

# Jaan Aarik

## List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Structure and Electrical Behavior of Hafnium-Praseodymium Oxide Thin Films Grown by Atomic Layer Deposition. <i>Materials</i> , 2022, 15, 877.	2.9	2
2	Structure and Electrical Properties of Zirconium-Aluminum-Oxide Films Engineered by Atomic Layer Deposition. <i>Coatings</i> , 2022, 12, 431.	2.6	1
3	Mechanical properties of crystalline and amorphous aluminum oxide thin films grown by atomic layer deposition. <i>Surface and Coatings Technology</i> , 2022, 438, 128409.	4.8	9
4	Engineering of atomic layer deposition process for titanium-aluminum-oxide based resistively switching medium. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2022, 282, 115797.	3.5	1
5	Low-Temperature Atomic Layer Deposition of $\text{Al}_2\text{O}_3$ Thin Films. <i>Crystal Growth and Design</i> , 2021, 21, 4220-4229.	3.0	8
6	Atomic-layer design and properties of Pr-doped $\text{HfO}_2$ thin films. <i>Journal of Alloys and Compounds</i> , 2021, 868, 159100.	5.5	4
7	Influence of $\text{Al}_2\text{O}_3$ Template and Process Parameters on Atomic Layer Deposition and Properties of Thin Films Containing High-Density $\text{TiO}_2$ Phases. <i>Coatings</i> , 2021, 11, 1280.	2.6	1
8	Influence of oxygen precursors on atomic layer deposition of $\text{HfO}_2$ and hafnium-titanium oxide films: Comparison of $\text{O}_3$ - and $\text{H}_2\text{O}$ -based processes. <i>Applied Surface Science</i> , 2020, 530, 147229.	6.1	11
9	Platinum Sputtered on Nb-doped $\text{TiO}_2$ Films Prepared by ALD: Highly Active and Durable Carbon-free ORR Electrocatalyst. <i>Journal of the Electrochemical Society</i> , 2020, 167, 164505.	2.9	13
10	Influence of phase composition on optical properties of $\text{TiO}_2$ : Dependence of refractive index and band gap on formation of $\text{TiO}_2$ -II phase in thin films. <i>Optical Materials</i> , 2019, 96, 109335.	3.6	52
11	Chemical resistance of $\text{TiO}_2$ and $\text{Al}_2\text{O}_3$ single-layer and multilayer coatings atomic layer deposited from hydrogen-free precursors on silicon and stainless steel. <i>Materials Chemistry and Physics</i> , 2019, 228, 285-292.	4.0	11
12	Enhanced flexibility and electron-beam-controlled shape recovery in alumina-coated Au and Ag core-shell nanowires. <i>Nanotechnology</i> , 2017, 28, 505707.	2.6	15
13	Magnetic and Electrical Performance of Atomic Layer Deposited Iron Erbium Oxide Thin Films. <i>ACS Omega</i> , 2017, 2, 8836-8842.	3.5	3
14	Plasmon resonance effect caused by gold nanoparticles formed on titanium oxide films. <i>Thin Solid Films</i> , 2016, 616, 449-455.	1.8	9
15	Raman characterization of stacking in multi-layer graphene grown on Ni. <i>Carbon</i> , 2016, 98, 658-665.	10.3	47
16	Effect of substrate-enhanced and inhibited growth on atomic layer deposition and properties of aluminum-titanium oxide films. <i>Thin Solid Films</i> , 2016, 600, 119-125.	1.8	44
17	Atomic Layer Deposition and Characterization of Dysprosium-Doped Zirconium Oxide Thin Films. <i>Chemical Vapor Deposition</i> , 2015, 21, 181-187.	1.3	5
18	Oxygen Barrier Properties of $\text{Al}_2\text{O}_3$ - and $\text{TiO}_2$ -coated LDPE Films. <i>Polymer-Plastics Technology and Engineering</i> , 2015, 54, 301-304.	1.9	13

