

# Joseph Woicik

## List of Publications by Year in descending order

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101  
papers

3,627  
citations

136950

32  
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144013

57  
g-index

101  
all docs

101  
docs citations

101  
times ranked

4689  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Ferroelectric Oxide Made Directly on Silicon. <i>Science</i> , 2009, 324, 367-370.	12.6	347
2	Diffraction anomalous fine structure: A new x-ray structural technique. <i>Physical Review Letters</i> , 1992, 69, 3064-3067.	7.8	217
3	Surface extended-x-ray-absorption fine structure and scanning tunneling microscopy of Si(001)2Å–1-Sb. <i>Physical Review Letters</i> , 1990, 65, 3417-3420.	7.8	141
4	Oxygen vacancies in N doped anatase TiO <sub>2</sub> : Experiment and first-principles calculations. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	140
5	Origin of the Bipolar Doping Behavior of SnO from X-ray Spectroscopy and Density Functional Theory. <i>Chemistry of Materials</i> , 2013, 25, 3114-3123.	6.7	135
6	Near-neighbor mixing and bond dilation in mechanically alloyed Cu-Fe. <i>Physical Review B</i> , 1996, 54, 6929-6940.	3.2	124
7	Direct Observation of Electrostatically Driven Band Gap Renormalization in a Degenerate Perovskite Transparent Conducting Oxide. <i>Physical Review Letters</i> , 2016, 116, 027602.	7.8	100
8	Nature of the Metal Insulator Transition in Ultrathin Epitaxial Vanadium Dioxide. <i>Nano Letters</i> , 2013, 13, 4857-4861.	9.1	90
9	La-doped BaSnO <sub>3</sub> Degenerate perovskite transparent conducting oxide: Evidence from synchrotron x-ray spectroscopy. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	81
10	X-Ray Anomalous Scattering Study of a Charge-Ordered State in NaV <sub>2</sub> O <sub>5</sub> . <i>Physical Review Letters</i> , 2000, 85, 4349-4352.	7.8	73
11	Gold-induced germanium crystallization. <i>Physical Review B</i> , 1992, 46, 9505-9510.	3.2	72
12	Surface structure of cadmium selenide nanocrystallites. <i>Physical Review B</i> , 1997, 55, 13822-13828.	3.2	70
13	Bond-Length Distortions in Strained Semiconductor Alloys. <i>Physical Review Letters</i> , 1997, 79, 5026-5029.	7.8	69
14	Origin of deep subgap states in amorphous indium gallium zinc oxide: Chemically disordered coordination of oxygen. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	67
15	Selective Passivation of GeO <sub>2</sub> /Ge Interface Defects in Atomic Layer Deposited High-k MOS Structures. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 20499-20506.	8.0	66
16	Displacive Ordering Transitions in Perovskite-Like AgNb <sub>1/2</sub> Ta <sub>1/2</sub> O <sub>3</sub> . <i>Chemistry of Materials</i> , 2010, 22, 4987-4995.	6.7	63
17	Stability of the M2 phase of vanadium dioxide induced by coherent epitaxial strain. <i>Physical Review B</i> , 2016, 94, .	3.2	62
18	Conservation of bond lengths in strained Ge-Si layers. <i>Physical Review B</i> , 1991, 43, 2419-2422.	3.2	59

