Witold Brostow

List of Publications by Year
in descending order

145 papers	3,187 citations	159585 30 h-index	189892 50 g-index
146 all docs	146 docs citations	146 times ranked	2986 citing authors

#	Article	IF	Citations
1	Sliding wear, viscoelasticity, and brittleness of polymers. Journal of Materials Research, 2006, 21, 2422-2428.	2.6	261
2	Workability and Mechanical Performance of Steel Fiber-Reinforced Self-Compacting Concrete with Fly Ash. Composite Interfaces, 2011, 18, 169-184.	2.3	158
3	Brittleness of materials: implications for composites and a relation to impact strength. Journal of Materials Science, 2010, 45, 242-250.	3.7	115
4	Glass transition temperatures in binary polymer blends. Journal of Polymer Science, Part B: Polymer Physics, 2009, 47, 80-95.	2.1	105
5	Preparation and Characterization of Poly(Lactic Acid)â€gâ€Maleic Anhydrideâ€‰+â€‰Starch Blends. Macromolecular Symposia, 2009, 277, 69-80.	0.7	104
6	Brittleness and toughness of polymers and other materials. Materials Letters, 2015, 159, 478-480.	2.6	100
7	Nanohybrid scratch resistant coatings for teeth and bone viscoelasticity manifested in tribology. Materials Research Innovations, 2003, 7, 110-114.	2.3	83
8	X-Ray, Gamma, and Neutron Radiation Tests on Epoxy-Ferrochromium Slag Composites by Experiments and Monte Carlo Simulations. International Journal of Polymer Analysis and Characterization, 2013, 18, 224-231.	1.9	83
9	Structural characterization of ?- and ?-nucleated isotactic polypropylene. Polymer International, 2004, 53, 2086-2091.	3.1	81
10	Effects of fluoropolymer addition to an epoxy on scratch depth and recovery. Materials Research Innovations, 2002, 6, 7-12.	2.3	78
11	The concept of materials brittleness and its applications. Polymer Bulletin, 2011, 67, 1697-1707.	3.3	64
12	Effects of surface plasma treatment on tribology of thermoplastic polymers. Polymer Engineering and Science, 2008, 48, 1971-1976.	3.1	59
13	Porous polyurethane foams based on recycled poly(ethylene terephthalate) for oil sorption. Polymer International, 2013, 62, 116-126.	3.1	55
14	Effect of the type of carbon nanotubes on tribological properties of polyamide 6. Polymer Engineering and Science, 2009, 49, 896-902.	3.1	52
15	Effect of different types of peroxides on properties of vulcanized EPDM + PP blends. Polymer Composites, 2010, 31, 1678-1691.	4.6	49
16	Time-stress correspondence in viscoelastic materials: an equation for the stress and temperature shift factor. Materials Research Innovations, 2000, 3, 347-351.	2.3	48
17	Separation of gelation from vitrification in curing of a fiber-reinforced epoxy composite. Polymer Composites, 2002, 23, 1111-1119.	4.6	47
18	Mechanical improvement of concrete by irradiated polypropylene fibers. Polymer Engineering and Science, 2005, 45, 1426-1431.	3.1	43