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19	Photoluminescence of atomic layer deposited ZrO <sub>2</sub> :Dy <sup>3+</sup> thin films. <i>Thin Solid Films</i> , 2015, 583, 70-75.	1.8	11
20	Raman modes in transferred bilayer CVD graphene. <i>Open Physics</i> , 2015, 13, .	1.7	7
21	Growth of Ti Al <sub>1-x</sub> O films by atomic layer deposition using successive supply of metal precursors. <i>Thin Solid Films</i> , 2015, 591, 276-284.	1.8	13
22	Atomic layer deposition of rutile and TiO <sub>2</sub> -II from TiCl <sub>4</sub> and O <sub>3</sub> on sapphire: Influence of substrate orientation on thin film structure. <i>Journal of Crystal Growth</i> , 2015, 428, 86-92.	1.5	9
23	Dysprosium oxide and dysprosium-oxide-doped titanium oxide thin films grown by atomic layer deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015, 33, .	2.1	6
24	Temperature induced inversion of oxygen response in CVD graphene on SiO <sub>2</sub> . <i>Sensors and Actuators B: Chemical</i> , 2014, 190, 1006-1013.	7.8	28
25	Atomic layer deposition of ZrO <sub>2</sub> for graphene-based multilayer structures: <i>in situ</i> and <i>ex situ</i> characterization of growth process. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014, 211, 397-402.	1.8	8
26	Influence of process parameters on atomic layer deposition of ZrO <sub>2</sub> thin films from CpZr(NMe <sub>2</sub> ) <sub>3</sub> and H <sub>2</sub> O. <i>Thin Solid Films</i> , 2014, 565, 37-44.	1.8	17
27	Atomic layer deposition of high-quality Al <sub>2</sub> O <sub>3</sub> and Al-doped TiO <sub>2</sub> thin films from hydrogen-free precursors. <i>Thin Solid Films</i> , 2014, 565, 19-24.	1.8	31
28	Nanoscale Characterization of TiO <sub>2</sub> Films Grown by Atomic Layer Deposition on RuO <sub>2</sub> Electrodes. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 2486-2492.	8.0	21
29	Atomic layer deposition of TiO <sub>2</sub> from TiCl <sub>4</sub> and O <sub>3</sub> . <i>Thin Solid Films</i> , 2013, 542, 100-107.	1.8	64
30	Atomic layer deposition of high-k dielectrics on carbon nanoparticles. <i>Thin Solid Films</i> , 2013, 538, 16-20.	1.8	5
31	Atomic layer deposition of rutile-phase TiO <sub>2</sub> on RuO <sub>2</sub> from TiCl <sub>4</sub> and O <sub>3</sub> : Growth of high-permittivity dielectrics with low leakage current. <i>Journal of Crystal Growth</i> , 2013, 382, 61-66.	1.5	17
32	Chemical resistance of thin film materials based on metal oxides grown by atomic layer deposition. <i>Thin Solid Films</i> , 2013, 542, 219-224.	1.8	24
33	Atomic layer deposition of aluminum oxide films on graphene. <i>IOP Conference Series: Materials Science and Engineering</i> , 2013, 49, 012014.	0.6	18
34	Impact of plasma treatment on electrical properties of TiO <sub>2</sub> /RuO <sub>2</sub> -based DRAM capacitor. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 385304.	2.8	27
35	Atomic layer deposition of epitaxial TiO <sub>2</sub> II on <i>c</i> -sapphire. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2013, 31, .	2.1	12
36	Atomic layer deposition of epitaxial HfO <sub>2</sub> thin films on <i>r</i> -cut sapphire. <i>Journal of Materials Research</i> , 2013, 28, 1680-1686.	2.6	8

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37	Atomic layer deposition of high-permittivity TiO <sub>2</sub> dielectrics with low leakage current on RuO <sub>2</sub> in TiCl <sub>4</sub> -based processes. Semiconductor Science and Technology, 2012, 27, 074007.	2.0	17
