

# Andreas Zerr

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

71  
papers

2,971  
citations

23  
h-index

54  
g-index

81  
ext. papers

3,145  
ext. citations

10.9  
avg, IF

4.59  
L-index

#	Paper	IF	Citations
71	Electronic Band Transitions in $\text{EGe}_3\text{N}_4$ . <i>Electronic Materials Letters</i> , <b>2021</b> , 17, 315-323	2.9	3
70	Influence of elastic anisotropy on measured sound velocities and elastic moduli of polycrystalline cubic solids. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 035903	2.5	0
69	3D characterization of individual grains of coexisting high-pressure H <sub>2</sub> O ice phases by time-domain Brillouin scattering. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 053104	2.5	0
68	Defects induced by He <sup>+</sup> irradiation in $\text{EBi}_3\text{N}_4$ . <i>Journal of Luminescence</i> , <b>2021</b> , 237, 118132	3.8	5
67	Elastic anisotropy and single-crystal moduli of solid argon up to 64 GPa from time-domain Brillouin scattering. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	4
66	Synthesis of cubic zirconium(IV) nitride, c-Zr <sub>3</sub> N <sub>4</sub> , in the 68 GPa pressure region. <i>Ceramics International</i> , <b>2019</b> , 45, 20028-20032	5.1	6
65	Sound Velocities and Elastic Moduli of Phases I and V of Silicon at High Pressures. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2019</b> , 13, 1900173	2.5	1
64	Synthesis of organic-inorganic hybrids via a high-pressure-ramp process: the effect of inorganic nanoparticle loading on structural and photochromic properties. <i>Nanoscale</i> , <b>2018</b> , 10, 22293-22301	7.7	8
63	Experimental evidence of an electronic transition in CeP under pressure using Ce L XAS. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 17526-17530	3.6	9
62	In situ imaging of the dynamics of photo-induced structural phase transition at high pressures by picosecond acoustic interferometry. <i>New Journal of Physics</i> , <b>2017</b> , 19, 053026	2.9	5
61	Superhard Materials <b>2017</b> , 175-200		3
60	Longitudinal sound velocities, elastic anisotropy, and phase transition of high-pressure cubic H <sub>2</sub> O ice to 82 GPa. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	16
59	Picosecond laser ultrasonics for imaging of transparent polycrystalline materials compressed to megabar pressures. <i>Ultrasonics</i> , <b>2016</b> , 69, 259-67	3.5	15
58	Vickers microhardness and indentation fracture toughness of tantalum sesquinitride, $\text{ETa}_2\text{N}_3$ . <i>Ceramics International</i> , <b>2016</b> , 42, 982-985	5.1	3
57	Photoluminescence and electronic transitions in cubic silicon nitride. <i>Scientific Reports</i> , <b>2016</b> , 6, 18523	4.9	14
56	Revealing sub- $\mu\text{m}$ and $\mu\text{m}$ -scale textures in H <sub>2</sub> O ice at megabar pressures by time-domain Brillouin scattering. <i>Scientific Reports</i> , <b>2015</b> , 5, 9352	4.9	27
55	Elastic moduli and hardness of $\text{ETa}_2\text{N}_3$ from nanoindentation measurements. <i>Europhysics Letters</i> , <b>2015</b> , 111, 18006	1.6	3

