Ã˜ystein Prytz

List of Publications by Year
in descending order

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70	1,283	430874	395702
papers	citations	18	33
		h-index	g-index

72	72	72	1869
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spaceâ€“charge theory applied to the grain boundary impedance of proton conducting BaZr0.9Y0.1O3â^'Î´. Solid State Ionics, 2010, 181, 268-275.	2.7	219
2	Interpretation of hydrogen-assisted fatigue crack propagation in BCC iron based on dislocation structure evolution around the crack wake. Acta Materialia, 2018, 156, 245-253.	7.9	88
3	Multi-scale observation of hydrogen-induced, localized plastic deformation in fatigue-crack propagation in a pure iron. Scripta Materialia, 2017, 140, 13-17.	5.2	68
4	Mechanistic Insight in the Ethane Dehydrogenation Reaction over Cr/Al2O3 Catalysts. Catalysis Letters, 2005, 103, 143-148.	2.6	66
5	In situ XPS investigation of Pt(Sn)/Mg(Al)O catalysts during ethane dehydrogenation experiments. Surface Science, 2007, 601, 30-43.	1.9	64
6	The role of intergranular fracture on hydrogen-assisted fatigue crack propagation in pure iron at a low stress intensity range. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 733, 316-328.	5.6	53
7	The Lorenz function: Its properties at optimum thermoelectric figure-of-merit. Applied Physics Letters, 2011, 99, .	3.3	39
8	The influence of exact exchange corrections in van der Waals layered narrow bandgap black phosphorus. Journal of Physics Condensed Matter, 2010, 22, 015502.	1.8	37
9	Substoichiometric Silicon Nitride â€“ An Anode Material for Li-ion Batteries Promising High Stability and High Capacity. Scientific Reports, 2018, 8, 8634.	3.3	33
10	Valence band study of thermoelectric Zintl-phase<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>SrZn</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>YbZn</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:m Physical Review B, 2010, 81, .	3.2	32
11	Accurate determination of domain boundary orientation in LaNbO4. Acta Materialia, 2005, 53, 297-302.	7.9	29
12	Nanoscale inclusions in the phonon glass thermoelectric material Zn₄Sb₃. Philosophical Magazine Letters, 2009, 89, 362-369.	1.2	29
13	A Toroidal Zr₇₀ Oxysulfate Cluster and Its Diverse Packing Structures. Angewandte Chemie - International Edition, 2020, 59, 21397-21402.	13.8	29
14	Comparison of theoretical and experimental dielectric functions: Electron energy-loss spectroscopy and density-functional calculations on skutterudites. Physical Review B, 2006, 74, .	3.2	28
15	Density-functional band-structure calculations for La-, Y-, and Sc-filledCoP3-based skutterudite structures. Physical Review B, 2004, 70, .	3.2	27
16	Automated approaches for band gap mapping in STEM-EELS. Ultramicroscopy, 2018, 184, 39-45.	1.9	22
17	Long-term Cyclability of Substoichiometric Silicon Nitride Thin Film Anodes for Li-ion Batteries. Scientific Reports, 2017, 7, 13315.	3.3	20
18	Band gap maps beyond the delocalization limit: correlation between optical band gaps and plasmon energies at the nanoscale. Scientific Reports, 2018, 8, 848.	3.3	20

