Anton Ievlev

List of Publications by Citations

119 papers	2,109 citations	26 h-index	39 g-index
127 ext. papers	2,498 ext. citations	7.3 avg, IF	4.87 L-index

#	Paper	IF	Citations
119	Intermittency, quasiperiodicity and chaos in probe-induced ferroelectric domain switching. *Nature Physics*, **2014**, 10, 59-66	16.2	116
118	Chemical nature of ferroelastic twin domains in CHNHPbI perovskite. *Nature Materials*, **2018**, 17, 1013-1019	27	114
117	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	13.1	84
116	Big data and deep data in scanning and electron microscopies: deriving functionality from multidimensional data sets. *Advanced Structural and Chemical Imaging*, **2015**, 1, 6	3.9	63
115	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	63
114	Humidity effects on tip-induced polarization switching in lithium niobate. *Applied Physics Letters*, **2014**, 104, 092908	3.4	58
113	Nanoforging Single Layer MoSe2 Through Defect Engineering with Focused Helium Ion Beams. *Scientific Reports*, **2016**, 6, 30481	4.9	55
112	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, 052017	2.5	51
111	Symmetry breaking and electrical frustration during tip-induced polarization switching in the nonpolar cut of lithium niobate single crystals. *ACS Nano*, **2015**, 9, 769-77	16.7	50
110	Investigation of Electrode Electrochemical Reactions in CH NH PbBr Perovskite Single-Crystal Field-Effect Transistors. *Advanced Materials*, **2019**, 31, e1902618	24	48
109	Direct probing of charge injection and polarization-controlled ionic mobility on ferroelectric LiNbO(3) surfaces. *Advanced Materials*, **2014**, 26, 958-63	24	44
108	UV-activated ZnO films on a flexible substrate for room temperature O and HO sensing. *Scientific Reports*, **2017**, 7, 6053	4.9	44
107	Ionic field effect and memristive phenomena in single-point ferroelectric domain switching. *Nature Communications*, **2014**, 5, 4545	17.4	41
106	In situ investigation of formation of self-assembled nanodomain structure in lithium niobate after pulse laser irradiation. *Applied Physics Letters*, **2011**, 99, 082901	3.4	40
105	Seeing through Walls at the Nanoscale: Microwave Microscopy of Enclosed Objects and Processes in Liquids. *ACS Nano*, **2016**, 10, 3562-70	16.7	39
104	Size-effect in layered ferrielectric CuInP2S6. *Applied Physics Letters*, **2016**, 109, 172901	3.4	39
103	Electrostrictive and electrostatic responses in contact mode voltage modulated scanning probe microscopies. *Applied Physics Letters*, **2014**, 104, 232901	3.4	37

