Anton Ievlev

List of Publications by Year in descending order

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123 papers	2,907 citations	159585 30 h-index	214800 47 g-index
127 all docs	127 docs citations	127 times ranked	4327 citing authors

#	Article	IF	Citations
1	Tunable Microwave Conductance of Nanodomains in Ferroelectric PbZr _{0.2} Ti _{0.8} O ₃ Thin Film. Advanced Electronic Materials, 2022, 8, 2100952.	5.1	5
2	Direct Observation of Photoinduced Ion Migration in Lead Halide Perovskites. Advanced Functional Materials, 2021, 31, 2008777.	14.9	41
3	Magnetic Texture in Insulating Single Crystal High Entropy Oxide Spinel Films. ACS Applied Materials & Interfaces, 2021, 13, 17971-17977.	8.0	24
4	Role of Decomposition Product Ions in Hysteretic Behavior of Metal Halide Perovskite. ACS Nano, 2021, 15, 9017-9026.	14.6	13
5	Ferroic Halide Perovskite Optoelectronics. Advanced Functional Materials, 2021, 31, 2102793.	14.9	23
6	Helium Ion Microscopy with Secondary Ion Mass Spectrometry for Nanoscale Chemical Imaging and Analysis of Polyolefins. ACS Applied Polymer Materials, 2021, 3, 3478-3484.	4.4	2
7	Influence of microstructure on replacement and porosity generation during experimental dolomitization of limestones. Geochimica Et Cosmochimica Acta, 2021, 303, 137-158.	3.9	14
8	Understanding Degradation Mechanisms in SrIrO₃ Oxygen Evolution Electrocatalysts: Chemical and Structural Microscopy at the Nanoscale. Advanced Functional Materials, 2021, 31, 2101542.	14.9	16
9	A Tracer Study on sCO2 Corrosion with Multiple Oxygen-Bearing Impurities. Oxidation of Metals, 2021, 96, 571-587.	2.1	3
10	Unraveling the hysteretic behavior at double cations-double halides perovskite - electrode interfaces. Nano Energy, 2021, 89, 106428.	16.0	11
11	Microstructural Evaluation of Phase Instability in Large Bandgap Metal Halide Perovskites. ACS Nano, 2021, 15, 20391-20402.	14.6	8
12	Femtosecond Laser Desorption Postionization MS vs ToF-SIMS Imaging for Uncovering Biomarkers Buried in Geological Samples. Analytical Chemistry, 2021, 93, 15949-15957.	6.5	5
13	Selfâ€Assembled Room Temperature Multiferroic BiFeO₃â€LiFe₅O₈ Nanocomposites. Advanced Functional Materials, 2020, 30, 1906849.	14.9	14
14	Statistical learning of governing equations of dynamics from in-situ electron microscopy imaging data. Materials and Design, 2020, 195, 108973.	7.0	8
15	Hysteretic Ion Migration and Remanent Field in Metal Halide Perovskites. Advanced Science, 2020, 7, 2001176.	11.2	29
16	Operando Imaging of Ion Migration in Metal Halide Perovskites. Microscopy and Microanalysis, 2020, 26, 2046-2048.	0.4	0
17	Identifying and Tuning the In Situ Oxygen-Rich Surface of Molybdenum Nitride Electrocatalysts for Oxygen Reduction. ACS Applied Energy Materials, 2020, 3, 12433-12446.	5.1	17
18	Advanced characterization of surface-modified nanoparticles and nanofilled antibacterial dental adhesive resins. Scientific Reports, 2020, 10, 9811.	3.3	16

