

Thomas E Weirich

List of Publications by Year in descending order

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116
papers

3,417
citations

159585

30
h-index

155660

55
g-index

119
all docs

119
docs citations

119
times ranked

4212
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	On the Stability of Isolated Iridium Sites in Nâ€Rich Frameworks Against Agglomeration Under Reducing Conditions. <i>ChemCatChem</i> , 2022, 14, .	3.7	12
3	Effect of target peak power density on the phase formation, microstructure evolution, and mechanical properties of Cr ₂ AlC MAX-phase coatings. <i>Journal of the European Ceramic Society</i> , 2021, 41, 1841-1847.	5.7	13
4	Composition/Performance Evaluation of Lean NO _x Trap Catalysts for Coupling with SCR Technology. <i>ChemCatChem</i> , 2021, 13, 1787-1805.	3.7	12
5	Correlating the Synthesis, Structure, and Catalytic Performance of Ptâ€Re/TiO ₂ for the Aqueous-Phase Hydrogenation of Carboxylic Acid Derivatives. <i>ACS Catalysis</i> , 2021, 11, 5119-5134.	11.2	10
6	Novel low-temperature lean NO _x storage materials based on La _{0.5} Sr _{0.5} Fe _{1-x} M _x O _{3-Î} /Al ₂ O ₃ infiltration composites (M = Ti, Zr, Nb). <i>Applied Catalysis B: Environmental</i> , 2021, 286, 119919.	20.2	6
7	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
8	Faster Diffusion of Oxygen Along Dislocations in (La,Sr)MnO _{3+Î} Is a Spaceâ€Charge Phenomenon. <i>Advanced Functional Materials</i> , 2021, 31, 2105647.	14.9	12
9	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
10	Microstructural and chemical surface and rim zone changes of ferriteâ€perlite 42CrMo4 steel after electrochemical machining. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2021, 52, 1214-1229.	0.9	0
11	Structural and Electrochemical Properties of Nesting and Core/Shell Pt/TiO ₂ Spherical Particles Synthesized by Ultrasonic Spray Pyrolysis. <i>Metals</i> , 2020, 10, 11.	2.3	14
12	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
13	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
14	The blocking effect of surface dislocations on oxygen tracer diffusion in SrTiO ₃ . <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 15455-15463.	2.8	21
15	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
16	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
17	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
18	Complexion at WC-Co grain boundaries of cemented carbides. <i>Materials Letters</i> , 2017, 187, 7-10.	2.6	20

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19	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
20	Formation and Effect of NH ₄ ⁺ Intermediates in NH ₃ -SCR over Fe-ZSM-5 Zeolite Catalysts. <i>ACS Catalysis</i> , 2016, 6, 7696-7700.	11.2	68
21	On the plastic deformation of chromium-based nitride hard coatings deposited by hybrid dcMS/HPPMS: A fundamental study using nanoscratch test. <i>Surface and Coatings Technology</i> , 2016, 308, 298-306.	4.8	16
22	Microstructure, phase transformation and hardness of nanometric Cr-Al multilayer coatings. <i>Advances in Mechanical Engineering</i> , 2015, 7, 168781401558972.	1.6	6
23	Self-assembly of biaxial discorctangular 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
24	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
25	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. <i>Macromolecules</i> , 2013, 46, 5604-5613.	4.8	17
26	CO ₂ corrosion and recovery of perovskite-type BaCo _{1-x} Fe _x Nb ₃ O ₁₂ membranes. <i>Journal of Membrane Science</i> , 2013, 437, 49-56.	8.2	55
27	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
28	Dysprosium-Doped (Ba,Sr)TiO ₃ Thin Films on Nickel Foils for Capacitor Applications. <i>Journal of the American Ceramic Society</i> , 2013, 96, 1228-1233.	3.8	6
29	Synthesis of TiO ₂ core/RuO ₂ shell particles using multistep ultrasonic spray pyrolysis. <i>Materials Research Bulletin</i> , 2013, 48, 3633-3635.	5.2	21
30	Nanoimprint and selective-area MOVPE for growth of GaAs/InAs core/shell nanowires. <i>Nanotechnology</i> , 2013, 24, 085603.	2.6	45
31	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
32	Extrusion of CNT-modified Polymers with Low Viscosity - Influence of Crystallization and CNT Orientation on the Electrical Properties. <i>Polymers and Polymer Composites</i> , 2013, 21, 473-482.	1.9	19
33	Monitoring structural influences on quantum transport in InAs nanowires. <i>Applied Physics Letters</i> , 2012, 101, 062104.	3.3	5
34	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
35	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
36	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

