

Carlo G Pantano

List of Publications by Citations

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77
papers

2,747
citations

28
h-index

51
g-index

77
ext. papers

2,990
ext. citations

4
avg, IF

5.04
L-index

#	Paper	IF	Citations
77	Structural investigation of silica gel films by infrared spectroscopy. <i>Journal of Applied Physics</i> , 1990 , 68, 4225-4232	2.5	358
76	Silicon Oxycarbide Glasses. <i>Journal of Sol-Gel Science and Technology</i> , 1999 , 14, 7-25	2.3	315
75	Chemical Durability of Silicon Oxycarbide Glasses. <i>Journal of the American Ceramic Society</i> , 2002 , 85, 1529-1536	3.8	193
74	Synthesis and Characterization of Silicon Oxycarbide Glasses. <i>Journal of the American Ceramic Society</i> , 1990 , 73, 958-963	3.8	188
73	Synthesis of Silicon Carbide Thin Films with Polycarbosilane (PCS). <i>Journal of the American Ceramic Society</i> , 2005 , 80, 2333-2340	3.8	103
72	Structure of Cerium Phosphate Glasses: Molecular Dynamics Simulation. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 2393-2401	3.8	74
71	Thermochemical Nitridation of Microporous Silica Films in Ammonia. <i>Journal of the American Ceramic Society</i> , 1987 , 70, 9-14	3.8	66
70	NMR evidence for formation of octahedral and tetrahedral Al and repolymerization of the Si network during dissolution of aluminosilicate glass and crystal. <i>American Mineralogist</i> , 2003 , 88, 54-67	2.9	62
69	Mechanisms for Silanol Formation on Amorphous Silica Fracture Surfaces. <i>Journal of the American Ceramic Society</i> , 2004 , 82, 1289-1293	3.8	62
68	Mechanochemical Wear of Soda Lime Silica Glass in Humid Environments. <i>Journal of the American Ceramic Society</i> , 2014 , 97, 2061-2068	3.8	56
67	Hydroxylation and Dehydroxylation Behavior of Silica Glass Fracture Surfaces. <i>Journal of the American Ceramic Society</i> , 2002 , 85, 1499-1504	3.8	54
66	Challenges in Ceramic Science: A Report from the Workshop on Emerging Research Areas in Ceramic Science. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 3699-3712	3.8	51
65	Hydronium Ions in Soda-lime Silicate Glass Surfaces. <i>Journal of the American Ceramic Society</i> , 2013 , 96, 458-463	3.8	50
64	Nanostructural Characterization of Silicon Oxycarbide Glasses and Glass-Ceramics. <i>Journal of the American Ceramic Society</i> , 1994 , 77, 3012-3018	3.8	48
63	Elastic Moduli of Silica Gels Prepared with Tetraethoxysilane. <i>Journal of the American Ceramic Society</i> , 1986 , 69, 775-779	3.8	47
62	Environmental effects on initiation and propagation of surface defects on silicate glasses: scratch and fracture toughness study. <i>Applied Physics A: Materials Science and Processing</i> , 2014 , 116, 519-528	2.6	41
61	Thermal Poling of Soda-Lime Silica Glass with Nonblocking Electrodes Part 1: Effects of Sodium Ion Migration and Water Ingress on Glass Surface Structure. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 1221-1230	3.8	40