54	Laser-assisted high-pressure-induced polymerization of 2-(hydroxyethyl)methacrylate. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 3577-82	3.4	9
53	A New Route for High-Purity Organic Materials: High-Pressure-Ramp-Induced Ultrafast Polymerization of 2-(Hydroxyethyl)Methacrylate. <i>Scientific Reports</i> , <b>2015</b> , 5, 18244	4.9	7
52	Directivity patterns and pulse profiles of ultrasound emitted by laser action on interface between transparent and opaque solids: Analytical theory. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 044902	2.5	9
51	Electronic structure and band gap of oxygen bearing c-Zr <sub>3</sub> N <sub>4</sub> and of c-Hf <sub>3</sub> N <sub>4</sub> by soft X-ray spectroscopy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2014</b> , 211, 835-842	1.6	4
50	Electronic structure of spinel-type nitride compounds Si <sub>3</sub> N <sub>4</sub> , Ge <sub>3</sub> N <sub>4</sub> , and Sn <sub>3</sub> N <sub>4</sub> with tunable band gaps: application to light emitting diodes. <i>Physical Review Letters</i> , <b>2013</b> , 111, 097402	7.4	5 <sup>1</sup>
49	Elastic moduli and hardness of highly incompressible platinum perpnictide PtAs <sub>2</sub> . <i>Applied Physics Letters</i> , <b>2013</b> , 103, 101901	3.4	5
48	Elastic moduli of Ta <sub>2</sub> N <sub>3</sub> , a tough self-healing material, via laser ultrasonics. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2012</b> , 6, 484-486	2.5	7
47	Hard Materials <b>2012</b> ,		2
46	Laser ultrasonic measurements in a diamond anvil cell on Fe and the KBr pressure medium. <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 278, 012017	0.3	7
45	Compressibility of cubic vanadium mononitride. <i>Europhysics Letters</i> , <b>2010</b> , 92, 66001	1.6	12
44	Raman spectroscopy study of nitromethane in a shear diamond anvil cell. <i>High Pressure Research</i> , <b>2010</b> , 30, 24-27	1.6	2
43	Elastic moduli of hard c-Zr <sub>3</sub> N <sub>4</sub> from laser ultrasonic measurements. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2010</b> , 4, 353-355	2.5	22
42	High-Pressure Synthesis of Tantalum Nitride Having Orthorhombic U <sub>2</sub> S <sub>3</sub> Structure. <i>Advanced Functional Materials</i> , <b>2009</b> , 19, 2282-2288	15.6	90
41	Synthesis and properties of oxygen-bearing c-Zr <sub>3</sub> N <sub>4</sub> and c-Hf <sub>3</sub> N <sub>4</sub> . <i>Journal of Alloys and Compounds</i> , <b>2009</b> , 480, 46-49	5.7	11
40	Comments on Hardness, elasticity, and fracture toughness of polycrystalline spinel germanium nitride and tin nitride, [by M.P. Shemkunas, W.T. Petuskey, A.V.G. Chizmeshya, K. Leinenweber, and G.H. Wolf [J. Mater. Res. 19, 1392 (2004)]: Reestablishing of elastic moduli for Ge <sub>3</sub> N <sub>4</sub> . <i>Journal of Materials Research</i> , <b>2008</b> , 23, 3273-3274	2.5	
39	High-pressure high-temperature synthesis of novel binary and ternary nitride phases of group 4 and 14 elements. <i>Journal of Physics: Conference Series</i> , <b>2008</b> , 121, 062003	0.3	2
38	High-pressure synthesis of crystalline carbon nitride imide, C <sub>2</sub> N <sub>2</sub> (NH). <i>Angewandte Chemie - International Edition</i> , <b>2007</b> , 46, 1476-80	16.4	74
37	High-Pressure Synthesis of Crystalline Carbon Nitride Imide, C <sub>2</sub> N <sub>2</sub> (NH). <i>Angewandte Chemie</i> , <b>2007</b> , 119, 1498-1502	3.6	21

36	High-Pressure Multianvil Synthesis and Structure Refinement of Oxygen-Bearing Cubic Zirconium(IV) Nitride. <i>Advanced Materials</i> , <b>2007</b> , 19, 1869-1873	24	22
35	Elastic moduli and hardness of $c\text{-Zr}_{2.86}(\text{N}_{0.88}\text{O}_{0.12})_4$ having Th <sub>3</sub> P <sub>4</sub> -type structure. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 191910	3.4	13
34	Recent Advances in New Hard High-Pressure Nitrides. <i>Advanced Materials</i> , <b>2006</b> , 18, 2933-2948	24	114
33	Decomposition of alkanes at high pressures and temperatures. <i>High Pressure Research</i> , <b>2006</b> , 26, 23-32	1.6	44
32	High-pressure chemistry of nitride-based materials. <i>Chemical Society Reviews</i> , <b>2006</b> , 35, 987-1014	58.5	185
31	Equation of state of cubic hafnium(IV) nitride having Th <sub>3</sub> P <sub>4</sub> -type structure. <i>Solid State Communications</i> , <b>2006</b> , 139, 255-258	1.6	29
30	Synthesis of Nanocrystalline Zr <sub>3</sub> N <sub>4</sub> and Hf <sub>3</sub> N <sub>4</sub> Powders from Metal Dialkylamides. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , <b>2005</b> , 631, 1449-1455	1.3	30
29	Elastic Moduli and Hardness of Cubic Silicon Nitride. <i>Journal of the American Ceramic Society</i> , <b>2004</b> , 85, 86-90	3.8	122
28	Synthesis of cubic zirconium and hafnium nitride having Th <sub>3</sub> P <sub>4</sub> structure. <i>Nature Materials</i> , <b>2003</b> , 2, 185- <del>97</del>		268
27	Spinel-Sialone. <i>Angewandte Chemie</i> , <b>2002</b> , 114, 804-808	3.6	6
26	Spinel sialons. <i>Angewandte Chemie - International Edition</i> , <b>2002</b> , 41, 789-93	16.4	30
25	Equation of state and structural phase transition in FeBO <sub>3</sub> at high pressure. <i>JETP Letters</i> , <b>2002</b> , 75, 23-25.2	1.2	15
24	New high pressure nitrides. <i>Acta Crystallographica Section A: Foundations and Advances</i> , <b>2002</b> , 58, c47-c47		7
23	A New High-Pressure Phase of Si <sub>3</sub> N <sub>4</sub> . <i>Physica Status Solidi (B): Basic Research</i> , <b>2001</b> , 227, R4-R6	1.3	21
22	Spinel-Si <sub>3</sub> N <sub>4</sub> : Multi-Anvil Press Synthesis and Structural Refinement. <i>Advanced Materials</i> , <b>2000</b> , 12, 883- <del>887</del>		113
21	Synthesis of a cubic Ge <sub>3</sub> N <sub>4</sub> phase at high pressures and temperatures. <i>Journal of Chemical Physics</i> , <b>1999</b> , 111, 4659-4662	3.9	114
20	Partitioning of nickel and cobalt between silicate perovskite and metal at pressures up to 80 GPa. <i>Nature</i> , <b>1999</b> , 398, 604-607	50.4	29
19	Synthesis of cubic silicon nitride. <i>Nature</i> , <b>1999</b> , 400, 340-342	50.4	549

