Effect of electrical conduction on the electron emission properties of diamond needles. New Journal of Physics, 2020, 22, 083044. | 2.9 | 4 |
| 7 | Capacitive effect in ultrafast laser-induced emission from low conductance diamond nanotips. New Journal of Physics, 2020, 22, 083055. | 2.9 | 1 |
| 8 | Effect of laser illumination on the electrical conductivity of single-crystal diamond needles. Journal of Applied Physics, 2019, 126, 045710. | 2.5 | 5 |
| 9 | Compositional accuracy in atom probe tomography analyses performed on III-N light emitting diodes. Journal of Applied Physics, 2019, 126, 124307. | 2.5 | 14 |
| 10 | Unraveling the Metastability of $C_{n</math>+} (n = 2-4) Clusters. Journal of Physical Chemistry Letters, 2019, 10, 581-588.$ | 4.6 | 24 |
| 11 | Photoassisted and multiphoton emission from single-crystal diamond needles. Nanoscale, 2019, 11, 6852-6858. | 5.6 | 14 |
| 12 | Conduction mechanisms and voltage drop during field electron emission from diamond needles. Ultramicroscopy, 2019, 202, 51-56. | 1.9 | 7 |
| 13 | Strain sensitivity and symmetry of 2.65 eV color center in diamond nanoscale needles. Applied Physics Letters, 2019, 114, 143104. | 3.3 | 1 |
| 14 | Field emission microscopy pattern of a single-crystal diamond needle under ultrafast laser illumination. New Journal of Physics, 2019, 21, 113060. | 2.9 | 3 |
| 15 | Optothermal response of a single silicon nanotip. Physical Review B, 2018, 97, . | 3.2 | 7 |
| 16 | Compositional accuracy of atom probe tomography measurements in GaN: Impact of experimental parameters and multiple evaporation events. Ultramicroscopy, 2018, 187, 126-134. | 1.9 | 27 |
| 17 | Thermal diffusivity of diamond nanowires studied by laser assisted atom probe tomography. Applied Physics Letters, 2018, 112, . | 3.3 | 10 |
| 18 | Dissociation of GaN ₂ ⁺ and AlN ₂ ⁺ in APT: Analysis of experimental measurements. Journal of Chemical Physics, 2018, 149, 134311. | 3.0 | 11 |

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|----|---|-----|-----------|
| 19 | Composition Metrology of Ternary Semiconductor Alloys Analyzed by Atom Probe Tomography. Journal of Physical Chemistry C, 2018, 122, 16704-16714. | 3.1 | 22 |
| 20 | Optimizing Atom Probe Analysis with Synchronous Laser Pulsing and Voltage Pulsing. Microscopy and Microanalysis, 2017, 23, 221-226. | 0.4 | 4 |
| 21 | Electronic structure and stability of the SiO ₂ ⁺ dications produced in tomographic atom probe experiments. Journal of Chemical Physics, 2017, 147, 164301. | 3.0 | 17 |
| 22 | Simulation of field-induced molecular dissociation in atom-probe tomography: Identification of a neutral emission channel. Physical Review A, 2017, 95, . | 2.5 | 43 |
| 23 | Three-dimensional atomic-scale investigation of ZnO-Mg _x Zn _{1-x} O m-plane heterostructures. Applied Physics Letters, 2017, 111, . | 3.3 | 24 |
| 24 | Field-Dependent Measurement of GaAs Composition by Atom Probe Tomography. Microscopy and Microanalysis, 2017, 23, 1067-1075. | 0.4 | 20 |
| 25 | Carrier Localization in GaN/AlN Quantum Dots As Revealed by Three-Dimensional Multimicroscopy. Nano Letters, 2017, 17, 4261-4269. | 9.1 | 14 |
| 26 | Field emission and field ion microscopy from single crystal diamond needle. , 2017, , . | | 0 |
| 27 | Multi-excitonic emission from Stranski-Krastanov GaN/AlN quantum dots inside a nanoscale tip. Applied Physics Letters, 2017, 111, . | 3.3 | 11 |
| 28 | Wavelength and shape dependent strong-field photoemission from silver nanotips. New Journal of Physics, 2016, 18, 103010. | 2.9 | 16 |
| 29 | Atom Probe Sample Preparation. , 2016, , 97-121. | | 22 |
| 30 | Assessing the Composition of Wide Bandgap Compound Semiconductors by Atom Probe Tomography: A Metrological Problem. Microscopy and Microanalysis, 2016, 22, 650-651. | 0.4 | 1 |
| 31 | Multi-microscopy study of the influence of stacking faults and three-dimensional In distribution on the optical properties of m-plane InGaN quantum wells grown on microwire sidewalls. Applied Physics Letters, 2016, 108, . | 3.3 | 28 |
| 32 | Dissociation Dynamics of Molecular Ions in High dc Electric Field. Journal of Physical Chemistry A, 2016, 120, 3654-3662. | 2.5 | 26 |
| 33 | Role of the resistivity of insulating field emitters on the energy of field-ionised and field-evaporated atoms. Ultramicroscopy, 2015, 159, 139-146. | 1.9 | 8 |
| 34 | Three-Dimensional Atom-Probe Tomographic Analyses of Lead-Telluride Based Thermoelectric Materials. Jom, 2014, 66, 2288-2297. | 1.9 | 10 |
| 35 | Composition of Wide Bandgap Semiconductor Materials and Nanostructures Measured by Atom Probe Tomography and Its Dependence on the Surface Electric Field. Journal of Physical Chemistry C, 2014, 118, 24136-24151. | 3.1 | 135 |
| 36 | Kinetics of growth and consumption of Ni rich phases. Microelectronic Engineering, 2014, 120, 146-149. | 2.4 | 3 |

