

# Wilfried Wunderlich

## List of Publications by Year in descending order

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87  
papers

1,881  
citations

279798

23  
h-index

276875

41  
g-index

90  
all docs

90  
docs citations

90  
times ranked

2345  
citing authors

#	ARTICLE	IF	CITATIONS
1	HREM-studies of the microstructure of nanocrystalline palladium. Scripta Metallurgica Et Materialia, 1990, 24, 403-408.	1.0	197
2	Nanocompositesâ€”a new material design concept. Science and Technology of Advanced Materials, 2005, 6, 2-10.	6.1	177
3	Enhanced effective mass in doped SrTiO <sub>3</sub> and related perovskites. Physica B: Condensed Matter, 2009, 404, 2202-2212.	2.7	144
4	Fabrication and characterization of anatase/rutileâ€”TiO <sub>2</sub> thin films by magnetron sputtering: a review. Science and Technology of Advanced Materials, 2005, 6, 11-17.	6.1	95
5	An aqueous solâ€”gel route to synthesize nanosized lanthana-doped titania having an increased anatase phase stability for photocatalytic application. Materials Chemistry and Physics, 2005, 90, 123-127.	4.0	86
6	Laser-Ablated ZnO Nanoparticles and Their Photocatalytic Activity toward Organic Pollutants. Materials, 2018, 11, 1127.	2.9	72
7	Synthesis and Characterization of Iron Oxide Embedded Hydroxyapatite Bioceramics. Journal of the American Ceramic Society, 2012, 95, 2695-2699.	3.8	63
8	Au-Pd@g-C <sub>3</sub> N <sub>4</sub> as an Efficient Photocatalyst for Visible-Light Oxidation of Benzene to Phenol: Experimental and Mechanistic Study. Journal of Physical Chemistry C, 2018, 122, 27477-27485.	3.1	58
9	Effect of tantalum addition on anatase phase stability and photoactivity of aqueous solâ€”gel derived mesoporous titania. Journal of Molecular Catalysis A, 2007, 276, 41-46.	4.8	48
10	Mobile dislocations at the $\sqrt{2}/\sqrt{3}$ phase boundaries in intermetallic TiAl/Ti <sub>3</sub> Al-alloys. Acta Metallurgica Et Materialia, 1993, 41, 1791-1799.	1.8	44
11	Optical and synchrotron radiation white-beam topographic investigations during the high-temperature phase transitions of KLiSO <sub>4</sub> . Ferroelectrics, 1997, 191, 171-177.	0.6	37
12	AB-INITIO CALCULATIONS OF THE OPTICAL BAND GAP OF TiO <sub>2</sub> THIN FILMS. International Journal of Nanoscience, 2004, 03, 439-445.	0.7	37
13	The Atomistic Structure of Metal/Ceramic Interfaces Is the Key Issue for Developing Better Properties. Metals, 2014, 4, 410-427.	2.3	37
14	Mesoporous gadolinium doped titania photocatalyst through an aqueous solâ€”gel method. Journal of Alloys and Compounds, 2010, 505, 194-200.	5.5	36
15	Molecular dynamics â€” simulations of the fracture toughness of sapphire. Materials & Design, 2001, 22, 53-59.	5.1	35
16	Structural aspects and porosity features of nano-size high surface area aluminaâ€”silica mixed oxide catalyst generated through hybrid solâ€”gel route. Materials Chemistry and Physics, 2006, 95, 56-61.	4.0	35
17	Growth model for plasma-CVD growth of carbon nano-tubes on Ni-sheets. Diamond and Related Materials, 2007, 16, 369-378.	3.9	29
18	Pd Loaded TiO <sub>2</sub> Nanotubes for the Effective Catalytic Reduction of p-Nitrophenol. Catalysis Letters, 2016, 146, 474-482.	2.6	28