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37	Behavior of oxygen vacancies in single-crystal SrTiO ₃ : Equilibrium distribution and diffusion kinetics. <i>Physical Review B</i> , 2012, 85, .	3.2	176
38	Light-Mediated Heterogeneous Cross Dehydrogenative Coupling Reactions: Metal Oxides as Efficient, Recyclable, Photoredox Catalysts in C-C Bond-Forming Reactions. <i>Chemistry - A European Journal</i> , 2012, 18, 3478-3481.	3.3	213
39	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
40	Effect of Si-doping on InAs nanowire transport and morphology. <i>Journal of Applied Physics</i> , 2011, 110, .	2.5	61
41	Relaxation Behavior Study of Ultrasmall Superparamagnetic Iron Oxide Nanoparticles at Ultralow and Ultrahigh Magnetic Fields. <i>Journal of Physical Chemistry B</i> , 2011, 115, 14789-14793.	2.6	15
42	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
43	Structure of Cs _{0.5} [Nb _{2.5} W _{2.5} O ₁₄] analysed by focal-series reconstruction and crystallographic image processing. <i>Acta Materialia</i> , 2010, 58, 3764-3772.	7.9	10
44	Ultrastructural Analysis of Vascular Calcifications in Uremia. <i>Journal of the American Society of Nephrology: JASN</i> , 2010, 21, 689-696.	6.1	157
45	The structure of charoite, (K,Sr,Ba,Mn) ₁₅ (Ca,Na) ₃₂ [(Si ₇₀ (O,OH) ₁₈₀)](OH,F) ₄₀ solved by conventional and automated electron diffraction. <i>Mineralogical Magazine</i> , 2010, 74, 159-177.	0.8	1
46	Analysis of Calcifications in Patients with Coral Reef Aorta. <i>Annals of Vascular Surgery</i> , 2010, 24, 408-414.	0.9	30
47	Behavior of Ba(Co, Fe, Nb)O _{3-δ} Perovskite in CO ₂ -Containing Atmospheres: Degradation Mechanism and Materials Design. <i>Chemistry of Materials</i> , 2010, 22, 6246-6253.	6.7	180
48	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). <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 10320.	2.8	157
49	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
50	On the mechanism of WC coarsening in WC-Co hardmetals with various carbon contents. <i>International Journal of Refractory Metals and Hard Materials</i> , 2009, 27, 234-243.	3.8	79
51	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
52	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
53	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
54	Electrodeposition of a protective copper/nickel deposit on the magnesium alloy (AZ31). <i>Corrosion Science</i> , 2008, 50, 1385-1390.	6.6	60

