

Volker Klemm

List of Publications by Year in descending order

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110
papers

2,030
citations

218677

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112
times ranked

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#	ARTICLE	IF	CITATIONS
1	Investigations on the Influence of Subsequent Electron Beam (EB) Remelting on the Microstructure of an Aluminium Nitride Layer Formed on an Aluminium Substrate (Part II). <i>Coatings</i> , 2022, 12, 650.	2.6	0
2	Investigations on the Microstructure of an Aluminium Nitride Layer and Its Interface with the Aluminium Substrate (Part I). <i>Coatings</i> , 2022, 12, 618.	2.6	4
3	Size- and position-controlled Ge nanocrystals separated by high-k dielectrics. <i>MRS Bulletin</i> , 2022, 47, 773-782.	3.5	2
4	On the preferred orientation in Ti _{1-x} Al _x N and Ti _{1-x} Al _x Si _y N thin films. <i>International Journal of Materials Research</i> , 2022, 96, 738-742.	0.3	0
5	orientated Fe _{1-x} Mn _x Al _{1-y} Ni single crystal under compression using acoustic emission measurements. <i>Acta Materialia</i> , 2021, 200, 117323.	7.9	10
6	Application of a novel method for fabrication of graphene reinforced aluminum matrix nanocomposites: Synthesis, microstructure, and mechanical properties. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 772, 138820.	5.6	58
7	An orthorhombic D022-like precursor to Al ₈ Mo ₃ in the Al-Mo-Ti system. <i>Journal of Alloys and Compounds</i> , 2020, 823, 153807.	5.5	7
8	Exploring superiority of silatranyl moiety as anchoring unit over its trialkoxysilyl analogue for covalent grafting via fabrication of functionalized mesoporous silica possessing azomethinic pincers for dye adsorption. <i>Microporous and Mesoporous Materials</i> , 2019, 273, 265-272.	4.4	10
9	Martensite Reversion Duality Behavior in a Cold-Rolled High Mn Transformation-Induced Plasticity Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 4550-4560.	2.2	7
10	Quality of dissimilar welded particle-reinforced TRIP/TWIP steels generated by electron beam braze-welding. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2019, 63, 1655-1667.	2.5	1
11	Promoting abnormal grain growth in Fe-based shape memory alloys through compositional adjustments. <i>Nature Communications</i> , 2019, 10, 2337.	12.8	79
12	Cordierite/CeO ₂ ceramic nanocomposites from vermiculite with fixed CeO ₂ nanoparticles, talc and kaolin. <i>Applied Clay Science</i> , 2019, 179, 105150.	5.2	6
13	A Novel Approach to Structure Modification of Brasses by Combination of Non-equilibrium Heat Treatment and Friction Stir Processing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 2391-2398.	2.2	11
14	Thermal Stability of Athermal γ - α -Ti(Fe) Produced upon Quenching of β -Ti(Fe). <i>Advanced Engineering Materials</i> , 2019, 21, 1800158.	3.5	14
15	On the microstructural and functional stability of Fe-Mn-Al-Ni at ambient and elevated temperatures. <i>Scripta Materialia</i> , 2019, 162, 442-446.	5.2	27
16	Effect of stacking fault energy on the restoration mechanisms and mechanical properties of friction stir welded copper alloys. <i>Materials and Design</i> , 2019, 162, 185-197.	7.0	70
17	Modification of the Electrolyte/Electrode Interface for the Template-free Electrochemical Synthesis of Metal Nanowires from Ionic Liquids. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 1272-1278.	4.6	4
18	Nanoscale partitioning of Mn between austenite and martensite revealed by Curie temperature variations. <i>Philosophical Magazine Letters</i> , 2018, 98, 55-63.	1.2	3

