

John G Ekerdt

List of Publications by Year in descending order

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114
papers

2,061
citations

236833

25
h-index

276775

41
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114
all docs

114
docs citations

114
times ranked

3177
citing authors

#	ARTICLE	IF	CITATIONS
1	Epitaxial growth by atomic layer deposition and properties of high- <i>k</i> barium strontium titanate on Zintl-templated Ge (001) substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	4
2	Electro-optic response in epitaxially stabilized orthorhombic $\text{m} \times \text{m} \times 2\text{O}$. Physical Review Materials, 2021, 5, .	0.9	8
3	Atomic layer deposition and selective etching of ruthenium for area-selective deposition: Temperature dependence and supercycle design. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	9
4	Materials for emergent silicon-integrated optical computing. Journal of Applied Physics, 2021, 130, 070907.	1.1	27
5	Long-life LiNi _{0.5} Mn _{1.5} O ₄ /graphite lithium-ion cells with an artificial graphite-electrolyte interface. Energy Storage Materials, 2021, 43, 499-508.	9.5	22
6	Anodized Nickel Foam for Oxygen Evolution Reaction in Fe-Free and Unpurified Alkaline Electrolytes at High Current Densities. ACS Nano, 2021, 15, 3468-3480.	7.3	54
7	Vacuum ultraviolet enhanced atomic layer etching of ruthenium films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	5
8	Manipulating the Dielectric Properties of Crystalline Perovskite Films through Isovalent A-site Cation Substitution. ECS Meeting Abstracts, 2021, MA2021-02, 859-859.	0.0	0
9	Long-Term Cycling of a Mn-Rich High-Voltage Spinel Cathode by Stabilizing the Surface with a Small Dose of Iron. ACS Applied Energy Materials, 2021, 4, 13297-13306.	2.5	7
10	Epitaxial, electro-optically active barium titanate thin films on silicon by chemical solution deposition. Journal of the American Ceramic Society, 2020, 103, 1209-1218.	1.9	17
11	Engineering nanoscale polarization at the SrTiO ₃ /Ge interface. Scripta Materialia, 2020, 178, 489-492.	2.6	1
12	Atomic layer deposition of ruthenium using an ABC-type process: Role of oxygen exposure during nucleation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	8
13	Dielectric breakdown in epitaxial BaTiO ₃ thin films. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, 044007.	0.6	3
14	A Vacuum Ultraviolet-Enhanced Oxidation Mechanism for Pd: Near-Surface Oxidation for Atomic Layer Etching. ACS Applied Materials & Interfaces, 2020, 12, 50985-50995.	4.0	3
15	Vacuum Ultraviolet-Enhanced Oxidation—A Route to the Atomic Layer Etching of Palladium Metal. Chemistry of Materials, 2020, 32, 6035-6042.	3.2	7
16	Direct Observation of Large Atomic Polar Displacements in Epitaxial Barium Titanate Thin Films. Advanced Materials Interfaces, 2020, 7, 2000555.	1.9	8
17	Composition and annealing effects on the linear electro-optic response of solution-deposited barium strontium titanate. Journal of the American Ceramic Society, 2020, 103, 5700-5705.	1.9	9
18	Role of template layers for heteroepitaxial growth of lanthanum oxide on GaN(0001) via atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	5