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19	Concrete reinforced with irradiated nylon fibers. Journal of Materials Research, 2006, 21, 484-491.	2.6	43
20	Nanoindentation creep and glass transition temperatures in polymers. Polymer International, 2007, 56, 773-778.	3.1	42
21	Bismuth telluride-based thermoelectric materials: Coatings as protection against thermal cycling effects. Journal of Materials Research, 2012, 27, 2930-2936.	2.6	42
22	Improvement of Scratch and Wear Resistance of Polymers by Fillers Including Nanofillers. Nanomaterials, 2017, 7, 66.	4.1	41
23	Synthesis of silver nanoparticles using aqueous extracts of Heterotheca inuloides as reducing agent and natural fibers as templates: Agave lechuguilla and silk. Materials Science and Engineering C, 2016, 69, 429-436.	7.3	40
24	Predicting wear from mechanical properties of thermoplastic polymers. Polymer Engineering and Science, 2008, 48, 1982-1985.	3.1	39
25	Tribological Behavior of Polymers Simulated by Molecular Dynamics. Journal of Materials Research, 2004, 19, 851-856.	2.6	38
26	Lowering mechanical degradation of drag reducers in turbulent flow. Journal of Materials Research, 2007, 22, 56-60.	2.6	38
27	Dielectric and Mechanical Relaxation in the Blends of a Polymer Liquid Crystal with Polycarbonate. Macromolecules, 1996, 29, 5017-5025.	4.8	35
28	Connection of surface tension with multiple tribological properties in epoxy + fluoropolymer systems. Polymer International, 2003, 52, 1498-1505.	3.1	34
29	Grooves in scratch testing. Journal of Materials Research, 2007, 22, 2483-2487.	2.6	33
30	Effects of ball burnishing on surface properties of low density polyethylene. Tribology International, 2016, 93, 36-42.	5.9	33
31	Thermal and mechanical properties of EPDM/PPÂ+Âthermal shock-resistant ceramic composites. Journal of Materials Science, 2011, 46, 2445-2455.	3.7	31
32	Plasticizer migration from crossâ€linked flexible PVC: Effects on tribology and hardness. Polymer Engineering and Science, 2012, 52, 211-217.	3.1	31
33	Porous polymer oil sorbents based on PET fibers with crosslinked copolymer coatings. RSC Advances, 2013, 3, 25849.	3.6	29
34	Peroxy derivatives of epoxy resins based on bisphenol A: Effects of quaternary ammonium salts. Materials Research Innovations, 1999, 3, 132-137.	2.3	27
35	Reliability and prediction of long-term performance of polymer-based materials. Pure and Applied Chemistry, 2009, 81, 417-432.	1.9	26
36	Prediction of long-term service performance of polymeric materials from short-term tests: Creep and prediction of the stress shift factor of a longitudinal polymer liquid crystal. Polymer Engineering and Science, 2001, 41, 977-981.	3.1	24

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37	Wear of thermoplastics determined by multiple scratching. E-Polymers, 2005, 5, .	3.0	24
38	Optimization of Tribological and Mechanical Properties of Nanocomposites of Polyurethane/Poly(vinyl acetate)/CaCO₃. Journal of Nanoscience and Nanotechnology, 2011, 11, 3922-3928.	0.9	23
39	Graphical modeling and computer animation of tensile deformation in polymer liquid crystals (PLCs). Materials Research Innovations, 2001, 4, 75-81.	2.3	22
40	Tensile properties and wear resistance of epoxy nanocomposites reinforced with cellulose nanofibers. Polymer Bulletin, 2018, 75, 2039-2051.	3.3	22
41	Cure progress in epoxy systems: dependence on temperature and time. Materials Research Innovations, 2003, 7, 125-132.	2.3	21
42	Microhybrids of metal powder incorporated in polymeric matrices: Friction, mechanical behavior, and microstructure. Polymer Engineering and Science, 2008, 48, 1977-1981.	3.1	21
43	Synthesis and properties of peroxy derivatives of epoxy resins based on Bisphenol A: Effects of the presence of boron trifluoride ethereate. Materials Research Innovations, 2002, 6, 24-30.	2.3	20
44	Friction and Scratch Resistance of Polymer Liquid Crystals: Effects of Magnetic Field Orientation. Journal of Materials Research, 2004, 19, 1038-1042.	2.6	20
45	Thermoplastic elastomers from rubber and recycled polyethylene: chemical reactions at interphases for property enhancement. Polymer International, 2004, 53, 1693-1703.	3.1	20
46	Thermophysical Properties and Molecular Relaxations in Cured Epoxy Resinâ€‰+â€‰PEO Blends: Observations on Factors Controlling Miscibility. Macromolecular Chemistry and Physics, 2006, 207, 879-892.	2.2	20
47	Formation of polymethylsiloxanes with alkyl side groups. Journal of Applied Polymer Science, 2007, 104, 1176-1183.	2.6	20
48	Porous hydroxyapatite-based obturation materials for dentistry. Journal of Materials Research, 2008, 23, 1587-1596.	2.6	20
49	Effects of Î³ radiation on fiberâ€reinforced polymer concrete. Polymer Composites, 2008, 29, 1244-1251.	4.6	19
50	Computer simulations of chain conformations in dilute polymer solutions under shear flow. Journal of Chemical Physics, 1996, 105, 7135-7139.	3.0	18
51	Tribological Properties of Epoxy+Silica Hybrid Materials. Journal of Nanoscience and Nanotechnology, 2009, 9, 1916-1922.	0.9	18
52	Poly(butyl terephthalate)/oxytetramethylene + oxidized carbon nanotubes hybrids: Mechanical and tribological behavior. Journal of Materials Research, 2012, 27, 1815-1823.	2.6	18
53	Polymer tribology in safety medical devices: Retractable syringes. Advances in Polymer Technology, 2007, 26, 56-64.	1.7	17
54	Characterization of grooves in scratch resistance testing. Polymer Engineering and Science, 2008, 48, 2060-2065.	3.1	17