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19	Strontium-induced oxygen defect structure and hole doping in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ . <i>Physical Review Letters</i> , 1990, 64, 2715-2718.	7.8	55
20	Band-structure effects in the excitation-energy dependence of $\text{SiL}_{2,3}$ -x-ray-emission spectra. <i>Physical Review B</i> , 1993, 48, 1918-1920.	3.2	54
21	Accommodation of strain in ultrathin $\text{InAs}/\text{GaAs}$ films. <i>Physical Review B</i> , 1995, 52, R2281-R2284.	3.2	54
22	Local atomic and electronic structures of epitaxial strained $\text{LaCoO}_3$ thin films. <i>Physical Review B</i> , 2012, 85, .	3.2	54
23	A combined fit of total scattering and extended X-ray absorption fine structure data for local-structure determination in crystalline materials. <i>Journal of Applied Crystallography</i> , 2009, 42, 867-877.	4.5	51
24	Extended x-ray absorption fine structure study of $\text{Al}_x\text{Ga}(1-x)\text{N}$ films. <i>Applied Physics Letters</i> , 1997, 70, 2108-2110.	3.3	49
25	X-ray standing-wave determination of the clean $\text{InP}(110)$ surface reconstruction. <i>Physical Review Letters</i> , 1992, 68, 341-344.	7.8	45
26	Strain-induced change in local structure and its effect on the ferromagnetic properties of $\text{La}_{0.5}\text{Sr}_{0.5}\text{CoO}_3$ thin films. <i>Applied Physics Letters</i> , 2008, 93, 182507.	3.3	42
27	In situ XANES of an iron porphyrin irreversibly adsorbed on an electrode surface. <i>Journal of the American Chemical Society</i> , 1991, 113, 9063-9066.	13.7	38
28	Interfacial Effects in $\mu\text{-LiVOPO}_4$ and Evolution of the Electronic Structure. <i>Chemistry of Materials</i> , 2015, 27, 8211-8219.	6.7	37
29	Performance of a four-element Si drift detector for X-ray absorption fine-structure spectroscopy: resolution, maximum count rate, and dead-time correction with incorporation into the ATHENA data analysis software. <i>Journal of Synchrotron Radiation</i> , 2010, 17, 409-413.	2.4	36
30	$\text{In}/\text{Si}(111)\text{-}\sqrt{3}\times\sqrt{3}$ interface: An unrelaxed $T_4$ geometry. <i>Physical Review Letters</i> , 1993, 71, 1204-1207.	7.8	34
31	Unit cell of strained $\text{GeSi}$ . <i>Physical Review B</i> , 1997, 55, 15386-15389.	3.2	32
32	Random-cluster calculation of bond lengths in strained-semiconductor alloys. <i>Physical Review B</i> , 1998, 57, 6266-6269.	3.2	32
33	X-ray standing-wave study of monolayers of $\text{Sb}$ on $\text{GaAs}(110)$ . <i>Physical Review B</i> , 1992, 46, 7276-7279.	3.2	31
34	Determination of the $\text{Sb}/\text{Si}(111)$ interfacial structure by back-reflection x-ray standing waves and surface extended x-ray-absorption fine structure. <i>Physical Review B</i> , 1991, 44, 3475-3478.	3.2	30
35	Effects of annealing on the local structure of $\text{Fe}$ and $\text{Co}$ in $\text{CoFeB}/\text{MgO}/\text{CoFeB}$ tunnel junctions: An extended x-ray-absorption fine structure study. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	30
36	Silicide formation and structural evolution in $\text{Fe}$ -, $\text{Co}$ -, and $\text{Ni}$ -implanted silicon. <i>Physical Review B</i> , 1992, 46, 4077-4085.	3.2	29

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37	Separation of the strain and finite size effect on the ferromagnetic properties of La <sub>0.5</sub> Sr <sub>0.5</sub> CoO <sub>3</sub> thin films. Applied Physics Letters, 2007, 91, 172509.	3.3	28
38	Local bonding structure of Sb on Si(111) by surface extended x-ray-absorption fine structure and photoemission. Physical Review B, 1991, 43, 4331-4339.	3.2	27
39	High-resolution structural study of Bi on Si(001). Physical Review B, 1995, 52, R5515-R5518.	3.2	27
40	Layer perfection in ultrathin MOVPE-grown InAs layers buried in GaAs(001) studied by X-ray standing waves and photoluminescence spectroscopy. Journal of Synchrotron Radiation, 1999, 6, 500-502.	2.4	27
41	Diffraction anomalous fine-structure study of strained Ga <sub>1-x</sub> In <sub>x</sub> As on GaAs(001). Physical Review B, 1998, 58, R4215-R4218.	3.2	26
42	Phase-correct bond lengths in crystalline Ge <sub>x</sub> Si <sub>1-x</sub> alloys. Physical Review B, 1998, 57, 14592-14595.	3.2	26
43	Ferromagnetism and Charge Order from a Frozen Electron Configuration in Strained Epitaxial LaCoO <sub>3</sub> . Physical Review Letters, 2018, 120, 197201.	7.8	26
44	Silicon (111) 2 $\bar{1}$ surface states: K-edge transitions and surface-selective L <sub>2,3</sub> VV Auger line shape. Physical Review B, 1989, 39, 8593-8604.	3.2	24
45	Polarization x-ray-absorption near-edge structure study of Pr <sub>2-x</sub> Ce <sub>x</sub> CuO <sub>4</sub> single crystals: The nature of Ce doping. Physical Review B, 1990, 42, 1037-1040.	3.2	24
46	Structure of SrTiO <sub>3</sub> Films on Si. Physical Review Letters, 2012, 108, 166101.	7.8	24
47	Strain and relaxation in InAs and InGaAs films grown on GaAs(001). Applied Physics Letters, 1996, 68, 3010-3012.	3.3	23
48	Evolution of the crystallographic position of As impurities in heavily doped Si crystals as their electrical activity changes. Applied Physics Letters, 1996, 68, 3090-3092.	3.3	23
49	Direct Measurement of Valence-Charge Asymmetry by X-Ray Standing Waves. Physical Review Letters, 2000, 84, 773-776.	7.8	23
50	X-Ray Spectroscopy of Ultra-Thin Oxide/Oxide Heteroepitaxial Films: A Case Study of Single-Nanometer VO <sub>2</sub> /TiO <sub>2</sub> . Materials, 2015, 8, 5452-5466.	2.9	23
51	Bond-length strain in buried Ga <sub>1-x</sub> In <sub>x</sub> As thin-alloy films grown coherently on InP(001). Applied Physics Letters, 1998, 73, 1269-1271.	3.3	22
52	Composition dependent bilayer atomic ordering in Al <sub>x</sub> Ga <sub>1-x</sub> N films examined by polarization-dependent extended x-ray absorption fine structure. Applied Physics Letters, 2012, 100, .	3.3	22
53	Annealing dependence of diamond-metal Schottky barrier heights probed by hard x-ray photoelectron spectroscopy. Applied Physics Letters, 2012, 100, .	3.3	22
54	K edge x-ray absorption study of Cr dopants in Mg <sub>2</sub> SiO <sub>4</sub> and Ca <sub>2</sub> GeO <sub>4</sub> . Applied Physics Letters, 1997, 71, 1168-1170.	3.3	20