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19	Direct Write of 3D Nanoscale Mesh Objects with Platinum Precursor via Focused Helium Ion Beam Induced Deposition. Micromachines, 2020, 11, 527.	2.9	15
20	Secondary Ion Mass Spectrometry (SIMS) for Chemical Characterization of Metal Halide Perovskites. Advanced Functional Materials, 2020, 30, 2002201.	14.9	29
21	Nitride or Oxynitride? Elucidating the Compositionâ€“Activity Relationships in Molybdenum Nitride Electrocatalysts for the Oxygen Reduction Reaction. Chemistry of Materials, 2020, 32, 2946-2960.	6.7	57
22	Toward nanoscale molecular mass spectrometry imaging via physically constrained machine learning on co-registered multimodal data. Npj Computational Materials, 2020, 6, .	8.7	15
23	Exploration of Electrochemical Reactions at Organicâ€“Inorganic Halide Perovskite Interfaces via Machine Learning in In Situ Timeâ€ofâ€Flight Secondary Ion Mass Spectrometry. Advanced Functional Materials, 2020, 30, 2001995.	14.9	30
24	Twin domains modulate light-matter interactions in metal halide perovskites. APL Materials, 2020, 8, .	5.1	17
25	Strainâ€“Chemical Gradient and Polarization in Metal Halide Perovskites. Advanced Electronic Materials, 2020, 6, 1901235.	5.1	19
26	Spectral Map Reconstruction Using Pan-Sharpening Algorithm: Enhancing Chemical Imaging with AFM-IR. Microscopy and Microanalysis, 2019, 25, 1024-1025.	0.4	2
27	Multi-Model Imaging of Local Chemistry and Ferroic Properties of Hybrid Organic-Inorganic Perovskites. Microscopy and Microanalysis, 2019, 25, 2076-2077.	0.4	3
28	Controls of Microstructure and Chemical Reactivity on the Replacement of Limestone by Fluorite Studied Using Spatially Resolved Small Angle X-ray and Neutron Scattering. ACS Earth and Space Chemistry, 2019, 3, 1998-2016.	2.7	10
29	Non-conventional mechanism of ferroelectric fatigue via cation migration. Nature Communications, 2019, 10, 3064.	12.8	23
30	Investigation of Electrode Electrochemical Reactions in CH₃NH₃PbBr₃ Perovskite Singleâ€Crystal Fieldâ€Effect Transistors. Advanced Materials, 2019, 31, e1902618.	21.0	74
31	Ferroic twin domains in metal halide perovskites. MRS Advances, 2019, 4, 2817-2830.	0.9	7
32	Lightâ€Ferroic Interaction in Hybrid Organicâ€“Inorganic Perovskites. Advanced Optical Materials, 2019, 7, 1901451.	7.3	24
33	Surface Analysis of Polymers using Helium Ion Microscopy Coupled with Secondary Ion Mass Spectrometry (HIM-SIMS). Microscopy and Microanalysis, 2019, 25, 868-869.	0.4	1
34	Multimodal Chemical Imaging for Linking Adhesion with Local Chemistry in Agrochemical Multicomponent Polymeric Coatings. Analytical Chemistry, 2019, 91, 2791-2796.	6.5	8
35	Deep data analytics for genetic engineering of diatoms linking genotype to phenotype via machine learning. Npj Computational Materials, 2019, 5, .	8.7	16
36	Application of pan-sharpening algorithm for correlative multimodal imaging using AFM-IR. Npj Computational Materials, 2019, 5, .	8.7	9

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37	Entropic and Enthalpic Effects in Thin Film Blends of Homopolymers and Bottlebrush Polymers. Macromolecules, 2019, 52, 1526-1535.	4.8	35
38	Reply to: On the ferroelectricity of CH3NH3PbI3 perovskites. Nature Materials, 2019, 18, 1051-1053.	27.5	21
39	Ionic Gating of Ultrathin and Leaky Ferroelectrics. Advanced Materials Interfaces, 2019, 6, 1801723.	3.7	8
40	Intrinsic lithium indium diselenide: Scintillation properties and defect states. Journal of Luminescence, 2019, 205, 346-350.	3.1	4
41	Subtractive fabrication of ferroelectric thin films with precisely controlled thickness. Nanotechnology, 2018, 29, 155302.	2.6	7
42	Multi-purposed Ar gas cluster ion beam processing for graphene engineering. Carbon, 2018, 131, 142-148.	10.3	18
43	Toward an understanding of surface layer formation, growth, and transformation at the glassâ€“fluid interface. Geochimica Et Cosmochimica Acta, 2018, 229, 65-84.	3.9	19
44	Chemical Phenomena of Atomic Force Microscopy Scanning. Analytical Chemistry, 2018, 90, 3475-3481.	6.5	20
45	Helium Ion Microscopy for Imaging and Quantifying Porosity at the Nanoscale. Analytical Chemistry, 2018, 90, 1370-1375.	6.5	17
46	Magnetic order multilayering in FeRh thin films by He-Ion irradiation. Materials Research Letters, 2018, 6, 106-112.	8.7	36
47	Precursor purity effects on solution-based growth of MAPbBr₃ single crystals towards efficient radiation sensing. CrystEngComm, 2018, 20, 7818-7825.	2.6	43
48	Liquid Cell Crystallization and In-situ Imaging of Thiamethoxam by Helium Ion Microscopy. Microscopy and Microanalysis, 2018, 24, 330-331.	0.4	0
49	Multimodal Chemical and Functional Imaging of Nanoscale Transformations Away from Equilibrium. Microscopy and Microanalysis, 2018, 24, 1042-1043.	0.4	0
50	Correlated Materials Characterization via Multimodal Chemical and Functional Imaging. ACS Nano, 2018, 12, 11798-11818.	14.6	28
51	Plasma exposures of a high-conductivity graphitic foam for plasma facing components. Nuclear Materials and Energy, 2018, 17, 123-128.	1.3	4
52	Self-Organized Formation of Quasi-Regular Ferroelectric Nanodomain Structure on the Nonpolar Cuts by Grounded SPM Tip. ACS Applied Materials & Interfaces, 2018, 10, 36211-36217.	8.0	23
53	In situ liquid cell crystallization and imaging of thiamethoxam by helium ion microscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, .	1.2	3
54	Probing static discharge of polymer surfaces with nanoscale resolution. Nanotechnology, 2018, , .	2.6	0