60	Analysis of Water and Hydroxyl Species in Soda Lime Glass Surfaces Using Attenuated Total Reflection (ATR)-IR Spectroscopy. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 128-134	3.8	39
59	Electronic structure calculations of physisorption and chemisorption on oxide glass surfaces. <i>Physical Review B</i> , 2005 , 72,	3.3	37
58	Compositionally Dependent Si 2p Binding Energy Shifts in Silicon Oxynitride Thin Films. <i>Journal of the American Ceramic Society</i> , 1986 , 69, 314-316	3.8	37
57	XPS analysis of silane coupling agents and silane-treated E-glass fibers. <i>Surface and Interface Analysis</i> , 1990 , 15, 498-501	1.5	36
56	Glass slides to DNA microarrays. <i>Materials Today</i> , 2004 , 7, 20-26	21.8	34
55	Thermal Poling of Soda-Lime Silica Glass with Nonblocking Electrodes Part 2: Effects on Mechanical and Mechanochemical Properties. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 1231-1238	3.8	32
54	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. <i>Journal of Non-Crystalline Solids</i> , 2017 , 474, 24-31	3.9	30
53	Porous Silicon Oxycarbide Glasses. <i>Journal of the American Ceramic Society</i> , 2005 , 79, 2696-2704	3.8	30
52	Porous silicon oxycarbide glasses from organically modified silica gels of high surface area. <i>Journal of Sol-Gel Science and Technology</i> , 1994 , 1, 141-151	2.3	30
51	Biaxial Flexure Strength and Dynamic Fatigue of Soda-Lime-Silica Float Glass. <i>Journal of the American Ceramic Society</i> , 2004 , 85, 1777-1782	3.8	29
50	Molecular dynamics study of correlations between IR peak position and bond parameters of silica and silicate glasses: Effects of temperature and stress. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 178-188	3.8	28
49	Local Structure of Cerium in Aluminophosphate and Silicophosphate Glasses. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 2442-2451	3.8	27
48	Microstructure and Viscosity of Hot Pressed Silicon Oxycarbide Glasses		27
47	High surface area SiC/silicon oxycarbide glasses prepared from phenyltrimethoxysilane-tetramethoxysilane gels. <i>Journal of Porous Materials</i> , 1996 , 2, 245-252	2.4	24
46	Vibrational Sum Frequency Generation Spectroscopy Study of Hydrous Species in Soda Lime Silica Float Glass. <i>Langmuir</i> , 2016 , 32, 6035-45	4	23
45	Ultralow Dispersion Multicomponent Thin-Film Chalcogenide Glass for Broadband Gradient-Index Optics. <i>Advanced Materials</i> , 2018 , 30, e1803628	24	23
44	The Role of Si-H Functionality in Oxycarbide Glass Synthesis. <i>Materials Research Society Symposia Proceedings</i> , 1992 , 271, 795		23
43	Hydrolysis Reactions at the Surface of Fluorozirconate Glass. <i>Journal of the American Ceramic Society</i> , 1988 , 71, 577-581	3.8	23

42	Elemental areal density calculation and oxygen speciation for flat glass surfaces using x-ray photoelectron spectroscopy. <i>Journal of Non-Crystalline Solids</i> , 2016 , 450, 185-193	3.9	23
41	Leached Layer Formation on Float Glass Surfaces in the Presence of Acid Interleave Coatings. <i>Journal of the American Ceramic Society</i> , 2008 , 91, 736-744	3.8	22
40	Physical and optical properties of the International Simple Glass. <i>Npj Materials Degradation</i> , 2019 , 3,	5.7	21
39	Effects of Surface Chemistry on the Nanomechanical Properties of Commercial Float Glass. <i>Journal of the American Ceramic Society</i> , 2010 , 93, 838-847	3.8	21
38	Probing Hydrogen-Bonding Interactions of Water Molecules Adsorbed on Silica, Sodium Calcium Silicate, and Calcium Aluminosilicate Glasses. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 17792-17801	3.8	20
37	Thermal poling of alkaline earth boroaluminosilicate glasses with intrinsically high dielectric breakdown strength. <i>Journal of Applied Physics</i> , 2012 , 111, 083519	2.5	20
36	Effect of heat treatment on the surface chemical structure of glass: Oxygen speciation from in situ XPS analysis. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 644-656	3.8	19
35	Structural and compositional modification of a barium boroaluminosilicate glass surface by thermal poling. <i>Applied Physics A: Materials Science and Processing</i> , 2014 , 116, 529-543	2.6	18
34	Effects of fictive temperature on the leaching of soda lime silica glass surfaces. <i>Journal of the American Ceramic Society</i> , 2017 , 100, 1424-1431	3.8	16
33	A Mechanism of Corrosion-Induced Roughening of Glass Surfaces. <i>International Journal of Applied Glass Science</i> , 2013 , 4, 274-279	1.8	16
32	Ionic Conductivity in Sodium Alkaline Earth Aluminosilicate Glasses. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 1239-1247	3.8	16
31	Effect of glass composition on the hardness of surface layers on aluminosilicate glasses formed through reaction with strong acid. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 657-665	3.8	15
30	Correlation between IR peak position and bond parameter of silica glass: Molecular dynamics study on fictive temperature (cooling rate) effect. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 5419-5427	3.8	15
29	Effect of Enameling on the Strength and Dynamic Fatigue of Soda Lime Silica Float Glass. <i>Journal of the American Ceramic Society</i> , 2002 , 85, 2507-2514	3.8	15
28	Isotopic Studies of Oxidation of Si ₃ N ₄ and Si using SIMS. <i>Journal of the Electrochemical Society</i> , 1990 , 137, 741-742	3.9	14
27	High Temperature Stability of Oxycarbide Glasses. <i>Materials Research Society Symposia Proceedings</i> , 1992 , 271, 783		12
26	A Compression-Loaded Double Cantilever Beam Specimen. <i>Journal of the American Ceramic Society</i> , 1990 , 73, 2534-2535	3.8	12
25	Tribology Structure Relationships in Silicon Oxycarbide Thin Films. <i>International Journal of Applied Ceramic Technology</i> , 2009 , 7, 675-686	2	11

