Mark D Losego

List of Publications by Year
in descending order

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Version: 2024-02-01

96 papers	4,434 citations	117571 34 h-index	106281 65 g-index
99 all docs	99 docs citations	99 times ranked	6936 citing authors

#	Article	IF	Citations
1	Effects of chemical bonding on heat transport across interfaces. Nature Materials, 2012, 11, 502-506.	13.3	560
2	Three-dimensional self-assembled photonic crystals with high temperature stability for thermal emission modification. Nature Communications, 2013, 4, 2630.	5.8	204
3	Solar water splitting in a molecular photoelectrochemical cell. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20008-20013.	3.3	203
4	Facile Conversion of Hydroxy Double Salts to Metalâ€“Organic Frameworks Using Metal Oxide Particles and Atomic Layer Deposition Thin-Film Templates. Journal of the American Chemical Society, 2015, 137, 13756-13759.	6.6	174
5	Hydrogel-Based Glucose Sensors: Effects of Phenylboronic Acid Chemical Structure on Response. Chemistry of Materials, 2013, 25, 3239-3250.	3.2	167
6	Vapor phase infiltration (VPI) for transforming polymers into organicâ€“inorganic hybrid materials: a critical review of current progress and future challenges. Materials Horizons, 2017, 4, 747-771.	6.4	142
7	Electrochemically tunable thermal conductivity of lithium cobalt oxide. Nature Communications, 2014, 5, 4035.	5.8	137
8	Crossing the divide between homogeneous and heterogeneous catalysis in water oxidation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20918-20922.	3.3	123
9	Vapor Phase Infiltration of Metal Oxides into Nanoporous Polymers for Organic Solvent Separation Membranes. Chemistry of Materials, 2019, 31, 5509-5518.	3.2	109
10	Stabilization of [Ru(bpy)₂(4,4â€²-(PO₃H₂)bpy)]²⁺ on Mesoporous TiO₂ with Atomic Layer Deposition of Al₂O₃. Chemistry of Materials, 2013, 25, 3-5.	3.2	101
11	Conformal and highly adsorptive metalâ€“organic framework thin films via layer-by-layer growth on ALD-coated fiber mats. Journal of Materials Chemistry A, 2015, 3, 1458-1464.	5.2	100
12	Highly Adsorptive, MOFâ€Functionalized Nonwoven Fiber Mats for Hazardous Gas Capture Enabled by Atomic Layer Deposition. Advanced Materials Interfaces, 2014, 1, 1400040.	1.9	99
13	Highly Conductive and Conformal Poly(3,4-ethylenedioxythiophene) (PEDOT) Thin Films via Oxidative Molecular Layer Deposition. Chemistry of Materials, 2014, 26, 3471-3478.	3.2	92
14	Conductive oxide thin films: Model systems for understanding and controlling surface plasmon resonance. Journal of Applied Physics, 2009, 106, .	1.1	89
15	Interfacial thermal conductance in spun-cast polymer films and polymer brushes. Applied Physics Letters, 2010, 97, .	1.5	87
16	Testing the minimum thermal conductivity model for amorphous polymers using high pressure. Physical Review B, 2011, 83, .	1.1	87
17	Stabilizing Small Molecules on Metal Oxide Surfaces Using Atomic Layer Deposition. Nano Letters, 2013, 13, 4802-4809.	4.5	85
18	Visible Light Driven Benzyl Alcohol Dehydrogenation in a Dye-Sensitized Photoelectrosynthesis Cell. Journal of the American Chemical Society, 2014, 136, 9773-9779.	6.6	80