18	The transition of pyrope to perovskite. <i>Physics and Chemistry of Minerals</i> , <b>1998</b> , 25, 193-196	1.6	16
17	(Mg,Fe)SiO <sub>3</sub> -perovskite stability under lower mantle conditions. <i>Science</i> , <b>1998</b> , 280, 2093-5	33.3	80
16	Solidus of Earth's deep mantle. <i>Science</i> , <b>1998</b> , 281, 243-6	33.3	156
15	Melting of CaSiO <sub>3</sub> perovskite to 430 kbar and first in-situ measurements of lower mantle eutectic temperatures. <i>Geophysical Research Letters</i> , <b>1997</b> , 24, 909-912	4.9	35
14	Temperature and chemistry of the core-mantle boundary. <i>Chemical Geology</i> , <b>1995</b> , 120, 199-205	4.2	34
13	The Coesite-Stishovite Transition in a laser-heated diamond cell. <i>Geophysical Research Letters</i> , <b>1995</b> , 22, 441-444	4.9	23
12	Corrections and clarifications. <i>Science</i> , <b>1994</b> , 265, 723	33.3	
11	Response. <i>Science</i> , <b>1994</b> , 264, 280-1	33.3	20
10	Constraints on the melting temperature of the lower mantle from high-pressure experiments on MgO and magnesioferrite. <i>Nature</i> , <b>1994</b> , 371, 506-508	50.4	182
9	Perovskite temperature profile. <i>Science</i> , <b>1994</b> , 265, 723	33.3	2
8	Perovskite Temperature Profile. <i>Science</i> , <b>1994</b> , 265, 723-723	33.3	
7	Melting of (Mg, Fe)SiO <sub>3</sub> -Perovskite to 625 Kilobars: Indication of a High Melting Temperature in the Lower Mantle. <i>Science</i> , <b>1993</b> , 262, 553-5	33.3	192
6	Hydrostatic compression of [(Mg <sub>0.6</sub> , Fe <sub>0.4</sub> ) <sub>2</sub> SiO <sub>4</sub> ] to 50.0 GPa. <i>Physics and Chemistry of Minerals</i> , <b>1993</b> , 19, 507	1.6	19
5	Optical chamber with diamond anvils for shear deformation of substances at pressures up to 96 GPa. <i>High Pressure Research</i> , <b>1992</b> , 8, 567-571	1.6	7
4	Relative stability of red and black phosphorus at P. <i>Journal of Materials Science</i> , <b>1992</b> , 27, 2677-2681	4.3	18
3	Amorphisation of gallium antimonide under the conditions of shear deformation under pressure. <i>Physica Status Solidi A</i> , <b>1988</b> , 105, K29-K32		8
2	Spinel-SiAlONs [A New Group of Silicon-Based Hard Materials] 808-813		
1	Phase Transitions and Material Synthesis using the CO <sub>2</sub> -Laser Heating Technique in a Diamond Cell 41-65		10

