

Thomas E Weirich

List of Publications by Year in descending order

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116
papers

3,417
citations

159585

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h-index

155660

55
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119
all docs

119
docs citations

119
times ranked

4212
citing authors

#	ARTICLE	IF	CITATIONS
1	An interface clusters mixture model for the structure of amorphous silicon monoxide (SiO). Journal of Non-Crystalline Solids, 2003, 320, 255-280.	3.1	231
2	Light-Mediated Heterogeneous Cross Dehydrogenative Coupling Reactions: Metal Oxides as Efficient, Recyclable, Photoredox Catalysts in C-C Bond-Forming Reactions. Chemistry - A European Journal, 2012, 18, 3478-3481.	3.3	213
3	Behavior of Ba(Co, Fe, Nb)O _{3-δ} Perovskite in CO ₂ -Containing Atmospheres: Degradation Mechanism and Materials Design. Chemistry of Materials, 2010, 22, 6246-6253.	6.7	180
4	Behavior of oxygen vacancies in single-crystal SrTiO ₃ : Equilibrium distribution and diffusion kinetics. Physical Review B, 2012, 85, .	3.2	176
5	A crystal structure determined with 0.02 Å... accuracy by electron microscopy. Nature, 1996, 382, 144-146.	27.8	159
6	Ultrastructural Analysis of Vascular Calcifications in Uremia. Journal of the American Society of Nephrology: JASN, 2010, 21, 689-696.	6.1	157
7	A kinetic study of the decomposition of the cubic perovskite-type oxide Ba _x Sr _{1-x} Co _{0.8} Fe _{0.2} O _{3-δ} (BSCF) (x = 0.1 and 0.5). Physical Chemistry Chemical Physics, 2010, 12, 10320.	2.8	157
8	The structure of charoite, (K,Sr,Ba,Mn) ₁₅ (Ca,Na) ₃₂ [(Si ₇₀ (O,OH) ₁₈₀)(OH,F) ₄₀] ₂ ·nH ₂ O solved by conventional and automated electron diffraction. Mineralogical Magazine, 2010, 74, 159-177.	4.0	138
9	Rietveld analysis of electron powder diffraction data from nanocrystalline anatase, TiO ₂ . Ultramicroscopy, 2000, 81, 263-270.	1.9	89
10	Quasiregular quantum-dot-like structure formation with postgrowth thermal annealing of InGaN/GaN quantum wells. Applied Physics Letters, 2002, 80, 2571-2573.	3.3	79
11	On the mechanism of WC coarsening in WC-Co hardmetals with various carbon contents. International Journal of Refractory Metals and Hard Materials, 2009, 27, 234-243.	3.8	79
12	Ab initio determination of the framework structure of the heavy-metal oxide Cs _x Nb _{2.54} W _{2.46} O ₁₄ from 100kV precession electron diffraction data. Ultramicroscopy, 2006, 106, 164-175.	1.9	78
13	Structures of nanometre-size crystals determined from selected-area electron diffraction data. Acta Crystallographica Section A: Foundations and Advances, 2000, 56, 29-35.	0.3	72
14	Formation and Effect of NH ₄ ⁺ Intermediates in NH ₃ -SCR over Fe-ZSM-5 Zeolite Catalysts. ACS Catalysis, 2016, 6, 7696-7700.	11.2	68
15	Effect of Si-doping on InAs nanowire transport and morphology. Journal of Applied Physics, 2011, 110, .	2.5	61
16	Electrodeposition of a protective copper/nickel deposit on the magnesium alloy (AZ31). Corrosion Science, 2008, 50, 1385-1390.	6.6	60
17	Laser interference metallurgy: A new method for periodic surface microstructure design on multilayered metallic thin films. Applied Surface Science, 2007, 253, 8070-8074.	6.1	59
18	Structural, compositional, optical and colorimetric characterization of TiN-nanoparticles. European Physical Journal D, 2004, 31, 69-76.	1.3	55