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19	Comparable study of vermiculites from four commercial deposits prepared with fixed ceria nanoparticles. Applied Clay Science, 2018, 151, 164-174.	5.2	16
20	Microstructure and charge trapping in ZrO ₂ - and Si ₃ N ₄ -based superlattice layer systems with Ge nanoparticles. Thin Solid Films, 2018, 645, 124-128.	1.8	3
21	High temperature phase equilibria in the Ti-poor part of the Al-Mo-Ti system. Journal of Alloys and Compounds, 2017, 706, 616-628.	5.5	6
22	High-temperature phase equilibria with the bcc-type $\hat{\Gamma}^2$ (AlMo) phase in the binary Al-Mo system. Intermetallics, 2017, 83, 29-37.	3.9	12
23	Cyclic Degradation Behavior of $\langle 001 \rangle$ -Oriented Fe-Mn-Al-Ni Single Crystals in Tension. Shape Memory and Superelasticity, 2017, 3, 335-346.	2.2	22
24	Coexistence of conversion and intercalation mechanisms in lithium ion batteries: Consequences for microstructure and interaction between the active material and electrolyte. International Journal of Materials Research, 2017, 108, 971-983.	0.3	3
25	Structural Properties and Photocatalytic Activity of Ceria Nanoparticles on Vermiculite Matrix. Journal of Nanoscience and Nanotechnology, 2016, 16, 7844-7848.	0.9	11
26	Evolution of real structure in Ge-Si mosaic crystals. Crystal Research and Technology, 2016, 51, 742-751.	1.3	0
27	Microstructure, texture, and mechanical properties of friction stir welded commercial brass alloy. Materials Characterization, 2016, 119, 84-91.	4.4	56
28	Temperature stable Au nanoparticles embedded in Er ³⁺ doped ZrO ₂ sol-gel thin films prepared by spin coating. Thin Solid Films, 2016, 606, 13-18.	1.8	5
29	Cyclic degradation in bamboo-like Fe-Mn-Al-Ni shape memory alloys – The role of grain orientation. Scripta Materialia, 2016, 114, 156-160.	5.2	61
30	Influence of Al on the temperature dependence of strain hardening behavior and glide planarity in Fe-Cr-Ni-Mn-C austenitic stainless steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 649, 301-312.	5.6	31
31	Interplay of microstructure defects in austenitic steel with medium stacking fault energy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 649, 390-399.	5.6	51
32	Microstructure of V-based ohmic contacts to AlGaN/GaN heterostructures at a reduced annealing temperature. Applied Physics Letters, 2015, 106, .	3.3	14
33	Charge trapping of Ge-nanocrystals embedded in TaZrOx dielectric films. Applied Physics Letters, 2015, 106, .	3.3	18
34	The role of oxygen in shockwave-synthesized $\hat{\Gamma}^3$ -Si ₃ N ₄ material. Journal of the European Ceramic Society, 2015, 35, 3283-3288.	5.7	3
35	Effect of the stoichiometry of niobium oxide on the resistive switching of Nb ₂ O ₅ based metal-insulator-metal stacks. Journal of Electron Spectroscopy and Related Phenomena, 2015, 202, 122-127.	1.7	13
36	Crystallization dynamics and interface stability of strontium titanate thin films on silicon. Journal of Applied Crystallography, 2015, 48, 393-400.	4.5	6