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55	Rheology of low-density polyethylene + Boehmite composites. Polymer Composites, 2010, 31, 1909-1913.	4.6	17
56	Thermal, hydrolytic, anticorrosive, and tribological properties of alkydâ€silicone hyperbranched resins with high solid content. Journal of Applied Polymer Science, 2012, 124, 3591-3599.	2.6	17
57	Porous crosslinked copolymers of octadecyl acrylate with acrylic acid as sorbers for crude petroleum spills. Polymer International, 2013, 62, 1225-1235.	3.1	17
58	Zeta Potentialâ€"Viscosity Relationship in Kaolinite Slurry in the Presence of Dispersants. Arabian Journal for Science and Engineering, 2014, 39, 5451-5457.	1.1	17
59	Statistical thermodynamics of polymer liquid crystals: Competition between energetic and entropic effects. Journal of Chemical Physics, 1996, 105, 4367-4376.	3.0	16
60	Polymer indentation with mesoscopic molecular dynamics. Journal of Materials Research, 2013, 28, 3043-3052.	2.6	15
61	Nano-Al (OH)3 and Mg (OH)2 as flame retardants for polypropylene used on wires and cables. Emergent Materials, 2019, 2, 23-34.	5.7	15
62	Effects of UV Stabilizers on Polypropylene Outdoors. Materials, 2020, 13, 1626.	2.9	15
63	Antibiocorrosive epoxy-based coatings with low friction and high scratch resistance. Wear, 2018, 394-395, 228-235.	3.1	15
64	Epoxy and glass composites in water studied with2H-NMR. Polymer Engineering and Science, 1996, 36, 1129-1133.	3.1	14
65	Generation of polymeric structures on a computer. Materials Research Innovations, 2003, 7, 19-26.	2.3	14
66	Poly(methyl acrylate) plus Mesoporous Silica Nanohybrids: Mechanical and Thermophysical Properties. E-Polymers, 2007, 7, .	3.0	14
67	Tribological properties of blends of melamineâ€formaldehyde resin with low density polyethylene. Polymer Engineering and Science, 2008, 48, 292-296.	3.1	14
68	Settling rates for flocculation of iron and manganese oreâ€containing suspensions by cationic glycogen. Polymer Engineering and Science, 2008, 48, 1892-1896.	3.1	14
69	Bond strength of polymer lightweight aggregate concrete. Polymer Composites, 2013, 34, 2125-2132.	4.6	14
70	Poly(acrylic acid) + zinc diacetate composites: High temperature service and electric conductivity. Materials Research Innovations, 1999, 3, 85-91.	2.3	13
71	Crosslinking agents of unsaturated polymers: evaluation of the agent efficiency. Materials Research Innovations, 2002, 6, 153-159.	2.3	13
72	3D-printed and injection molded polymer matrix composites with 2D layered materials. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 042201.	2.1	11