102	Effects of Dopant Ionic Radius on Cerium Reduction in Epitaxial Cerium Oxide Thin Films. *Journal of Physical Chemistry C*, **2017**, 121, 8841-8849	3.8	36
101	Quantitative Description of Crystal Nucleation and Growth from in Situ Liquid Scanning Transmission Electron Microscopy. *ACS Nano*, **2015**, 9, 11784-91	16.7	36
100	Tip-induced domain growth on the non-polar cuts of lithium niobate single-crystals. *Applied Physics Letters*, **2015**, 106, 182902	3.4	32
99	Precursor purity effects on solution-based growth of MAPbBr3 single crystals towards efficient radiation sensing. *CrystEngComm*, **2018**, 20, 7818-7825	3.3	32
98	Nanoscale Control of Oxygen Defects and Metal-Insulator Transition in Epitaxial Vanadium Dioxides. *ACS Nano*, **2018**, 12, 7159-7166	16.7	31
97	Chemical State Evolution in Ferroelectric Films during Tip-Induced Polarization and Electroresistive Switching. *ACS Applied Materials & Interfaces*, **2016**, 8, 29588-29593	9.5	31
96	Nitride or Oxynitride? Elucidating the Composition□Activity Relationships in Molybdenum Nitride Electrocatalysts for the Oxygen Reduction Reaction. *Chemistry of Materials*, **2020**, 32, 2946-2960	9.6	28
95	Nanodomain structures formation during polarization reversal in uniform electric field in strontium barium niobate single crystals. *Journal of Applied Physics*, **2012**, 112, 064117	2.5	28
94	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	3.9	27
93	Dynamic behavior of CH3NH3PbI3 perovskite twin domains. *Applied Physics Letters*, **2018**, 113, 072102	3.4	26
92	Stretching Epitaxial La0.6Sr0.4CoO3□for Fast Oxygen Reduction. *Journal of Physical Chemistry C*, **2017**, 121, 25651-25658	3.8	25
91	Magnetic order multilayering in FeRh thin films by He-Ion irradiation. *Materials Research Letters*, **2018**, 6, 106-112	7.4	24
90	Entropic and Enthalpic Effects in Thin Film Blends of Homopolymers and Bottlebrush Polymers. *Macromolecules*, **2019**, 52, 1526-1535	5.5	23
89	Field enhancement of electronic conductance at ferroelectric domain walls. *Nature Communications* , **2017**, 8, 1318	17.4	22
88	Reply to: On the ferroelectricity of CHNHPbI perovskites. *Nature Materials*, **2019**, 18, 1051-1053	27	21
87	Light-Ferroic Interaction in Hybrid Organic□Inorganic Perovskites. *Advanced Optical Materials*, **2019**, 7, 1901451	8.1	20
86	Secondary Ion Mass Spectrometry (SIMS) for Chemical Characterization of Metal Halide Perovskites. *Advanced Functional Materials*, **2020**, 30, 2002201	15.6	20
85	Graphene engineering by neon ion beams. *Nanotechnology*, **2016**, 27, 125302	3.4	20

84	Characterization of LiMn2O4 cathodes by electrochemical strain microscopy. *Applied Physics Letters*, **2016**, 108, 113106	3.4	20
83	Correlated Materials Characterization via Multimodal Chemical and Functional Imaging. *ACS Nano*, **2018**, 12, 11798-11818	16.7	19
82	Quantitative Analysis of the Local Phase Transitions Induced by Laser Heating. *ACS Nano*, **2015**, 9, 12442-12450	16.7	18
81	The anti-soiling performance of highly reflective superhydrophobic nanoparticle-textured mirrors. *Nanoscale*, **2018**, 10, 14600-14612	7.7	18
80	Automated Interpretation and Extraction of Topographic Information from Time of Flight Secondary Ion Mass Spectrometry Data. *Scientific Reports*, **2017**, 7, 17099	4.9	18
79	Direct Observation of Photoinduced Ion Migration in Lead Halide Perovskites. *Advanced Functional Materials*, **2021**, 31, 2008777	15.6	17
78	Chemical Phenomena of Atomic Force Microscopy Scanning. *Analytical Chemistry*, **2018**, 90, 3475-3481	7.8	16
77	Unraveling the Effects of Strontium Incorporation on Barite Growth In Situ and Ex Situ Observations Using Multiscale Chemical Imaging. *Crystal Growth and Design*, **2018**, 18, 5521-5533	3.5	16
76	Non-conventional mechanism of ferroelectric fatigue via cation migration. *Nature Communications*, **2019**, 10, 3064	17.4	16
75	Ferroelectric domain triggers the charge modulation in semiconductors (invited). *Journal of Applied Physics*, **2014**, 116, 066817	2.5	16
74	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	9.5	16
73	Ferroelectric switching by the grounded scanning probe microscopy tip. *Physical Review B*, **2015**, 91,	3.3	15
72	Exploration of Electrochemical Reactions at Organic Inorganic Halide Perovskite Interfaces via Machine Learning in In Situ Time-of-Flight Secondary Ion Mass Spectrometry. *Advanced Functional Materials*, **2020**, 30, 2001995	15.6	15
71	Strain Chemical Gradient and Polarization in Metal Halide Perovskites. *Advanced Electronic Materials*, **2020**, 6, 1901235	6.4	14
70	Toward an understanding of surface layer formation, growth, and transformation at the glass Fluid interface. *Geochimica Et Cosmochimica Acta*, **2018**, 229, 65-84	5.5	14
69	Hysteretic Ion Migration and Remanent Field in Metal Halide Perovskites. *Advanced Science*, **2020**, 7, 2001176	13.6	14
68	Helium Ion Microscopy for Imaging and Quantifying Porosity at the Nanoscale. *Analytical Chemistry*, **2018**, 90, 1370-1375	7.8	14
67	Multi-purposed Ar gas cluster ion beam processing for graphene engineering. *Carbon*, **2018**, 131, 142-148	10.4	13