38	Atomic layer deposition of Ru films from bis(2,5-dimethylpyrrolyl)ruthenium and oxygen. Thin Solid Films, 2012, 520, 2756-2763.	1.8	27
39	Atomic layer deposition of HfO <sub>2</sub> on graphene from HfCl <sub>4</sub> and H <sub>2</sub> O. Open Physics, 2011, 9, 319-324.	1.7	20
40	Electrical properties of TiO <sub>2</sub> -based MIM capacitors deposited by TiCl <sub>4</sub> and TTIP based atomic layer deposition processes. Microelectronic Engineering, 2011, 88, 1514-1516.	2.4	21
41	Atomic Layer Deposition of Ruthenium Films from (Ethylcyclopentadienyl)(pyrrolyl)ruthenium and Oxygen. Journal of the Electrochemical Society, 2011, 158, D158.	2.9	52
42	Low Equivalent Oxide Thickness TiO <sub>2</sub> Based Capacitors for DRAM Application. ECS Transactions, 2011, 41, 73-77.	0.5	8
43	Structure and morphology of Ru films grown by atomic layer deposition from 1-ethyl-1- <sup>TM</sup> -methyl-ruthenocene. Journal of Crystal Growth, 2010, 312, 2025-2032.	1.5	24
44	Atomic layer deposition of high capacitance density Ta <sub>2</sub> O <sub>5</sub> -ZrO <sub>2</sub> based dielectrics for metal-insulator-metal structures. Microelectronic Engineering, 2010, 87, 144-149.	2.4	33
45	Atomic layer deposition of HfO <sub>2</sub> : Effect of structure development on growth rate, morphology and optical properties of thin films. Applied Surface Science, 2010, 257, 1043-1052.	6.1	30
46	Conformity and structure of titanium oxide films grown by atomic layer deposition on silicon substrates. Thin Solid Films, 2008, 516, 4855-4862.	1.8	48
47	Atomic Layer Deposition of Iron Oxide Thin Films and Nanotubes using Ferrocene and Oxygen as Precursors. Chemical Vapor Deposition, 2008, 14, 67-70.	1.3	78
48	Atomic layer deposition of Cr <sub>2</sub> O <sub>3</sub> thin films: Effect of crystallization on growth and properties. Applied Surface Science, 2008, 254, 5149-5156.	6.1	31
49	Characterization of asymmetric rhombohedral twin in epitaxial $\pm$ -Cr <sub>2</sub> O <sub>3</sub> thin films by X-ray and electron diffraction. Thin Solid Films, 2007, 515, 4570-4579.	1.8	36
50	Influence of TiO <sub>2</sub> incorporation in HfO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> based capacitor dielectrics. Thin Solid Films, 2007, 515, 6447-6451.	1.8	33
51	Ion-induced electron emission from different crystalline phases of ZrO <sub>2</sub> . Applied Physics Letters, 2006, 88, 211504.	3.3	3
52	Precursor-dependent structural and electrical characteristics of atomic layer deposited films: Case study on titanium oxide. Materials Science in Semiconductor Processing, 2006, 9, 1084-1089.	4.0	12
53	Influence of carrier gas pressure and flow rate on atomic layer deposition of HfO <sub>2</sub> and ZrO <sub>2</sub> thin films. Applied Surface Science, 2006, 252, 5723-5734.	6.1	28
54	Effect of preparation conditions on properties of atomic layer deposited TiO <sub>2</sub> films in Mo-TiO <sub>2</sub> -Al stacks. Thin Solid Films, 2006, 510, 39-47.	1.8	16

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55	Electron Probe Microanalysis of HfO <sub>2</sub> Thin Films on Conductive and Insulating Substrates. Mikrochimica Acta, 2006, 155, 195-198.	5.0	4
56	Structural study of TiO <sub>2</sub> thin films by micro-Raman spectroscopy. Open Physics, 2006, 4, 105-116.	1.7	30