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73	Thermal expansivity and thermal conductivity of amorphous thermoplastic polyimide and polymer liquid crystal blends. Polymer Engineering and Science, 2000, 40, 490-498.	3.1	10
74	Effect of marble particle size and gamma irradiation on mechanical properties of polymer concrete. E-Polymers, 2010, 10, .	3.0	10
75	Tribological properties of LDPE + Boehmite composites. Polymer Composites, 2010, 31, 417-425.	4.6	10
76	Encapsulation of hydrophobic drugs in a copolymer: Glass transition behavior and miscibility evaluation. Polymer Engineering and Science, 2011, 51, 1456-1465.	3.1	10
77	Effects of polymeric coatings on the service life of bismuth telluride-based thermoelectric materials. Sustainable Energy and Fuels, 2017, 1, 1376-1380.	4.9	10
78	Stress Relaxation In Metals And Polymers: Theory, Experiment And Computer Simulations. Materials Research Society Symposia Proceedings, 1993, 321, 99.	0.1	9
79	Cowoven polypropylene/glass composites with polypropylene + polymer liquid crystal interlayers: Dynamic mechanical and thermal analysis. Polymer Composites, 1998, 19, 107-115.	4.6	9
80	Mechanical properties of glass fiber composites with an epoxy resin modified by a liquid crystalline epoxy. Polymer Composites, 2002, 23, 564-573.	4.6	9
81	A statistical-mechanical model of polymer liquid crystals subjected to external deformations. Journal of Chemical Physics, 2004, 121, 3272-3281.	3.0	9
82	Tensile properties of LDPE + Boehmite composites. Polymer Composites, 2009, 30, 760-767.	4.6	9
83	Strong thermoplastic elastomers created using nickel nanopowder. Polymer Bulletin, 2011, 67, 1671-1696.	3.3	9
84	Nonisothermal thermophysical evaluation of a polypropylene + ethylene propylene diene (EPDM) blend. Polymer Engineering and Science, 1996, 36, 1101-1106.	3.1	8
85	Synthesis and characterization of petroleum resins with epoxy groups. Materials Research Innovations, 2003, 7, 167-171.	2.3	8
86	Estimation of fracture energy of high-strength steel fibre-reinforced concrete using rule-based Mamdani-type fuzzy inference system. Science and Engineering of Composite Materials, 2012, 19, 373-380.	1.4	8
87	Stress relaxation: Experiment, theory, and computer simulation. Mechanics of Composite Materials, 1996, 31, 432-445.	1.4	7
88	Semicrystalline thermoplastic polyimide + polymer liquid crystal blends: Nonisothermal calorimetry and thermogravimetry. Polymer Engineering and Science, 1998, 38, 204-212.	3.1	7
89	Effects of magnetic fields on flexural properties of a longitudinal polymer liquid crystal. Materials Research Innovations, 2002, 5, 261-267.	2.3	7
90	Determination of wear of surfaces by scratch testing. E-Polymers, 2004, 4, .	3.0	7