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37	Erbium-doped slot waveguides containing size-controlled silicon nanocrystals. Journal of Applied Physics, 2015, 117, 163106.	2.5	3
38	Core/shell CdS/ZnS nanoparticles: Molecular modelling and characterization by photocatalytic decomposition of Methylene Blue. Applied Surface Science, 2014, 292, 813-822.	6.1	18
39	Properties of cryo-drawn copper with severely twinned microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 588, 132-141.	5.6	21
40	In situ X-ray diffraction study of stacking fault formation in the near-surface region of transformation induced plasticity steels. Thin Solid Films, 2013, 530, 105-112.	1.8	29
41	Microstructure Defects Contributing to the Energy Absorption in Cr^Mn^Ni^{TRIP} Steels. Advanced Engineering Materials, 2013, 15, 571-582.	3.5	35
42	Ge nanoparticle formation by thermal treatment of rf-sputtered ZrO ₂ /ZrGe ₂ O ₃ superlattices. Journal of Applied Physics, 2013, 113, 044303.	2.5	5
43	(Invited) Germanium Nanostructures in High-K Materials. ECS Transactions, 2013, 53, 237-243.	0.5	3
44	Phase and Microstructure Development in the Conversion Type Electrodes for Li-Ion Batteries Based on the Cu-Fe-O System. Journal of the Electrochemical Society, 2013, 160, A1594-A1603.	2.9	6
45	Interface Phenomena Responsible for Bonding between ^{TRIP} Steel and Partially Stabilised Zirconia as Revealed by TEM. Advanced Engineering Materials, 2013, 15, 627-637.	3.5	3
46	Room temperature fabricated NbO _x /Nb ₂ O ₅ memory switching device with threshold switching effect. , 2013, , .		12
47	Silicon and Germanium Nanoclusters Embedded in Zirconium Dioxide Matrices. ECS Journal of Solid State Science and Technology, 2012, 1, N135-N138.	1.8	1
48	(Invited) Semiconductor Nanocrystals Embedded in High-k Materials. ECS Transactions, 2012, 45, 9-16.	0.5	1
49	Low-band gap nanoparticles embedded in high-K dielectrics. , 2012, , .		0
50	Thermally activated crystallization of Nb ₂ O ₅ grown on Pt electrode. Applied Physics A: Materials Science and Processing, 2012, 108, 431-437.	2.3	8
51	Filamentary resistive switching in amorphous and polycrystalline Nb ₂ O ₅ thin films. Solid-State Electronics, 2012, 72, 73-77.	1.4	46
52	Microstructure of austenitic stainless steels of various phase stabilities after cyclic and tensile deformation. International Journal of Materials Research, 2011, 102, 1374-1377.	0.3	14
53	Effect of the carbon ion energy on the microstructure of ta-C/Cr multilayers. Surface and Coatings Technology, 2011, 206, 1753-1758.	4.8	14
54	Stacking faults in high-alloyed metastable austenitic cast steel observed by electron channelling contrast imaging. Scripta Materialia, 2011, 64, 513-516.	5.2	89

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55	Microstructure formation in electrodeposited Co/Cu/Cu multilayers with GMR effect: Influence of current density during magnetic layer deposition. <i>Acta Materialia</i> , 2011, 59, 2992-3001.	7.9	27
56	Effect of Internal Interfaces on Hardness and Thermal Stability of Nanocrystalline Ti _{0.5} Al _{0.5} N Coatings. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 559-569.	2.2	53
57	Orientation Relationship between the TRIP Steel Substrate and the ZrO ₂ thin Film. <i>Steel Research International</i> , 2011, 82, 985-989.	1.8	5
58	In-situ Study of the Microstructure Development in a CrMnNi TRIP Steel During Plastic Deformation. <i>Steel Research International</i> , 2011, 82, 998-1003.	1.8	4
59	Characterization of microstructural defects in melt grown ZnO single crystals. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	19
60	Magnetic response of (Cr,Al,Si)N nanocrystallites on the microstructure of Cr/Al/Si/N nanocomposites. <i>Zeitschrift für Kristallographie</i> , 2010, 225, 599-609.	1.1	13
61	Microstructure Investigation of the PVD Thin Films of TRIP Steels. <i>Solid State Phenomena</i> , 2010, 160, 273-279.	0.3	2
62	Adhesion of silver nanoparticles on the clay substrates; modeling and experiment. <i>Applied Surface Science</i> , 2010, 256, 2841-2848.	6.1	21
63	Adhesion of silver nanoparticles on the montmorillonite surface. <i>Journal of Physics and Chemistry of Solids</i> , 2010, 71, 634-637.	4.0	12
64	Vermiculite interlayer as a reactor for CdS ultrafine particles preparation. <i>Microporous and Mesoporous Materials</i> , 2010, 129, 118-125.	4.4	9
65	Effect of the aluminium content and the bias voltage on the microstructure formation in Ti _{1-x} Al _x N protective coatings grown by cathodic arc evaporation. <i>Surface and Coatings Technology</i> , 2010, 205, 1345-1349.	4.8	48
66	Preparation and characterization of antibacterial silver/vermiculites and silver/montmorillonites. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 6287-6300.	3.9	35
67	Microstructural investigations on as-cast and annealed Al-Sc and Al-Sc-Zr alloys. <i>Materials Characterization</i> , 2009, 60, 1387-1394.	4.4	67
68	Microstructural characterisation of titanium coatings deposited using cold gas spraying on Al ₂ O ₃ substrates. <i>Surface and Coatings Technology</i> , 2009, 203, 3206-3213.	4.8	42
69	Formation of microstructural defects in electrodeposited Co/Cu multilayers. <i>Acta Materialia</i> , 2009, 57, 3211-3222.	7.9	34
70	Interplay of microstructural features in Cr _{1-x} Al _x N and Cr _{1-x} Al _x Si _y N nanocomposite coatings deposited by cathodic arc evaporation. <i>Surface and Coatings Technology</i> , 2008, 202, 3199-3207.	4.8	15
71	Investigation of thin oxide films on titanium for capacitor applications. <i>Surface and Interface Analysis</i> , 2008, 40, 850-852.	1.8	10
72	Formation of defect structures in hard nanocomposites. <i>Surface and Coatings Technology</i> , 2008, 203, 572-578.	4.8	25