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19	Novel ultra-coarse hardmetal grades with reinforced binder for mining and construction. <i>International Journal of Refractory Metals and Hard Materials</i> , 2005, 23, 225-232.	3.8	55
20	CO ₂ corrosion and recovery of perovskite-type BaCo _{1-x} Fe _x Nb _y O _{3-δ} membranes. <i>Journal of Membrane Science</i> , 2013, 437, 49-56.	8.2	55
21	Hybrid sol-gel double metal cyanide catalysts for the copolymerisation of styrene oxide and CO ₂ . <i>Green Chemistry</i> , 2012, 14, 1168.	9.0	54
22	Size-Selective, Stabilizer-Free, Hydrogenolytic Synthesis of Iridium Nanoparticles Supported on Carbon Nanotubes. <i>Chemistry of Materials</i> , 2011, 23, 2008-2010.	6.7	45
23	Nanoimprint and selective-area MOVPE for growth of GaAs/InAs core/shell nanowires. <i>Nanotechnology</i> , 2013, 24, 085603.	2.6	45
24	Structure of nanocrystalline anatase solved and refined from electron powder data Presented at the microsymposium on Electron Crystallography of Small Molecules and Organic Materials, 19th European Crystallographic Meeting, Nancy, France, 25-31 August 2000.. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2002, 58, 308-315.	0.3	41
25	Plastic deformation behavior of nanostructured CrN/AlN multilayer coatings deposited by hybrid dcMS/HPPMS. <i>Surface and Coatings Technology</i> , 2017, 332, 253-261.	4.8	41
26	Effects of Nb on the microstructure and corrosive property in the Alloy 690-SUS 304L weldment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 397, 229-238.	5.6	40
27	Wear characteristics of second-phase-reinforced sol-gel corundum abrasives. <i>Acta Materialia</i> , 2006, 54, 3605-3615.	7.9	37
28	Interface structure, chemistry and properties of NiAl composites fabricated from matrix-coated single-crystalline Al ₂ O ₃ fibres (sapphire) with and without an hBN interlayer. <i>Acta Materialia</i> , 2006, 54, 2473-2488.	7.9	36
29	Preparation of Nanosized Perovskite-type Oxides via Polyol Method. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2004, 630, 2083-2089.	1.2	32
30	Analysis of Calcifications in Patients with Coral Reef Aorta. <i>Annals of Vascular Surgery</i> , 2010, 24, 408-414.	0.9	30
31	An in situ XAS investigation of the kinetics of the ammonolysis of Ga ₂ O ₃ and the oxidation of GaN. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 3127.	2.8	29
32	A pretreatment with galvanostatic etching for copper electrodeposition on pure magnesium and magnesium alloys in an alkaline copper-sulfate bath. <i>Electrochimica Acta</i> , 2008, 53, 7235-7241.	5.2	27
33	Long-term structural surface modifications of mixed conducting La ₂ NiO _{4+δ} at high temperatures. <i>Monatshefte für Chemie</i> , 2009, 140, 1095-1102.	1.8	25
34	Micro-Analysis of the Contact Zone of Tribologically Loaded Second-Phase Reinforced Sol-Gel-Abrasives. <i>CIRP Annals - Manufacturing Technology</i> , 2002, 51, 245-250.	3.6	24
35	Development of Hybrid Polymer Electrolyte Membranes Based on the Semi-Interpenetrating Network Concept. <i>Fuel Cells</i> , 2006, 6, 225-236.	2.4	24
36	A new approach to fabrication of gradient WC-Co hardmetals. <i>International Journal of Refractory Metals and Hard Materials</i> , 2010, 28, 228-237.	3.8	24