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91	Scratch velocity and wear resistance. E-Polymers, 2005, 5, .	3.0	7
92	Long-term irradiation effects on gamma-irradiated Nylon 6,12 fibers. Journal of Materials Research, 2008, 23, 1276-1281.	2.6	7
93	Polymer concretes improved by fiber reinforcement and gamma irradiation. E-Polymers, 2009, 9, .	3.0	7
94	Tribological properties of ethyleneâ€“propyleneâ€“diene rubber + polypropylene + thermalâ€shockâ€resistant ceramic composites. Polymer International, 2012, 61, 1362-1370.	3.1	7
95	Molecular dynamics computer simulation of scratch resistance testing of polymers: visualization. Polymer Bulletin, 2013, 70, 1457-1464.	3.3	7
96	Tribology of composites produced with recycled GFRP waste. Journal of Composite Materials, 2015, 49, 2849-2858.	2.4	7
97	Modified xonotliteâ€“type calcium silicate hydrate slabs for fire doors. Journal of Fire Sciences, 2018, 36, 83-96.	2.0	7
98	Sawdust based composites. Polymers for Advanced Technologies, 2020, 31, 2504-2511.	3.2	7
99	POLYCHAR-8 worldwide forum on polymer applications and theory in 2000. Materials Research Innovations, 2001, 4, 65-67.	2.3	6
100	Gammaâ€irradiation effects on polypropyleneâ€based composites with and without an internal lubricant. Polymer Engineering and Science, 2009, 49, 1035-1041.	3.1	6
101	Sliding wear behavior of polymers studied with mesoscopic molecular dynamics. Journal of Materials Science, 2017, 52, 1203-1213.	3.7	6
102	Polydisperse polymer liquid crystals near the anisotropicâ€isotropic transition. Macromolecular Theory and Simulations, 1996, 5, 1151-1166.	1.4	5
103	Synthesis and Characterization of Poly(methyl acrylate) + SiO2 Hybrids. E-Polymers, 2008, 8, .	3.0	5
104	Polypropylene + Polystyrene Blends with a Compatibilizer. Part 2. Tribological and Mechanical Properties. E-Polymers, 2008, 8, .	3.0	5
105	Composites of polyesterâ€‰+â€‰glass fiber residues vs. composites with mineral fillers. Composite Interfaces, 2012, 19, 511-522.	2.3	5
106	Rheological Characterization of Liquid Polymers Containing Ceramic Nanopowders for Use in Thermoelectric Devices. Journal of Nanoscience and Nanotechnology, 2015, 15, 6604-6608.	0.9	5
107	Tribological and Mechanical Properties of Poly[(R)-3-hydroxybutyric acid] Grafted with Vinyl Compounds: Insight into Possible Application. International Journal of Polymer Analysis and Characterization, 2015, 20, 469-479.	1.9	5
108	Modification of Poly(Vinyl Chloride) + Epoxy Systems for Improved Thermal and Aging Stability. Macromolecular Symposia, 2016, 365, 239-245.	0.7	5

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109	Composites containing bamboo with different binders. Pure and Applied Chemistry, 2018, 90, 1001-1009.	1.9	5
110	Preventing thermal degradation of PVC insulation by mixtures of crossâ€linking agents and antioxidants. Journal of Applied Polymer Science, 2020, 137, 48816.	2.6	5
111	Conformational transformations in chiral polythiophene derivatives aggregated in polymethacrylate matrices: Experiments and molecular dynamics simulations. Macromolecular Symposia, 1999, 148, 31-45.	0.7	4
112	Synthesis and Characterization of Porous Crosslinked Copolymers for Oil Spill Sorption. E-Polymers, 2007, 7, .	3.0	4
113	Polypropylene + Polystyrene Blends with a Compatibilizer. Part I. Morphology and Thermophysical Properties. E-Polymers, 2008, 8, .	3.0	4
114	Swelling and network parameters of crosslinked porous octadecyl acrylate copolymers as oil spill sorbers. E-Polymers, 2009, 9, .	3.0	4
115	Post-irradiation effects on Nylon-fibers reinforced concretes. E-Polymers, 2010, 10, .	3.0	4
116	Waste Materials from Tetra Pak Packages as Reinforcement of Polymer Concrete. International Journal of Polymer Science, 2015, 2015, 1-8.	2.7	4
117	Arsenic Antibacterial Polymer Composites Based on Poly(Vinyl Chloride). Macromolecular Symposia, 2016, 365, 258-262.	0.7	4
118	Synthesis and ionic conductivity of siloxane based polymer electrolytes with pendant propyl acetoacetate groups. Pure and Applied Chemistry, 2018, 90, 989-999.	1.9	4
119	Wetting angles of molten polymers on thermoelectric solid metal surfaces. Journal of Adhesion Science and Technology, 0, , 1-9.	2.6	4
120	Preface. International forum on polymersâ€”1995: Part II. Polymer Engineering and Science, 1996, 36, 1029-1031.	3.1	3
121	Thermomechanical Characterization of Bismuth Telluride Based Thermoelectric Materials. Materials Research Society Symposia Proceedings, 2001, 691, 1.	0.1	3
122	Effects of glass fibers and polypropylene/glass fiber hybrid fibers on the kinetics and mechanical properties of epoxy composites. Polymer Composites, 2001, 22, 32-41.	4.6	3
123	Concrete + polyester + CaCO3: Mechanics and morphology after gamma irradiation. E-Polymers, 2007, 7, .	3.0	3
124	Accuracy in locating glass transitions: aging and gamma sterilization of vulcanized thermoplastic elastomers. E-Polymers, 2009, 9, .	3.0	3
125	Surface and electrical properties of high density polyethylene + carbon black composites near the percolation threshold. E-Polymers, 2010, 10, .	3.0	3
126	Thermomechanical processing environment and morphology development of a thermotropic polymer liquid crystal. Journal of Applied Polymer Science, 2010, 115, 2991-3004.	2.6	3

