Alan Savan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7448630/publications.pdf

Version: 2024-02-01

90 papers	4,118 citations	126708 33 h-index	118652 62 g-index
90 all docs	90 docs citations	90 times ranked	4805 citing authors

#	Article	IF	Citations
1	Searching novel complex solid solution electrocatalysts in unconventional element combinations. Nano Research, 2022, 15, 4780-4784.	5.8	21
2	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
3	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
4	High-throughput discovery of hydrogen evolution electrocatalysts in the complex solid solution system Coâ€“Crâ€“Feâ€“Moâ€“Ni. Journal of Materials Chemistry A, 2022, 10, 9981-9987.	5.2	12
5	Linear growth of reaction layer during in-situ TEM annealing of thin film Al/Ni diffusion couples. Journal of Alloys and Compounds, 2022, 922, 165926.	2.8	3
6	Complexâ€Solidâ€Solution Electrocatalyst Discovery by Computational Prediction and Highâ€Throughput Experimentation**. Angewandte Chemie - International Edition, 2021, 60, 6932-6937.	7.2	86
7	Complexâ€Solidâ€Solution Electrocatalyst Discovery by Computational Prediction and Highâ€Throughput Experimentation**. Angewandte Chemie, 2021, 133, 7008-7013.	1.6	8
8	Nanocrystalline equiatomic CoCrFeNi alloy thin films: Are they single phase fcc?. Surface and Coatings Technology, 2021, 410, 126945.	2.2	12
9	Stabilization of an iridium oxygen evolution catalyst by titanium oxides. JPhys Energy, 2021, 3, 034006.	2.3	19
10	Electrocatalytic oxidation of 2-propanol on PtxIr100-x bifunctional electrocatalysts â€“ A thin-film materials library study. Journal of Catalysis, 2021, 396, 387-394.	3.1	11
11	Bayesian Optimization of Highâ€Entropy Alloy Compositions for Electrocatalytic Oxygen Reduction**. Angewandte Chemie, 2021, 133, 24346-24354.	1.6	22
12	Bayesian Optimization of Highâ€Entropy Alloy Compositions for Electrocatalytic Oxygen Reduction**. Angewandte Chemie - International Edition, 2021, 60, 24144-24152.	7.2	61
13	Atomic scale understanding of phase stability and decomposition of a nanocrystalline CrMnFeCoNi Cantor alloy. Applied Physics Letters, 2021, 119, 201910.	1.5	3
14	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
15	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
16	Microstructure evolution and thermal stability of equiatomic CoCrFeNi films on (0001) Î±-Al2O3. Acta Materialia, 2020, 200, 908-921.	3.8	12
17	Phase decomposition in a nanocrystalline CrCoNi alloy. Scripta Materialia, 2020, 188, 259-263.	2.6	9
18	Structure Zone Investigation of Multiple Principle Element Alloy Thin Films as Optimization for Nanoindentation Measurements. Materials, 2020, 13, 2113.	1.3	5

#	Article	IF	Citations
19	Correlative chemical and structural investigations of accelerated phase evolution in a nanocrystalline high entropy alloy. Scripta Materialia, 2020, 183, 122-126.	2.6	14
20	Toward a Paradigm Shift in Electrocatalysis Using Complex Solid Solution Nanoparticles. ACS Energy Letters, 2019, 4, 1206-1214.	8.8	140
21	Accelerated atomic-scale exploration of phase evolution in compositionally complex materials. Materials Horizons, 2018, 5, 86-92.	6.4	72
22	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
23	Discovery of a Multinary Noble Metalâ€“Free Oxygen Reduction Catalyst. Advanced Energy Materials, 2018, 8, 1802269.	10.2	227
24	Atomic-scale investigation of fast oxidation kinetics of nanocrystalline CrMnFeCoNi thin films. Journal of Alloys and Compounds, 2018, 766, 1080-1085.	2.8	39
25	Combinatorial metallurgical synthesis and processing of high-entropy alloys. Journal of Materials Research, 2018, 33, 3156-3169.	1.2	83
26	High-throughput study of binary thin film tungsten alloys. International Journal of Refractory Metals and Hard Materials, 2017, 69, 40-48.	1.7	3
27	Nanostructured Tiâ€“Ta thin films synthesized by combinatorial glancing angle sputter deposition. Nanotechnology, 2016, 27, 495604.	1.3	13
28	On the Origin of the Improved Ruthenium Stability in RuO₂â€“IrO₂Mixed Oxides. Journal of the Electrochemical Society, 2016, 163, F3099-F3104.	1.3	82
29	Structural and multifunctional properties of magnetron-sputtered Feâ€“P(â€“Mn) thin films. Thin Solid Films, 2016, 603, 262-267.	0.8	5
30	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
31	Combinatorial synthesis and high-throughput characterization of the thin film materials system Co-Mn-Ge: Composition, structure, and magnetic properties. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1969-1974.	0.8	9
32	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
33	Compositionâ€Dependent Oxygen Reduction Activity and Stability of Ptâ€“Cu Thin Films. ChemElectroChem, 2014, 1, 358-361.	1.7	22
34	Potential-resolved dissolution of Pt-Cu: A thin-film material library study. Electrochimica Acta, 2014, 144, 332-340.	2.6	37
35	Electrochemistry on binary valve metal combinatorial libraries: niobium-tantalum thin films. Electrochimica Acta, 2014, 140, 366-375.	2.6	12
36	Synthesis of Au microwires by selective oxidation of Auâ€“W thin-film composition spreads. Science and Technology of Advanced Materials, 2013, 14, 015003.	2.8	2

