Riikka L Puurunen

List of Publications by Year
in descending order

84 papers	6,695 citations	31 h-index (147726)	78 g-index (66879)
100 all docs	100 docs citations	100 times ranked	6188 citing authors

#	Article	IF	Citations
1	Conformality of atomic layer deposition in microchannels: impact of process parameters on the simulated thickness profile. Physical Chemistry Chemical Physics, 2022, 24, 8645-8660.	1.3	14
2	Optical metrology of 3D thin film conformality by LHAR chip assisted method. , 2022, , .		3
3	Conversion of furfural to 2-methylfuran over CuNi catalysts supported on biobased carbon foams. Catalysis Today, 2021, 367, 16-27.	2.2	12
4	Oxygen Recombination Probability Data for Plasma-Assisted Atomic Layer Deposition of SiO₂ and TiO₂. Journal of Physical Chemistry C, 2021, 125, 8244-8252.	1.5	8
5	Impact of Ions on Film Conformality and Crystallinity during Plasma-Assisted Atomic Layer Deposition of TiO₂. Chemistry of Materials, 2021, 33, 5002-5009.	3.2	16
6	Mechanical and optical properties of as-grown and thermally annealed titanium dioxide from titanium tetrachloride and water by atomic layer deposition. Thin Solid Films, 2021, 732, 138758.	0.8	17
7	Saturation profile measurement of atomic layer deposited film by X-ray microanalysis on lateral high-aspect-ratio structure. Applied Surface Science Advances, 2021, 5, 100102.	2.9	1
8	Saturation profile based conformality analysis for atomic layer deposition: aluminum oxide in lateral high-aspect-ratio channels. Physical Chemistry Chemical Physics, 2020, 22, 23107-23120.	1.3	23
9	Evidence for low-energy ions influencing plasma-assisted atomic layer deposition of SiO2: Impact on the growth per cycle and wet etch rate. Applied Physics Letters, 2020, 117, .	1.5	15
10	Hydrodeoxygenation Model Compounds Î³-Heptalactone and Î³-Nonalactone: Density from 293 to 473 K and H₂ Solubility from 479 to 582 K. Journal of Chemical & Engineering Data, 2020, 65, 2764-2773.	1.0	2
11	Hydrodeoxygenation of Levulinic Acid Dimers on a Zirconia-Supported Ruthenium Catalyst. Catalysts, 2020, 10, 200.	1.6	12
12	Hydrodeoxygenation of Propylphenols on a Niobiaâ€Supported Platinum Catalyst: Ortho , Meta , Para Isomerism, Reaction Conditions, and Phase Equilibria. Advanced Sustainable Systems, 2020, 4, 1900140.	2.7	0
13	Liquidâ€phase Hydrodeoxygenation of 4â€Propylphenol to Propylbenzene: Reducible Supports for Pt Catalysts. ChemCatChem, 2020, 12, 4090-4104.	1.8	9
14	ToF-SIMS 3D Analysis of Thin Films Deposited in High Aspect Ratio Structures via Atomic Layer Deposition and Chemical Vapor Deposition. Nanomaterials, 2019, 9, 1035.	1.9	16
15	Film Conformality and Extracted Recombination Probabilities of O Atoms during Plasma-Assisted Atomic Layer Deposition of SiO₂, TiO₂, Al₂O₃, and HfO₂. Journal of Physical Chemistry C, 2019, 123, 27030-27035.	1.5	33
16	Kinetic Modelling of the Aqueous-Phase Reforming of Fischer-Tropsch Water over Ceria-Zirconia Supported Nickel-Copper Catalyst. Catalysts, 2019, 9, 936.	1.6	12
17	Nickel Supported on Mesoporous Zirconium Oxide by Atomic Layer Deposition: Initial Fixed-Bed Reactor Study. Topics in Catalysis, 2019, 62, 611-620.	1.3	11
18	Solvent-free Hydrodeoxygenation of Î³-Nonalactone on Noble Metal Catalysts Supported on Zirconia. Topics in Catalysis, 2019, 62, 724-737.	1.3	7

