

Andreas Zerr

List of Publications by Citations

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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	Synthesis of cubic silicon nitride. <i>Nature</i> , 1999 , 400, 340-342	50.4	549
70	Synthesis of cubic zirconium and hafnium nitride having Th3P4 structure. <i>Nature Materials</i> , 2003 , 2, 185-211	27.7	268
69	Melting of (Mg, Fe)SiO ₃ -Perovskite to 625 Kilobars: Indication of a High Melting Temperature in the Lower Mantle. <i>Science</i> , 1993 , 262, 553-5	33.3	192
68	High-pressure chemistry of nitride-based materials. <i>Chemical Society Reviews</i> , 2006 , 35, 987-1014	58.5	185
67	Constraints on the melting temperature of the lower mantle from high-pressure experiments on MgO and magnesioferrite. <i>Nature</i> , 1994 , 371, 506-508	50.4	182
66	Solidus of Earth's deep mantle. <i>Science</i> , 1998 , 281, 243-6	33.3	156
65	Elastic Moduli and Hardness of Cubic Silicon Nitride. <i>Journal of the American Ceramic Society</i> , 2004 , 85, 86-90	3.8	122
64	Recent Advances in New Hard High-Pressure Nitrides. <i>Advanced Materials</i> , 2006 , 18, 2933-2948	24	114
63	Synthesis of a cubic Ge ₃ N ₄ phase at high pressures and temperatures. <i>Journal of Chemical Physics</i> , 1999 , 111, 4659-4662	3.9	114
62	Spinel-Si ₃ N ₄ : Multi-Anvil Press Synthesis and Structural Refinement. <i>Advanced Materials</i> , 2000 , 12, 883-887	27.7	113
61	High-Pressure Synthesis of Tantalum Nitride Having Orthorhombic U ₂ S ₃ Structure. <i>Advanced Functional Materials</i> , 2009 , 19, 2282-2288	15.6	90
60	(Mg,Fe)SiO ₃ -perovskite stability under lower mantle conditions. <i>Science</i> , 1998 , 280, 2093-5	33.3	80
59	High-pressure synthesis of crystalline carbon nitride imide, C ₂ N ₂ (NH). <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 1476-80	16.4	74
58	Electronic structure of spinel-type nitride compounds Si ₃ N ₄ , Ge ₃ N ₄ , and Sn ₃ N ₄ with tunable band gaps: application to light emitting diodes. <i>Physical Review Letters</i> , 2013 , 111, 097402	7.4	51
57	Decomposition of alkanes at high pressures and temperatures. <i>High Pressure Research</i> , 2006 , 26, 23-32	1.6	44
56	Melting of CaSiO ₃ perovskite to 430 kbar and first in-situ measurements of lower mantle eutectic temperatures. <i>Geophysical Research Letters</i> , 1997 , 24, 909-912	4.9	35
55	Temperature and chemistry of the core-mantle boundary. <i>Chemical Geology</i> , 1995 , 120, 199-205	4.2	34

54	Spinel sialons. <i>Angewandte Chemie - International Edition</i> , 2002 , 41, 789-93	16.4	30
53	Synthesis of Nanocrystalline Zr ₃ N ₄ and Hf ₃ N ₄ Powders from Metal Dialkylamides. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2005 , 631, 1449-1455	1.3	30
52	Equation of state of cubic hafnium(IV) nitride having Th ₃ P ₄ -type structure. <i>Solid State Communications</i> , 2006 , 139, 255-258	1.6	29
51	Partitioning of nickel and cobalt between silicate perovskite and metal at pressures up to 80 GPa. <i>Nature</i> , 1999 , 398, 604-607	50.4	29
50	Revealing sub- μm and μm -scale textures in H ₂ O ice at megabar pressures by time-domain Brillouin scattering. <i>Scientific Reports</i> , 2015 , 5, 9352	4.9	27
49	The Coesite-Stishovite Transition in a laser-heated diamond cell. <i>Geophysical Research Letters</i> , 1995 , 22, 441-444	4.9	23
48	Elastic moduli of hard c-Zr ₃ N ₄ from laser ultrasonic measurements. <i>Physica Status Solidi - Rapid Research Letters</i> , 2010 , 4, 353-355	2.5	22
47	High-Pressure Multianvil Synthesis and Structure Refinement of Oxygen-Bearing Cubic Zirconium(IV) Nitride. <i>Advanced Materials</i> , 2007 , 19, 1869-1873	24	22
46	High-Pressure Synthesis of Crystalline Carbon Nitride Imide, C ₂ N ₂ (NH). <i>Angewandte Chemie</i> , 2007 , 119, 1498-1502	3.6	21
45	A New High-Pressure β Phase of Si ₃ N ₄ . <i>Physica Status Solidi (B): Basic Research</i> , 2001 , 227, R4-R6	1.3	21
44	Response. <i>Science</i> , 1994 , 264, 280-1	33.3	20
43	Hydrostatic compression of $\text{[(Mg}_{0.6}\text{, Fe}_{0.4})_2\text{SiO}_4]$ to 50.0 GPa. <i>Physics and Chemistry of Minerals</i> , 1993 , 19, 507	1.6	19
42	Relative stability of red and black phosphorus at P. <i>Journal of Materials Science</i> , 1992 , 27, 2677-2681	4.3	18
41	Longitudinal sound velocities, elastic anisotropy, and phase transition of high-pressure cubic H ₂ O ice to 82 GPa. <i>Physical Review B</i> , 2017 , 96,	3.3	16
40	The transition of pyrope to perovskite. <i>Physics and Chemistry of Minerals</i> , 1998 , 25, 193-196	1.6	16
39	Picosecond laser ultrasonics for imaging of transparent polycrystalline materials compressed to megabar pressures. <i>Ultrasonics</i> , 2016 , 69, 259-67	3.5	15
38	Equation of state and structural phase transition in FeBO ₃ at high pressure. <i>JETP Letters</i> , 2002 , 75, 23-25.2		15
37	Photoluminescence and electronic transitions in cubic silicon nitride. <i>Scientific Reports</i> , 2016 , 6, 18523	4.9	14