#	Article	IF	Citations
37	Scanning droplet cell microscopy on a wide range hafniumâ€“niobium thin film combinatorial library. Electrochimica Acta, 2013, 110, 539-549.	2.6	25
38	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
39	Layered WO3/TiO2 nanostructures with enhanced photocurrent densities. International Journal of Hydrogen Energy, 2013, 38, 15954-15964.	3.8	42
40	Pt-Cu Alloys as Catalysts for the Oxygen Reduction Reaction - A Thin-Film Study of Activity and Stability. ECS Transactions, 2013, 58, 587-592.	0.3	2
41	Preparation of 24 Ternary Thin Film Materials Libraries on a Single Substrate in One Experiment for Irreversible High-Throughput Studies. ACS Combinatorial Science, 2012, 14, 25-30.	3.8	8
42	High-throughput study of martensitic transformations in the complete Tiâ€“Niâ€“Cu system. Intermetallics, 2012, 26, 98-109.	1.8	37
43	Small-Scale Deposition of Thin Films and Nanoparticles by Microevaporation Sources. Journal of Microelectromechanical Systems, 2011, 20, 21-27.	1.7	3
44	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
45	Applications of an energyâ€dispersive pnCCD for Xâ€ray reflectivity: Investigation of interdiffusion in Feâ€“Pt multilayers. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2601-2607.	0.8	12
46	Interdiffusion in Fe/Pt Multilayers: In Situ High Temperature Synchrotron Radiation Reflectivity Study. Advanced Engineering Materials, 2011, 13, 475-479.	1.6	3
47	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
48	Phase transformation, structural and functional fatigue properties of Tiâ€“Niâ€“Hf shape memory thin films. Acta Materialia, 2011, 59, 3267-3275.	3.8	52
49	Enhanced photoelectrochemical properties of WO3 thin films fabricated by reactive magnetron sputtering. International Journal of Hydrogen Energy, 2011, 36, 4724-4731.	3.8	82
50	High-throughput characterization of the Seebeck coefficient of a-(Cr1 â^'xSix)1 â^'yOythin film materials libraries as verification of the extended thermopower formula. Journal of Physics Condensed Matter, 2011, 23, 265501.	0.7	4
51	High-throughput characterization of film thickness in thin film materials libraries by digital holographic microscopy. Science and Technology of Advanced Materials, 2011, 12, 054201.	2.8	10
52	Combinatorial investigation of Feâ€“B thin-film nanocomposites. Science and Technology of Advanced Materials, 2011, 12, 054208.	2.8	7
53	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
54	Combinatorial investigation of Hfâ€“Ta thin films and their anodic oxides. Electrochimica Acta, 2010, 55, 7884-7891.	2.6	37