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73	Analysis of local composition gradients in the hard-phase grains of cermets using a combination of X-ray diffraction and electron microscopy. International Journal of Refractory Metals and Hard Materials, 2008, 26, 263-275.	3.8	10
74	Synthesis, microstructure and hardness of bulk ultrahard BN nanocomposites. Journal of Materials Research, 2008, 23, 981-993.	2.6	23
75	XRD Analysis of Local Strain Fields in Pearlitic Steels - towards the Fast Examination of Microstructure after Hot Rolling. Steel Research International, 2008, 79, 800-806.	1.8	13
76	Silver Nanoparticles/Montmorillonite Composites Prepared Using Nitrating Reagent at Water and Glycerol. Journal of Nanoscience and Nanotechnology, 2008, 8, 3050-3058.	0.9	16
77	Interference phenomena in nanocrystalline materials and their application in the microstructure analysis. Zeitschrift für Kristallographie, Supplement, 2008, 2008, 15-26.	0.5	8
78	Microstructural characterisation of Cr-Al-N nanocomposites deposited by cathodic arc evaporation. Zeitschrift für Kristallographie, Supplement, 2008, 2008, 159-166.	0.5	3
79	Residual stress and elastic anisotropy in the Ti-Al-(Si)-N and Cr-Al-(Si)-N nanocomposites deposited by cathodic arc evaporation. Zeitschrift für Kristallographie, Supplement, 2008, 2008, 245-252.	0.5	1
80	Microstructure formation in electrochemically deposited Copper thin films. Materialwissenschaft Und Werkstofftechnik, 2007, 38, 121-124.	0.9	1
81	Internal structure of clusters of partially coherent nanocrystallites in Cr-Al-N and Cr-Al-Si-N coatings. Surface and Coatings Technology, 2007, 201, 9476-9484.	4.8	34
82	Interplay between the deposition mode and microstructure in electrochemically deposited Cu thin films. Thin Solid Films, 2007, 515, 6698-6706.	1.8	17
83	Microstructure and hardness of nanocrystalline Ti _{1-x} Al _x Si _y N thin films. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 462, 279-282.	5.6	47
84	Microstructure development in Cr-Al-Si-N nanocomposites deposited by cathodic arc evaporation. Surface and Coatings Technology, 2006, 201, 2835-2843.	4.8	39
85	Some consequences of the partial crystallographic coherence between nanocrystalline domains in Ti-Al-N and Ti-Al-Si-N coatings. Thin Solid Films, 2006, 514, 240-249.	1.8	63
86	Growth and properties of mosaic single crystals for -ray lens application. Journal of Crystal Growth, 2005, 275, e495-e500.	1.5	19
87	Characterisation of nitrogen modified diamond-like carbon films deposited by radio-frequency plasma enhanced chemical vapour deposition. Diamond and Related Materials, 2005, 14, 1073-1077.	3.9	14
88	On the preferred orientation in Ti _{1-x} Al _x N and Ti _{1-x} Al _x Si _y N thin films. International Journal of Materials Research, 2005, 96, 738-742.	0.8	6
89	Interference phenomena observed by X-ray diffraction in nanocrystalline thin films. Journal of Applied Crystallography, 2004, 37, 613-620.	4.5	64
90	Substructure Analysis in Heavily Deformed Materials by Diffraction Methods. Advanced Engineering Materials, 2004, 6, 861-871.	3.5	9

