Alfred G Ludwig

List of Publications by Year
in descending order

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287	9,199	76196	58464
papers	citations	40 h-index	82 g-index

289	289	289	9632
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Oxygen and hydrogen evolution reactions on Ru, RuO 2 , Ir, and IrO 2 thin film electrodes in acidic and alkaline electrolytes: A comparative study on activity and stability. Catalysis Today, 2016, 262, 170-180.	2.2	999
2	Combinatorial search of thermoelastic shape-memory alloys with extremely small hysteresis width. Nature Materials, 2006, 5, 286-290.	13.3	551
3	The stability number as a metric for electrocatalyst stability benchmarking. Nature Catalysis, 2018, 1, 508-515.	16.1	533
4	Identification of Quaternary Shape Memory Alloys with Nearâ€Zero Thermal Hysteresis and Unprecedented Functional Stability. Advanced Functional Materials, 2010, 20, 1917-1923.	7.8	304
5	The 2019 materials by design roadmap. Journal Physics D: Applied Physics, 2019, 52, 013001.	1.3	236
6	Discovery of a Multinary Noble Metalâ€“Free Oxygen Reduction Catalyst. Advanced Energy Materials, 2018, 8, 1802269.	10.2	227
7	Discovery of new materials using combinatorial synthesis and high-throughput characterization of thin-film materials libraries combined with computational methods. Npj Computational Materials, 2019, 5, .	3.5	186
8	What Makes Highâ€Entropy Alloys Exceptional Electrocatalysts?. Angewandte Chemie - International Edition, 2021, 60, 26894-26903.	7.2	145
9	Toward a Paradigm Shift in Electrocatalysis Using Complex Solid Solution Nanoparticles. ACS Energy Letters, 2019, 4, 1206-1214.	8.8	140
10	Selfâ€Directed Localization of ZIFâ€8 Thin Film Formation by Conversion of ZnO Nanolayers. Advanced Functional Materials, 2014, 24, 4804-4811.	7.8	134
11	Development of multifunctional thin films using high-throughput experimentation methods. International Journal of Materials Research, 2008, 99, 1144-1149.	0.1	116
12	Structure-related antibacterial activity of a titanium nanostructured surface fabricated by glancing angle sputter deposition. Nanotechnology, 2014, 25, 195101.	1.3	115
13	Giant magnetostrictive thin films for applications in microelectromechanical systems (invited). Journal of Applied Physics, 2000, 87, 4691-4695.	1.1	90
14	Complexâ€Solidâ€Solution Electrocatalyst Discovery by Computational Prediction and Highâ€Throughput Experimentation**. Angewandte Chemie - International Edition, 2021, 60, 6932-6937.	7.2	86
15	Combinatorial metallurgical synthesis and processing of high-entropy alloys. Journal of Materials Research, 2018, 33, 3156-3169.	1.2	83
16	Enhanced photoelectrochemical properties of WO3 thin films fabricated by reactive magnetron sputtering. International Journal of Hydrogen Energy, 2011, 36, 4724-4731.	3.8	82
17	On the Origin of the Improved Ruthenium Stability in RuO₂â€“IrO₂Mixed Oxides. Journal of the Electrochemical Society, 2016, 163, F3099-F3104.	1.3	82
18	Magnetostrictive actuation in microsystems. Sensors and Actuators A: Physical, 2000, 81, 275-280.	2.0	81

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19	Design of Complex Solidâ€Solution Electrocatalysts by Correlating Configuration, Adsorption Energy Distribution Patterns, and Activity Curves. Angewandte Chemie - International Edition, 2020, 59, 5844-5850.	7.2	81
20	Optimization of the Î”E effect in thin films and multilayers by magnetic field annealing. IEEE Transactions on Magnetics, 2002, 38, 2829-2831.	1.2	75
21	Giant magnetostrictive multilayers (invited). Journal of Applied Physics, 1999, 85, 6232-6237.	1.1	74
22	Accelerated atomic-scale exploration of phase evolution in compositionally complex materials. Materials Horizons, 2018, 5, 86-92.	6.4	72
23	Giant magnetostrictive spring magnet type multilayers. Journal of Applied Physics, 1997, 81, 5420-5422.	1.1	71
