Barry C Arkles

List of Publications by Year
in descending order

62	1,313	394421	377865
papers	citations	19 h-index	34 g-index

72	72	72	1591
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Factors contributing to the stability of alkoxysilanes in aqueous solution. Journal of Adhesion Science and Technology, 1992, 6, 193-206.	2.6	174
2	Reviewâ€"Silicon Nitride and Silicon Nitride-Rich Thin Film Technologies: Trends in Deposition Techniques and Related Applications. ECS Journal of Solid State Science and Technology, 2017, 6, P691-P714.	1.8	114
3	Commercial Applications of Sol-Gel-Derived Hybrid Materials. MRS Bulletin, 2001, 26, 402-408.	3.5	103
4	Tantalum Nitride Films Grown by Inorganic Low Temperature Thermal Chemical Vapor Deposition Diffusion Barrier Properties in Copper Metallization. Journal of the Electrochemical Society, 1999, 146, 170-176.	2.9	72
5	Facile Surface Modification of Hydroxylated Silicon Nanostructures Using Heterocyclic Silanes. Journal of the American Chemical Society, 2016, 138, 15106-15109.	13.7	68
6	Reviewâ€"Silicon Nitride and Silicon Nitride-Rich Thin Film Technologies: State-of-the-Art Processing Technologies, Properties, and Applications. ECS Journal of Solid State Science and Technology, 2020, 9, 063006.	1.8	64
7	The Effects of Processing Parameters in the Chemical Vapor Deposition of Cobalt from Cobalt Tricarbonyl Nitrosyl. Journal of the Electrochemical Society, 1999, 146, 2139-2145.	2.9	50
8	Low temperature metal-organic chemical vapor deposition of tungsten nitride as diffusion barrier for copper metallization. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 1101.	1.6	47
9	Editors' Choiceâ€"Reviewâ€"Cobalt Thin Films: Trends in Processing Technologies and Emerging Applications. ECS Journal of Solid State Science and Technology, 2019, 8, P119-P152.	1.8	45
10	Barrier Properties of Titanium Nitride Films Grown by Low Temperature Chemical Vapor Deposition from Titanium Tetraiodide. Journal of the Electrochemical Society, 1997, 144, 1002-1008.	2.9	39
11	Interlayer Mediated Epitaxy of Cobalt Silicide on Silicon (100) from Low Temperature Chemical Vapor Deposition of Cobalt Formation Mechanisms and Associated Properties. Journal of the Electrochemical Society, 2001, 148, C21.	2.9	37
12	Soft Materials with Recoverable Shape Factors from Extreme Distortion States. Advanced Materials, 2016, 28, 2393-2398.	21.0	37
13	The Role Of Polarity In The Structure Of Silanes Employed In Surface Modification. , 0, , 51-64.		30
14	Thermally Induced Silane Dehydrocoupling on Silicon Nanostructures. Angewandte Chemie - International Edition, 2016, 55, 6423-6427.	13.8	28
15	Low temperature plasma-assisted chemical vapor deposition of tantalum nitride from tantalum pentabromide for copper metallization. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 182.	1.6	27
16	Enhanced Hydrolytic Stability of Siliceous Surfaces Modified with Pendant Dipodal Silanes. Chemistry - A European Journal, 2014, 20, 9442-9450.	3.3	25
17	The molecular weight of PTFE wear debris. Wear, 1976, 39, 177-180.	3.1	22
18	Low-temperature chemical vapor deposition of tantalum nitride from tantalum pentabromide for integrated circuitry copper metallization applications. Journal of Materials Research, 1999, 14, 2043-2052.	2.6	21

#	Article	IF	Citations
19	Low temperature inorganic chemical vapor deposition of Tiâ€“Siâ€“N diffusion barrier liners for gigascale copper interconnect applications. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 2011.	1.6	21
20	Silacrowns: phase-transfer catalysts. Organometallics, 1983, 2, 454-457.	2.3	20
21	Cyclic azasilanes. , 2004, , 179-191.		18
22	Wear Characteristics of Fluoropolymer Composites. , 1974, , 663-688.		16
23	Applications of Hybrid Polymers Generated from Living Anionic Ring Opening Polymerization. Molecules, 2021, 26, 2755.	3.8	15
24	Reaction of trimethylsilyl azide with bridged bicyclic olefins. Journal of Organometallic Chemistry, 1976, 121, 285-291.	1.8	14
25	Single Molecular Layer Adaption of Interfacial Surfaces by Cyclic Azasilane â€œClick-Chemistryâ€• Materials Research Society Symposia Proceedings, 2015, 1793, 35-40.	0.1	13
26	Thermally Induced Silane Dehydrocoupling on Silicon Nanostructures. Angewandte Chemie, 2016, 128, 6533-6537.	2.0	13
27	Silicon Nitride from Organosilazane Cyclic and Linear Prepolymers. Journal of the Electrochemical Society, 1986, 133, 233-234.	2.9	12
28	Surfaceâ€Triggered Tandem Coupling Reactions of Cyclic Azasilanes. Chemistry - an Asian Journal, 2017, 12, 1198-1203.	3.3	12
29	Spin-on-glass thin films prepared from a novel polysilsesquioxane by thermal and ultraviolet-irradiation methods. Thin Solid Films, 1999, 345, 244-254.	1.8	11
30	Tantalum diffusion barrier grown by inorganic plasma-promoted chemical vapor deposition: Performance in copper metallization. Journal of Materials Research, 2000, 15, 2800-2810.	2.6	11
31	The Effects of Processing Parameters in the Lowâ€Temperature Chemical Vapor Deposition of Titanium Nitride from Tetraiodotitanium. Journal of the Electrochemical Society, 1998, 145, 676-683.	2.9	10
32	Low temperature plasma-promoted chemical vapor deposition of tantalum from tantalum pentabromide for copper metallization. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2887.	1.6	10
33	Staged development of modified silicon dioxide films. Journal of Sol-Gel Science and Technology, 1997, 8, 465-469.	2.4	8
34	Carbon Fiber Reinforced Thermoplastics. Product R&D, 1976, 15, 100-114.	0.3	7
35	Concerning the relative non-toxicity of silacrown ionophores. Pharmacology Biochemistry and Behavior, 1984, 21, 77-80.	2.9	7
36	Hydroxymethylsilanetriol â€“ A Simple Analog of Silicic Acid. Silicon, 2013, 5, 187-197.	3.3	7