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19	Sticking probabilities of H2O and Al(CH3)3 during atomic layer deposition of Al2O3 extracted from their impact on film conformality. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	30
20	Conformality in atomic layer deposition: Current status overview of analysis and modelling. Applied Physics Reviews, 2019, 6, .	5.5	293
21	Tribological properties of thin films made by atomic layer deposition sliding against silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	0.9	7
22	<i>(Invited) </i>Learnings from an Open Science Effort: Virtual Project on the History of ALD. ECS Transactions, 2018, 86, 3-17.	0.3	2
23	Aqueous-phase reforming of Fischer-Tropsch alcohols over nickel-based catalysts to produce hydrogen: Product distribution and reaction pathways. Applied Catalysis A: General, 2018, 567, 112-121.	2.2	19
24	Modeling growth kinetics of thin films made by atomic layer deposition in lateral high-aspect-ratio structures. Journal of Applied Physics, 2018, 123, .	1.1	42
25	Study of Ni, Pt, and Ru Catalysts on Woodâ€based Activated Carbon Supports and their Activity in Furfural Conversion to 2â€Methylfuran. ChemCatChem, 2018, 10, 3269-3283.	1.8	28
26	Comparison of mechanical properties and composition of magnetron sputter and plasma enhanced atomic layer deposition aluminum nitride films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	0.9	10
27	Structured microreactor with gold and palladium on titania: Active, regenerable and durable catalyst coatings for the gas-phase partial oxidation of 1-butanol. Applied Catalysis A: General, 2018, 562, 173-183.	2.2	10
28	(Invited) Learnings from an Open Science Effort: Virtual Project on the History of ALD. ECS Meeting Abstracts, 2018, , .	0.0	0
29	Aluminum oxide/titanium dioxide nanolaminates grown by atomic layer deposition: Growth and mechanical properties. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	38
30	Review Article: Recommended reading list of early publications on atomic layer depositionâ€"Outcome of the â€œVirtual Project on the History of ALDâ€• Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	65
31	Influence of ALD temperature on thin film conformality: Investigation with microscopic lateral high-aspect-ratio structures. , 2016, , .		10
32	Microscratch testing method for systematic evaluation of the adhesion of atomic layer deposited thin films on silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	21
33	Thermal conductivity of amorphous Al₂O₃/TiO₂nanolaminates deposited by atomic layer deposition. Nanotechnology, 2016, 27, 445704.	1.3	27
34	Nucleation and Conformality of Iridium and Iridium Oxide Thin Films Grown by Atomic Layer Deposition. Langmuir, 2016, 32, 10559-10569.	1.6	31
35	Microscopic silicon-based lateral high-aspect-ratio structures for thin film conformality analysis. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	0.9	40
36	Nanotribological, nanomechanical and interfacial characterization of atomic layer deposited TiO2 on a silicon substrate. Wear, 2015, 342-343, 270-278.	1.5	13