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127	Structures of Blends of Poly (p-Phenylene Sulfide) (PPS) with Poly(p-Phenylene Sulfide) Tj ETQq1 1 0.784314 rgBT /Over	3.4	2
128	Mechanisms of Orientation of Polymer Liquid Crystals (PLCs) in External Fields. International Journal of Polymeric Materials and Polymeric Biomaterials, 2000, 45, 169-189.	3.4	2
129	Polymer resins with epoxy end groups obtained from hydrocarbon pyrolysis C9 fraction. Materials Research Innovations, 2003, 7, 291-294.	2.3	2
130	Application of dynamic mechanical analysis techniques to bismuth telluride based thermoelectric materials. E-Polymers, 2004, 4, .	3.0	2
131	Mechanical finishing and ion beams application to cold working tool steels: consequences for scratch resistance. MRS Communications, 2018, 8, 178-182.	1.8	2
132	Computer simulation of stress relaxation. Makromolekulare Chemie Macromolecular Symposia, 1993, 65, 109-121.	0.6	1
133	Synthesis and Thermal Properties of Poly(ethynyldimethylsilane-co-dimethylsiloxanes). International Journal of Polymeric Materials and Polymeric Biomaterials, 1997, 35, 157-171.	3.4	1
134	Preface. International forum on polymers: Status report 1996. Polymer Engineering and Science, 1997, 37, 925-927.	3.1	1
135	Epoxy networks modified by unsaturated oligoesters and acrylates or methacrylates. Macromolecular Symposia, 1999, 148, 87-102.	0.7	1
136	POLYCHAR-9 Worldwide Forum on Polymer Applications and Theory in 2001. Materials Research Innovations, 2002, 5, 240-242.	2.3	1
137	POLYCHAR-10 World Forum on Polymer Applications & Theory in 2002. Materials Research Innovations, 2003, 7, 1-3.	2.3	1
138	Characterization of orientation in polyethylene by scratch testing. E-Polymers, 2010, 10, .	3.0	1
139	Evaluation of Potential Printed Wiring Board Materials: Thermoplastic Polyimide + Polymer Liquid Crystal Blends. Materials Research Society Symposia Proceedings, 1998, 515, 125.	0.1	0
140	International forum on polymers 1999: POLYCHARâ€7. Macromolecular Symposia, 1999, 148, i.	0.7	0
141	POLY(ETHYLENE TEREPHTALATE)-CONTAINING POLYMER LIQUID CRYSTALS AND THEIR BLENDS. International Journal of Polymeric Materials and Polymeric Biomaterials, 2003, 52, 999-1034.	3.4	0
142	Oligomeric azodinitrile compounds with epoxy groups on the basis of 4,4â€²-azo-bis-(4-cyanopentanoic) acid. Materials Research Innovations, 2003, 7, 47-50.	2.3	0
143	Morphology and thermal properties of two polymethacrylates modified by a polymer liquid crystal. Polymer International, 2004, 53, 460-464.	3.1	0
144	Scratch behavior of reinforced HDPE through molecular dynamics simulations. MRS Communications, 2021, 11, 628-634.	1.8	0

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145	Polymeric Coatings for Skutterudite-Based Thermoelectric Materials. Lubricants, 2022, 10, 72.	2.9	0