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37	Efficiency of labelling of red blood cells with technetium-99m after dipyridamole infusion for thallium-201 stress testing. European Journal of Nuclear Medicine and Molecular Imaging, 1992, 19, 1050-3.	2.1	6
38	Defect- and H-Free Stoichiometric Silicon Carbide by Thermal CVD from the Single Source Precursor Trisilacyclohexane. Electronic Materials, 2022, 3, 27-40.	1.9	6
39	Characterization and analysis of <scp>extendedâ€wear</scp> silicone hydrogel contact lenses utilizing novel silicone macromers. Journal of Biomedical Materials Research - Part A, 2022, 110, 1512-1523.	4.0	6
40	Hydridosilane Modification of Metals: An Exploratory Study. Journal of Adhesion Science and Technology, 2012, 26, 41-54.	2.6	5
41	Synthesis and Exploratory Deposition Studies of Isotetrasilane and Reactive Intermediates for Epitaxial Silicon. Inorganic Chemistry, 2019, 58, 3050-3057.	4.0	5
42	Polysiloxaneâ€"Thermoplastic Interpenetrating Polymer Networks. Advances in Chemistry Series, 1989, , 181-199.	0.6	4
43	Conformational Molecular Switches for Post-CMOS Nanoelectronics. IEEE Transactions on Circuits and Systems I: Regular Papers, 2007, 54, 2345-2352.	5.4	4
44	Single-Molecule Orthogonal Double-Click Chemistryâ€"Inorganic to Organic Nanostructure Transition. ACS Applied Materials & Interfaces, 2020, 12, 27737-27744.	8.0	4
45	Silacrown ionophores. Journal of Membrane Science, 1987, 32, 83-91.	8.2	3
46	Modification of Silicone Elastomers Using Silicone Comonomers Containing Hydrophilic Surface Active Endgroups. Materials Research Society Symposia Proceedings, 2014, 1626, 1.	0.1	3
47	Emerging Molecular and Atomic Level Techniques for Nanoscale Applications. Electrochemical Society Interface, 2018, 27, 59-63.	0.4	3
48	Silacrowns, a New Class of Immobilizable Phase Transfer Catalysts. ACS Symposium Series, 1982, , 281-292.	0.5	2
49	Silicon Nitride Films Deposited by Atmospheric Pressure Chemical Vapor Deposition. Materials Research Society Symposia Proceedings, 1997, 495, 107.	0.1	2
50	Î²-Acetoxyethyl Silsesquioxanes: Chloride-Free Precursors for SiO2 Films Via Staged Hydrolysis. Materials Research Society Symposia Proceedings, 1999, 606, 251.	0.1	2
51	Living Polymerization Routes to Siloxane Macromers and Higher Order Silicone Structures. ACS Symposium Series, 2013, , 59-78.	0.5	2
52	Preparation of Aromatic Silanes as High Thermal Stability Coupling Agents. Advanced Materials Research, 2013, 690-693, 1483-1489.	0.3	2
53	Thin-film Deposition of Silicon Nitrides and Oxides from Trihydridosilanes. ECS Transactions, 2014, 64, 243-249.	0.5	2
54	Dipodal Silanes: Important Tool for Surface Modification to Improve Durability. Materials Research Society Symposia Proceedings, 2014, 1648, 1.	0.1	2

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55	The low-temperature remote-plasma-activated pulsed chemical vapor deposition route to SiNx from 1,3,5-tri(isopropyl)cyclotrisilazane. Thin Solid Films, 2020, 711, 138299.	1.8	2
56	[50] Functional properties of rat liver mitochondria immobilized on an alkylsilylated surface. Methods in Enzymology, 1979, 56, 550-557.	1.0	1
57	The Preparation of l,l-Bimetallics of Magnesium and Zinc. , 1996, , 661-672.		1
58	Long-Chain Organofunctional Silanes: Synthesis and Surface Derivatization. Advanced Materials Research, 2011, 415-417, 1829-1836.	0.3	1
59	Low Temperature CVD Route to Binary and Ternary Diffusion Barrier Nitrides for Cu Metallization. Materials Research Society Symposia Proceedings, 1998, 514, 499.	0.1	0
60	Hydridosilane Modification of Metals: An Exploratory Study. Advanced Materials Research, 2011, 254, 111-114.	0.3	0
61	The Mason-Dixon Survey at 250 Years: Recent Investigations. Pennsylvania Magazine of History and Biography, 2016, 140, 83.	0.1	0
62	Simplified CVD route to near-zero thickness silicon nitride films. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2022, 40, 040601.	1.2	0