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19	Effect of Meso- and Micro-Porosity in Carbon Electrodes on Atomic Layer Deposition of Pseudocapacitive V₂O₅ for High Performance Supercapacitors. Chemistry of Materials, 2015, 27, 6524-6534.	3.2	78
20	Electrodeposited 3D Tungsten Photonic Crystals with Enhanced Thermal Stability. Chemistry of Materials, 2011, 23, 4783-4788.	3.2	77
21	Atomic Layer Deposition of TiO₂ on Mesoporous nanoITO: Conductive Coreâ€“Shell Photoanodes for Dye-Sensitized Solar Cells. Nano Letters, 2014, 14, 3255-3261.	4.5	71
22	Printed, metallic thermoelectric generators integrated with pipe insulation for powering wireless sensors. Applied Energy, 2017, 208, 758-765.	5.1	71
23	Mid-infrared surface plasmon resonance in zinc oxide semiconductor thin films. Applied Physics Letters, 2013, 102, .	1.5	69
24	Ultralow Thermal Conductivity in Organoclay Nanolaminates Synthesized via Simple Self-Assembly. Nano Letters, 2013, 13, 2215-2219.	4.5	68
25	Characterization of Electronic Transport through Amorphous TiO₂ Produced by Atomic Layer Deposition. Journal of Physical Chemistry C, 2019, 123, 20116-20129.	1.5	68
26	Solvent Quality Effects on Scaling Behavior of Poly(methyl methacrylate) Brushes in the Moderate- and High-Density Regimes. Langmuir, 2011, 27, 3698-3702.	1.6	67
27	Density dependence of the room temperature thermal conductivity of atomic layer deposition-grown amorphous alumina (Al2O3). Applied Physics Letters, 2014, 104, .	1.5	62
28	Ferroelectric response from lead zirconate titanate thin films prepared directly on low-resistivity copper substrates. Applied Physics Letters, 2005, 86, 172906.	1.5	61
29	Quantifying charge carrier localization in chemically doped semiconducting polymers. Nature Materials, 2021, 20, 1414-1421.	13.3	61
30	Copper Benzenetricarboxylate Metalâ€“Organic Framework Nucleation Mechanisms on Metal Oxide Powders and Thin Films formed by Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2016, 8, 9514-9522.	4.0	60
31	Interpreting picosecond acoustics in the case of low interface stiffness. Review of Scientific Instruments, 2012, 83, 114902.	0.6	59
32	Characterizing the Molecular Order of Phosphonic Acid Self-Assembled Monolayers on Indium Tin Oxide Surfaces. Langmuir, 2011, 27, 11883-11888.	1.6	43
33	A physiochemical processing kinetics model for the vapor phase infiltration of polymers: measuring the energetics of precursor-polymer sorption, diffusion, and reaction. Physical Chemistry Chemical Physics, 2018, 20, 21506-21514.	1.3	41
34	Stabilization of Polyoxometalate Water Oxidation Catalysts on Hematite by Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2017, 9, 35048-35056.	4.0	39
35	Density and size effects on the thermal conductivity of atomic layer deposited TiO2 and Al2O3 thin films. Thin Solid Films, 2018, 650, 71-77.	0.8	36
36	Stabilizing chromophore binding on TiO₂ for long-term stability of dye-sensitized solar cells using multicomponent atomic layer deposition. Physical Chemistry Chemical Physics, 2014, 16, 8615-8622.	1.3	34

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37	Aqueous Zinc Compounds as Residual Antimicrobial Agents for Textiles. ACS Applied Materials & Interfaces, 2018, 10, 7709-7716.	4.0	31
38	Atomic Layer Deposition onto Thermoplastic Polymeric Nanofibrous Aerogel Templates for Tailored Surface Properties. ACS Nano, 2020, 14, 7999-8011.	7.3	31
39	Highly Efficient Plasmon Induced Hot-Electron Transfer at Ag/TiO₂ Interface. ACS Photonics, 2021, 8, 1497-1504.	3.2	30
40	Variation in the density, optical polarizabilities, and crystallinity of TiO2 thin films deposited via atomic layer deposition from 38 to 150â€‰Â°C using the titanium tetrachloride-water reaction. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	28
41	Atomic layer deposition of ZnO electron transporting layers directly onto the active layer of organic solar cells. Organic Electronics, 2019, 64, 37-46.	1.4	28
42	Increased Chemical Stability of Vapor-Phase Infiltrated AlO_xâ€“Poly(methyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 54	2.0	28
43	Importance Of Solution Chemistry In Preparing Solâ€“Gel PZT Thin Films Directly On Copper Surfaces. Chemistry of Materials, 2008, 20, 303-307.	3.2	26
44	Tree-based control software for multilevel sequencing in thin film deposition applications. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, .	0.6	25
45	Lowâ€Temperature Atomic Layer Deposition of Tungsten using Tungsten Hexafluoride and Highlyâ€diluted Silane in Argon. Chemical Vapor Deposition, 2013, 19, 161-166.	1.4	24
46	Surfactant-enabled epitaxy through control of growth mode with chemical boundary conditions. Nature Communications, 2011, 2, 461.	5.8	23
47	Optimizing phase and microstructure of chemical solution-deposited bismuth ferrite (BiFeO3) thin films to reduce DC leakage. Journal of Materials Science, 2013, 48, 1578-1584.	1.7	21
48	Breaking through barriers. Nature Materials, 2013, 12, 382-384.	13.3	21
49	Bacterial Growth and Death on Cotton Fabrics Conformally Coated with ZnO Thin Films of Varying Thicknesses via Atomic Layer Deposition (ALD). Jom, 2019, 71, 178-184.	0.9	19
50	Reactionâ€“Diffusion Transport Model to Predict Precursor Uptake and Spatial Distribution in Vapor-Phase Infiltration Processes. Chemistry of Materials, 2021, 33, 5210-5222.	3.2	19
51	Atomic Layer Deposition for Sensitized Solar Cells: Recent Progress and Prospects. Advanced Materials Interfaces, 2016, 3, 1600354.	1.9	18
52	Diphenylisobenzofuran Bound to Nanocrystalline Metal Oxides: Excimer Formation, Singlet Fission, Electron Injection, and Low Energy Sensitization. Journal of Physical Chemistry C, 2018, 122, 28478-28490.	1.5	18
53	Atomic layer deposition (ALD) of subnanometer inorganic layers on natural cotton to enhance oil sorption performance in marine environments. Journal of Materials Research, 2019, 34, 563-570.	1.2	18
54	Microstructure and heteroatom dictate the doping mechanism and thermoelectric properties of poly(alkyl-chalcogenophenes). Applied Physics Letters, 2021, 118, 233301.	1.5	18