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37	Ti ₉ Se ₂ - Eine Verbindung mit kolumnaren [Ti ₉]-Baueinheiten. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 1996, 622, 630-634.	1.2	23
38	Electron crystallography without limits? Crystal structure of Ti ₄₅ Se ₁₆ redetermined by electron diffraction structure analysis. Acta Crystallographica Section A: Foundations and Advances, 2001, 57, 183-191.	0.3	21
39	In-Situ Preparation of Polymer-Coated Alumina Nanopowders by Chemical Vapor Synthesis. Chemical Vapor Deposition, 2003, 9, 40-44.	1.3	21
40	TEM Investigations of Fine Niobium Precipitates in HSLA Steel. Steel Research International, 2004, 75, 753-758.	1.8	21
41	Synthesis of TiO ₂ core/RuO ₂ shell particles using multistep ultrasonic spray pyrolysis. Materials Research Bulletin, 2013, 48, 3633-3635.	5.2	21
42	The blocking effect of surface dislocations on oxygen tracer diffusion in SrTiO ₃ . Physical Chemistry Chemical Physics, 2018, 20, 15455-15463.	2.8	21
43	Microstructural Study of the Dissimilar Joints of Alloy 690 and SUS 304L Stainless Steel. Materials Transactions, 2007, 48, 481-489.	1.2	20
44	Complexion at WC-Co grain boundaries of cemented carbides. Materials Letters, 2017, 187, 7-10.	2.6	20
45	Structural and Magnetic Properties of Ni/NiOxide- and Co/CoOxide Core/Shell Nanoparticles and their possible Use for Ferrofluids. Zeitschrift Fur Physikalische Chemie, 2006, 220, 173-187.	2.8	19
46	Extrusion of CNT-modified Polymers with Low Viscosity - Influence of Crystallization and CNT Orientation on the Electrical Properties. Polymers and Polymer Composites, 2013, 21, 473-482.	1.9	19
47	Effects of post-growth thermal annealing on the indium aggregated structures in InGaN/GaN quantum wells. Journal of Crystal Growth, 2002, 242, 35-40.	1.5	18
48	Novel nanoparticle matter: ZrN-nanoparticles. Applied Physics B: Lasers and Optics, 2003, 77, 681-686.	2.2	18
49	Structural investigations of Pt ⁺ TiO _x electrode stacks for ferroelectric thin film devices. Journal of Applied Physics, 2006, 99, 114107.	2.5	17
50	Orientation of Well-Dispersed Multiwalled Carbon Nanotubes in Melt-Spun Polymer Fibers and Its Impact on the Formation of the Semicrystalline Polymer Structure: A Combined Wide-Angle X-ray Scattering and Electron Tomography Study. Macromolecules, 2013, 46, 5604-5613.	4.8	17
51	Transformation of nanoporous oxoselenoantimonates into Sb ₂ O ₃ nanoribbons and nanorods. Chemical Communications, 2005, , 5790.	4.1	16
52	On the plastic deformation of chromium-based nitride hard coatings deposited by hybrid dcMS/HPPMS: A fundamental study using nanoscratch test. Surface and Coatings Technology, 2016, 308, 298-306.	4.8	16
53	Evolution of the surface roughness (dynamic scaling) and microstructure of sputter-deposited Ag ₇₅ Co ₂₅ granular films. Journal of Physics Condensed Matter, 2000, 12, 9237-9245.	1.8	15
54	Relaxation Behavior Study of Ultrasmall Superparamagnetic Iron Oxide Nanoparticles at Ultralow and Ultrahigh Magnetic Fields. Journal of Physical Chemistry B, 2011, 115, 14789-14793.	2.6	15

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55	Crystal structure of octatitanium triselenide, Ti ₈ Se ₃ . Zeitschrift Fur Kristallographie - Crystalline Materials, 1996, 211, .	0.8	14
56	Electron diffraction structure analysis: structural research with low-quality diffraction data. Zeitschrift Fur Kristallographie - Crystalline Materials, 2003, 218, .	0.8	14
57	TEM and nanomechanical studies on tribological surface modifications formed on roller bearings under controlled lubrication conditions. Journal of Materials Science, 2006, 41, 4543-4553.	3.7	14
58	Structural and Electrochemical Properties of Nesting and Core/Shell Pt/TiO ₂ Spherical Particles Synthesized by Ultrasonic Spray Pyrolysis. Metals, 2020, 10, 11.	2.3	14
59	cis-Pt Mediated Assembly of Gold Nanoparticles on DNA. Journal of Cluster Science, 2007, 18, 193-204.	3.3	13
60	Effect of target peak power density on the phase formation, microstructure evolution, and mechanical properties of Cr ₂ AlC MAX-phase coatings. Journal of the European Ceramic Society, 2021, 41, 1841-1847.	5.7	13
61	Effects of Thermal Annealing on the Structure of Ferroelectric Thin Films. Journal of the American Ceramic Society, 2006, 89, 1321-1325.	3.8	12
62	Probing fatigue in ferroelectric thin films with subnanometer depth resolution. Applied Physics Letters, 2007, 91, 072905.	3.3	12
63	Chemical vapor synthesis of nanocrystalline perovskites using laser flash evaporation of low volatility solid precursors. Review of Scientific Instruments, 2007, 78, 123903.	1.3	12
64	Composition/Performance Evaluation of Lean NO _x Trap Catalysts for Coupling with SCR Technology. ChemCatChem, 2021, 13, 1787-1805.	3.7	12
65	Faster Diffusion of Oxygen Along Dislocations in (La,Sr)MnO ₃ is a Space-Charge Phenomenon. Advanced Functional Materials, 2021, 31, 2105647.	14.9	12
66	On the Stability of Isolated Iridium Sites in N-Rich Frameworks Against Agglomeration Under Reducing Conditions. ChemCatChem, 2022, 14, .	3.7	12
67	Application of EDM Hole-Drilling Method to the Measurement of Residual Stress in Tool and Carbon Steels. Journal of Engineering Materials and Technology, Transactions of the ASME, 2006, 128, 468-475.	1.4	11
68	Structure and stability of $\hat{1}\pm$ - and $\hat{1}^2$ -Ti ₂ Se. Electron diffraction versus density-functional theory calculations. Acta Crystallographica Section A: Foundations and Advances, 2003, 59, 18-21.	0.3	10
69	Structure of Cs _{0.5} [Nb _{2.5} W _{2.5} O ₁₄] analysed by focal-series reconstruction and crystallographic image processing. Acta Materialia, 2010, 58, 3764-3772.	7.9	10
70	Correlating the Synthesis, Structure, and Catalytic Performance of Pt-Re/TiO ₂ for the Aqueous-Phase Hydrogenation of Carboxylic Acid Derivatives. ACS Catalysis, 2021, 11, 5119-5134.	11.2	10
71	Crystal structure determination from EM images and electron diffraction patterns. Advances in Imaging and Electron Physics, 2002, , 257-289.	0.2	9
72	Energy filtering TEM analysis of nanoelectronic device structures: Fast and efficient way to assess chemical microstructures. Materials Science and Technology, 2008, 24, 667-674.	1.6	8