66	Surface Chemistry Controls Anomalous Ferroelectric Behavior in Lithium Niobate. *ACS Applied Materials & Interfaces*, **2018**, 10, 29153-29160	9.5	13
65	Graphene milling dynamics during helium ion beam irradiation. *Carbon*, **2018**, 138, 277-282	10.4	13
64	Local Study of Polarization Reversal Kinetics in Ferroelectric Crystals Using Scanning Probe Microscopy. *Ferroelectrics*, **2008**, 374, 26-32	0.6	13
63	Buckling Instabilities in Polymer Brush Surfaces via Postpolymerization Modification. *Macromolecules*, **2017**, 50, 8670-8677	5.5	12
62	Twin domains modulate light-matter interactions in metal halide perovskites. *APL Materials*, **2020**, 8, 011106	5.7	12
61	Micro-Raman Visualization of Domain Structure in Strontium Barium Niobate Single Crystals. *Ferroelectrics*, **2012**, 439, 33-39	0.6	12
60	Nanoscale Electrochemical Phenomena of Polarization Switching in Ferroelectrics. *ACS Applied Materials & Interfaces*, **2018**, 10, 38217-38222	9.5	12
59	Light-Activated Hybrid Nanocomposite Film for Water and Oxygen Sensing. *ACS Applied Materials & Interfaces*, **2018**, 10, 31745-31754	9.5	11
58	Data encoding based on the shape of the ferroelectric domains produced by using a scanning probe microscope tip. *Nanoscale*, **2015**, 7, 11040-7	7.7	11
57	Molecular reorganization in bulk bottlebrush polymers: direct observation via nanoscale imaging. *Nanoscale*, **2018**, 10, 18001-18009	7.7	11
56	Rapid Diffusion and Nanosegregation of Hydrogen in Magnesium Alloys from Exposure to Water. *ACS Applied Materials & Interfaces*, **2017**, 9, 38125-38134	9.5	10
55	Self-consistent theory of nanodomain formation on nonpolar surfaces of ferroelectrics. *Physical Review B*, **2016**, 93,	3.3	10
54	Ion Migration Studies in Exfoliated 2D Molybdenum Oxide via Ionic Liquid Gating for Neuromorphic Device Applications. *ACS Applied Materials & Interfaces*, **2018**, 10, 22623-22631	9.5	10
53	Room-Temperature Activation of InGaZnO Thin-Film Transistors via He Irradiation. *ACS Applied Materials & Interfaces*, **2017**, 9, 35125-35132	9.5	10
52	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, 1934-41	3.2	10
51	Self-Assembled Room Temperature Multiferroic BiFeO3-LiFe5O8 Nanocomposites. *Advanced Functional Materials*, **2020**, 30, 1906849	15.6	10
50	Deep data analytics for genetic engineering of diatoms linking genotype to phenotype via machine learning. *Npj Computational Materials*, **2019**, 5,	10.9	9
49	Formation of nanodomain ensembles during polarization reversal in Sr0.61Ba0.39Nb2O6: Ce single crystals. *Physics of the Solid State*, **2011**, 53, 2311-2315	0.8	9