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37	Fracture properties of atomic layer deposited aluminum oxide free-standing membranes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	0.9	17
38	A Short History of Atomic Layer Deposition: Tuomo Suntola's Atomic Layer Epitaxy. Chemical Vapor Deposition, 2014, 20, 332-344.	1.4	166
39	Aluminum oxide from trimethylaluminum and water by atomic layer deposition: The temperature dependence of residual stress, elastic modulus, hardness and adhesion. Thin Solid Films, 2014, 552, 124-135.	0.8	155
40	X-ray reflectivity characterization of atomic layer deposition Al2O3/TiO2 nanolaminates with ultrathin bilayers. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	0.9	28
41	Thermal and plasma enhanced atomic layer deposition of SiO2 using commercial silicon precursors. Thin Solid Films, 2014, 558, 93-98.	0.8	66
42	On the reliability of nanoindentation hardness of Al2O3films grown on Si-wafer by atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, 01A116.	0.9	10
43	Crystallinity of inorganic films grown by atomic layer deposition: Overview and general trends. Journal of Applied Physics, 2013, 113, .	1.1	1,190
44	Use of ALD thin film Bragg mirror stacks in tuneable visible light MEMS Fabry-Perot interferometers. Proceedings of SPIE, 2012, , .	0.8	7
45	Silicon full wafer bonding with atomic layer deposited titanium dioxide and aluminum oxide intermediate films. Sensors and Actuators A: Physical, 2012, 188, 268-276.	2.0	12
46	Reducing stiction in microelectromechanical systems by rough nanometer-scale films grown by atomic layer deposition. Sensors and Actuators A: Physical, 2012, 188, 240-245.	2.0	14
47	Direct wafer bonding of atomic layer deposited TiO<inf>2</inf> and Al<inf>2</inf>O<inf>3</inf> thin films. , 2011, , .		3
48	Depth profiling of Al2O3+TiO2 nanolaminates by means of a time-of-flight energy spectrometer. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 3021-3024.	0.6	14
49	Controlling the Crystallinity and Roughness of Atomic Layer Deposited Titanium Dioxide Films. Journal of Nanoscience and Nanotechnology, 2011, 11, 8101-8107.	0.9	51
50	Thin film absorbers for visible, near-infrared, and short-wavelength infrared spectra. Sensors and Actuators A: Physical, 2010, 162, 210-214.	2.0	8
51	Vapor-phase self-assembled monolayers for improved MEMS reliability. , 2010, , .		3
52	Bonding of ALD Alumina for Advanced SOI Substrates. ECS Transactions, 2010, 33, 137-144.	0.3	7
53	Atomic Layer Deposition in MEMS Technology. , 2010, , 433-446.		12
54	Low-Temperature Processes for MEMS Device Fabrication. NATO Science for Peace and Security Series B: Physics and Biophysics, 2010, , 167-178.	0.2	2

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55	Thin film absorbers for visible, near-infrared, and short-wavelength infrared spectra. Procedia Chemistry, 2009, 1, 393-396.	0.7	3
56	Implementing ALD Layers in MEMS Processing. ECS Transactions, 2007, 11, 3-14.	0.3	66
57	Atomic layer deposition of iridium(III) acetylacetonate on alumina, silicaâ€“alumina, and silica supports. Applied Surface Science, 2007, 253, 4103-4111.	3.1	37
58	Inductively coupled plasma etching of amorphous Al[sub 2]O[sub 3] and TiO[sub 2] mask layers grown by atomic layer deposition. Journal of Vacuum Science & Technology B, 2006, 24, 2350.	1.3	41
59	Nucleation of atomic-layer-deposited HfO2 films, and evolution of their microstructure, studied by grazing incidence small angle x-ray scattering using synchrotron radiation. Applied Physics Letters, 2006, 88, 032907.	1.5	13
60	Grazing Incidence-X-ray Fluorescence Spectrometry for the Compositional Analysis of Nanometer-Thin High-.KAPPA. Dielectric HfO2 Layers. Analytical Sciences, 2005, 21, 845-850.	0.8	17
61	The future of high-K on pure germanium and its importance for Ge CMOS. Materials Science in Semiconductor Processing, 2005, 8, 203-207.	1.9	18
62	Correlation between the growth-per-cycle and the surface hydroxyl group concentration in the atomic layer deposition of aluminum oxide from trimethylaluminum and water. Applied Surface Science, 2005, 245, 6-10.	3.1	90
63	Formation of Metal Oxide Particles in Atomic Layer Deposition During the Chemisorption of Metal Chlorides: A Review. Chemical Vapor Deposition, 2005, 11, 79-90.	1.4	66
64	Formation of Metal Oxide Particles in Atomic Layer Deposition During the Chemisorption of Metal Chlorides: A Review. ChemInform, 2005, 36, no.	0.1	0
65	Reply to â€œComment on â€˜Analysis of hydroxyl group controlled atomic layer deposition of hafnium oxide from hafnium tetrachloride and waterâ€â€‰â€™ [J. Appl. Phys. 95, 4777 (2004)]. Journal of Applied Physics, 2005, 98, 016102.	1.1	2
66	Surface Preparation Techniques for High-k Deposition on Ge Substrates. Solid State Phenomena, 2005, 103-104, 31-36.	0.3	5
67	Hafnium oxide films by atomic layer deposition for high-Îº gate dielectric applications: Analysis of the density of nanometer-thin films. Applied Physics Letters, 2005, 86, 073116.	1.5	37
68	Atomic layer deposition of hafnium oxide on germanium substrates. Journal of Applied Physics, 2005, 97, 064104.	1.1	95
69	Surface chemistry of atomic layer deposition: A case study for the trimethylaluminum/water process. Journal of Applied Physics, 2005, 97, 121301.	1.1	2,217
70	Analysis of hydroxyl group controlled atomic layer deposition of hafnium dioxide from hafnium tetrachloride and water. Journal of Applied Physics, 2004, 95, 4777-4786.	1.1	85
71	Random Deposition as a Growth Mode in Atomic Layer Deposition. Chemical Vapor Deposition, 2004, 10, 159-170.	1.4	62
72	Island growth in the atomic layer deposition of zirconium oxide and aluminum oxide on hydrogen-terminated silicon: Growth mode modeling and transmission electron microscopy. Journal of Applied Physics, 2004, 96, 4878-4889.	1.1	132