#	Article	IF	Citations
55	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
56	Microstructure and magnetic properties of FeCo/Ti thin film multilayers annealed in nitrogen. Thin Solid Films, 2010, 519, 770-774.	0.8	5
57	The ferromagnetic shape memory system Feâ€“Pdâ€“Cu. Acta Materialia, 2010, 58, 5949-5961.	3.8	39
58	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
59	Thermally Oxidized Mnâ€“Co Thin Films as Protective Coatings for SOFC Interconnects. Journal of the Electrochemical Society, 2009, 156, B1431.	1.3	37
60	High-throughput study of the anodic oxidation of Hfâ€“Ti thin films. Electrochimica Acta, 2009, 54, 5171-5178.	2.6	20
61	High-throughput synthesis and characterization of anodic oxides on Nbâ€“Ti alloys. Electrochimica Acta, 2009, 54, 5973-5980.	2.6	39
62	A combinatorial passivation study of Taâ€“Ti alloys. Corrosion Science, 2009, 51, 1519-1527.	3.0	50
63	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
64	Investigation of thermally oxidised Mnâ€“Co thin films for application in SOFC metallic interconnects. Applied Surface Science, 2008, 255, 1850-1859.	3.1	33
65	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
66	Development of multifunctional thin films using high-throughput experimentation methods. International Journal of Materials Research, 2008, 99, 1144-1149.	0.1	116
67	Ceramic nitride/metal coatings with enhanced fracture toughness and fatigue resistance using a multiscalar laminate architecture. International Journal of Surface Science and Engineering, 2008, 2, 419.	0.4	1
68	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
69	Topographical evolution of sputtered chromium nitride thin films. Thin Solid Films, 2007, 515, 2903-2920.	0.8	11
70	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
71	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
72	Corrosion behaviour of MoSx-based coatings deposited onto high speed steel by magnetron sputtering. Surface and Coatings Technology, 2006, 201, 4099-4104.	2.2	19

#	Article	IF	Citations
73	Structural and magnetic characteristics of FeCo thin films modified by combinatorial ion implantation. Thin Solid Films, 2006, 495, 169-174.	0.8	8
74	Interdiffusion in Feâ€“Pt multilayers. Journal of Applied Physics, 2006, 100, 073517.	1.1	24
75	Effects of temperature on the chemistry and tribology of co-sputtered MoSx-Ti composite thin films. Thin Solid Films, 2005, 489, 137-144.	0.8	35
76	Resistance to electrochemical corrosion of CrxNy- and DLC-coated steel tools in the environment of wet wood. Surface and Coatings Technology, 2005, 200, 83-86.	2.2	8
77	Reactions of water and ethanol with polycrystalline TiC surfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 234-240.	0.9	9
78	Design and application of gradient annealing devices for the parallel thermal processing of Fe/Pt multilayers. Materials Research Society Symposia Proceedings, 2005, 894, 1.	0.1	2
79	MoS2-based alloys and nanocomposites for solid lubrication. Lubrication Science, 2004, 16, 229-238.	0.9	4
80	In-process structuring of CrN coatings, and its influence on friction in dry and lubricated sliding. Wear, 2003, 254, 1099-1105.	1.5	49
81	Alloying MoS2 with Al and Au: structure and tribological performance. Surface and Coatings Technology, 2003, 169-170, 716-720.	2.2	40
82	Microstructure, chemistry, and tribological performance of MoSx/WSey co-sputtered composites. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 1682-1689.	0.9	10
83	Structure and mechanical properties of argon assisted carbon nitride films. Thin Solid Films, 2001, 398-399, 124-129.	0.8	12
84	Microstructure and tribological performance of MoSx/Au co-sputtered composites. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 609-613.	0.9	15
85	Mechanical and tribological performance of MoS2 co-sputtered composites. Surface and Coatings Technology, 2000, 126, 15-24.	2.2	115
86	Use of nanoscaled multilayer and compound films to realize a soft lubrication phase within a hard, wear-resistant matrix. Surface and Coatings Technology, 2000, 126, 159-165.	2.2	52
87	Characterisation of magnetron sputter deposited MoSx/metal multilayers. Thin Solid Films, 1999, 354, 59-65.	0.8	26
88	Morphology and tribological properties of metal (oxide)â€“MoS2 nanostructured multilayer coatings. Surface and Coatings Technology, 1998, 105, 175-183.	2.2	71
89	Structural, morphological, chemical and tribological investigations of sputter deposited MoSx/metal multilayer coatings. Surface and Coatings Technology, 1998, 108-109, 340-344.	2.2	74
90	Phase constitution of the noble metal thin-film complex solid solution system Ag-Ir-Pd-Pt-Ru in dependence of elemental compositions and annealing temperatures. Nano Research, 0, , 1.	5.8	2