24	Highâ€Throughput Fabrication of Auâ€“Cu Nanoparticle Libraries by Combinatorial Sputtering in Ionic Liquids. Advanced Functional Materials, 2014, 24, 2049-2056.	7.8	71
25	Bayesian Optimization of Highâ€Entropy Alloy Compositions for Electrocatalytic Oxygen Reduction**. Angewandte Chemie - International Edition, 2021, 60, 24144-24152.	7.2	61
26	Combinatorial fabrication and high-throughput characterization of a Tiâ€“Niâ€“Cu shape memory thin film composition spread. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 481-482, 151-155.	2.6	60
27	MEMS tools for combinatorial materials processing and high-throughput characterization. Measurement Science and Technology, 2005, 16, 111-118.	1.4	59
28	Rapid and Surfactant-Free Synthesis of Bimetallic Ptâ€“Cu Nanoparticles Simply via Ultrasound-Assisted Redox Replacement. ACS Catalysis, 2012, 2, 1647-1653.	5.5	54
29	Highâ€Throughput Screening of Thinâ€Film Semiconductor Material Libraries I: System Development and Case Study for Tï¿Wï¿O. ChemSusChem, 2015, 8, 1270-1278.	3.6	54
30	Phase transformation, structural and functional fatigue properties of Tiâ€“Niâ€“Hf shape memory thin films. Acta Materialia, 2011, 59, 3267-3275.	3.8	52
31	A combinatorial passivation study of Taâ€“Ti alloys. Corrosion Science, 2009, 51, 1519-1527.	3.0	50
32	Screening of material libraries for electrochemical CO2 reduction catalysts â€“ Improving selectivity of Cu by mixing with Co. Journal of Catalysis, 2016, 343, 248-256.	3.1	47
33	Unraveling compositional effects on the light-induced oxygen evolution in Bi(Vâ€“Moâ€“X)O4 material libraries. Energy and Environmental Science, 2017, 10, 1213-1221.	15.6	47
34	Combinatorial study of phase transformation characteristics of a Tiâ€“Niâ€“Pd shape memory thin film composition spread in view of microactuator applications. Applied Surface Science, 2007, 254, 743-748.	3.1	45
35	R-phase formation in Ti39Ni45Cu16 shape memory thin films and bulk alloys discovered by combinatorial methods. Acta Materialia, 2009, 57, 4169-4177.	3.8	45
36	Integration of two degree-of-freedom magnetostrictive actuation and piezoresistive detection: application to a two-dimensional optical scanner. Journal of Microelectromechanical Systems, 2002, 11, 355-361.	1.7	44

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37	High-Density Droplet Microarray of Individually Addressable Electrochemical Cells. Analytical Chemistry, 2017, 89, 5832-5839.	3.2	44
38	High-throughput characterization of hydrogen storage materials using thin films on micromachined Si substrates. Journal of Alloys and Compounds, 2007, 446-447, 516-521.	2.8	42
39	Layered WO3/TiO2 nanostructures with enhanced photocurrent densities. International Journal of Hydrogen Energy, 2013, 38, 15954-15964.	3.8	42
40	Unravelling Compositionâ€“Activityâ€“Stability Trends in High Entropy Alloy Electrocatalysts by Using a Dataâ€Guided Combinatorial Synthesis Strategy and Computational Modeling. Advanced Energy Materials, 2022, 12, .	10.2	42
41	The effect of cast microstructure and crystallography on rafting, dislocation plasticity and creep anisotropy of single crystal Ni-base superalloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 626, 305-312.	2.6	41
42	Modular high-throughput test stand for versatile screening of thin-film materials libraries. Science and Technology of Advanced Materials, 2011, 12, 054206.	2.8	40
43	CrN/AlN nanolaminate coatings deposited via high power pulsed and middle frequency pulsed magnetron sputtering. Thin Solid Films, 2014, 572, 153-160.	0.8	40
44	High-throughput synthesis and characterization of anodic oxides on Nbâ€“Ti alloys. Electrochimica Acta, 2009, 54, 5973-5980.	2.6	39
45	The ferromagnetic shape memory system Feâ€“Pdâ€“Cu. Acta Materialia, 2010, 58, 5949-5961.	3.8	39
46	Ag-stabilized few-layer graphene dispersions in low boiling point solvents for versatile nonlinear optical applications. Carbon, 2013, 62, 182-192.	5.4	39