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|----|---|------|-----------|
| 37 | Correlation of Microphotoluminescence Spectroscopy, Scanning Transmission Electron Microscopy, and Atom Probe Tomography on a Single Nano-object Containing an InGaN/GaN Multiquantum Well System. <i>Nano Letters</i> , 2014, 14, 107-114. | 9.1 | 70 |
| 38 | Progress in the understanding of Ni silicide formation for advanced <sc>MOS</sc> structures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014, 211, 152-165. | 1.8 | 23 |
| 39 | Energy deficit of pulsed-laser field-ionized and field-emitted ions from non-metallic nano-tips. <i>Journal of Applied Physics</i> , 2014, 115, . | 2.5 | 27 |
| 40 | Three-dimensional nanoscale study of Al segregation and quantum dot formation in GaAs/AlGaAs core-shell nanowires. <i>Applied Physics Letters</i> , 2014, 105, . | 3.3 | 45 |
| 41 | Direct observation of Ni decorated dislocation loops within As ⁺ -implanted silicon and arsenic clustering in Ni silicide contact. <i>Microelectronic Engineering</i> , 2013, 107, 184-189. | 2.4 | 11 |
| 42 | Combined in situ x-ray scattering and electrical measurements for characterizing phase transformations in nanometric functional films. <i>Thin Solid Films</i> , 2013, 541, 21-27. | 1.8 | 11 |
| 43 | Morphology Control of Nanostructures: Na-Doped PbTe/PbS System. <i>Nano Letters</i> , 2012, 12, 5979-5984. | 9.1 | 100 |
| 44 | High-performance bulk thermoelectrics with all-scale hierarchical architectures. <i>Nature</i> , 2012, 489, 414-418. | 27.8 | 3,767 |
| 45 | Dopant Distributions in PbTe-Based Thermoelectric Materials. <i>Journal of Electronic Materials</i> , 2012, 41, 1583-1588. | 2.2 | 30 |
| 46 | Arsenic clustering during formation of the transient Ni silicide. <i>Scripta Materialia</i> , 2012, 67, 169-172. | 5.2 | 14 |
| 47 | Boron clustering in implanted NiSi. <i>Scripta Materialia</i> , 2011, 64, 828-831. | 5.2 | 7 |
| 48 | Dopant diffusivity and solubility in nickel silicides. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011, 8, 670-673. | 0.8 | 4 |
| 49 | Measurement of As diffusivity in Ni ₂ Si thin films. <i>Microelectronic Engineering</i> , 2010, 87, 263-266. | 2.4 | 5 |
| 50 | B diffusion in implanted Ni ₂ Si and NiSi layers. <i>Applied Physics Letters</i> , 2010, 96, 054102. | 3.3 | 8 |
| 51 | Composition measurement of the Ni-silicide transient phase by atom probe tomography. <i>Applied Physics Letters</i> , 2010, 96, . | 3.3 | 37 |
| 52 | Kinetics of a transient silicide during the reaction of Ni thin film with (100)Si. <i>Applied Physics Letters</i> , 2009, 95, 181902. | 3.3 | 34 |
| 53 | Lattice and grain-boundary diffusion of As in Ni ₂ Si. <i>Journal of Applied Physics</i> , 2008, 104, . | 2.5 | 18 |
| 54 | Numerical Simulation Support for Diffusion Coefficient Measurements in Polycrystalline Thin Films. <i>Defect and Diffusion Forum</i> , 0, 309-310, 63-72. | 0.4 | 5 |

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|----|---|-----|-----------|
| 55 | Redistribution of Alloy Elements during Nickel Silicide Formation: Benefit of Atom Probe Tomography. Defect and Diffusion Forum, 0, 309-310, 161-166. | 0.4 | 1 |
| 56 | A Model for Formation and Consumption of Transient Phase. Solid State Phenomena, 0, 172-174, 646-651. | 0.3 | 2 |
| 57 | Original Methods for Diffusion Measurements in Polycrystalline Thin Films. Defect and Diffusion Forum, 0, 322, 129-150. | 0.4 | 12 |
| 58 | Diffusion and Redistribution of Boron in Nickel Silicides. Defect and Diffusion Forum, 0, 323-325, 415-420. | 0.4 | 6 |