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55	Loss for photoemission versus gain for Auger: Direct experimental evidence of crystal-field splitting and charge transfer in photoelectron spectroscopy. <i>Physical Review B</i> , 2015, 91, .	3.2	20
56	Order-to-disorder phase-transition study of Pb on Ge(111). <i>Physical Review B</i> , 1995, 51, 2440-2445.	3.2	19
57	Structural characterization of the (1 monolayer Sb)/GaP(110) interface using x-ray standing waves. <i>Physical Review B</i> , 1992, 46, 6869-6874.	3.2	18
58	Structural determination of the Si(111) $\sqrt{3}\times\sqrt{3}$ -Bi surface by x-ray standing waves and scanning tunneling microscopy. <i>Physical Review B</i> , 1994, 50, 12246-12249.	3.2	18
59	Boron migration due to annealing in CoFeB/MgO/CoFeB interfaces: A combined hard x-ray photoelectron spectroscopy and x-ray absorption studies. <i>Applied Physics Letters</i> , 2011, 99, 222502.	3.3	18
60	Local structure underlying anomalous tetragonal distortions in BiFeO <sub>3</sub> -PbTiO <sub>3</sub> ferroelectrics. <i>Applied Physics Letters</i> , 2014, 104, 242913.	3.3	17
61	Si(111) $2\times 1$ surface core-level shifts investigated by use of Ge overlayer. <i>Physical Review B</i> , 1989, 40, 12463-12467.	3.2	16
62	Layer perfection in ultrathin InAs quantum wells in GaAs(001). <i>Physical Review B</i> , 2000, 61, 2073-2084.	3.2	16
63	Band alignment of atomic layer deposited HfO <sub>2</sub> on clean and N passivated germanium surfaces. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	16
64	Design and performance of the Advanced Light Source double-crystal monochromator. <i>Review of Scientific Instruments</i> , 1995, 66, 1748-1750.	1.3	15
65	Lattice compression of Si crystals and crystallographic position of As impurities measured with x-ray standing wave spectroscopy. <i>Journal of Applied Physics</i> , 1999, 85, 1429-1437.	2.5	15
66	Electron lone pair distortion facilitated metal-insulator transition in $\text{Pb}_{0.33}\text{V}_{2}\text{O}_5$ nanowires. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	15
67	Morphology and barrier-height development of Bi/InP(110) interfaces. <i>Physical Review B</i> , 1990, 42, 3017-3023.	3.2	13
68	Large-angle bond-rotation relaxation for CdTe(110). <i>Physical Review B</i> , 1995, 51, 10774-10778.	3.2	13
69	Effects of rapid thermal annealing on the structural and local atomic properties of ZnO: Ge nanocomposite thin films. <i>Journal of Applied Physics</i> , 2015, 117, .	2.5	13
70	Analysing trimethylaluminum infiltration into polymer brushes using a scalable area selective vapor phase process. <i>Materials Advances</i> , 2021, 2, 769-781.	5.4	13
71	Atomic-resolution study of lattice distortions of buried $\text{In}_x\text{Ga}_{1-x}$ monolayers in GaAs(001). <i>Physical Review B</i> , 1999, 60, 13612-13618.	3.2	12
72	Temperature-dependent local structure of $\text{LaFeAsO}_{1-x}\text{F}_x$ : Probing the atomic correlations. <i>Journal of Applied Physics</i> , 2010, 108, 123715.	2.5	12