24	Effects of tempering and heat strengthening on hardness, indentation fracture resistance, and wear of soda lime float glass. <i>International Journal of Applied Glass Science</i> , 2019 , 10, 431-440	1.8	10
23	Differences in surface failure modes of soda lime silica glass under normal indentation versus tangential shear: A comparative study on Na+/K+-ion exchange effects. <i>Journal of the American Ceramic Society</i> , 2019 , 102, 1665-1676	3.8	10
22	Chemical structure and mechanical properties of soda lime silica glass surfaces treated by thermal polishing in inert and reactive ambient gases. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 2951-2964	2.8	9
21	Characterization and reactivity of sodium aluminoborosilicate glass fiber surfaces. <i>Applied Surface Science</i> , 2016 , 370, 328-334	6.7	9
20	Influence of acid leaching surface treatment on indentation cracking of soda lime silicate glass. <i>Journal of Non-Crystalline Solids</i> , 2020 , 543, 120144	3.9	7
19	Low-Energy Ion-Scattering Spectroscopy of Modified Silicate Glasses. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 1259-1265	3.8	6
18	Performance Stability of Silicone Oxide-Coated Plastic Parenteral Vials. <i>PDA Journal of Pharmaceutical Science and Technology</i> , 2017 , 71, 317-327	0.6	6
17	Oxidation resistant sol-gel derived silicon oxynitride thin films. <i>Applied Physics Letters</i> , 1986 , 48, 27-29	3.4	6
16	The formation of a silica-rich surface using sulfur dioxide in drawn glass capillaries. <i>Journal of High Resolution Chromatography</i> , 1980 , 3, 303-305		6
15	Processing Effects on the Surface Composition of Glass Fiber. <i>Journal of the American Ceramic Society</i> , 2004 , 83, 2423-2428	3.8	5
14	Monolithic Chalcogenide Optical Nanocomposites Enable Infrared System Innovation: Gradient Refractive Index Optics. <i>Advanced Optical Materials</i> , 2020 , 8, 2000150	8.1	5
13	Transformation Range Viscosity of Fluorozirconate Glasses. <i>Journal of the American Ceramic Society</i> , 1984 , 67, C-164-C-165	3.8	4
12	Secondary Ion Mass Spectroscopy 1986 , 610-627		3
11	Chemical Properties of Real and Ideal Glass Surfaces 1986 , 127-148		3
10	Hydrogen profiles in the surface of reduced lead-silicate glasses. <i>Surface and Interface Analysis</i> , 1994 , 21, 144-149	1.5	2
9	Chemical Precursors to Zinc Sulfide: ZnS Whisker Synthesis. <i>Materials Research Society Symposia Proceedings</i> , 1988 , 121, 503		2
8	Effects of acid leaching treatment of soda-lime silicate glass on crack initiation and fracture. <i>Journal of the American Ceramic Society</i> , 2021 , 104, 4550-4558	3.8	2
7	What Do We Know about Glass Surfaces?. <i>Ceramic Engineering and Science Proceedings</i> , 137-148	0.1	2

6	Gradient Refractive Index (GRIN) Optics: Monolithic Chalcogenide Optical Nanocomposites Enable Infrared System Innovation: Gradient Refractive Index Optics (Advanced Optical Materials 10/2020). <i>Advanced Optical Materials</i> , 2020 , 8, 2070040	8.1	1
5	In Situ X-Ray Diffraction Studies of Crystallization Growth Behavior in ZnO-Bi ₂ O ₃ -B ₂ O ₃ Glass as a Route to Functional Optical Devices. <i>MRS Advances</i> , 2018 , 3, 563-567	0.7	1
4	Surface Chemical Studies of Oxides and Nitrides. <i>Materials Research Society Symposia Proceedings</i> , 1984 , 40, 303		1
3	Effects of Composite Processing on the Performance of Carbon Fiber/Glass Matrix Composites. <i>Ceramic Engineering and Science Proceedings</i> , 863-872	0.1	1
2	High Compressive Strength Ordered Polymer Fibers and Films Via Sol Gel Microcomposite Processing. <i>Materials Research Society Symposia Proceedings</i> , 1989 , 175, 193		
1	Chemical Analyses of Sol/Gel Surfaces and Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 1984 , 32, 255		