48	Formation of Self-Assembled Domain Structures in Lithium Niobate Modified by Ar Ions Implantation. *Ferroelectrics*, **2010**, 399, 35-42	0.6	9
47	Magnetic Texture in Insulating Single Crystal High Entropy Oxide Spinel Films. *ACS Applied Materials & Interfaces*, **2021**, 13, 17971-17977	9.5	9
46	Identifying and Tuning the In Situ Oxygen-Rich Surface of Molybdenum Nitride Electrocatalysts for Oxygen Reduction. *ACS Applied Energy Materials*, **2020**, 3, 12433-12446	6.1	8
45	Elasticity Modulation Due to Polarization Reversal and Ionic Motion in the Ferroelectric Superionic Conductor KTiOPO. *ACS Applied Materials & Interfaces*, **2018**, 10, 32298-32303	9.5	8
44	Toward nanoscale molecular mass spectrometry imaging via physically constrained machine learning on co-registered multimodal data. *Npj Computational Materials*, **2020**, 6,	10.9	7
43	Building with ions: towards direct write of platinum nanostructures using in situ liquid cell helium ion microscopy. *Nanoscale*, **2017**, 9, 12949-12956	7.7	7
42	Ionic Gating of Ultrathin and Leaky Ferroelectrics. *Advanced Materials Interfaces*, **2019**, 6, 1801723	4.6	7
41	Subtractive fabrication of ferroelectric thin films with precisely controlled thickness. *Nanotechnology*, **2018**, 29, 155302	3.4	6
40	Probing Ternary Solvent Effect in High V(oc) Polymer Solar Cells Using Advanced AFM Techniques. *ACS Applied Materials & Interfaces*, **2016**, 8, 4730-8	9.5	6
39	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	3.2	6
38	Ferroic Halide Perovskite Optoelectronics. *Advanced Functional Materials*, **2021**, 31, 2102793	15.6	6
37	Local coexistence of VO2 phases revealed by deep data analysis. *Scientific Reports*, **2016**, 6, 29216	4.9	6
36	Direct Write of 3D Nanoscale Mesh Objects with Platinum Precursor via Focused Helium Ion Beam Induced Deposition. *Micromachines*, **2020**, 11,	3.3	5
35	Ferroic twin domains in metal halide perovskites. *MRS Advances*, **2019**, 4, 2817-2830	0.7	5
34	Statistical learning of governing equations of dynamics from in-situ electron microscopy imaging data. *Materials and Design*, **2020**, 195, 108973	8.1	5
33	Multimodal Chemical Imaging for Linking Adhesion with Local Chemistry in Agrochemical Multicomponent Polymeric Coatings. *Analytical Chemistry*, **2019**, 91, 2791-2796	7.8	4
32	Advanced characterization of surface-modified nanoparticles and nanofilled antibacterial dental adhesive resins. *Scientific Reports*, **2020**, 10, 9811	4.9	4
31	Understanding Degradation Mechanisms in SrIrO3 Oxygen Evolution Electrocatalysts: Chemical and Structural Microscopy at the Nanoscale. *Advanced Functional Materials*, **2021**, 31, 2101542	15.6	4