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73	Extended x-ray-absorption fine-structure determination of bond-length conservation at the clean InP(110) surface. Physical Review B, 1992, 46, 9869-9872.	3.2	11
74	Surface extended x-ray-absorption fine-structure study of the (1 monolayer Sb)/GaP(110) interface. Physical Review B, 1993, 47, 6444-6449.	3.2	11
75	Extended x-ray absorption fine-structure measurement of bond-length strain in epitaxial Gd2O3 on GaAs(001). Applied Physics Letters, 2000, 76, 2526-2528.	3.3	11
76	Electronic structure of C and N co-doped TiO2: A combined hard x-ray photoemission spectroscopy and density functional theory study. Applied Physics Letters, 2014, 105, .	3.3	11
77	Enhanced electron correlations at the $\text{SrTiO}_3/\text{LaAlO}_3$ interface. Physical Review B, 2015, 91, .	3.2	11
78	Revealing excitonic processes and chemical bonding in $\text{MoS}_2$ by x-ray spectroscopy. Physical Review B, 2018, 98, .	3.2	11
79	Attenuation of photons at $\sim 14$ -keV energies in helium. Physical Review A, 1995, 51, 447-453.	2.5	10
80	Band alignment in Ge/GeOx/HfO2/TiO2 heterojunctions as measured by hard x-ray photoelectron spectroscopy. Applied Physics Letters, 2012, 101, .	3.3	10
81	Nondestructive compositional depth profiling using variable kinetic energy hard X-ray photoelectron spectroscopy and maximum entropy regularization. Surface and Interface Analysis, 2014, 46, 407-417.	1.8	10
82	Surface-sensitive x-ray standing-wave study of Si(111) $\sqrt{3}\times\sqrt{3}$ -Ag. Physical Review B, 1996, 53, 15425-15428.	3.2	9
83	Reliability of structural parameters determined from DAFS data using the iterative dispersion integral algorithm. Journal of Synchrotron Radiation, 1999, 6, 335-337.	2.4	9
84	Synchrotron X-ray Based Characterization of CdZnTe Crystals. Journal of Electronic Materials, 2007, 36, 1092-1097.	2.2	9
85	Photon-energy-sensitive Si <sub>2,3</sub> VV Auger satellite. Physical Review B, 1989, 39, 6048-6051.	3.2	8
86	X-ray, soft x-ray, and VUV beam position monitor. Review of Scientific Instruments, 1992, 63, 526-529.	1.3	8
87	The role of Ta and Pt in segregation within Co-Cr-Ta and Co-Cr-Pt thin film magnetic recording media. Journal of Applied Physics, 1996, 79, 5345.	2.5	8
88	Evidence of extreme type-III band offset at buried $\text{In}_2\text{S}_3/\text{SnTe}$ interfaces. Physical Review B, 2015, 91, .	3.2	7
89	Surface Segregation in Lanthanum Strontium Manganite Thin Films and Its Potential Effect on the Oxygen Reduction Reaction. Journal of the Electrochemical Society, 2017, 164, F3091-F3096.	2.9	7
90	Preferential site distribution of dilute Pt and Ta in CoCr-based films: An extended x-ray absorption fine structure study. Journal of Applied Physics, 1997, 82, 2912-2917.	2.5	6

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91	Imaging defects in strained-silicon thin films by glancing-incidence x-ray topography. Applied Physics Letters, 2006, 88, 224102.	3.3	5
92	Domain ordering of strained 5 ML SrTiO <sub>3</sub> films on Si(001). Applied Physics Letters, 2007, 90, 221908.	3.3	5
93	On the scalability of doped hafnia thin films. Applied Physics Letters, 2014, 104, .	3.3	5
94	The impact of porosity on the formation of manganese based copper diffusion barrier layers on low- $\kappa$ dielectric materials. Journal Physics D: Applied Physics, 2015, 48, 325102.	2.8	5
95	Semiconductor surface core level shifts by use of selected overlayers. Physica Scripta, 1990, 41, 1034-1036.	2.5	4
96	Atomistic calculation of the local structure in bulk and strained semiconductor alloys. Journal of Applied Physics, 2012, 112, .	2.5	4
97	Zr-induced structural changes in Hf $\lambda^x$ Zr $\lambda$ O <sub>2</sub> high- $\kappa$ thin films. Applied Physics A: Materials Science and Processing, 2014, 117, 93-96.	2.3	4
98	Crystal structure and powder diffraction reference pattern of type I clathrate Ba <sub>8</sub> Ni <sub>4</sub> Ge <sub>42</sub> . Powder Diffraction, 2012, 27, 25-31.	0.2	2
99	Bond lengths in semiconductor alloys. Journal of Synchrotron Radiation, 1999, 6, 570-572.	2.4	1
100	Evolution of correlated electron behavior from the surface to the bulk in Sr $\lambda$ Ca $1-\lambda$ VO <sub>3</sub> . Materials Research Society Symposia Proceedings, 2015, 1730, 1.	0.1	0
101	Noble-metal dark-edge fermiology: Centrifugal barriers, core-hole memory, and the Zeeman Auger effect. Physical Review B, 2021, 104, .	3.2	0