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73	Island growth as a growth mode in atomic layer deposition: A phenomenological model. Journal of Applied Physics, 2004, 96, 7686-7695.	1.1	267
74	Chromium(III) supported on aluminum-nitride-surfaced alumina: characteristics and dehydrogenation activity. Journal of Catalysis, 2003, 213, 281-290.	3.1	25
75	Growth Per Cycle in Atomic Layer Deposition: A Theoretical Model. Chemical Vapor Deposition, 2003, 9, 249-257.	1.4	163
76	Growth Per Cycle in Atomic Layer Deposition: Real Application Examplesof a Theoretical Model. Chemical Vapor Deposition, 2003, 9, 327-332.	1.4	95
77	Growth of Aluminum Nitride on Porous Alumina and Silica through Separate Saturated Gasâˆ'Solid Reactions of Trimethylaluminum and Ammonia. Chemistry of Materials, 2002, 14, 720-729.	3.2	34
78	Preparation of silica-supported cobalt catalysts through chemisorption of cobalt(ii) and cobalt(iii) acetylacetonate. Physical Chemistry Chemical Physics, 2002, 4, 2466-2472.	1.3	46
79	Spectroscopic Study on the Irreversible Deactivation of Chromia/Alumina Dehydrogenation Catalysts. Journal of Catalysis, 2002, 210, 418-430.	3.1	146
80	Title is missing!. Catalysis Letters, 2002, 83, 27-32.	1.4	19
81	Monitoring Chromia/Alumina Catalysts in Situ during Propane Dehydrogenation by Optical Fiber UVâ€"Visible Diffuse Reflectance Spectroscopy. Journal of Catalysis, 2001, 204, 253-257.	3.1	52
82	Successive reactions of gaseous trimethylaluminium and ammonia on porous alumina. Physical Chemistry Chemical Physics, 2001, 3, 1093-1102.	1.3	84
83	Growth of aluminium nitride on porous silica by atomic layer chemical vapour deposition. Applied Surface Science, 2000, 165, 193-202.	3.1	33
84	IR and NMR Study of the Chemisorption of Ammonia on Trimethylaluminum-Modified Silica. Journal of Physical Chemistry B, 2000, 104, 6599-6609.	1.2	77