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55	Stabilizing molecular sensitizers in aqueous environs. Nano Energy, 2013, 2, 1067-1069.	8.2	16
56	High performance photocatalytic metal oxide synthetic bi-component nanosheets formed by atomic layer deposition. Materials Horizons, 2014, 1, 419.	6.4	16
57	Vapor Phase Infiltration Doping of the Semiconducting Polymer Poly(aniline) with TiCl₄ + H₂O: Mechanisms, Reaction Kinetics, and Electrical and Optical Properties. ACS Applied Polymer Materials, 2021, 3, 720-729.	2.0	16
58	Atomic layer deposition (ALD) of nanoscale coatings on SrAl₂O₄â€based phosphor powders to prevent aqueous degradation. Journal of the American Ceramic Society, 2020, 103, 3706-3715.	1.9	16
59	Electrical Conductivity, Thermal Behavior, and Seebeck Coefficient of Conductive Films for Printed Thermoelectric Energy Harvesting Systems. Journal of Electronic Materials, 2016, 45, 5561-5569.	1.0	14
60	Effect of Surface Ligand on Charge Separation and Recombination at CsPbI₃ Perovskite Quantum Dot/TiO₂ Interfaces. Journal of Physical Chemistry C, 2019, 123, 21415-21421.	1.5	14
61	Epitaxial calcium oxide films deposited on gallium nitride surfaces. Journal of Vacuum Science & Technology B, 2007, 25, 1029.	1.3	13
62	Controlling wettability, wet strength, and fluid transport selectivity of nanopaper with atomic layer deposited (ALD) sub-nanometer metal oxide coatings. Nanoscale Advances, 2020, 2, 356-367.	2.2	13
63	Thermoelectric and Charge Transport Properties of Solution-Processable and Chemically Doped Dioxythienothiophene Copolymers. ACS Applied Polymer Materials, 2021, 3, 2316-2324.	2.0	12
64	Re-examination of the Aqueous Stability of Atomic Layer Deposited (ALD) Amorphous Alumina (Al₂O₃) Thin Films and the Use of a Postdeposition Air Plasma Anneal to Enhance Stability. Langmuir, 2021, 37, 14509-14519.	1.6	12
65	Critical examination of growth rate for magnesium oxide (MgO) thin films deposited by molecular beam epitaxy with a molecular oxygen flux. Journal of Materials Research, 2010, 25, 670-679.	1.2	11
66	Thermally Stimulated Wettability Transformations on One-Cycle Atomic Layer Deposition-Coated Cellulosic Paper: Applications for Droplet Manipulation and Heat Patterned Paper Fluidics. ACS Applied Materials & Interfaces, 2021, 13, 13802-13812.	4.0	11
67	Epitaxial growth of the metastable phase ytterbium monoxide on gallium nitride surfaces. Journal of Crystal Growth, 2008, 310, 51-56.	0.7	10
68	Defect chemistry of nano-grained barium titanate films. Journal of Materials Science, 2008, 43, 38-42.	1.7	9
69	Reproducibility and Ferroelectric Fatigue of Lead Zirconate Titanate Thin Films Deposited Directly on Copper Via a Composite Gel Architecture. Journal of the American Ceramic Society, 2010, 93, 3983-3985.	1.9	9
70	Smooth cubic commensurate oxides on gallium nitride. Journal of Applied Physics, 2014, 115, .	1.1	9
71	Measuring the Glass Transition Temperature of Vapor-Phase-Infiltrated AlO_x-PS-r-PHEMA Organicâ€“Inorganic Hybrid Thin-Film Materials. Macromolecules, 2021, 54, 6790-6798.	2.2	9
72	Vapor phase infiltration of zinc oxide into thin films of cis-polyisoprene rubber. Materials Advances, 2020, 1, 1695-1704.	2.6	8

