

John C Lambropoulos

List of Publications by Year in descending order

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74
papers

1,580
citations

279487

23
h-index

329751

37
g-index

75
all docs

75
docs citations

75
times ranked

779
citing authors

#	ARTICLE	IF	CITATIONS
1	Freeform optics for imaging. <i>Optica</i> , 2021, 8, 161.	4.8	178
2	Subsurface damage in some single crystalline optical materials. <i>Applied Optics</i> , 2005, 44, 2241.	2.1	111
3	Removal rate model for magnetorheological finishing of glass. <i>Applied Optics</i> , 2007, 46, 7927.	2.1	98
4	Shear stress in magnetorheological finishing for glasses. <i>Applied Optics</i> , 2009, 48, 2585.	2.1	81
5	Microhardness and Indentation Fracture of Potassium Dihydrogen Phosphate (KDP). <i>Journal of the American Ceramic Society</i> , 2002, 85, 174-178.	1.9	77
6	Process parameter effects on material removal in magnetorheological finishing of borosilicate glass. <i>Applied Optics</i> , 2010, 49, 1951.	2.1	70
7	Surface microroughness of optical glasses under deterministic microgrinding. <i>Applied Optics</i> , 1996, 35, 4448.	2.1	65
8	The isotropic assumption during the Czochralski growth of single semiconductors crystals. <i>Journal of Crystal Growth</i> , 1987, 84, 349-358.	0.7	53
9	Zirconia-coated carbonyl-iron-particle-based magnetorheological fluid for polishing optical glasses and ceramics. <i>Applied Optics</i> , 2009, 48, 6797.	2.1	53
10	Twyman effect mechanics in grinding and microgrinding. <i>Applied Optics</i> , 1996, 35, 5704.	2.1	51
11	Loose abrasive lapping hardness of optical glasses and its interpretation. <i>Applied Optics</i> , 1997, 36, 1501.	2.1	44
12	Constitutive Law for the Densification of Fused Silica, with Applications in Polishing and Microgrinding. <i>Journal of the American Ceramic Society</i> , 1996, 79, 1441-1452.	1.9	38
13	Magnetic field effects on shear and normal stresses in magnetorheological finishing. <i>Optics Express</i> , 2010, 18, 19713.	1.7	38
14	Mechanisms of picosecond laser-induced damage in common multilayer dielectric coatings. <i>Scientific Reports</i> , 2019, 9, 607.	1.6	34
15	Synthesis and corrosion study of zirconia-coated carbonyl iron particles. <i>Journal of Colloid and Interface Science</i> , 2010, 342, 49-56.	5.0	33
16	The effect of interface shape on thermal stress during Czochralski crystal growth. <i>Journal of Crystal Growth</i> , 1988, 92, 390-396.	0.7	32
17	<title>Use of magnetorheological finishing (MRF) to relieve residual stress and subsurface damage on lapped semiconductor silicon wafers</title>. , 2001, , .		31
18	Stresses near the solid-liquid interface during the growth of a Czochralski crystal. <i>Journal of Crystal Growth</i> , 1987, 80, 245-256.	0.7	29

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19	A magnetorheological polishing-based approach for studying precision microground surfaces of tungsten carbides. Precision Engineering, 2007, 31, 83-93.	1.8	28
20	Surface effects on Young's modulus and hardness of fused silica by nanoindentation study. Journal of Materials Science, 2007, 42, 191-198.	1.7	26
21	UV-laser-induced densification of fused silica: a molecular dynamics study. Journal of Non-Crystalline Solids, 2004, 347, 144-152.	1.5	25
22	Dependence of birefringence and residual stress near laser-induced cracks in fused silica on laser fluence and on laser-pulse number. Applied Optics, 1998, 37, 7772.	2.1	24
23	<title>Densification of fused silica: effects on nanoindentation</title>. , 2000, , .		24
24	Toward Magnetorheological Finishing of Magnetic Materials. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2007, 129, 961-964.	1.3	24
25	Large-aperture plasma-assisted deposition of inertial confinement fusion laser coatings. Applied Optics, 2011, 50, C19.	2.1	24
26	Femtosecond laser polishing of germanium [Invited]. Optical Materials Express, 2019, 9, 4165.	1.6	24
27	<title>Noncontact estimate of grinding-induced subsurface damage</title>. , 1999, , .		23
28	Subsurface damage and microstructure development in precision microground hard ceramics using magnetorheological finishing spots. Applied Optics, 2007, 46, 5500.	2.1	22
29	Electric-field-induced motion of polymer cholesteric liquid-crystal flakes in a moderately conductive fluid. Applied Optics, 2002, 41, 5362.	2.1	16
30	Elastic and plastic anisotropy during growth from the melt of single semiconductor crystals. Journal of Materials Research, 1988, 3, 531-537.	1.2	15
31	Mechanics of shaped crystal growth from the melt. Journal of Materials Research, 1996, 11, 2163-2176.	1.2	15
32	<title>Controlling stress in sapphire optics</title>. , 1997, , .		15
33	Crack arrest and stress dependence of laser-induced surface damage in fused-silica and borosilicate glass. Applied Optics, 1999, 38, 6892.	2.1	15
34	<title>Deformation of fused silica: nanoindentation and densification</title>. , 1998, 3424, 72.		14
35	<title>Exploring anisotropy in removal rate for single crystal sapphire using MRF</title>. , 2001, , .		13
36	Deterministic Microgrinding, Lapping, and Polishing of Glass-Ceramics. Journal of the American Ceramic Society, 2005, 88, 1127-1132.	1.9	10