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55	Energy filtering TEM analysis of nanoelectronic device structures: Fast and efficient way to assess chemical microstructures. <i>Materials Science and Technology</i> , 2008, 24, 667-674.	1.6	8
56	Probing fatigue in ferroelectric thin films with subnanometer depth resolution. <i>Applied Physics Letters</i> , 2007, 91, 072905.	3.3	12
57	Chemical vapor synthesis of nanocrystalline perovskites using laser flash evaporation of low volatility solid precursors. <i>Review of Scientific Instruments</i> , 2007, 78, 123903.	1.3	12
58	Microstructural Study of the Dissimilar Joints of Alloy 690 and SUS 304L Stainless Steel. <i>Materials Transactions</i> , 2007, 48, 481-489.	1.2	20
59	Laser interference metallurgy: A new method for periodic surface microstructure design on multilayered metallic thin films. <i>Applied Surface Science</i> , 2007, 253, 8070-8074.	6.1	59
60	cis-Pt Mediated Assembly of Gold Nanoparticles on DNA. <i>Journal of Cluster Science</i> , 2007, 18, 193-204.	3.3	13
61	Title is missing!. <i>Ultramicroscopy</i> , 2007, 107, v.	1.9	4
62	Moderne TEM-Untersuchungen am Beispiel mikrolegierter StÄhle. <i>Praktische Metallographie/Practical Metallography</i> , 2007, 44, 155-171.	0.3	1
63	Structural and Magnetic Properties of Ni/NiOxide- and Co/CoOxide Core/Shell Nanoparticles and their possible Use for Ferrofluids. <i>Zeitschrift Fur Physikalische Chemie</i> , 2006, 220, 173-187.	2.8	19
64	Effects of Thermal Annealing on the Structure of Ferroelectric Thin Films. <i>Journal of the American Ceramic Society</i> , 2006, 89, 1321-1325.	3.8	12
65	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
66	Wear characteristics of second-phase-reinforced sol-gel corundum abrasives. <i>Acta Materialia</i> , 2006, 54, 3605-3615.	7.9	37
67	TEM and nanomechanical studies on tribological surface modifications formed on roller bearings under controlled lubrication conditions. <i>Journal of Materials Science</i> , 2006, 41, 4543-4553.	3.7	14
68	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. <i>Ultramicroscopy</i> , 2006, 106, 164-175.	1.9	78
69	Development of Hybrid Polymer Electrolyte Membranes Based on the Semi-Interpenetrating Network Concept. <i>Fuel Cells</i> , 2006, 6, 225-236.	2.4	24
70	Structure of Cs _x Nb _{2.54} W _{2.46} O ₁₄ determined by exit wave reconstruction. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2006, 62, s187-s187.	0.3	0
71	Application of EDM Hole-Drilling Method to the Measurement of Residual Stress in Tool and Carbon Steels. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2006, 128, 468-475.	1.4	11
72	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

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73	Density inhomogeneity in ferroelectric thin films. Applied Physics Letters, 2006, 89, 052901.	3.3	6
74	Structural investigations of Pt ⁺ TiOx electrode stacks for ferroelectric thin film devices. Journal of Applied Physics, 2006, 99, 114107.	2.5	17
75	From Fourier Series Towards Crystal Structures. , 2006, , 235-257.		2
76	Arteriosclerotic aorta calcifications characterized by TEM and electron crystallography. Acta Crystallographica Section A: Foundations and Advances, 2006, 62, s186-s186.	0.3	1
77	Effects of Nb on the microstructure and corrosive property in the Alloy 690 ⁺ SUS 304L weldment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 397, 229-238.	5.6	40
78	Novel ultra-coarse hardmetal grades with reinforced binder for mining and construction. International Journal of Refractory Metals and Hard Materials, 2005, 23, 225-232.	3.8	55
79	Transformation of nanoporous oxoselenoantimonates into Sb2O3 ⁺ nanoribbons and nanorods. Chemical Communications, 2005, , 5790.	4.1	16
80	Effect of gas nitriding in flowing ammonia on the hot-dip galvanising of the Dual-Phase steel DP500. International Journal of Materials Research, 2005, 96, 233-241.	0.8	2
81	Present status of electron crystallography on inorganic materials. Acta Crystallographica Section A: Foundations and Advances, 2005, 61, c115-c115.	0.3	0
82	The crystal structure of Zr2Se reinvestigated by electron crystallography and X-ray powder diffraction. Crystallography Reports, 2004, 49, 379-389.	0.6	5
83	Structural, compositional, optical and colorimetric characterization of TiN-nanoparticles. European Physical Journal D, 2004, 31, 69-76.	1.3	55
84	Preparation of Nanosized Perovskite-type Oxides via Polyol Method. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2004, 630, 2083-2089.	1.2	32
85	First-principles calculations as a tool for structure validation in electron crystallography. Acta Crystallographica Section A: Foundations and Advances, 2004, 60, 75-81.	0.3	6
86	TEM Investigations of Fine Niobium Precipitates in HSLA Steel. Steel Research International, 2004, 75, 753-758.	1.8	21
87	Title is missing!. Journal of Materials Science: Materials in Electronics, 2003, 14, 49-53.	2.2	2
88	Novel nanoparticle matter: ZrN-nanoparticles. Applied Physics B: Lasers and Optics, 2003, 77, 681-686.	2.2	18
89	In-Situ Preparation of Polymer-Coated Alumina Nanopowders by Chemical Vapor Synthesis. Chemical Vapor Deposition, 2003, 9, 40-44.	1.3	21
90	Chemical Reactivity of Tetrasulfur Tetranitride: Synthesis, Physical Properties, and Structural Characterization of the Amorphous Phase Cu7S4N4.. ChemInform, 2003, 34, no.	0.0	0