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73	Comparison of InAs nanowire conductivity: influence of growth method and structure. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2012, 9, 230-234.	0.8	8
74	Crystal structure of dititanium monoselenide, Ti ₂ Se. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 1996, 211, .	0.8	7
75	Structural Investigations of (GaIn)(NAs)/GaAs Multi-Quantum-Wells by Transmission Electron Microscopy. <i>Materials Research Society Symposia Proceedings</i> , 2000, 618, 291.	0.1	6
76	First-principles calculations as a tool for structure validation in electron crystallography. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2004, 60, 75-81.	0.3	6
77	Density inhomogeneity in ferroelectric thin films. <i>Applied Physics Letters</i> , 2006, 89, 052901.	3.3	6
78	Dysprosium-doped (BaSrTiO_3) Thin Films on Nickel Foils for Capacitor Applications. <i>Journal of the American Ceramic Society</i> , 2013, 96, 1228-1233.	3.8	6
79	Microstructure, phase transformation and hardness of nanometric Cr-Al multilayer coatings. <i>Advances in Mechanical Engineering</i> , 2015, 7, 168781401558972.	1.6	6
80	Novel hardmetals with nano-grain reinforced binder for hard-facings. <i>International Journal of Refractory Metals and Hard Materials</i> , 2017, 67, 98-104.	3.8	6
81	Electron tomography and nano-diffraction enabling the investigation of individual magnetic nanoparticles inside fibers of MR visible implants. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 315303.	2.8	6
82	Oxygen Surface Exchange and Tracer Diffusion in Differently Oriented Thin Films of Gd-Doped CeO ₂ . <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 36768-36777.	8.0	6
83	Novel low-temperature lean NO _x storage materials based on La _{0.5} Sr _{0.5} Fe _{1-x} MxO _{3-δ} /Al ₂ O ₃ infiltration composites (M = Ti, Zr, Nb). <i>Applied Catalysis B: Environmental</i> , 2021, 286, 119919.	20.2	6
84	The crystal structure of Zr ₂ Se reinvestigated by electron crystallography and X-ray powder diffraction. <i>Crystallography Reports</i> , 2004, 49, 379-389.	0.6	5
85	Monitoring structural influences on quantum transport in InAs nanowires. <i>Applied Physics Letters</i> , 2012, 101, 062104.	3.3	5
86	Nanosegregation of ternary Cr-Ni-Fe alloy deposits electrodeposited from a Cr ³⁺ -based bath. <i>Materials Letters</i> , 2013, 93, 107-110.	2.6	5
87	From conformal overgrowth to lateral growth of indium arsenide nano structures on silicon substrates by MOVPE. <i>Journal of Crystal Growth</i> , 2013, 370, 141-145.	1.5	5
88	Self-assembly of biaxial discorectangular lead carbonate nanosheets into stacked ribbons studied by SAXS and HAADF-STEM tomographic tilt series. <i>Soft Matter</i> , 2014, 10, 9511-9522.	2.7	5
89	Advances in the understanding of mesoporous transition aluminas: Unveiling the correlation between morphology and thermostability. <i>Journal of Solid State Chemistry</i> , 2022, 308, 122906.	2.9	5
90	Title is missing!. <i>Ultramicroscopy</i> , 2007, 107, v.	1.9	4