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37	High temperature inelastic deformation during shaped crystal growth from the melt. Journal of Crystal Growth, 1990, 104, 1-7.	0.7	9
38	Surface texture evolution of different chemical-vapor-deposited zinc sulfide flats polished with various magnetorheological fluids. Precision Engineering, 2016, 43, 257-261.	1.8	9
39	<title>Glass-ceramics: deterministic microgrinding, lapping, and polishing</title>. , 1997, , .		8
40	Molecular dynamics study of UV-laser-induced densification of fused silica. II. Effects of laser pulse duration, pressure, and temperature, and comparison with pressure-induced densification. Journal of Non-Crystalline Solids, 2005, 351, 3271-3278.	1.5	7
41	Magnetorheological finishing of chemical-vapor deposited zinc sulfide via chemically and mechanically modified fluids. Applied Optics, 2016, 55, 1481.	2.1	7
42	Zirconia coated carbonyl iron particle-based magnetorheological fluid for polishing. Proceedings of SPIE, 2009, , .	0.8	6
43	Modulation of Interfacial Adhesion Using Semicrystalline Shape-Memory Polymers. Langmuir, 2022, 38, 3607-3616.	1.6	6
44	Thermal shock and post-quench strength of lapped borosilicate optical glass. Journal of Non-Crystalline Solids, 2009, 355, 2370-2374.	1.5	5
45	Toughening and crack tip shielding in brittle materials by residually stressed thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1991, 9, 2503-2509.	0.9	4
46	Thermoelastic analysis of dislocation generation during edge-defined film-fed growth of polygonal shells. Journal of Crystal Growth, 1995, 155, 38-46.	0.7	4
47	<title>Manufacturing-induced residual stresses in optical glasses and crystals: Example of residual stress relief by magnetorheological finishing (MRF) in commercial silicon wafers</title>. , 2001, , .		4
48	Normal force and drag force in magnetorheological finishing. Proceedings of SPIE, 2009, , .	0.8	4
49	Analysis of thermal stress, fracture strength, and the effect of ion exchange on high average power phosphate glass slab lasers. Journal of Applied Physics, 1990, 67, 1784-1792.	1.1	3
50	Contributions of nanodiamond abrasives and deionized water in magnetorheological finishing of aluminum oxynitriden. , 2009, , .		3
51	Twyman effect in thin curved optics: effects of variable thickness and curvature. Applied Optics, 2021, 60, 1780.	0.9	3
52	Twyman effects in thin curved optics. , 2017, , .		3
53	Subsurface Damage (SSD) Assessment in Ground Silicon Carbide (SiC). , 2017, , .		3
54	Constitutive Laws for Ceramics Exhibiting Stress-Induced Martensitic Transformation. Materials Research Society Symposia Proceedings, 1986, 78, 35.	0.1	2

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55	Thermomechanics of thin films and interfaces. Journal of Electronic Materials, 1990, 19, 895.	1.0	2
56	Spherical cavity expansion in densifying material. Journal of Applied Physics, 2003, 94, 6437-6441.	1.1	2
57	Thermal shock testing of lapped optical glass. , 2007, , .		2
58	An experimental examination of fracture criteria using brittle polystyrene. Journal of Applied Polymer Science, 1986, 32, 5585-5595.	1.3	1
59	Lifetime prediction of laser-precracked fused silica subjected to subsequent cyclic laser pulses. Journal of Materials Research, 2000, 15, 1182-1189.	1.2	1
60	<title>Surface features and residual strains in AlON grinding</title>. , 2001, 4451, 165.		1
61	Electric field induced rotation of polymer cholesteric liquid crystal flakes: mechanisms and applications. , 2002, , .		1
62	MRF spotting technique for studying subsurface damage in deterministic microground polycrystalline alumina. , 2007, , .		1
63	Verification of cascade optical coherence tomography for freeform optics form metrology. Optics Express, 2021, 29, 8542.	1.7	1
64	Optical materials micromechanical property database: fracture toughness and ductility. , 2005, , .		1
65	Subsurface damage measurement of single crystal germanium and borosilicate glass BK-7. , 2019, , .		1
66	Stresses in Anisotropic Thin Films Bonded to Stiff Substrates. Materials Research Society Symposia Proceedings, 1987, 108, 399.	0.1	0
67	Thermal Stresses During Quenching of Short Glass Cylinders. Journal of the American Ceramic Society, 1988, 71, C-24-C-25.	1.9	0
68	Nanomechanics in optical manufacturing. , 2016, , .		0
69	Polishing rate of fused silica, compared to glasses BK7 and SF6. , 2003, , .		0
70	Comparative micro-indentation and dislocation activity in silicon and CaF2: a model. , 2005, , .		0
71	Effects of glass mechanical properties on polishing. , 2005, , .		0
72	Micromechanical contributions to material removal and surface finish. , 2007, , .		0

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73	Densification contributions in material removal mechanism. , 2007, , .		0
74	Thin curved optics and the Twyman effect. , 2021, , .		0