47	Feâ€“Crâ€“Al Containing Oxide Semiconductors as Potential Solar Water-Splitting Materials. ACS Applied Materials & Interfaces, 2015, 7, 4883-4889.	4.0	39
48	Wet Nanoindentation of the Solid Electrolyte Interphase on Thin Film Si Electrodes. ACS Applied Materials & Interfaces, 2015, 7, 23554-23563.	4.0	39
49	Atomic-scale investigation of fast oxidation kinetics of nanocrystalline CrMnFeCoNi thin films. Journal of Alloys and Compounds, 2018, 766, 1080-1085.	2.8	39
50	Comparing the Activity of Complex Solid Solution Electrocatalysts Using Inflection Points of Voltammetric Activity Curves as Activity Descriptors. ACS Catalysis, 2021, 11, 1014-1023.	5.5	39
51	Bistable Thin-Film Shape Memory Actuators for Applications in Tactile Displays. Journal of Microelectromechanical Systems, 2009, 18, 186-194.	1.7	38
52	A novel high-throughput fatigue testing method for metallic thin films. Science and Technology of Advanced Materials, 2011, 12, 054202.	2.8	38
53	Crystallography companion agent for high-throughput materials discovery. Nature Computational Science, 2021, 1, 290-297.	3.8	38
54	Thermally Oxidized Mnâ€“Co Thin Films as Protective Coatings for SOFC Interconnects. Journal of the Electrochemical Society, 2009, 156, B1431.	1.3	37

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55	Combinatorial investigation of Hfâ€“Ta thin films and their anodic oxides. Electrochimica Acta, 2010, 55, 7884-7891.	2.6	37
56	High-throughput study of martensitic transformations in the complete Tiâ€“Niâ€“Cu system. Intermetallics, 2012, 26, 98-109.	1.8	37
57	Combinatorial development of nanoporous WO3 thin film photoelectrodes for solar water splitting by dealloying of binary alloys. International Journal of Hydrogen Energy, 2012, 37, 11618-11624.	3.8	37
58	Rapid Identification of Areas of Interest in Thin Film Materials Libraries by Combining Electrical, Optical, X-ray Diffraction, and Mechanical High-Throughput Measurements: A Case Study for the System Niâ€“Al. ACS Combinatorial Science, 2014, 16, 686-694.	3.8	37
59	Potential-resolved dissolution of Pt-Cu: A thin-film material library study. Electrochimica Acta, 2014, 144, 332-340.	2.6	37
60	Understanding surface reactivity of Si electrodes in Li-ion batteries by in operando scanning electrochemical microscopy. Chemical Communications, 2016, 52, 6825-6828.	2.2	37
61	PEALD of SiO₂ and Al₂O₃ Thin Films on Polypropylene: Investigations of the Film Growth at the Interface, Stress, and Gas Barrier Properties of Dyads. ACS Applied Materials & Interfaces, 2018, 10, 7422-7434.	4.0	37
62	Functional and structural fatigue of titanium tantalum high temperature shape memory alloys (HT) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Processing, 2015, 620, 359-366.	2.6	36
63	Magnetic properties and microstructure of giant magnetostrictive TbFe/FeCo multilayers. Journal of Applied Physics, 1998, 83, 7267-7269.	1.1	35
64	High-frequency magnetoelastic materials for remote-interrogated stress sensors. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 1126-1131.	1.0	35
65	Opto-mechanical characterization of hydrogen storage properties of Mgâ€“Ni thin film composition spreads. Applied Surface Science, 2007, 254, 682-686.	3.1	34
66	First-principles calculations of the elastic constants of Feâ€“Pt alloys. Intermetallics, 2008, 16, 113-118.	1.8	34
67	Bimetallic silverâ€“platinum nanoparticles with combined osteo-promotive and antimicrobial activity. Nanotechnology, 2019, 30, 305101.	1.3	34
68	Investigation of thermally oxidised Mnâ€“Co thin films for application in SOFC metallic interconnects. Applied Surface Science, 2008, 255, 1850-1859.	3.1	33
69	Correlating Oxygen Evolution Catalysts Activity and Electronic Structure by a High-Throughput Investigation of Ni1-y-zFeyCrzOx. Scientific Reports, 2017, 7, 44192.	1.6	32