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19	Epitaxial integration of ferroelectric and conductive perovskites on silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	5
20	Epitaxial growth of high- <i>k</i> Ba _x Sr _{1-x} TiO ₃ thin films on SrTiO ₃ (001) substrates by atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	9
21	Atomic layer deposition of epitaxial ferroelectric barium titanate on Si(001) for electronic and photonic applications. Journal of Applied Physics, 2019, 126, .	1.1	19
22	Epitaxial BaSnO ₃ and SrSnO ₃ perovskite growth on SrTiO ₃ (001) via atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, 050902.	0.9	5
23	Area-Selective Atomic Layer Deposition of Crystalline BaTiO ₃ . Chemistry of Materials, 2019, 31, 5558-5565.	3.2	9
24	Area-selective atomic layer deposition of cobalt oxide to generate patterned cobalt films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	15
25	Area-Selective Deposition of Ruthenium by Combining Atomic Layer Deposition and Selective Etching. Chemistry of Materials, 2019, 31, 3878-3882.	3.2	71
26	Strain-dependence of $\epsilon(2)$ in thin film barium strontium titanate. AIP Advances, 2019, 9, .	0.6	3
27	Atomic layer deposition of cobalt oxide on oxide substrates and low temperature reduction to form ultrathin cobalt metal films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	12
28	Effect of SrTiO ₃ oxygen vacancies on the conductivity of LaTiO ₃ /SrTiO ₃ heterostructures. Journal of Applied Physics, 2018, 124, 185303.	1.1	22
29	Crystalline SrZrO ₃ deposition on Ge (001) by atomic layer deposition for high- <i>k</i> dielectric applications. Journal of Applied Physics, 2018, 124, .	1.1	9
30	Preventing carbon contamination of Ge (001) during atomic layer deposition with a barium-based Zintl layer. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	0.9	3
31	Zintl layer formation during perovskite atomic layer deposition on Ge (001). Journal of Chemical Physics, 2017, 146, 052817.	1.2	11
32	Monolithic integration of metal-ferroelectric-semiconductor heterostructure using atomic layer deposition. Proceedings of SPIE, 2017, , .	0.8	3
33	Enhanced Photoluminescence of Monolayer WS ₂ on Ag Films and Nanowire-WS ₂ -Film Composites. ACS Photonics, 2017, 4, 1421-1430.	3.2	46
34	Functionalized Polycyclic Aromatic Polymers for High Temperature Wireless Chemical Memory Threshold Sensors. Industrial & Engineering Chemistry Research, 2017, 56, 5479-5482.	1.8	0
35	Recent studies of oxide-semiconductor heterostructures using aberration-corrected scanning transmission electron microscopy. Journal of Materials Research, 2017, 32, 912-920.	1.2	7
36	First-principles predictions of ruthenium-phosphorus and ruthenium-boron glassy structures and chemical vapor deposition of thin amorphous ruthenium-boron alloy films. Thin Solid Films, 2017, 622, 56-64.	0.8	4

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37	Miniature Passive Wireless Resonant Platform for Chemical Memory-Based Threshold Sensing. IEEE Sensors Journal, 2017, 17, 1209-1210.	2.4	8
38	Epitaxial growth of barium titanate thin films on germanium via atomic layer deposition. Journal of Crystal Growth, 2017, 476, 6-11.	0.7	13
39	Cubic crystalline erbium oxide growth on GaN(0001) by atomic layer deposition. Journal of Applied Physics, 2017, 122, .	1.1	10
40	A Career in Catalysis: Alexis T. Bell. ACS Catalysis, 2017, 7, 8628-8640.	5.5	5
41	Integration of ferroelectric BaTiO ₃ with Ge: The role of a SrTiO ₃ buffer layer investigated using aberration-corrected STEM. Applied Physics Letters, 2017, 110, .	1.5	5
42	ELNES spectrum unmixing and mapping for oxide/oxide interfaces.. Microscopy and Microanalysis, 2017, 23, 1588-1589.	0.2	0
43	Aberration-corrected STEM Imaging and EELS Mapping of BaTiO ₃ /SrTiO ₃ Interfacial Defects. Microscopy and Microanalysis, 2017, 23, 1598-1599.	0.2	0
44	ELNES analysis of β -Al ₂ O ₃ /SrTiO ₃ and LaTiO ₃ /SrTiO ₃ interfaces. Microscopy and Microanalysis, 2016, 22, 1660-1661.	0.2	0
45	Selective Growth of Titanium Nitride on HfO ₂ across Nanolines and Nanopillars. Chemistry of Materials, 2016, 28, 4928-4934.	3.2	26
46	Monolithic integration of perovskites on Ge(001) by atomic layer deposition: a case study with SrHf _x Ti _{1-x} O ₃ . MRS Communications, 2016, 6, 125-132.	0.8	13
47	Theoretical modeling and experimental observations of the atomic layer deposition of SrO using a cyclopentadienyl Sr precursor. Journal of Chemical Physics, 2016, 145, 064701.	1.2	3
48	Ru nucleation and thin film smoothness improvement with ammonia during chemical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	9
49	Precursor dependent nucleation and growth of ruthenium films during chemical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	11
50	Chemical nature of active sites for defect-mediated nucleation on silicon dioxide. AIChE Journal, 2016, 62, 367-372.	1.8	1
51	Materials science of Ru and Ru alloy thin films for barrier applications. , 2016, , .		0
52	Epitaxial Growth of Perovskite Strontium Titanate on Germanium via Atomic Layer Deposition. Journal of Visualized Experiments, 2016, , .	0.2	2
53	A Low-Leakage Epitaxial High- κ Gate Oxide for Germanium Metal-Oxide-Semiconductor Devices. ACS Applied Materials & Interfaces, 2016, 8, 5416-5423.	4.0	9
54	Atomic layer deposition of perovskite oxides and their epitaxial integration with Si, Ge, and other semiconductors. Applied Physics Reviews, 2015, 2, .	5.5	76