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91	Characterization of the cell block structure and disclination configurations in plastically deformed metals by electron diffraction. Journal of Alloys and Compounds, 2004, 378, 93-96.	5.5	15
92	X-ray diffraction on nanocrystalline Ti _{1-x} Al _x N thin films. Journal of Alloys and Compounds, 2004, 378, 107-111.	5.5	35
93	Nano- and microstructure of diamond-like carbon films modified by CaO incorporation. Diamond and Related Materials, 2003, 12, 1030-1033.	3.9	12
94	Disclinations in Severe Deformed Materials: A Case for Tem Characterization. , 2003, , 533-541.		0
95	TEM Identification of Disclinations in Plastically Deformed Crystals. Solid State Phenomena, 2002, 87, 57-72.	0.3	12
96	NANO- AND MICROSTRUCTURE OF SHORT FIBRE REINFORCED AND UNREINFORCED HYDROXYAPATITE. Biomedizinische Technik, 2002, 47, 397-400.	0.8	7
97	Identification de disclinations dans la structure des matériaux fortement déformés. Annales De Chimie: Science Des Matériaux, 2002, 27, 25-33.	0.4	5
98	Transmission Electron Microscopy Image Contrast of Disclination Defects in Crystals (Computer) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 4	1.7	8
99	Zirconia-Alumina Nanoparticles Prepared by Laser Evaporation: Powder Characterisation by TEM and 27Al MAS NMR. Particle and Particle Systems Characterization, 2002, 19, 169.	2.3	11
100	Investigation of interfacial interaction between uncoated and coated carbon fibres and the magnesium alloy AZ91. Analytical and Bioanalytical Chemistry, 2002, 374, 635-638.	3.7	22
101	Transmission electron microscopy analysis of disclination structures in plastically deformed metals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 324, 174-178.	5.6	26
102	Tailored colloidal AFM probes and their TEM investigation. Surface and Interface Analysis, 2002, 33, 50-53.	1.8	19
103	Disclinations in Plastically Deformed Metallic Materials. Advanced Engineering Materials, 2001, 3, 877.	3.5	35
104	Microstructure Formations in Copper-Silicon Carbide Composites During Mechanical Alloying in a Planetary Activator. Materialwissenschaft Und Werkstofftechnik, 2000, 31, 1048-1055.	0.9	9
105	A Tem-Based Disclination Model for the Substructure Evolution under Severe Plastic Deformation. , 2000, , 197-202.		3
106	A Microdiffraction Method for the Characterization of Partial Disclinations in Plastically Deformed Metals by TEM. Physica Status Solidi A, 1999, 175, 569-576.	1.7	17
107	Undoped GaAs grown by the vertical gradient freeze method: growth and properties. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1994, 28, 87-90.	3.5	5
108	The promise of EXAFS/EXELFS spectroscopy for structure analysis in ceramic composites. Journal of the European Ceramic Society, 1992, 10, 213-220.	5.7	0

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109	Application of lattice parameter measurements in X-ray analysis of elastic distortions due to interstitial atoms in metals. <i>Crystal Research and Technology</i> , 1983, 18, K112-K115.	1.3	0
110	Microstructure Investigations of the Phase Boundaries in the Bridgman TRIP Steel Crystal. <i>Solid State Phenomena</i> , 0, 160, 211-216.	0.3	4