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73	Vapor phase infiltration of aluminum oxide into benzocyclobutene-based polymer dielectrics to increase adhesion strength to thin film metal interconnects. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 033210.	0.9	8
74	Vapor-Phase-Infiltrated AlO_x/PIM-1 â€œHybrid Scaffoldsâ€•as Solution-Processable Amine Supports for CO₂ Adsorption. ACS Applied Polymer Materials, 2021, 3, 4460-4469.	2.0	7
75	Synthesis of polycrystalline ytterbium monoxide thin films by molecular beam deposition. Journal of Vacuum Science & Technology B, 2006, 24, 2111.	1.3	6
76	Effects of Al2O3 atomic layer deposition on interfacial structure and electron transfer dynamics at Re-bipyridyl complex/TiO2 interfaces. Chemical Physics, 2018, 512, 68-74.	0.9	6
77	Single-Cycle Atomic Layer Deposition on Bulk Wood Lumber for Managing Moisture Content, Mold Growth, and Thermal Conductivity. Langmuir, 2020, 36, 1633-1641.	1.6	6
78	Immobilization of molecular catalysts on solid supports via atomic layer deposition for chemical synthesis in sustainable solvents. Green Chemistry, 2021, 23, 9523-9533.	4.6	6
79	Metalâ€“Organic Frameworks: Highly Adsorptive, MOFâ€Functionalized Nonwoven Fiber Mats for Hazardous Gas Capture Enabled by Atomic Layer Deposition (Adv. Mater. Interfaces 4/2014). Advanced Materials Interfaces, 2014, 1, .	1.9	5
80	Engineering the interfacial chemistry and mechanical properties of cellulose-reinforced epoxy composites using atomic layer deposition (ALD). Cellulose, 2020, 27, 6275-6285.	2.4	5
81	Bayesian optimization of functional output in inverse problems. Optimization and Engineering, 2021, 22, 2553-2574.	1.3	5
82	Infusing Inorganics into the Subsurface of Polymer Redistribution Layer Dielectrics for Improved Adhesion to Metals Interconnects. , 2017, , .		4
83	High-Temperature And Moisture-Ageing Reliability of High-Density Power Packages For Electric Vehicles. , 2018, , .		4
84	Selective area epitaxy of magnesium oxide thin films on gallium nitride surfaces. Journal of Materials Research, 2016, 31, 36-45.	1.2	3
85	Wash Fastness of Hybrid AlO_x-PET Fabrics Created via Vapor-Phase Infiltration. ACS Applied Polymer Materials, 2022, 4, 3304-3314.	2.0	3
86	Thin Films: Atomic Layer Deposition for Sensitized Solar Cells: Recent Progress and Prospects (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.9	2
87	Thermoelectrics that bend but donâ€™t break. Nature Materials, 2019, 18, 3-4.	13.3	2
88	Pulsed heating atomic layer deposition (PH-ALD) for epitaxial growth of zinc oxide thin films on c-plane sapphire. Dalton Transactions, 2021, 51, 303-311.	1.6	2
89	Mist Deposition of Micron-Thick Lead Zirconate Titanate Films. Materials Research Society Symposia Proceedings, 2003, 784, 11281.	0.1	1
90	Impact of trimethylaluminum exposure time on the mechanical properties of single-cycle atomic layer deposition modified cellulosic nanopaper. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, 052407.	0.9	1

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91	Base Metal Bottom Electrodes. , 2013, , 571-592.		1
92	Use of in situ electrical conductance measurements to understand the chemical mechanisms and chamber wall effects during vapor phase infiltration doping of poly(aniline) with TiCl4â€‰+â€‰H2O. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	1
93	Atomic Layer Deposition Reinforcement of Methylcellulose Nanowire Forests. Advanced Engineering Materials, 2022, 24, .	1.6	1
94	Reliability Assessment of Ultra-low-K dielectric Material and Demonstration in Advanced Interposers. , 2022, , .		1
95	Molecular Tailoring of Interfacial Adhesion Using Self-Assembled Monolayers. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 21-27.	0.3	0
96	Lead Strontium Zirconate Titanate (PSZT) Thin Films for Tunable Dielectric Applications. , 0, , 1-8.		0