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55	Quasi-two-dimensional electron gas at the interface of $\hat{\Gamma}^3$ -Al ₂ O ₃ /SrTiO ₃ heterostructures grown by atomic layer deposition. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	30
56	Oxygen Vacancies at the $\hat{\Gamma}^3$ -Al ₂ O ₃ /STO Heterointerface Grown by Atomic Layer Deposition. <i>Materials Research Society Symposia Proceedings</i> , 2015, 1730, 14.	0.1	0
57	Characterization of Two-Dimensional Electron Gas at the γ -Al ₂ O ₃ /SrTiO ₃ Interface. <i>Microscopy and Microanalysis</i> , 2015, 21, 1309-1310.	0.2	0
58	Integrated films of transition metal oxides for information technology. <i>Microelectronic Engineering</i> , 2015, 147, 285-289.	1.1	12
59	Atomic layer deposition of crystalline SrHfO ₃ directly on Ge (001) for high- <i>k</i> dielectric applications. <i>Journal of Applied Physics</i> , 2015, 117, .	1.1	43
60	A silicon-based photocathode for water reduction with an epitaxial SrTiO ₃ protection layer and a nanostructured catalyst. <i>Nature Nanotechnology</i> , 2015, 10, 84-90.	15.6	353
61	A Chemical Route to Monolithic Integration of Crystalline Oxides on Semiconductors. <i>Advanced Materials Interfaces</i> , 2014, 1, 1400081.	1.9	40
62	Epitaxial <i>c</i> -axis oriented BaTiO ₃ thin films on SrTiO ₃ -buffered Si(001) by atomic layer deposition. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	59
63	Incorporation of La in epitaxial SrTiO ₃ thin films grown by atomic layer deposition on SrTiO ₃ -buffered Si (001) substrates. <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	15
64	Pulsed Laser Deposition of Epitaxial and Polycrystalline Bismuth Vanadate Thin Films. <i>Journal of Physical Chemistry C</i> , 2014, 118, 26543-26550.	1.5	49
65	High-Performance Vertical Gate-All-Around Silicon Nanowire FET With High- κ Metal Gate. <i>IEEE Transactions on Electron Devices</i> , 2014, 61, 3896-3900.	1.6	22
66	Detection of Low-Density Surface Sites on Silica: Experimental Evidence of Intrinsic Oxygen-Vacancy Defects. <i>Chemistry of Materials</i> , 2014, 26, 2166-2171.	3.2	11
67	XPS Investigation of the Atomic Layer Deposition Half Reactions of Bis(<i>tert</i> -butyl- ϵ^2 -ethylpropionamidinato) Cobalt(II). <i>Chemistry of Materials</i> , 2014, 26, 2642-2646.	3.2	26
68	Atomic Interdiffusion and Diffusive Stabilization of Cobalt by Copper During Atomic Layer Deposition from Bis(<i>tert</i> -butyl- ϵ^2 -ethylpropionamidinato) Cobalt(II). <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 1091-1095.	2.1	23
69	Coverage-Dependent Luminescence from Two-Dimensional Systems of Covalently Attached Perylene Fluorophores on Silica. <i>Journal of Physical Chemistry C</i> , 2014, 118, 2104-2114.	1.5	9
70	Chemical vapor deposition of ruthenium- ϵ^2 -phosphorus alloy thin films: Using phosphine as the phosphorus source. <i>Thin Solid Films</i> , 2014, 558, 160-164.	0.8	6
71	Epitaxy: A Chemical Route to Monolithic Integration of Crystalline Oxides on Semiconductors (Adv.) <i>Tj ETQq1 1 0.784314 rgBT /Overloc</i>	1.9	1
72	Titration of Free Hydroxyl and Strained Siloxane Sites on Silicon Dioxide with Fluorescent Probes. <i>Langmuir</i> , 2013, 29, 11868-11875.	1.6	15