70	Controlling the Amorphous and Crystalline State of Multinary Alloy Nanoparticles in An Ionic Liquid. Nanomaterials, 2018, 8, 903.	1.9	31
71	A New Prototype Twoâ€Phase (TiNi)â€“(Î²â€W) SMA System with Tailorable Thermal Hysteresis. Advanced Functional Materials, 2011, 21, 113-118.	7.8	30
72	Thickness-dependence of the B2â€“B19 martensitic transformation in nanoscale shape memory alloy thin films: Zero-hysteresis in 75nm thick Ti51Ni38Cu11 thin films. Acta Materialia, 2012, 60, 306-313.	3.8	30

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73	Combinatorial screening of Pd-based quaternary electrocatalysts for oxygen reduction reaction in alkaline media. Journal of Materials Chemistry A, 2017, 5, 67-72.	5.2	30
74	Micro-sensor coupling magnetostriction and magnetoresistive phenomena. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 1132-1135.	1.0	29
75	Magnetoelastic and magnetostatic interactions in exchange-spring multilayers. Physical Review B, 2005, 72, .	1.1	29
76	Nanostructured Few-Layer Graphene with Superior Optical Limiting Properties Fabricated by a Catalytic Steam Etching Process. Journal of Physical Chemistry C, 2013, 117, 11811-11817.	1.5	29
77	Adherence of human mesenchymal stem cells on Ti and TiO2 nano-columnar surfaces fabricated by glancing angle sputter deposition. Applied Surface Science, 2014, 292, 626-631.	3.1	29
78	Nanoscale copper and silver thin film systems display differences in antiviral and antibacterial properties. Scientific Reports, 2022, 12, 7193.	1.6	29
79	Micro-hotplates for high-throughput thin film processing and in situ phase transformation characterization. Sensors and Actuators A: Physical, 2008, 147, 576-582.	2.0	28
80	Highâ€Throughput Screening of Thinâ€Film Semiconductor Material Libraries II: Characterization of Feï£¿Wï£¿O Libraries. ChemSusChem, 2015, 8, 1279-1285.	3.6	28
81	Deep learning for visualization and novelty detection in large X-ray diffraction datasets. Npj Computational Materials, 2021, 7, .	3.5	28
82	Magnetically tunable SAW-resonator. , 0, , .		27
83	Investigation of hard magnetic properties in the Feâ€“Pt system by combinatorial deposition of thin film multilayer libraries. Applied Surface Science, 2006, 252, 2518-2523.	3.1	27
84	Dynamics of Photogenerated Holes in TiO‹sub›2‹/sub›-Polyheptazine Hybrid Photoanodes for Visible Light-Driven Water Splitting. Journal of the Electrochemical Society, 2012, 159, H616-H622.	1.3	27
85	Correlative plasma-surface model for metastable Cr-Al-N: Frenkel pair formation and influence of the stress state on the elastic properties. Journal of Applied Physics, 2017, 121, .	1.1	27
86	Rapid Assessment of Sputtered Nanoparticle Ionic Liquid Combinations. ACS Combinatorial Science, 2018, 20, 243-250.	3.8	27
87	Combinatorial Synthesis and High-Throughput Characterization of Feâ€“Vâ€“O Thin-Film Materials Libraries for Solar Water Splitting. ACS Combinatorial Science, 2018, 20, 544-553.	3.8	27
88	Predicting structure zone diagrams for thin film synthesis by generative machine learning. Communications Materials, 2020, 1, .	2.9	27
89	Zoomingâ€in â€“ Visualization of active site heterogeneity in high entropy alloy electrocatalysts using scanning electrochemical cell microscopy. Electrochemical Science Advances, 2022, 2, e2100105.	1.2	27
90	High-Throughput Characterization of Pt Supported on Thin Film Oxide Material Libraries Applied in the Oxygen Reduction Reaction. Analytical Chemistry, 2011, 83, 1916-1923.	3.2	26

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91	A structure zone diagram obtained by simultaneous deposition on a novel step heater: A case study for Cu₂O thin films. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2798-2804.	0.8	26
92	Unraveling Selfâ€Doping Effects in Thermoelectric TiNiSn Halfâ€Heusler Compounds by Combined Theory and Highâ€Throughput Experiments. Advanced Electronic Materials, 2016, 2, 1500208.	2.6	26