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55	Nanoscale Electrochemical Phenomena of Polarization Switching in Ferroelectrics. ACS Applied Materials & Interfaces, 2018, 10, 38217-38222.	8.0	18
56	Molecular reorganization in bulk bottlebrush polymers: direct observation via nanoscale imaging. Nanoscale, 2018, 10, 18001-18009.	5.6	14
57	3D Nanostructures Grown via Focused Helium Ion Beam Induced Deposition. Microscopy and Microanalysis, 2018, 24, 332-333.	0.4	1
58	Elasticity Modulation Due to Polarization Reversal and Ionic Motion in the Ferroelectric Superionic Conductor KTiOPO₄. ACS Applied Materials & Interfaces, 2018, 10, 32298-32303.	8.0	11
59	Surface Chemistry Controls Anomalous Ferroelectric Behavior in Lithium Niobate. ACS Applied Materials & Interfaces, 2018, 10, 29153-29160.	8.0	20
60	The anti-soiling performance of highly reflective superhydrophobic nanoparticle-textured mirrors. Nanoscale, 2018, 10, 14600-14612.	5.6	24
61	Deep data analysis via physically constrained linear unmixing: universal framework, domain examples, and a community-wide platform. Advanced Structural and Chemical Imaging, 2018, 4, 6.	4.0	45
62	Unraveling the Effects of Strontium Incorporation on Barite Growthâ€"In Situ and Ex Situ Observations Using Multiscale Chemical Imaging. Crystal Growth and Design, 2018, 18, 5521-5533.	3.0	23
63	Chemical nature of ferroelastic twin domains in CH3NH3PbI3 perovskite. Nature Materials, 2018, 17, 1013-1019.	27.5	183
64	Dynamic behavior of CH3NH3PbI3 perovskite twin domains. Applied Physics Letters, 2018, 113, .	3.3	27
65	Light-Activated Hybrid Nanocomposite Film for Water and Oxygen Sensing. ACS Applied Materials & Interfaces, 2018, 10, 31745-31754.	8.0	12
66	Nanoscale Control of Oxygen Defects and Metalâ€"Insulator Transition in Epitaxial Vanadium Dioxides. ACS Nano, 2018, 12, 7159-7166.	14.6	41
67	Graphene milling dynamics during helium ion beam irradiation. Carbon, 2018, 138, 277-282.	10.3	18
68	Ion Migration Studies in Exfoliated 2D Molybdenum Oxide via Ionic Liquid Gating for Neuromorphic Device Applications. ACS Applied Materials & Interfaces, 2018, 10, 22623-22631.	8.0	12
69	Effects of Dopant Ionic Radius on Cerium Reduction in Epitaxial Cerium Oxide Thin Films. Journal of Physical Chemistry C, 2017, 121, 8841-8849.	3.1	44
70	Functional two/three-dimensional assembly of monolayer WS₂ and nickel oxide. Journal of Photonics for Energy, 2017, 7, 014001.	1.3	1
71	Buckling Instabilities in Polymer Brush Surfaces via Postpolymerization Modification. Macromolecules, 2017, 50, 8670-8677.	4.8	15
72	Stretching Epitaxial La_{0.6}Sr_{0.4}CoO_{3â^'Î´} for Fast Oxygen Reduction. Journal of Physical Chemistry C, 2017, 121, 25651-25658.	3.1	38