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73	Atomic layer deposition of photoactive CoO/SrTiO ₃ and CoO/TiO ₂ on Si(001) for visible light driven photoelectrochemical water oxidation. Journal of Applied Physics, 2013, 114, .	1.1	29
74	High ON/OFF Ratio and Quantized Conductance in Resistive Switching of TiO_2 on Silicon. IEEE Electron Device Letters, 2013, 34, 1385-1387.	2.2	31
75	Epitaxial growth of LaAlO ₃ on SrTiO ₃ -buffered Si (001) substrates by atomic layer deposition. Journal of Crystal Growth, 2013, 363, 150-157.	0.7	31
76	Epitaxial strontium titanate films grown by atomic layer deposition on SrTiO ₃ -buffered Si(001) substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	0.9	44
77	Effect of CO on Ru Nucleation and Ultra-Smooth Thin Film Growth by Chemical Vapor Deposition at Low Temperature. Chemistry of Materials, 2013, 25, 1793-1799.	3.2	15
78	Growth of epitaxial oxides on silicon using atomic layer deposition: Crystallization and annealing of TiO ₂ on SrTiO ₃ -buffered Si(001). Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2012, 30, 04E111.	0.6	19
79	Hot-wire CVD of Ge nanoparticles on Si-etched silicon dioxide. Journal of Crystal Growth, 2011, 321, 131-135.	0.7	4
80	Elaboration and quantitative investigation of BCN-type films by dynamic SIMS using the MCs x + mode. Surface and Interface Analysis, 2011, 43, 669-672.	0.8	3
81	Optical properties of La-incorporated HfO ₂ upon crystallization. Applied Physics Letters, 2011, 98, 122904.	1.5	12
82	Hafnia: Energetics of thin films and nanoparticles. Journal of Applied Physics, 2010, 107, .	1.1	36
83	Decomposition of a phenolic lignin model compound over organic N-bases in an ionic liquid. Holzforschung, 2010, 64, .	0.9	49
84	Subnanoscale Lanthanum Distribution in Lanthanum-Incorporated Hafnium Oxide Thin Films Grown Using Atomic Layer Deposition. Chemistry of Materials, 2010, 22, 3798-3806.	3.2	12
85	Chemistry of Silicon Nanocrystal Surfaces Exposed to Ammonia. Journal of Physical Chemistry C, 2010, 114, 16924-16928.	1.5	5
86	Effect of Surface Chemistry on Quantum Confinement and Photoluminescence of Ammonia-Passivated Silicon Nanocrystals. Journal of Physical Chemistry Letters, 2010, 1, 1957-1961.	2.1	4
87	Influence of surface chemistry on photoluminescence from deuterium-passivated silicon nanocrystals. Journal of Applied Physics, 2009, 106, 063121.	1.1	9
88	Time-to-failure analysis of 5Ånm amorphous Ru(P) as a copper diffusion barrier. Thin Solid Films, 2009, 517, 1645-1649.	0.8	44
89	Atomic Layer Deposition of Lanthanum Stabilized Amorphous Hafnium Oxide Thin Films. Chemistry of Materials, 2009, 21, 3096-3101.	3.2	39
90	Interaction of germanium with silicon dioxide. Surface Science, 2008, 602, 2796-2800.	0.8	7