93	Giant magnetostrictive TbFe/Fe multilayers. Journal of Alloys and Compounds, 1997, 258, 133-137.	2.8	25
94	Strain sensors based on magnetostrictive GMR/TMR structures. IEEE Transactions on Magnetics, 2002, 38, 2826-2828.	1.2	25
95	Identification of optimized Tiâ€“Niâ€“Cu shape memory alloy compositions for high-frequency thin film microactuator applications. Smart Materials and Structures, 2010, 19, 065032.	1.8	25
96	Scanning droplet cell microscopy on a wide range hafniumâ€“niobium thin film combinatorial library. Electrochimica Acta, 2013, 110, 539-549.	2.6	25
97	Laser micromachining for applications in thin film technology. Applied Surface Science, 2000, 154-155, 633-639.	3.1	24
98	Interdiffusion in Feâ€“Pt multilayers. Journal of Applied Physics, 2006, 100, 073517.	1.1	24
99	Development and characterization of Fe70Pd30 ferromagnetic shape memory splats. Intermetallics, 2010, 18, 877-882.	1.8	24
100	Antibacterial activity of microstructured sacrificial anode thin films by combination of silver with platinum group elements (platinum, palladium, iridium). Materials Science and Engineering C, 2017, 74, 536-541.	3.8	24
101	The effects of grain size on the phase transformation properties of annealed (Ti/Ni/W) shape memory alloy multilayers. Scripta Materialia, 2011, 64, 1047-1050.	2.6	23
102	Subtoxic cell responses to silica particles with different size and shape. Scientific Reports, 2020, 10, 21591.	1.6	23
103	Shape memory effect and magnetostriction of sputtered NiMnGa thin films. , 2003, , .		22
104	Reversible fccâ†”bcc transformation in freestanding epitaxially grown Feâ€“Pd ferromagnetic shape memory films. Scripta Materialia, 2011, 64, 89-92.	2.6	22
105	Compositionâ€Dependent Oxygen Reduction Activity and Stability of Ptâ€“Cu Thin Films. ChemElectroChem, 2014, 1, 358-361.	1.7	22
106	Combinatorial study of Fe-Co-V hard magnetic thin films. Science and Technology of Advanced Materials, 2017, 18, 231-238.	2.8	22
107	Antibacterial Efficacy of Sacrifical Anode Thin Films Combining Silver with Platinum Group Elements within a Bacteriaâ€Containing Human Plasma Clot. Advanced Engineering Materials, 2018, 20, 1700493.	1.6	22
108	Ion energy control via the electrical asymmetry effect to tune coating properties in reactive radio frequency sputtering. Plasma Sources Science and Technology, 2019, 28, 114001.	1.3	22

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109	Bayesian Optimization of Highâ€Entropy Alloy Compositions for Electrocatalytic Oxygen Reduction**. Angewandte Chemie, 2021, 133, 24346-24354.	1.6	22
110	Application of a Multilayered Magnetostrictive Film to a Micromachined 2-D Optical Scanner. Journal of Microelectromechanical Systems, 2004, 13, 264-271.	1.7	21
111	Influence of precipitates on the thermal hysteresis of Tiâ€“Niâ€“Pd shape memory thin films. Scripta Materialia, 2009, 60, 352-355.	2.6	21
112	Properties of anodic oxides grown on a hafniumâ€“tantalumâ€“titanium thin film library. Science and Technology of Advanced Materials, 2014, 15, 015006.	2.8	21
113	New Auâ€“Cuâ€“Al thin film shape memory alloys with tunable functional properties and high thermal stability. Acta Materialia, 2015, 85, 378-386.	3.8	21
114	Sputter deposition of highly active complex solid solution electrocatalysts into an ionic liquid library: effect of structure and composition on oxygen reduction activity. Nanoscale, 2020, 12, 23570-23577.	2.8	21
115	Searching novel complex solid solution electrocatalysts in unconventional element combinations. Nano Research, 2022, 15, 4780-4784.	5.8	21
116	High-throughput study of the anodic oxidation of Hfâ€“Ti thin films. Electrochimica Acta, 2009, 54, 5171-5178.	2.6	20
117	Highâ€Temperature Shape Memory Effect in Tiâ€Ta Thin Films Sputter Deposited at Room Temperature. Advanced Materials Interfaces, 2014, 1, 1400019.	1.9	20
