Carlo G Pantano

List of Publications by Year
in descending order

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77 papers	3,353 citations	147566 31 h-index	143772 57 g-index
77 all docs	77 docs citations	77 times ranked	2853 citing authors

#	Article	IF	Citations
1	Structural investigation of silica gel films by infrared spectroscopy. Journal of Applied Physics, 1990, 68, 4225-4232.	1.1	414
2	Silicon Oxycarbide Glasses. Journal of Sol-Gel Science and Technology, 1999, 14, 7-25.	1.1	360
3	Synthesis and Characterization of Silicon Oxycarbide Glasses. Journal of the American Ceramic Society, 1990, 73, 958-963.	1.9	221
4	Chemical Durability of Silicon Oxycarbide Glasses. Journal of the American Ceramic Society, 2002, 85, 1529-1536.	1.9	214
5	Synthesis of Silicon Carbide Thin Films with Polycarbosilane (PCS). Journal of the American Ceramic Society, 1997, 80, 2333-2340.	1.9	125
6	Structure of Cerium Phosphate Glasses: Molecular Dynamics Simulation. Journal of the American Ceramic Society, 2011, 94, 2393-2401.	1.9	84
7	Thermochemical Nitridation of Microporous Silica Films in Ammonia. Journal of the American Ceramic Society, 1987, 70, 9-14.	1.9	82
8	Hydroxylation and Dehydroxylation Behavior of Silica Glass Fracture Surfaces. Journal of the American Ceramic Society, 2002, 85, 1499-1504.	1.9	75
9	NMR evidence for formation of octahedral and tetrahedral Al and repolymerization of the Si network during dissolution of aluminosilicate glass and crystal. American Mineralogist, 2003, 88, 54-67.	0.9	74
10	Mechanisms for Silanol Formation on Amorphous Silica Fracture Surfaces. Journal of the American Ceramic Society, 1999, 82, 1289-1293.	1.9	74
11	Mechanochemical Wear of Soda Lime Silica Glass in Humid Environments. Journal of the American Ceramic Society, 2014, 97, 2061-2068.	1.9	67
12	Nanostructural Characterization of Silicon Oxycarbide Glasses and Glass-Ceramics. Journal of the American Ceramic Society, 1994, 77, 3012-3018.	1.9	61
13	Hydronium Ions in Sodaâ€lime Silicate Glass Surfaces. Journal of the American Ceramic Society, 2013, 96, 458-463.	1.9	60
14	Challenges in Ceramic Science: A Report from the Workshop on Emerging Research Areas in Ceramic Science. Journal of the American Ceramic Society, 2012, 95, 3699-3712.	1.9	59
15	Thermal Poling of Sodaâ€Lime Silica Glass with Nonblocking Electrodesâ€”Part 1: Effects of Sodium Ion Migration and Water Ingress on Glass Surface Structure. Journal of the American Ceramic Society, 2016, 99, 1221-1230.	1.9	55
16	Environmental effects on initiation and propagation of surface defects on silicate glasses: scratch and fracture toughness study. Applied Physics A: Materials Science and Processing, 2014, 116, 519-528.	1.1	51
17	Elastic Moduli of Silica Gels Prepared with Tetraethoxysilane. Journal of the American Ceramic Society, 1986, 69, 775-779.	1.9	50
18	Analysis of Water and Hydroxyl Species in Soda Lime Glass Surfaces Using Attenuated Total Reflection (ATR)â€IR Spectroscopy. Journal of the American Ceramic Society, 2016, 99, 128-134.	1.9	50