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91	Investigation of Volmer-Weber growth mode kinetics for germanium nanoparticles on hafnia. Journal of Applied Physics, 2007, 102, 114912.	1.1	16
92	Core-shell germanium-silicon nanoparticle structure for high κ nonvolatile memory applications. , 2007, , .		0
93	Chemical routes to ultra thin films for copper barriers and liners. Surface and Coatings Technology, 2007, 201, 9256-9259.	2.2	16
94	Chemical vapor deposition of amorphous ruthenium—phosphorus alloy films. Thin Solid Films, 2007, 515, 5298-5307.	0.8	40
95	Selective silicon nanoparticle growth on high-density arrays of silicon nitride. Journal of Crystal Growth, 2007, 308, 269-277.	0.7	6
96	Ge interactions on HfO2 surfaces and kinetically driven patterning of Ge nanocrystals on HfO2. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 78-83.	0.9	16
97	Surface reactions and kinetically-driven patterning scheme for selective deposition of Si and Ge nanoparticle arrays on HfO2. Surface Science, 2006, 600, 54-57.	0.8	7
98	Importance of evaporation in the design of materials for step and flash imprint lithography. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 1515.	1.6	13
99	Directed self assembly of nanocrystals within macroscopic to nanoscopic features. Materials Research Society Symposia Proceedings, 2005, 901, 1.	0.1	1
100	CVD Boron Carbo-Nitride as Pore Sealant for Ultra Low-K Interlayer Dielectrics. Materials Research Society Symposia Proceedings, 2005, 863, B6.8-1.	0.1	1
101	Interactions of Ge Atoms with High- Å³ Oxide Dielectric Surfaces. Materials Research Society Symposia Proceedings, 2005, 879, 1.	0.1	4
102	Influence of Thermal Treatments on the Chemistry and Self-Assembly of Ge Nanoparticles on SiO2 Surfaces. Materials Research Society Symposia Proceedings, 2004, 830, 72.	0.1	1
103	A Model for Heterogeneous Nucleation and Growth of Silicon Nanoparticles on Silicon Dioxide from Disilane. Materials Research Society Symposia Proceedings, 2001, 686, 1.	0.1	0
104	Control of Nucleation to Realize High Density Si Nanoparticles on SiO2 Thin Films. Materials Research Society Symposia Proceedings, 2001, 704, 10101.	0.1	1
105	Increasing the Efficiency of the Photocatalytic Oxidation of Organic Films on Aqueous Solutions by Reactively Coating the TiO2Photocatalyst with a Chlorinated Silicone. Journal of Physical Chemistry B, 1997, 101, 2621-2624.	1.2	29
106	Preparation and characterization of WO3/SiO2 catalysts. Catalysis Letters, 1995, 33, 209-215.	1.4	70
107	Gas—Phase Reaction Study of Disilane Pyrolysis: Applications to Low Pressure Chemical Vapor Deposition. Journal of the Electrochemical Society, 1994, 141, 2135-2140.	1.3	11
108	Resonance enhanced multiphonon ionization of silicon produced during disilane pyrolysis. Journal of Applied Physics, 1994, 76, 3144-3148.	1.1	5

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109	APPLICATION OF PHOTOCATALYTIC HOLLOW GLASS MICROBEADS IN THE CLEANUP OF OIL SPILLS. International Oil Spill Conference Proceedings, 1993, 1993, 623-627.	0.1	11
110	Monolayer dispersion of molybdenum on silica. Catalysis Letters, 1992, 16, 77-83.	1.4	54
111	Single Source Precursors for III-V OMCVD Growth and Pyrolysis Studies. Materials Research Society Symposia Proceedings, 1990, 204, 73.	0.1	2
112	Adsorption and Reaction of Carbon Dioxide on Zirconium Dioxide. ACS Symposium Series, 1988, , 123-132.	0.5	2
113	The Role of Substrate Transport in Catalyst Activity. ACS Symposium Series, 1986, , 68-83.	0.5	4
114	Diffusion of cyclic hydrocarbons in benzene-swollen, divinylbenzene-crosslinked polystyrene beads. Journal of Applied Polymer Science, 1982, 27, 3841-3849.	1.3	3