#	ARTICLE	IF	CITATIONS
19	Enhanced photoactivity and anatase thermal stability of silica-alumina mixed oxide additives on sol-gel nanocrystalline titania. <i>Materials Letters</i> , 2007, 61, 1751-1755.	2.6	27
20	An aqueous method for the controlled manganese ( $Mn^{2+}$ ) substitution in superparamagnetic iron oxide nanoparticles for contrast enhancement in MRI. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 4609-4619.	2.8	27
21	NaTaO <sub>3</sub> composite ceramics – A new thermoelectric material for energy generation. <i>Journal of Nuclear Materials</i> , 2009, 389, 57-61.	2.7	26
22	Preparation and Photocatalytic Properties of CdS and ZnS Nanomaterials Derived from Metal Xanthate. <i>Materials</i> , 2019, 12, 3313.	2.9	24
23	Effect on global and regional left ventricular functions by percutaneous transluminal coronary angioplasty in the chronic stage after myocardial infarction. <i>American Journal of Cardiology</i> , 1992, 69, 997-1002.	1.6	23
24	Al <sub>2</sub> O <sub>3</sub> @ TiO <sub>2</sub> – A simple sol-gel strategy to the synthesis of low temperature sintered alumina-aluminium titanate composites through a core-shell approach. <i>Journal of Solid State Chemistry</i> , 2008, 181, 2748-2754.	2.9	23
25	Molecular dynamics calculations about misfit dislocations at the BaTiO <sub>3</sub> /SrTiO <sub>3</sub> -interface. <i>Thin Solid Films</i> , 2000, 375, 9-14.	1.8	22
26	Strength properties and enhanced plasticity of intermetallic Ti–Al–(CrSi) alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1992, 152, 166-172.	5.6	21
27	TEM characterization of sol-gel-processed alumina-silica and alumina-titania nano-hybrid oxide catalysts. <i>Journal of the European Ceramic Society</i> , 2004, 24, 313-317.	5.7	21
28	Enhanced photoactivity of neodymium doped mesoporous titania synthesized through aqueous sol-gel method. <i>Journal of Sol-Gel Science and Technology</i> , 2007, 43, 283-290.	2.4	21
29	TEM studies on phases and phase stabilities of zirconia ceramics. <i>Physica B: Physics of Condensed Matter &amp; C: Atomic, Molecular and Plasma Physics, Optics</i> , 1988, 150, 86-98.	0.9	20
30	Interfacial chemical stability during diffusion bonding of Al <sub>2</sub> O <sub>3</sub> -fibres with Ni <sub>3</sub> Al- and NiAl-matrices. <i>Acta Materialia</i> , 1996, 44, 2383-2396.	7.9	20
31	Critical Nuclei Size, Initial Particle Size and Packing Effect on the Phase Stability of Sol-Peptization-Gel-Derived Nanostructured Titania. <i>Langmuir</i> , 2010, 26, 4567-4571.	3.5	20
32	A New Discussion of the Interaction Energy in the Solid Solution Hardening of B.C.C. Iron Alloys. <i>Physica Status Solidi A</i> , 1993, 135, 391-403.	1.7	19
33	Size Effect for Lead Zirconium Titanate Nanopowders with Pb(Zr <sub>0.3</sub> Ti <sub>0.7</sub> )O <sub>3</sub> Composition. <i>Japanese Journal of Applied Physics</i> , 2002, 41, 6985-6988.	1.5	17
34	Au-Pd nanoparticles enfolded in coil-like TiO <sub>2</sub> immobilized on carbon fibers felt as recyclable nanocatalyst for benzene oxidation under mild conditions. <i>Applied Surface Science</i> , 2020, 506, 144644.	6.1	16
35	Formation of L1 <sub>2</sub> ordered precipitates at room temperature and their effect on the mechanical properties in Al-Li alloys. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1993, 67, 99-107.	0.6	15
36	Impedance spectral studies of sol-gel alumina-silver nanocomposites. <i>Acta Materialia</i> , 2003, 51, 3511-3519.	7.9	13