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19	XPS analysis of silane coupling agents and silane-treated E-glass fibers. Surface and Interface Analysis, 1990, 15, 498-501.	0.8	49
20	Electronic structure calculations of physisorption and chemisorption on oxide glass surfaces. Physical Review B, 2005, 72, .	1.1	44
21	Compositionally Dependent Si 2p Binding Energy Shifts in Silicon Oxynitride Thin Films. Journal of the American Ceramic Society, 1986, 69, 314-316.	1.9	41
22	Molecular dynamics study of correlations between <scp>IR</scp> peak position and bond parameters of silica and silicate glasses: Effects of temperature and stress. Journal of the American Ceramic Society, 2018, 101, 178-188.	1.9	41
23	Characterization of surface structures of dealkalized soda lime silica glass using X-ray photoelectron, specular reflection infrared, attenuated total reflection infrared and sum frequency generation spectroscopies. Journal of Non-Crystalline Solids, 2017, 474, 24-31.	1.5	40
24	Thermal Poling of Sodaâ€Lime Silica Glass with Nonblocking Electrodesâ€”Part 2: Effects on Mechanical and Mechanochemical Properties. Journal of the American Ceramic Society, 2016, 99, 1231-1238.	1.9	38
25	Glass slides to DNA microarrays. Materials Today, 2004, 7, 20-26.	8.3	37
26	Physical and optical properties of the International Simple Glass. Npj Materials Degradation, 2019, 3, .	2.6	37
27	Biaxial Flexure Strength and Dynamic Fatigue of Sodaâ€“Limeâ€“Silica Float Glass. Journal of the American Ceramic Society, 2002, 85, 1777-1782.	1.9	36
28	Ultralow Dispersion Multicomponent Thinâ€Film Chalcogenide Glass for Broadband Gradientâ€Index Optics. Advanced Materials, 2018, 30, e1803628.	11.1	36
29	Porous Silicon Oxycarbide Glasses. Journal of the American Ceramic Society, 1996, 79, 2696-2704.	1.9	34
30	Porous silicon oxycarbide glasses from organically modified silica gels of high surface area. Journal of Sol-Gel Science and Technology, 1994, 1, 141-151.	1.1	33
31	Probing Hydrogen-Bonding Interactions of Water Molecules Adsorbed on Silica, Sodium Calcium Silicate, and Calcium Aluminosilicate Glasses. Journal of Physical Chemistry C, 2018, 122, 17792-17801.	1.5	33
32	Local Structure of Cerium in Aluminophosphate and Silicophosphate Glasses. Journal of the American Ceramic Society, 2011, 94, 2442-2451.	1.9	31
33	Hydrolysis Reactions at the Surface of Fluorozirconate Glass. Journal of the American Ceramic Society, 1988, 71, 577-581.	1.9	29
34	High surface area SiC/silicon oxycarbide glasses prepared from phenyltrimethoxysilane-tetramethoxysilane gels. Journal of Porous Materials, 1996, 2, 245-252.	1.3	29
35	Elemental areal density calculation and oxygen speciation for flat glass surfaces using x-ray photoelectron spectroscopy. Journal of Non-Crystalline Solids, 2016, 450, 185-193.	1.5	29
36	Vibrational Sum Frequency Generation Spectroscopy Study of Hydrous Species in Soda Lime Silica Float Glass. Langmuir, 2016, 32, 6035-6045.	1.6	29

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37	The Role of Si-H Functionality in Oxycarbide Glass Synthesis. Materials Research Society Symposia Proceedings, 1992, 271, 795.	0.1	28
38	Effect of heat treatment on the surface chemical structure of glass: Oxygen speciation from in situ XPS analysis. Journal of the American Ceramic Society, 2018, 101, 644-656.	1.9	28
39	Microstructure and Viscosity of Hot Pressed Silicon Oxycarbide Glasses. , 0, , 947-954.		28
40	Leached Layer Formation on Float Glass Surfaces in the Presence of Acid Interleave Coatings. Journal of the American Ceramic Society, 2008, 91, 736-744.	1.9	26
41	Thermal poling of alkaline earth boroaluminosilicate glasses with intrinsically high dielectric breakdown strength. Journal of Applied Physics, 2012, 111, .	1.1	25
42	Structural and compositional modification of a barium boroaluminosilicate glass surface by thermal poling. Applied Physics A: Materials Science and Processing, 2014, 116, 529-543.	1.1	25
43	Correlation between <scp>IR</scp> peak position and bond parameter of silica glass: Molecular dynamics study on fictive temperature (cooling rate) effect. Journal of the American Ceramic Society, 2018, 101, 5419-5427.	1.9	24
44	Effects of Surface Chemistry on the Nanomechanical Properties of Commercial Float Glass. Journal of the American Ceramic Society, 2010, 93, 838-847.	1.9	23
45	Ionic Conductivity in Sodiumâ€“Alkaline Earthâ€“Aluminosilicate Glasses. Journal of the American Ceramic Society, 2016, 99, 1239-1247.	1.9	22
46	Effect of glass composition on the hardness of surface layers on aluminosilicate glasses formed through reaction with strong acid. Journal of the American Ceramic Society, 2018, 101, 657-665.	1.9	22
47	Influence of acid leaching surface treatment on indentation cracking of soda lime silicate glass. Journal of Non-Crystalline Solids, 2020, 543, 120144.	1.5	21
48	Effects of fictive temperature on the leaching of soda lime silica glass surfaces. Journal of the American Ceramic Society, 2017, 100, 1424-1431.	1.9	20
49	Effects of tempering and heat strengthening on hardness, indentation fracture resistance, and wear of soda lime float glass. International Journal of Applied Glass Science, 2019, 10, 431-440.	1.0	18
50	Isotopic Studies of Oxidation of Si3â€‰Nâ€‰4 and Si using SIMS. Journal of the Electrochemical Society, 1990, 137, 741-742.	1.3	17
51	High Temperature Stability of Oxycarbide Glasses. Materials Research Society Symposia Proceedings, 1992, 271, 783.	0.1	17
52	Chemical structure and mechanical properties of soda lime silica glass surfaces treated by thermal poling in inert and reactive ambient gases. Journal of the American Ceramic Society, 2018, 101, 2951-2964.	1.9	17
53	Effect of Enameling on the Strength and Dynamic Fatigue of Soda-Lime-Silica Float Glass. Journal of the American Ceramic Society, 2002, 85, 2507-2514.	1.9	16
54	A Mechanism of Corrosionâ€Induced Roughening of Glass Surfaces. International Journal of Applied Glass Science, 2013, 4, 274-279.	1.0	16