30	Plasma exposures of a high-conductivity graphitic foam for plasma facing components. *Nuclear Materials and Energy*, **2018**, 17, 123-128	2.1	4
29	Application of pan-sharpening algorithm for correlative multimodal imaging using AFM-IR. *Npj Computational Materials*, **2019**, 5,	10.9	3
28	Multi-Model Imaging of Local Chemistry and Ferroic Properties of Hybrid Organic-Inorganic Perovskites. *Microscopy and Microanalysis*, **2019**, 25, 2076-2077	0.5	3
27	Intrinsic space charge layers and field enhancement in ferroelectric nanojunctions. *Applied Physics Letters*, **2015**, 107, 022903	3.4	3
26	Shape of Local Hysteresis Loops Measured by Means of Piezoresponse Force Microscopy. *Ferroelectrics*, **2010**, 398, 26-33	0.6	3
25	Role of Decomposition Product Ions in Hysteretic Behavior of Metal Halide Perovskite. *ACS Nano*, **2021**, 15, 9017-9026	16.7	3
24	Influence of microstructure on replacement and porosity generation during experimental dolomitization of limestones. *Geochimica Et Cosmochimica Acta*, **2021**, 303, 137-158	5.5	3
23	Unraveling the hysteretic behavior at double cations-double halides perovskite - electrode interfaces. *Nano Energy*, **2021**, 89, 106428	17.1	3
22	Imaging of electrical response of NiO x under controlled environment with sub-25-nm resolution. *Journal of Photonics for Energy*, **2016**, 6, 038001	1.2	2
21	Electric Field Poling of Lithium Niobate Crystals after Proton-Exchanged Channel Waveguide Fabrication. *Ferroelectrics*, **2012**, 441, 9-16	0.6	2
20	Intrinsic lithium indium diselenide: Scintillation properties and defect states. *Journal of Luminescence*, **2019**, 205, 346-350	3.8	2
19	Functional two/three-dimensional assembly of monolayer WS2 and nickel oxide. *Journal of Photonics for Energy*, **2017**, 7, 014001	1.2	1
18	Surface Analysis of Polymers using Helium Ion Microscopy Coupled with Secondary Ion Mass Spectrometry (HIM-SIMS). *Microscopy and Microanalysis*, **2019**, 25, 868-869	0.5	1
17	Combined Scanning Probe Microscopy and Confocal Raman Spectroscopy for Functional Imaging of the Layered Materials. *Microscopy and Microanalysis*, **2016**, 22, 218-219	0.5	1
16	Spatially resolved resistance of NiO nanostructures under humid environment **2016**,		1
15	Chemical Changes in Layered Ferroelectric Semiconductors Induced by Helium Ion Beam. *Scientific Reports*, **2017**, 7, 16619	4.9	1
14	Helium Ion Microscopy with Secondary Ion Mass Spectrometry for Nanoscale Chemical Imaging and Analysis of Polyolefins. *ACS Applied Polymer Materials*, **2021**, 3, 3478-3484	4.3	1
13	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, 051803	1.3	1

12	A Tracer Study on sCO2 Corrosion with Multiple Oxygen-Bearing Impurities. *Oxidation of Metals*, **2021**, 96, 571	1.6	1
11	Spectral Map Reconstruction Using Pan-Sharpening Algorithm: Enhancing Chemical Imaging with AFM-IR. *Microscopy and Microanalysis*, **2019**, 25, 1024-1025	0.5	0
10	Femtosecond Laser Desorption Postionization MS vs ToF-SIMS Imaging for Uncovering Biomarkers Buried in Geological Samples. *Analytical Chemistry*, **2021**, 93, 15949-15957	7.8	0
9	3D Nanostructures Grown via Focused Helium Ion Beam Induced Deposition. *Microscopy and Microanalysis*, **2018**, 24, 332-333	0.5	0
8	Tunable Microwave Conductance of Nanodomains in Ferroelectric PbZr 0.2 Ti 0.8 O 3 Thin Film. *Advanced Electronic Materials*, **2022**, 8, 2100952	6.4	0
7	Multimodal Chemical and Functional Imaging of Nanoscale Transformations in Ferroelectric Thin Films. *Microscopy and Microanalysis*, **2017**, 23, 1620-1621	0.5	
6	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	0.5	
5	Operando Imaging of Ion Migration in Metal Halide Perovskites. *Microscopy and Microanalysis*, **2020**, 26, 2046-2048	0.5	
4	Building with Ions: Development of In-situ Liquid Cell Microscopy for the Helium Ion Microscope.. *Microscopy and Microanalysis*, **2016**, 22, 754-755	0.5	
3	Inverse Problem Solution for Quantitative Investigations of Nanocrystals Formation and Growth. *Microscopy and Microanalysis*, **2016**, 22, 794-795	0.5	
2	Liquid Cell Crystallization and In-situ Imaging of Thiamethoxam by Helium Ion Microscopy. *Microscopy and Microanalysis*, **2018**, 24, 330-331	0.5	
1	Multimodal Chemical and Functional Imaging of Nanoscale Transformations Away from Equilibrium. *Microscopy and Microanalysis*, **2018**, 24, 1042-1043	0.5	