118	Synthesis of nanostructured LiMn₂O₄thin films by glancing angle deposition for Li-ion battery applications. Nanotechnology, 2016, 27, 455402.	1.3	20
119	Using Instability of a Non-stoichiometric Mixed Oxide Oxygen Evolution Catalyst As a Tool to Improve Its Electrocatalytic Performance. Electrocatalysis, 2018, 9, 139-145.	1.5	20
120	Glancing-Angle Deposition of Nanostructures on an Implant Material Surface. Nanomaterials, 2019, 9, 60.	1.9	20
121	Combining Switchable Phaseâ€Change Materials and Phaseâ€Transition Materials for Thermally Regulated Smart Midâ€Infrared Modulators. Advanced Optical Materials, 2021, 9, 2100417.	3.6	20
122	High-throughput characterization of mechanical properties of Tiâ€“Niâ€“Cu shape memory thin films at elevated temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 6552-6557.	2.6	19
123	Antibacterial activity of microstructured Ag/Au sacrificial anode thin films. Materials Science and Engineering C, 2015, 46, 276-280.	3.8	19
124	Expediting Combinatorial Data Set Analysis by Combining Human and Algorithmic Analysis. ACS Combinatorial Science, 2017, 19, 1-8.	3.8	19
125	Combinatorial Synthesis and High-Throughput Characterization of Microstructure and Phase Transformation in Niâ€“Tiâ€“Cuâ€“V Quaternary Thin-Film Library. Engineering, 2020, 6, 637-643.	3.2	19
126	Stabilization of an iridium oxygen evolution catalyst by titanium oxides. JPhys Energy, 2021, 3, 034006.	2.3	19

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127	Magnetoelastic thin films for high-frequency applications. IEEE Transactions on Magnetics, 2001, 37, 2690-2692.	1.2	18
128	Correlation of phase transformations and magnetic properties in annealed epitaxial Feâ€“Pd magnetic shape memory alloy films. Journal of Applied Physics, 2010, 107, .	1.1	18
129	High-Throughput Compositional and Structural Evaluation of a Li_a(Ni_xMn_yCo_z)O_r Thin Film Battery Materials Library. ACS Combinatorial Science, 2013, 15, 401-409.	3.8	18
130	Temperature dependent low-field measurements of the magnetocaloric Î”T with sub-mK resolution in small volume and thin film samples. Applied Physics Letters, 2015, 106, .	1.5	18
131	High-Throughput Structural and Functional Characterization of the Thin Film Materials System Niâ€“Coâ€“Al. ACS Combinatorial Science, 2017, 19, 618-624.	3.8	18
132	Development of Single-Crystal Ni-Base Superalloys Based on Multi-criteria Numerical Optimization and Efficient Use of Refractory Elements. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4134-4145.	1.1	18
133	Combinatorial fabrication of magnetic multilayer films. Applied Surface Science, 2004, 223, 78-83.	3.1	17
134	Artificial Single Variant Martensite in Freestanding Fe₇₀Pd₃₀Films Obtained by Coherent Epitaxial Growth. Advanced Materials, 2010, 22, 2668-2671.	11.1	17
135	Fundamental study of an industrial reactive HPPMS (Cr,Al)N process. Journal of Applied Physics, 2017, 122, .	1.1	17
136	Bacterial cell division is involved in the damage of gram-negative bacteria on a nano-pillar titanium surface. Biomedical Physics and Engineering Express, 2018, 4, 055002.	0.6	17
137	On the Effects of Diluted and Mixed Ionic Liquids as Liquid Substrates for the Sputter Synthesis of Nanoparticles. Nanomaterials, 2020, 10, 525.	1.9	17
138	Understanding the Magnetic Shape Memory System Feâ€“Pdâ€“X by Thin Film Experiments and First Principle Calculations. Advanced Engineering Materials, 2012, 14, 724-749.	1.6	16
139	Time- and space-resolved high-throughput characterization of stresses during sputtering and thermal processing of Alâ€“Crâ€“N thin films. Journal Physics D: Applied Physics, 2013, 46, 084011.	1.3	16
140	Influence of residual stress on the adhesion and surface morphology of PECVD-coated polypropylene. Journal Physics D: Applied Physics, 2017, 50, 445301.	1.3	16
141	Effect of Pt and Au current collector in LiMn₂O₄thin film for micro-batteries. Nanotechnology, 2018, 29, 035404.	1.3	16