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73	Rapid Diffusion and Nanosegregation of Hydrogen in Magnesium Alloys from Exposure to Water. ACS Applied Materials & Interfaces, 2017, 9, 38125-38134.	8.0	14
74	Building with ions: towards direct write of platinum nanostructures using in situ liquid cell helium ion microscopy. Nanoscale, 2017, 9, 12949-12956.	5.6	8
75	Room-Temperature Activation of InGaZnO Thin-Film Transistors via He⁺ Irradiation. ACS Applied Materials & Interfaces, 2017, 9, 35125-35132.	8.0	12
76	UV-activated ZnO films on a flexible substrate for room temperature O2 and H2O sensing. Scientific Reports, 2017, 7, 6053.	3.3	61
77	Automated Interpretation and Extraction of Topographic Information from Time of Flight Secondary Ion Mass Spectrometry Data. Scientific Reports, 2017, 7, 17099.	3.3	21
78	Multimodal Chemical and Functional Imaging of Nanoscale Transformations in Ferroelectric Thin Films. Microscopy and Microanalysis, 2017, 23, 1620-1621.	0.4	0
79	Chemical Changes in Layered Ferroelectric Semiconductors Induced by Helium Ion Beam. Scientific Reports, 2017, 7, 16619.	3.3	3
80	Field enhancement of electronic conductance at ferroelectric domain walls. Nature Communications, 2017, 8, 1318.	12.8	32
81	ToF-SIMS Investigations of Tip-Surface Chemical Interactions in Atomic Force Microscopy on a Combined AFM/ToF-SIMS Platform. Microscopy and Microanalysis, 2017, 23, 2082-2083.	0.4	0
82	Building with Ions: Development of In-situ Liquid Cell Microscopy for the Helium Ion Microscope.. Microscopy and Microanalysis, 2016, 22, 754-755.	0.4	0
83	Local coexistence of VO2 phases revealed by deep data analysis. Scientific Reports, 2016, 6, 29216.	3.3	8
84	Inverse Problem Solution for Quantitative Investigations of Nanocrystals Formation and Growth. Microscopy and Microanalysis, 2016, 22, 794-795.	0.4	0
85	Size-effect in layered ferrielectric CuInP2S6. Applied Physics Letters, 2016, 109, .	3.3	66
86	Characterization of LiMn2O4 cathodes by electrochemical strain microscopy. Applied Physics Letters, 2016, 108, .	3.3	24
87	In-Plane Heterojunctions Enable Multiphasic Two-Dimensional (2D) MoS₂ Nanosheets As Efficient Photocatalysts for Hydrogen Evolution from Water Reduction. ACS Catalysis, 2016, 6, 6723-6729.	11.2	116
88	Chemical State Evolution in Ferroelectric Films during Tip-Induced Polarization and Electroresistive Switching. ACS Applied Materials & Interfaces, 2016, 8, 29588-29593.	8.0	33
89	Imaging of electrical response of NiO x under controlled environment with sub-25-nm resolution. Journal of Photonics for Energy, 2016, 6, 038001.	1.3	2
90	Self-consistent theory of nanodomain formation on nonpolar surfaces of ferroelectrics. Physical Review B, 2016, 93, .	3.2	13