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19	Highly Correlated Hydride Ion Tracer Diffusion in SrTiO_{3â€“x}H_x Oxyhydrides. Journal of the American Chemical Society, 2019, 141, 4653-4659.	13.7	20
20	Direct observation of conduction band plasmons and the related Burstein-Moss shift in highly doped semiconductors: A STEM-EELS study of Ga-doped ZnO. Physical Review B, 2018, 98, .	3.2	19
21	Hydrogen-assisted crack propagation in Î±-iron during elasto-plastic fracture toughness tests. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 756, 396-404.	5.6	19
22	Radiation-induced defect accumulation and annealing in Si-implanted gallium oxide. Journal of Applied Physics, 2022, 131, .	2.5	17
23	A quantitative study of valence electron transfer in the skutterudite compound CoP3by combining x-ray induced Auger and photoelectron spectroscopy. Journal of Physics Condensed Matter, 2007, 19, 246216.	1.8	16
24	Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopy. Nanotechnology, 2017, 28, 105703.	2.6	15
25	Evidence of defect band mechanism responsible for band gap evolution in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mo>(</mml:mo><mml:mi>ZnO</mml:mi><mml:mi><m alloys. Physical Review B, 2019, 100, .	3.2	14
26	High electron mobility single-crystalline ZnSnN₂ on ZnO (0001) substrates. CrystEngComm, 2020, 22, 6268-6274.	2.6	13
27	Reduction of lattice thermal conductivity from planar faults in the layered Zintl compound SrZnSb2. Journal of Applied Physics, 2011, 109, 043509-043509-5.	2.5	12
28	Topologically induced confinement of collective modes in multilayer graphene nanocones measured by momentum-resolved STEM-VEELS. Physical Review B, 2013, 88, .	3.2	12
29	Role of Nitrogen in Defect Evolution in Zinc Oxide: STEMâ€“EELS Nanoscale Investigations. Journal of Physical Chemistry Letters, 2019, 10, 4725-4730.	4.6	12
30	The heterogeneous nucleation of threading dislocations on partial dislocations in III-nitride epilayers. Scientific Reports, 2020, 10, 17371.	3.3	12
31	Self-diffusion in Zn4Sb3 from first-principles molecular dynamics. Computational Materials Science, 2011, 50, 2663-2665.	3.0	11
32	Li and OH-Li Complexes in Hydrothermally Grown Single-Crystalline ZnO. Journal of Electronic Materials, 2011, 40, 429-432.	2.2	11
33	Strain Modulation of Si Vacancy Emission from SiC Micro- and Nanoparticles. Nano Letters, 2020, 20, 8689-8695.	9.1	11
34	Transition metald-band occupancy in skutterudites studied by electron energy-loss spectroscopy. Physical Review B, 2007, 75, .	3.2	10
35	The temperature-dependency of the optical band gap of ZnO measured by electron energy-loss spectroscopy in a scanning transmission electron microscope. Journal of Applied Physics, 2018, 123, .	2.5	10
36	Investigation of the electrostatic potential of a grain boundary in Y-substituted BaZrO3 using inline electron holography. Physical Chemistry Chemical Physics, 2019, 21, 17662-17672.	2.8	10

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37	Electron energy loss spectroscopy of theL2,3edge of phosphorus skutterudites and electronic structure calculations. Physical Review B, 2009, 80, .	3.2	9
38	Electronic structure of thermoelectric Znâ€“Sb. Journal of Physics Condensed Matter, 2011, 23, 265502.	1.8	9
39	Charge-ordered spinel AlV2O4: High-energy-resolution EELS and computational studies. Physical Review B, 2012, 85, .	3.2	9
40	New filled P-based skutteruditesâ€”promising materials for thermoelectricity?. New Journal of Physics, 2008, 10, 053004.	2.9	8
41	Bond analysis of phosphorus skutterudites: Elongated lanthanum electron buildup in LaFe4P12. Computational Materials Science, 2010, 47, 752-757.	3.0	8
42	Controlling luminescence and quenching mechanisms in subnanometer multilayer structure of europium titanium oxide thin films. Journal of Luminescence, 2019, 215, 116618.	3.1	8
43	Hydrogen-assisted fatigue crack propagation in a pure BCC iron. Part II: Accelerated regime manifested by quasi-cleavage fracture at relatively high stress intensity range values. MATEC Web of Conferences, 2018, 165, 03010.	0.2	7
44	Bandgap bowing in crystalline (ZnO)_{1â^'x}(GaN)_x thin films; influence of composition and structural properties. Semiconductor Science and Technology, 2019, 34, 015001.	2.0	7
45	Single-step approach to sensitized luminescence through bulk-embedded organics in crystalline fluorides. Communications Chemistry, 2020, 3, .	4.5	7
46	Dielectric response of pentagonal defects in multilayer graphene nano-cones. Nanoscale, 2014, 6, 1833-1839.	5.6	6
47	Hydrogen-assisted fatigue crack propagation in a pure BCC iron. Part I: Intergranular crack propagation at relatively low stress intensities. MATEC Web of Conferences, 2018, 165, 03011.	0.2	6
48	A Toroidal Zr 70 Oxysulfate Cluster and Its Diverse Packing Structures. Angewandte Chemie, 2020, 132, 21581-21586.	2.0	6
49	Formation of N₂ bubbles along grain boundaries in (ZnO)_{1â^'x}(GaN)_x: nanoscale STEM-EELS studies. Physical Chemistry Chemical Physics, 2020, 22, 3779-3783.	2.8	6
50	Bandgap and band edge positions in compositionally graded ZnCdO. Journal of Applied Physics, 2018, 124, .	2.5	5
51	Effects of Substrate and Postâ€Deposition Annealing on Structural and Optical Properties of (ZnO)_{1â^'x}(GaN)_x Films. Physica Status Solidi (B): Basic Research, 2019, 256, 1800529.	1.5	5
52	Comparison of the electronic structure of a thermoelectric skutterudite before and after adding rattlers: An electron energy loss study. Micron, 2008, 39, 685-689.	2.2	4
53	First complex oxide superconductor by atomic layer deposition. Chemical Communications, 2018, 54, 8253-8256.	4.1	4
54	ZnCr2O4 Inclusions in ZnO Matrix Investigated by Probe-Corrected STEM-EELS. Materials, 2019, 12, 888.	2.9	4