142	Dependence of grain sizes and microstrains on annealing temperature in Fe/Pt multilayers and L10 FePt thin films. Thin Solid Films, 2008, 517, 531-537.	0.8	15
143	Microstructure, Shape Memory Effect and Functional Stability of Ti₆₇Ta₃₃ Thin Films. Advanced Engineering Materials, 2015, 17, 1425-1433.	1.6	15
144	Design von komplexen Mischkristallâ€Elektrokatalysatoren auf Basis der Korrelation von Konfiguration, Verteilungsmustern der Adsorptionsenergie und AktivitÃtskurven. Angewandte Chemie, 2020, 132, 5893-5900.	1.6	15

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145	High-frequency magnetoelastic multilayer thin films and applications. IEEE Transactions on Magnetics, 2003, 39, 3062-3067.	1.2	14
146	Effects of annealing time on the structural and magnetic properties of L10 FePt thin films. Thin Solid Films, 2010, 518, 4977-4985.	0.8	14
147	Integrity of Micro-Hotplates During High-Temperature Operation Monitored by Digital Holographic Microscopy. Journal of Microelectromechanical Systems, 2010, 19, 1175-1179.	1.7	14
148	High-throughput characterization of stresses in thin film materials libraries using Si cantilever array wafers and digital holographic microscopy. Review of Scientific Instruments, 2011, 82, 063903.	0.6	14
149	Investigation of the Thinâ€‹<scp>F</scp>ilm Phase Diagram of the Crâ€“<scp>N</scp>iâ€“<scp>R</scp>e System by Highâ€‹<scp>T</scp>hroughput Experimentation. Advanced Engineering Materials, 2014, 16, 588-593.	1.6	14
150	Highâ€‹Throughput Investigation of the Oxidation and Phase Constitution of Thinâ€‹Film Niâ€“Alâ€“Cr Materials Libraries. Advanced Engineering Materials, 2015, 17, 1365-1373.	1.6	14
151	A Unified Interdisciplinary Approach to Design Antibacterial Coatings for Fast Silver Release. ChemElectroChem, 2017, 4, 1975-1983.	1.7	14
152	High-Throughput Exploration of Metal Vanadate Thin-Film Systems (Mâ€“Vâ€“O, M = Cu, Ag, W, Cr, Co, Fe) for Solar Water Splitting: Composition, Structure, Stability, and Photoelectrochemical Properties. ACS Combinatorial Science, 2020, 22, 844-857.	3.8	14
153	Synthesis of plasmonic Fe/Al nanoparticles in ionic liquids. RSC Advances, 2020, 10, 12891-12899.	1.7	14
154	Correlative chemical and structural investigations of accelerated phase evolution in a nanocrystalline high entropy alloy. Scripta Materialia, 2020, 183, 122-126.	2.6	14
155	Atomic mechanisms of interdiffusion in metallic multilayers. Materials Science and Engineering C, 2007, 27, 1470-1474.	3.8	13
156	Multifunctional FeCo/TiN Multilayer Thin Films with Combined Magnetic and Protective Properties. Advanced Engineering Materials, 2009, 11, 969-975.	1.6	13
157	Enhancing magnetocrystalline anisotropy of the Fe70Pd30 magnetic shape memory alloy by adding Cu. Acta Materialia, 2012, 60, 6920-6930.	3.8	13
158	The Bain library: A Cu-Au buffer template for a continuous variation of lattice parameters in epitaxial films. APL Materials, 2014, 2, .	2.2	13
159	Mechanical properties of SiLixthin films at different stages of electrochemical Li insertion. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2650-2656.	0.8	13
160	Combinatorial Development of Feâ€“Coâ€“Nb Thin Film Magnetic Nanocomposites. ACS Combinatorial Science, 2015, 17, 698-703.	3.8	13
161	Nanostructured Tiâ€“Ta thin films synthesized by combinatorial glancing angle sputter deposition. Nanotechnology, 2016, 27, 495604.	1.3	13
162	New materials for the light-induced hydrogen evolution reaction from the Cuâ€“Siâ€“Tiâ€“O system. Journal of Materials Chemistry A, 2016, 4, 3148-3152.	5.2	13

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163	Combinatorial synthesis and high-throughput characterization of structural and photoelectrochemical properties of Fe:WO₃nanostructured libraries. Nanotechnology, 2017, 28, 185604.	1.3	13
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