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91	Towards functional assembly of 3D and 2D nanomaterials. Proceedings of SPIE, 2016, , .	0.8	0
92	Nanoforging Single Layer MoSe2 Through Defect Engineering with Focused Helium Ion Beams. Scientific Reports, 2016, 6, 30481.	3.3	82
93	Combined Scanning Probe Microscopy and Confocal Raman Spectroscopy for Functional Imaging of the Layered Materials. Microscopy and Microanalysis, 2016, 22, 218-219.	0.4	1
94	Graphene engineering by neon ion beams. Nanotechnology, 2016, 27, 125302.	2.6	21
95	Seeing through Walls at the Nanoscale: Microwave Microscopy of Enclosed Objects and Processes in Liquids. ACS Nano, 2016, 10, 3562-3570.	14.6	47
96	Probing Ternary Solvent Effect in High V_{oc} Polymer Solar Cells Using Advanced AFM Techniques. ACS Applied Materials & Interfaces, 2016, 8, 4730-4738.	8.0	7
97	Spatially resolved resistance of NiO nanostructures under humid environment. , 2016, , .		1
98	Intrinsic space charge layers and field enhancement in ferroelectric nanojunctions. Applied Physics Letters, 2015, 107, 022903.	3.3	4
99	Data encoding based on the shape of the ferroelectric domains produced by using a scanning probe microscope tip. Nanoscale, 2015, 7, 11040-11047.	5.6	11
100	Tip-induced domain growth on the non-polar cuts of lithium niobate single-crystals. Applied Physics Letters, 2015, 106, .	3.3	42
101	Big data and deep data in scanning and electron microscopies: deriving functionality from multidimensional data sets. Advanced Structural and Chemical Imaging, 2015, 1, 6.	4.0	74
102	Ferroelectric switching by the grounded scanning probe microscopy tip. Physical Review B, 2015, 91, .	3.2	23
103	Quantitative Description of Crystal Nucleation and Growth from in Situ Liquid Scanning Transmission Electron Microscopy. ACS Nano, 2015, 9, 11784-11791.	14.6	41
104	Quantitative Analysis of the Local Phase Transitions Induced by Laser Heating. ACS Nano, 2015, 9, 12442-12450.	14.6	27
105	Symmetry Breaking and Electrical Frustration during Tip-Induced Polarization Switching in the Nonpolar Cut of Lithium Niobate Single Crystals. ACS Nano, 2015, 9, 769-777.	14.6	58
106	Humidity effects on tip-induced polarization switching in lithium niobate. Applied Physics Letters, 2014, 104, 092908.	3.3	64
107	Electrostrictive and electrostatic responses in contact mode voltage modulated scanning probe microscopies. Applied Physics Letters, 2014, 104, 232901.	3.3	44
108	Intermittency, quasiperiodicity and chaos in probe-induced ferroelectric domain switching. Nature Physics, 2014, 10, 59-66.	16.7	129

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109	Ferroelectric domain triggers the charge modulation in semiconductors (invited). Journal of Applied Physics, 2014, 116, 066817.	2.5	16
110	Ionic field effect and memristive phenomena in single-point ferroelectric domain switching. Nature Communications, 2014, 5, 4545.	12.8	48
111	Direct Probing of Charge Injection and Polarizationâ€Controlled Ionic Mobility on Ferroelectric LiNbO₃ Surfaces. Advanced Materials, 2014, 26, 958-963.	21.0	49
112	Electric Field Poling of Lithium Niobate Crystals after Proton-Exchanged Channel Waveguide Fabrication. Ferroelectrics, 2012, 441, 9-16.	0.6	4
113	Nanodomain structures formation during polarization reversal in uniform electric field in strontium barium niobate single crystals. Journal of Applied Physics, 2012, 112, .	2.5	30
114	Formation of nanodomain structures during polarization reversal in congruent lithium niobate implanted with ar ions. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 1934-1941.	3.0	10
115	Micro-Raman Visualization of Domain Structure in Strontium Barium Niobate Single Crystals. Ferroelectrics, 2012, 439, 33-39.	0.6	12
116	Influence of adsorbed surface layer on domain growth in the field produced by conductive tip of scanning probe microscope in lithium niobate. Journal of Applied Physics, 2011, 110, .	2.5	55
117	Investigation of the nanodomain structure formation by piezoelectric force microscopy and Raman confocal microscopy in LiNbO3 and LiTaO3 crystals. Journal of Applied Physics, 2011, 110, 052013.	2.5	65
118	Formation of nanodomain ensembles during polarization reversal in Sr0.61Ba0.39Nb2O6: Ce single crystals. Physics of the Solid State, 2011, 53, 2311-2315.	0.6	10
119	In situ investigation of formation of self-assembled nanodomain structure in lithium niobate after pulse laser irradiation. Applied Physics Letters, 2011, 99, 082901.	3.3	46
120	Shape of Local Hysteresis Loops Measured by Means of Piezoresponse Force Microscopy. Ferroelectrics, 2010, 398, 26-33.	0.6	3
121	Formation of Self-Assembled Domain Structures in Lithium Niobate Modified by Ar Ions Implantation. Ferroelectrics, 2010, 399, 35-42.	0.6	11
122	Local Study of Polarization Reversal Kinetics in Ferroelectric Crystals Using Scanning Probe Microscopy. Ferroelectrics, 2008, 374, 26-32.	0.6	13
123	Lightâ€“ferroelectric interaction in two-dimensional lead iodide perovskites. Journal of Materials Chemistry A, 0, , .	10.3	1