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91	Periodic Cation Segregation in Cs _{0.44} [Nb _{2.54} W _{2.46} O ₁₄] Quantified by High-Resolution Scanning Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2014, 20, 1453-1462.	0.4	4
92	Cold Gas Spraying of Nickel-Titanium Coatings for Protection Against Cavitation. <i>Journal of Thermal Spray Technology</i> , 2021, 30, 131-144.	3.1	4
93	Characterization of Co ₂₅ Ag ₇₅ and (Co ₉₀ Al ₁₀) ₂₈ Ag ₇₂ granular films by electron diffraction, high-resolution transmission electron microscopy and electron spectroscopic imaging. <i>Journal of Electron Microscopy</i> , 2003, 52, 91-100.	0.9	3
94	Deactivation reactions on a commercial lean nox-trap - Effect of hydrocarbon nature, concentration and operation temperature. <i>Applied Catalysis A: General</i> , 2019, 585, 117178.	4.3	3
95	Title is missing!. <i>Journal of Materials Science: Materials in Electronics</i> , 2003, 14, 49-53.	2.2	2
96	Nanomechanical and analytical investigations of tribological layers for wear protection in slow-running roller bearings. <i>Philosophical Magazine</i> , 2006, 86, 5477-5495.	1.6	2
97	From Fourier Series Towards Crystal Structures. , 2006, , 235-257.		2
98	Electron Crystallography-Structure Determination by Combining HREM, Crystallographic Image Processing and Electron Diffraction. <i>Springer Series in Surface Sciences</i> , 2001, , 191-222.	0.3	2
99	Crystal structure of defect pentavanadium tetratelluride, V _{4.64} Te ₄ . <i>Zeitschrift Fur Kristallographie - New Crystal Structures</i> , 1997, 212, 301.	0.3	2
100	Effect of gas nitriding in flowing ammonia on the hot-dip galvanising of the Dual-Phase steel DP500. <i>International Journal of Materials Research</i> , 2005, 96, 233-241.	0.8	2
101	Chemical Reactivity of Tetrasulfur Tetranitride: Synthesis, Physical Properties, and Structural Characterization of the Amorphous Phase Cu ₇ S ₄ N ₄ . <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2003, 629, 1751-1759.	1.2	1
102	Contraction of high strength Invar steel during creep test. <i>Steel Research International</i> , 2003, 74, 376-385.	1.8	1
103	Contrary Effects of Microstructure and Cleanliness on Tensile and Toughness Properties in Precipitation Hardening Stainless Steels. <i>Steel Research International</i> , 2012, 83, 434-444.	1.8	1
104	Microstructural analysis of germanium modified tin-copper brazing filler metals for transient liquid phase bonding of aluminium. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2017, 48, 1257-1263.	0.9	1
105	Controlled twinning and martensitic transformation in metastable AISI D3 (X210Cr12) steel by sequential deep rolling and liquid nitrogen cooling. <i>Materials Today Communications</i> , 2021, 28, 102484.	1.9	1
106	Arteriosclerotic aorta calcifications characterized by TEM and electron crystallography. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2006, 62, s186-s186.	0.3	1
107	Influence of Si-doping on structure in InAs nanowires. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, s300-s300.	0.3	1
108	Moderne TEM-Untersuchungen am Beispiel mikrolegierter StÄhle. <i>Praktische Metallographie/Practical Metallography</i> , 2007, 44, 155-171.	0.3	1

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109	Crystal structure of Ti ₄ Se ₁₆ Redetermined from Electron Diffraction Data. Acta Crystallographica Section A: Foundations and Advances, 2000, 56, s208-s208.	0.3	0
110	Electron crystallography - structure determination with poor-quality diffraction data. Acta Crystallographica Section A: Foundations and Advances, 2002, 58, c43-c43.	0.3	0
111	Chemical Reactivity of Tetrasulfur Tetranitride: Synthesis, Physical Properties, and Structural Characterization of the Amorphous Phase Cu ₇ S ₄ N ₄ . ChemInform, 2003, 34, no.	0.0	0
112	Structure of Cs _x Nb _{2.54} W _{2.46} O ₁₄ determined by exit wave reconstruction. Acta Crystallographica Section A: Foundations and Advances, 2006, 62, s187-s187.	0.3	0
113	The Electron Crystallography Forum - A new Corner for Electron Crystallographers at the Web. Acta Crystallographica Section A: Foundations and Advances, 2000, 56, s209-s209.	0.3	0
114	Electron Powder Diffraction - An old topic rediscovered for structure determination of nanocrystalline materials. Acta Crystallographica Section A: Foundations and Advances, 2000, 56, s39-s39.	0.3	0
115	Present status of electron crystallography on inorganic materials. Acta Crystallographica Section A: Foundations and Advances, 2005, 61, c115-c115.	0.3	0
116	Microstructural and chemical surface and rim zone changes of ferrite-pearlite 42CrMo4 steel after electrochemical machining. Materialwissenschaft Und Werkstofftechnik, 2021, 52, 1214-1229.	0.9	0