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37	In-Situ Observations of Grain Boundary Migration. <i>Materials Science Forum</i> , 1996, 204-206, 99-108.	0.3	12
38	High-Surface-Area Alumina-Silica Nanocatalysts Prepared by a Hybrid Sol-Gel Route Using a Boehmite Precursor. <i>Journal of the American Ceramic Society</i> , 2010, 93, 4047-4052.	3.8	12
39	Thermoelectric Properties of Mg <sub>2</sub> Si Produced by New Chemical Route and SPS. <i>Inorganics</i> , 2014, 2, 351-362.	2.7	12
40	On the quantitative EDS analysis of low carbon concentrations in analytical TEM. <i>Ultramicroscopy</i> , 1993, 49, 220-224.	1.9	11
41	Existence of enhanced solid state diffusion during mechanical alloying of Si and Ge. <i>Applied Physics Letters</i> , 1995, 66, 1903-1905.	3.3	11
42	Atomic Structure of Symmetrical Tilt Grain Boundaries in Zinc Oxide with High Coincidence. <i>Physica Status Solidi A</i> , 1998, 170, 99-111.	1.7	11
43	Interaction of Palladium Nano-Crystals with Hydrogen During PECVD Growth of Carbon Nanotubes. <i>Advances in Solid State Physics</i> , 0, , 171-180.	0.8	11
44	Development of high-temperature thermoelectric materials based on SrTiO <sub>3</sub> -layered perovskites. <i>International Journal of Materials Research</i> , 2006, 97, 657-662.	0.8	11
45	High surface area sol-gel alumina-titania nanocatalyst. <i>Journal of Sol-Gel Science and Technology</i> , 2009, 52, 88-96.	2.4	11
46	Arrangement of misfit dislocations at Ti <sub>3</sub> Al/TiAl phase boundaries. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993, 164, 421-427.	5.6	10
47	Magnetostriction properties of FePd thin films: Dependence on microstructure. <i>Journal of Alloys and Compounds</i> , 2009, 475, 339-342.	5.5	9
48	Large Closed-Circuit Seebeck Current in Quaternary (Ti,Zr)NiSn Heusler Alloys. <i>Journal of Electronic Materials</i> , 2011, 40, 583-588.	2.2	9
49	Reduced band-gap due to phonons in SrTiO <sub>3</sub> analyzed by ab initio calculations. <i>Solid-State Electronics</i> , 2008, 52, 1082-1087.	1.4	8
50	Electronic Band-Structure Calculations of Ba <sub>8</sub> Me <sub>x</sub> Si <sub>46-x</sub> Clathrates with Me = Mg, Pd, Ni, Au, Ag, Cu, Zn, Al, Sn. <i>Journal of Electronic Materials</i> , 2014, 43, 1527-1532.	2.2	8
51	Efficient photocatalyst for the degradation of cationic and anionic dyes prepared via modification of carbonized mesoporous TiO <sub>2</sub> by encapsulation of carbon dots. <i>Materials Research Bulletin</i> , 2022, 155, 111963.	5.2	8
52	A microscopic model for the mechanical alloying of silicon and germanium. <i>Scripta Metallurgica Et Materialia</i> , 1995, 33, 407-413.	1.0	7
53	Microstructure of mechanical alloyed Si <sub>76</sub> Ge <sub>23.95</sub> P <sub>0.05</sub> . <i>Scripta Materialia</i> , 1995, 6, 441-444.	0.5	7
54	Formation of stacking faults from misfit dislocations at the BaTiO <sub>3</sub> /SrTiO <sub>3</sub> interface simulated by molecular dynamics. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001, 309-310, 148-151.	5.6	7