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55	Differences in surface failure modes of soda lime silica glass under normal indentation versus tangential shear: A comparative study on Na⁺/K⁺â€ion exchange effects. Journal of the American Ceramic Society, 2019, 102, 1665-1676.	1.9	16
56	A Compression-Loaded Double Cantilever Beam Specimen. Journal of the American Ceramic Society, 1990, 73, 2534-2535.	1.9	13
57	Monolithic Chalcogenide Optical Nanocomposites Enable Infrared System Innovation: Gradient Refractive Index Optics. Advanced Optical Materials, 2020, 8, 2000150.	3.6	13
58	Tribologyâ€“Structure Relationships in Silicon Oxycarbide Thin Films. International Journal of Applied Ceramic Technology, 2010, 7, 675-686.	1.1	11
59	Oxidation resistant solâ€gel derived silicon oxynitride thin films. Applied Physics Letters, 1986, 48, 27-29.	1.5	10
60	Characterization and reactivity of sodium aluminoborosilicate glass fiber surfaces. Applied Surface Science, 2016, 370, 328-334.	3.1	10
61	Effects of acid leaching treatment of sodaâ€lime silicate glass on crack initiation and fracture. Journal of the American Ceramic Society, 2021, 104, 4550-4558.	1.9	10
62	Lowâ€Energy Ionâ€Scattering Spectroscopy of Modified Silicate Glasses. Journal of the American Ceramic Society, 2016, 99, 1259-1265.	1.9	9
63	Performance Stability of Silicone Oxideâ€“Coated Plastic Parenteral Vials. PDA Journal of Pharmaceutical Science and Technology, 2017, 71, 317-327.	0.3	8
64	The formation of a silica-rich surface using sulfur dioxide in drawn glass capillaries. Journal of High Resolution Chromatography, 1980, 3, 303-305.	2.0	6
65	Transformation Range Viscosity of Fluorozirconate Glasses. Journal of the American Ceramic Society, 1984, 67, C-164-C-165.	1.9	6
66	Processing Effects on the Surface Composition of Glass Fiber. Journal of the American Ceramic Society, 2000, 83, 2423-2428.	1.9	5
67	Chemical Precursors to Zinc Sulfide: ZnS Whisker Synthesis. Materials Research Society Symposia Proceedings, 1988, 121, 503.	0.1	3
68	Hydrogen profiles in the surface of reduced lead-silicate glasses. Surface and Interface Analysis, 1994, 21, 144-149.	0.8	3
69	What Do We Know about Glass Surfaces?. Ceramic Engineering and Science Proceedings, 0, , 137-148.	0.1	3
70	Chemical Properties of Real and Ideal Glass Surfaces. , 1986, , 127-148.		3
71	Secondary Ion Mass Spectroscopy. , 1986, , 610-627.		3
72	In Situ X-Ray Diffraction Studies of Crystallization Growth Behavior in ZnO-Bi2O3-B2O3 Glass as a Route to Functional Optical Devices. MRS Advances, 2018, 3, 563-567.	0.5	2

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73	Surface Chemical Studies of Oxides and Nitrides. Materials Research Society Symposia Proceedings, 1984, 40, 303.	0.1	1
74	High Compressive Strength Ordered Polymer Fibers and Films Via Sol Gel Microcomposite Processing. Materials Research Society Symposia Proceedings, 1989, 175, 193.	0.1	1
75	Gradient Refractive Index (GRIN) Optics: Monolithic Chalcogenide Optical Nanocomposites Enable Infrared System Innovation: Gradient Refractive Index Optics (Advanced Optical Materials 10/2020). Advanced Optical Materials, 2020, 8, 2070040.	3.6	1
76	Effects of Composite Processing on the Performance of Carbon Fiber/Glass Matrix Composites. Ceramic Engineering and Science Proceedings, 0, , 863-872.	0.1	1
77	Chemical Analyses of Sol/Gel Surfaces and Thin Films. Materials Research Society Symposia Proceedings, 1984, 32, 255.	0.1	0