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91	Structure and stability of $\hat{1}\pm$ - and $\hat{1}^2$ -Ti ₂ Se. Electron diffraction versus density-functional theory calculations. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2003, 59, 18-21.	0.3	10
92	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
93	Electron diffraction structure analysis: structural research with low-quality diffraction data. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2003, 218, .	0.8	14
94	An interface clusters mixture model for the structure of amorphous silicon monoxide (SiO). <i>Journal of Non-Crystalline Solids</i> , 2003, 320, 255-280.	3.1	231
95	Contraction of high strength Invar steel during creep test. <i>Steel Research International</i> , 2003, 74, 376-385.	1.8	1
96	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
97	Quasiregular quantum-dot-like structure formation with postgrowth thermal annealing of InGaN/GaN quantum wells. <i>Applied Physics Letters</i> , 2002, 80, 2571-2573.	3.3	79
98	Crystal structure determination from EM images and electron diffraction patterns. <i>Advances in Imaging and Electron Physics</i> , 2002, , 257-289.	0.2	9
99	Electron crystallography - structure determination with poor-quality diffraction data. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2002, 58, c43-c43.	0.3	0
100	Structure of nanocrystalline anatase solved and refined from electron powder data Presented at the microsposium 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
101	Effects of post-growth thermal annealing on the indium aggregated structures in InGaN/GaN quantum wells. <i>Journal of Crystal Growth</i> , 2002, 242, 35-40.	1.5	18
102	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
103	Electron crystallography without limits? Crystal structure of Ti ₄₅ Se ₁₆ redetermined by electron diffraction structure analysis. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2001, 57, 183-191.	0.3	21
104	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
105	Crystal structure of Ti ₄₅ Se ₁₆ Redetermined from Electron Diffraction Data. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2000, 56, s208-s208.	0.3	0
106	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
107	Structures of nanometre-size crystals determined from selected-area electron diffraction data. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2000, 56, 29-35.	0.3	72
108	Rietveld analysis of electron powder diffraction data from nanocrystalline anatase, TiO ₂ . <i>Ultramicroscopy</i> , 2000, 81, 263-270.	1.9	89

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109	Evolution of the surface roughness (dynamic scaling) and microstructure of sputter-deposited Ag ₇₅ Co ₂₅ granular films. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 9237-9245.	1.8	15
110	The Electron Crystallography Forum - A new Corner for Electron Crystallographers at the Web. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2000, 56, s209-s209.	0.3	0
111	Electron Powder Diffraction - An old topic rediscovered for structure determination of nanocrystalline materials. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2000, 56, s39-s39.	0.3	0
112	Crystal structure of defect pentavanadium tetratelluride, V ₄ .64Te ₄ . <i>Zeitschrift Fur Kristallographie - New Crystal Structures</i> , 1997, 212, 301.	0.3	2
113	Crystal structure of dititanium monoselenide, Ti ₂ Se. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 1996, 211, .	0.8	7
114	Crystal structure of octatitanium triselenide, Ti ₈ Se ₃ . <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 1996, 211, .	0.8	14
115	Ti ₉ Se ₂ - Eine Verbindung mit kolumnaren [Ti ₉]-Baueinheiten. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 1996, 622, 630-634.	1.2	23
116	A crystal structure determined with 0.02 Å... accuracy by electron microscopy. <i>Nature</i> , 1996, 382, 144-146.	27.8	159