57	<title>Spectrophotometric and Raman spectroscopic characterization of ALD grown TiO <sub>2</sub> thin films</title>. , 2006, 6596, 262.		3
58	DISORDERED STRUCTURE AND DENSITY OF GAP STATES IN HIGH-PERMITTIVITY THIN SOLID FILMS. , 2006, , 123-134.		1
59	Atomic layer deposition rate, phase composition and performance of HfO <sub>2</sub> films on noble metal and alkoxyated silicon substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 118, 112-116.	3.5	19
60	Thin films of HfO <sub>2</sub> and ZrO <sub>2</sub> as potential scintillators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 537, 251-255.	1.6	116
61	Engineering structure and properties of hafnium oxide films by atomic layer deposition temperature. Thin Solid Films, 2005, 479, 1-11.	1.8	36
62	Atomic Layer Deposition and Characterization of HfO <sub>2</sub> Films on Noble Metal Film Substrates. Journal of the Electrochemical Society, 2005, 152, F75.	2.9	19
63	<title>Optical properties of crystalline Al <sub>2</sub> O <sub>3</sub> thin films grown by atomic layer deposition</title>. , 2005, , .		7
64	<title>Structural study of ZrO <sub>2</sub> and HfO <sub>2</sub> thin films grown by atomic layer deposition</title>. , 2005, , .		0
65	Effect of selected atomic layer deposition parameters on the structure and dielectric properties of hafnium oxide films. Journal of Applied Physics, 2004, 96, 5298-5307.	2.5	64
66	Optical characterization of HfO <sub>2</sub> thin films grown by atomic layer deposition. Thin Solid Films, 2004, 466, 41-47.	1.8	175
67	Effects of precursors on nucleation in atomic layer deposition of HfO <sub>2</sub> . Applied Surface Science, 2004, 230, 292-300.	6.1	39
68	Spectral-spatial redistribution of self-trapped excitonic emission in thin anatase films. , 2003, , .		0
69	Properties of hafnium oxide films grown by atomic layer deposition from hafnium tetraiodide and oxygen. Journal of Applied Physics, 2002, 92, 5698-5703.	2.5	63
70	Deposition of HfO <sub>2</sub> Thin Films in HfI <sub>4</sub> -Based Processes. Journal of the Electrochemical Society, 2002, 149, F139.	2.9	42
71	Influence of growth temperature on properties of zirconium dioxide films grown by atomic layer deposition. Journal of Applied Physics, 2002, 92, 1833-1840.	2.5	100
72	Study of Thin Oxide Films by Electron, Ion and Synchrotron Radiation Beams. Mikrochimica Acta, 2002, 139, 165-169.	5.0	13

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73	Atomic layer deposition of TiO <sub>2</sub> thin films from TiI <sub>4</sub> and H <sub>2</sub> O. Applied Surface Science, 2002, 193, 277-286.	6.1	75
74	Growth kinetics and structure formation of ZrO <sub>2</sub> thin films in chloride-based atomic layer deposition process. Thin Solid Films, 2002, 408, 97-103.	1.8	90
75	Hafnium tetraiodide and oxygen as precursors for atomic layer deposition of hafnium oxide thin films. Thin Solid Films, 2002, 418, 69-72.	1.8	20
76	Influence of thickness and growth temperature on the properties of zirconium oxide films grown by atomic layer deposition on silicon. Thin Solid Films, 2002, 410, 53-60.	1.8	34
77	Epitaxial growth of TiO <sub>2</sub> films in a hydroxyl-free atomic layer deposition process. Journal of Crystal Growth, 2002, 235, 293-299.	1.5	43