36	Elastic moduli and hardness of c-Zr _{2.86} (N _{0.88} O _{0.12}) ₄ having Th ₃ P ₄ -type structure. <i>Applied Physics Letters</i> , 2007 , 90, 191910	3.4	13
35	Compressibility of cubic vanadium mononitride. <i>Europhysics Letters</i> , 2010 , 92, 66001	1.6	12
34	Synthesis and properties of oxygen-bearing c-Zr ₃ N ₄ and c-Hf ₃ N ₄ . <i>Journal of Alloys and Compounds</i> , 2009 , 480, 46-49	5.7	11
33	Phase Transitions and Material Synthesis using the CO ₂ -Laser Heating Technique in a Diamond Cell	41-65	10
32	Experimental evidence of an electronic transition in CeP under pressure using Ce L XAS. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 17526-17530	3.6	9
31	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> , 2014 , 115, 044902	2.5	9
30	Laser-assisted high-pressure-induced polymerization of 2-(hydroxyethyl)methacrylate. <i>Journal of Physical Chemistry B</i> , 2015 , 119, 3577-82	3.4	9
29	Amorphisation of gallium antimonide under the conditions of shear deformation under pressure. <i>Physica Status Solidi A</i> , 1988 , 105, K29-K32		8
28	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> , 2018 , 10, 22293-22301	7.7	8
27	Elastic moduli of Ta ₂ N ₃ , a tough self-healing material, via laser ultrasonics. <i>Physica Status Solidi - Rapid Research Letters</i> , 2012 , 6, 484-486	2.5	7
26	Laser ultrasonic measurements in a diamond anvil cell on Fe and the KBr pressure medium. <i>Journal of Physics: Conference Series</i> , 2011 , 278, 012017	0.3	7
25	New high pressure nitrides. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2002 , 58, c47-c47		7
24	Optical chamber with diamond anvils for shear deformation of substances at pressures up to 96 GPa. <i>High Pressure Research</i> , 1992 , 8, 567-571	1.6	7
23	A New Route for High-Purity Organic Materials: High-Pressure-Ramp-Induced Ultrafast Polymerization of 2-(Hydroxyethyl)Methacrylate. <i>Scientific Reports</i> , 2015 , 5, 18244	4.9	7
22	Synthesis of cubic zirconium(IV) nitride, c-Zr ₃ N ₄ , in the 68 GPa pressure region. <i>Ceramics International</i> , 2019 , 45, 20028-20032	5.1	6
21	Spinel-Sialone. <i>Angewandte Chemie</i> , 2002 , 114, 804-808	3.6	6
20	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> , 2017 , 19, 053026	2.9	5
19	Elastic moduli and hardness of highly incompressible platinum perpnictide PtAs ₂ . <i>Applied Physics Letters</i> , 2013 , 103, 101901	3.4	5

18	Defects induced by He+ irradiation in Si_3N_4 . <i>Journal of Luminescence</i> , 2021 , 237, 118132	3.8	5
17	Elastic anisotropy and single-crystal moduli of solid argon up to 64 GPa from time-domain Brillouin scattering. <i>Physical Review B</i> , 2019 , 99,	3.3	4
16	Electronic structure and band gap of oxygen bearing c-Zr $_3\text{N}_4$ and of c-Hf $_3\text{N}_4$ by soft X-ray spectroscopy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014 , 211, 835-842	1.6	4
15	Elastic moduli and hardness of Ta_2N_3 from nanoindentation measurements. <i>Europhysics Letters</i> , 2015 , 111, 18006	1.6	3
14	Superhard Materials 2017 , 175-200		3
13	Vickers microhardness and indentation fracture toughness of tantalum sesquinitride, Ta_2N_3 . <i>Ceramics International</i> , 2016 , 42, 982-985	5.1	3
12	Electronic Band Transitions in Ge_3N_4 . <i>Electronic Materials Letters</i> , 2021 , 17, 315-323	2.9	3
11	Hard Materials 2012 ,		2
10	Raman spectroscopy study of nitromethane in a shear diamond anvil cell. <i>High Pressure Research</i> , 2010 , 30, 24-27	1.6	2
9	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> , 2008 , 121, 062003	0.3	2
8	Perovskite temperature profile. <i>Science</i> , 1994 , 265, 723	33.3	2
7	Sound Velocities and Elastic Moduli of Phases I and V of Silicon at High Pressures. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1900173	2.5	1
6	Influence of elastic anisotropy on measured sound velocities and elastic moduli of polycrystalline cubic solids. <i>Journal of Applied Physics</i> , 2021 , 130, 035903	2.5	0
5	3D characterization of individual grains of coexisting high-pressure H $_2\text{O}$ ice phases by time-domain Brillouin scattering. <i>Journal of Applied Physics</i> , 2021 , 130, 053104	2.5	0
4	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_3N_4 . <i>Journal of Materials Research</i> , 2008 , 23, 3273-3274	2.5	
3	Spinel-SiAlONs [A New Group of Silicon-Based Hard Materials] 808-813		
2	Corrections and clarifications. <i>Science</i> , 1994 , 265, 723	33.3	
1	Perovskite Temperature Profile. <i>Science</i> , 1994 , 265, 723-723	33.3	