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55	Diffusion of indium in single crystal zinc oxide: a comparison between group III donors. Semiconductor Science and Technology, 2019, 34, 025011.	2.0	4
56	Imaging defect complexes in scanning transmission electron microscopy: Impact of depth, structural relaxation, and temperature investigated by simulations. Ultramicroscopy, 2020, 209, 112884.	1.9	4
57	Ternary Phases (Heusler) in the System Ti-Co-Sn. Metallurgical and Materials Transactions E, 2016, 3, 329-336.	0.5	3
58	Structural and optical properties of individual Zn2GeO4 particles embedded in ZnO. Nanotechnology, 2019, 30, 225702.	2.6	3
59	Formation and functionalization of Ge-nanoparticles in ZnO. Nanotechnology, 2021, 32, 505707.	2.6	2
60	Galvanic Restructuring of Exsolved Nanoparticles for Plasmonic and Electrocatalytic Energy Conversion. Small, 2022, 18, .	10.0	2
61	Accurate determination of orientation relationships between ferroelastic domains: the tetragonal to monoclinic transition in LaNbO4 as an example.. Materials Research Society Symposia Proceedings, 2004, 839, 125.	0.1	0
62	Experimental and theoretical studies of plasma resonance and the electronic structure of binary skutterudites. Materials Research Society Symposia Proceedings, 2005, 886, 1.	0.1	0
63	Bond Character of Carbon Cones and Discs. Microscopy and Microanalysis, 2011, 17, 1538-1539.	0.4	0
64	Topologically Induced Confinement of Collective Modes in Polycrystalline Graphene Nano-cones: Measured By Momentum Transfer Dependent STEM-VEELS. Microscopy and Microanalysis, 2013, 19, 1512-1513.	0.4	0
65	Reply to Comment on â€˜Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopyâ€™. Nanotechnology, 0, , .	2.6	0
66	Reply to Comment on â€˜Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopyâ€™. Nanotechnology, 2018, 29, 318002.	2.6	0
67	RÃ¼cktitelbild: A Toroidal Zr₇₀ Oxysulfate Cluster and Its Diverse Packing Structures (Angew. Chem. 48/2020). Angewandte Chemie, 2020, 132, 21972-21972.	2.0	0
68	Surface plasmon investigations by STEM-EELS mapping of Au/Ni nanoparticles on STO. Microscopy and Microanalysis, 2021, 27, 2452-2454.	0.4	0
69	Metallization of ZnSb and contact resistance. Journal of Applied Physics, 2021, 130, 025107.	2.5	0
70	Hydrogen-Assisted Fatigue Crack Propagation in a Commercially Pure BCC Iron. , 2018, , .		0