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55	Ceramic Materials. , 2010, , .		7
56	Tem-studies of grain boundaries in cyclically deformed Al <sub>3</sub> Zn <sub>2</sub> Mg-bicrystals. Acta Metallurgica Et Materialia, 1992, 40, 2123-2129.	1.8	5
57	Enhanced Microwave Resonance Properties of Pseudo-Tungsten-Bronze Ba <sub>6-3x</sub> R <sub>8+2x</sub> Ti <sub>18</sub> O <sub>54</sub> (R = Rare Earth) Solid Solutions Explained by Electron-Phonon Interaction. Japanese Journal of Applied Physics, 2013, 52, 09KH04.	1.5	5
58	SPS-sintered NaTaO <sub>3</sub> -Fe <sub>2</sub> O <sub>3</sub> composite exhibits enhanced Seebeck coefficient and electric current. Materials for Renewable and Sustainable Energy, 2014, 3, 1.	3.6	5
59	Ethyl benzene oxidation under aerobic conditions using cobalt oxide imbedded in nitrogen-doped carbon fiber felt wrapped by spiral TiO <sub>2</sub> -SiO <sub>2</sub> . Applied Catalysis A: General, 2022, 630, 118456.	4.3	5
60	Dielectric constant dependence on atomic substitution of Y <sub>2</sub> BaCuO <sub>5</sub> clarified by ab initio calculations. Journal of the European Ceramic Society, 2006, 26, 1869-1872.	5.7	4
61	Effect of Dynamic Strain Aging on Isothermal (473 K) Low Cycle Fatigue of Ferritic Ductile Cast Iron. Materials Transactions, 2009, 50, 1935-1940.	1.2	4
62	The Difference Between Thermo- and Pyroelectric Co-Based Rare-Earth (Nd, Y, Gd, Ce) Oxide Composites Measured Using a High Temperature Gradient. Journal of Electronic Materials, 2011, 40, 127-133.	2.2	4
63	Magnetron sputtering of (TiZr)NiSn thin films on different substrates for thermoelectric applications. Journal of Physics: Conference Series, 2012, 379, 012005.	0.4	4
64	Screening and Fabrication of Half-Heusler Phases for Thermoelectric Applications. Materials Research Society Symposia Proceedings, 2008, 1128, 11001.	0.1	3
65	On a high-purity Ge EDS detector II. Ice layer formation and optimization of detector design. Ultramicroscopy, 1993, 50, 219-227.	1.9	2
66	Interfacial Chemical Stability During Diffusion Bonding of Al <sub>2</sub> O <sub>3</sub> Fibres with Ni <sub>3</sub> Al and NiAl Matrices. Canadian Metallurgical Quarterly, 1995, 34, 231-236.	1.2	2
67	Interfacial chemical stability during diffusion bonding of Al <sub>2</sub> O <sub>3</sub> fibres with Ni <sub>3</sub> Al and NiAl matrices. Canadian Metallurgical Quarterly, 1995, 34, 231-236.	1.2	2
68	Molecular Dynamics-Simulations of the Fracture Toughness of Sapphire. Progress of Theoretical Physics Supplement, 2000, 138, 156-158.	0.1	2
69	New aspects about reduced LCF-life time of spherical ductile cast iron due to dynamic strain aging at intermediate temperatures. Journal of Nuclear Materials, 2009, 389, 137-141.	2.7	2
70	Energy Harvesting under Large Temperature Gradient - Comparison of Silicides, Half-Heusler Alloys and Ceramics. Energy Harvesting and Systems, 2015, 2, 37-46.	2.7	2
71	In situ generated Ligand-Free gold nanoparticles in polyvinylpyrrolidone solution assisted laser in liquid method for green oxidation of cyclohexane to adipic acid with high yield. Applied Surface Science, 2022, 581, 152388.	6.1	2
72	High Resolution Electron Microscopy of Grain Boundaries in Sintered High-Tc Superconductor YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-x</sub> . Materials Research Society Symposia Proceedings, 1988, 122, 515.	0.1	1

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73	On a high-purity Ge EDS detector III. The reliable acquisition of EDS spectra. Ultramicroscopy, 1993, 50, 229-235.	1.9	1
74	Molecular Dynamics Simulation of Alumina Interfaces in Order to Design Advanced Materials. Key Engineering Materials, 1998, 161-163, 449-452.	0.4	1
75	Effective mass and thermoelectric properties of SrTiO <sub>3</sub> -based natural superlattices evaluated by ab-initio calculations. , 2005, , .		1
76	Thermodynamical Calculations and Experimental Confirmation about the Mg-Al-Spinel Reaction Path in the Sol-Gel-Process. Key Engineering Materials, 2006, 317-318, 135-138.	0.4	1
77	Processing and Thermoelectric Properties of New Si-/ Se-/ Sn-Based Intermetallics. Materials Science Forum, 2016, 879, 2131-2137.	0.3	1
78	Chat Bot Concept for a Social Pain Reliever. , 2021, , .		1
79	Theoretical Considerations about Grain Boundary Migration in FCC Metals. Materials Science Forum, 1996, 207-209, 141-144.	0.3	0
80	Effective Electron Mass of ordered AgPbmSbTe <sub>2+m</sub> clarified by ab-initio calculations. , 2006, , .		0
81	Nitrogenation of FePt nanoparticles. Journal of Nanoparticle Research, 2007, 9, 507-511.	1.9	0
82	Thermally stable nanophase anatase titania with mesoporous texture by pseudo-inorganic templating. Microporous and Mesoporous Materials, 2009, 120, 467-471.	4.4	0
83	Improvement of thermoelectric TiZrNiSn thin films by contact layers. , 2014, , .		0
84	Parameters for Improving Titania as Photo Catalysis Material. Materials Today: Proceedings, 2016, 3, 662-666.	1.8	0
85	Correlation of Segregation Energies of Ni and Fe with Mendeleev Number. Materials Science Forum, 0, 1016, 1642-1646.	0.3	0
86	Fractal Aspects of the Martensitic Transformation in Zirconia. , 1989, , .		0
87	INFLUENCE OF HYDROGEN ON THE INTERFACE STRUCTURE AND PROPERTIES OF FATIGUED Al-Zn-Mg-BICRYSTALS. Journal De Physique Colloque, 1990, 51, C1-709-C1-714.	0.2	0