78	Atomic layer growth of epitaxial TiO <sub>2</sub> thin films from TiCl <sub>4</sub> and H <sub>2</sub> O on $\hat{\pm}$ -Al <sub>2</sub> O <sub>3</sub> substrates. Journal of Crystal Growth, 2002, 242, 189-198.	1.5	77
79	Atomic Layer Deposition of Thin Films Using O <sub>2</sub> as Oxygen Source. Langmuir, 2001, 17, 5508-5512.	3.5	30
80	Dielectric Properties of Zirconium Oxide Grown by Atomic Layer Deposition from Iodide Precursor. Journal of the Electrochemical Society, 2001, 148, F227.	2.9	48
81	Atomic Layer Deposition of Tantalum Oxide Thin Films from Iodide Precursor. Chemistry of Materials, 2001, 13, 122-128.	6.7	33
82	Phase transformations in hafnium dioxide thin films grown by atomic layer deposition at high temperatures. Applied Surface Science, 2001, 173, 15-21.	6.1	72
83	Atomic layer deposition of zirconium oxide from zirconium tetraiodide, water and hydrogen peroxide. Journal of Crystal Growth, 2001, 231, 262-272.	1.5	77
84	Texture development in nanocrystalline hafnium dioxide thin films grown by atomic layer deposition. Journal of Crystal Growth, 2000, 220, 105-113.	1.5	117
85	Anomalous effect of temperature on atomic layer deposition of titanium dioxide. Journal of Crystal Growth, 2000, 220, 531-537.	1.5	115
86	Characterization of titanium dioxide atomic layer growth from titanium ethoxide and water. Thin Solid Films, 2000, 370, 163-172.	1.8	71
87	Titanium isopropoxide as a precursor for atomic layer deposition: characterization of titanium dioxide growth process. Applied Surface Science, 2000, 161, 385-395.	6.1	187
88	Atomic Layer Chemical Vapor Deposition of TiO <sub>2</sub> Low Temperature Epitaxy of Rutile and Anatase. Journal of the Electrochemical Society, 2000, 147, 3319.	2.9	88
89	Real-Time Monitoring in Atomic Layer Deposition of TiO <sub>2</sub> from TiI <sub>4</sub> and H <sub>2</sub> O $\hat{\sim}$ H <sub>2</sub> O <sub>2</sub> . Langmuir, 2000, 16, 8122-8128.	3.5	41
90	Effect of growth conditions on formation of TiO <sub>2</sub> -II thin films in atomic layer deposition process. Journal of Crystal Growth, 1997, 181, 259-264.	1.5	49

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91	In situ study of atomic layer epitaxy growth of tantalum oxide thin films from Ta(OC <sub>2</sub> H <sub>5</sub> ) <sub>5</sub> and H <sub>2</sub> O. Applied Surface Science, 1997, 112, 236-242.	6.1	71
92	Effect of crystal structure on optical properties of TiO <sub>2</sub> films grown by atomic layer deposition. Thin Solid Films, 1997, 305, 270-273.	1.8	254
93	Control of thin film structure by reactant pressure in atomic layer deposition of TiO <sub>2</sub> . Journal of Crystal Growth, 1996, 169, 496-502.	1.5	68
94	Mechanisms of suboxide growth and etching in atomic layer deposition of tantalum oxide from TaCl <sub>5</sub> and H <sub>2</sub> O. Applied Surface Science, 1996, 103, 331-341.	6.1	51
95	Properties of tantalum oxide thin films grown by atomic layer deposition. Thin Solid Films, 1995, 260, 135-142.	1.8	111
96	Morphology and structure of TiO <sub>2</sub> thin films grown by atomic layer deposition. Journal of Crystal Growth, 1995, 148, 268-275.	1.5	275
97	Deposition and etching of tantalum oxide films in atomic layer epitaxy process. Journal of Crystal Growth, 1994, 144, 116-119.	1.5	38
98	In situ study of a strontium $\hat{I}^2$ -diketonate precursor for thin-film growth by atomic layer epitaxy. Journal of Materials Chemistry, 1994, 4, 1239-1244.	6.7	42