

Emmanuel P Giannelis

List of Publications by Year in descending order

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107
papers

15,355
citations

44069

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times ranked

14089
citing authors

#	ARTICLE	IF	CITATIONS
1	Acoustophoretic Liquefaction for 3D Printing Ultrahigh-Viscosity Nanoparticle Suspensions. <i>Advanced Materials</i> , 2022, 34, e2106183.	21.0	14
2	Electrocatalysis in Alkaline Media and Alkaline Membrane-Based Energy Technologies. <i>Chemical Reviews</i> , 2022, 122, 6117-6321.	47.7	195
3	Monitoring the Early Stages of Formation of Oil-in-Water Emulsions Using Flow Cytometry. <i>Langmuir</i> , 2022, 38, 62-71.	3.5	4
4	Simple synthesis of soft, tough, and cytocompatible biohybrid composites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	7.1	4
5	Encapsulation of an Anionic Surfactant into Hollow Spherical Nanosized Capsules: Size Control, Slow Release, and Potential Use for Enhanced Oil Recovery Applications and Environmental Remediation. <i>ACS Omega</i> , 2021, 6, 5689-5697.	3.5	17
6	Making bioinspired 3D-printed autonomic perspiring hydrogel actuators. <i>Nature Protocols</i> , 2021, 16, 2068-2087.	12.0	18
7	Stimuli-Responsive, Hydrolyzable Poly(Vinyl Laurate-co-vinyl Acetate) Nanoparticle Platform for In Situ Release of Surfactants. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 25553-25562.	8.0	6
8	Mastering Superior Performance Origins of Ionic Polyurethane/Silica Hybrids. <i>ACS Applied Polymer Materials</i> , 2021, 3, 6684-6693.	4.4	6
9	3D printable tough silicone double networks. <i>Nature Communications</i> , 2020, 11, 4000.	12.8	74
10	3D Printing of Viscoelastic Suspensions via Digital Light Synthesis for Tough Nanoparticle-Elastomer Composites. <i>Advanced Materials</i> , 2020, 32, e2001646.	21.0	31
11	Autonomic perspiration in 3D-printed hydrogel actuators. <i>Science Robotics</i> , 2020, 5, .	17.6	121
12	Development of Effective Lipase-Hybrid Nanoflowers Enriched with Carbon and Magnetic Nanomaterials for Biocatalytic Transformations. <i>Nanomaterials</i> , 2019, 9, 808.	4.1	50
13	Scalable Synthesis of Switchable Assemblies of Gold Nanorod Lyotropic Liquid Crystal Nanocomposites. <i>Small</i> , 2019, 15, 1901666.	10.0	12
14	Role of Mesopore Structure of Hierarchical Porous Carbons on the Electrosorption Performance of Capacitive Deionization Electrodes. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 7580-7596.	6.7	27
15	Metal Organic Cluster Photoresists for EUV Lithography. <i>Journal of Photopolymer Science and Technology</i> = [Fotoporima Konwakai Shi], 2019, 32, 711-714.	0.3	3
16	Simple Synthesis of Elastomeric Photomechanical Switches That Self-Heal. <i>Macromolecular Rapid Communications</i> , 2019, 40, e1800815.	3.9	21
17	Progress in metal organic cluster EUV photoresists. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018, 36, .	1.2	7
18	The Challenges of Highly Sensitive EUV Photoresists. <i>Journal of Photopolymer Science and Technology</i> = [Fotoporima Konwakai Shi], 2018, 31, 261-265.	0.3	8

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19	Metal-Organic Framework-Inspired Metal-Containing Clusters for High-Resolution Patterning. <i>Chemistry of Materials</i> , 2018, 30, 4124-4133.	6.7	65
20	EUV photolithography: resist progress in metal-organic complex photoresists. <i>Journal of Micro/Nanolithography, MEMS, and MOEMS</i> , 2018, 18, 1.	0.9	17
21	Characterization of Sulfur and Nanostructured Sulfur Battery Cathodes in Electron Microscopy Without Sublimation Artifacts. <i>Microscopy and Microanalysis</i> , 2017, 23, 155-162.	0.4	40
22	A novel fabrication approach for three-dimensional hierarchical porous metal oxide/carbon nanocomposites for enhanced solar photocatalytic performance. <i>Catalysis Science and Technology</i> , 2017, 7, 1965-1970.	4.1	13
23	Nanostructured Polymer Particles as Additives for High Conductivity, High Modulus Solid Polymer Electrolytes. <i>Macromolecules</i> , 2017, 50, 4699-4706.	4.8	44
24	Shape-Memory Behavior of Polylactide/Silica Ionic Hybrids. <i>Macromolecules</i> , 2017, 50, 2896-2905.	4.8	43
25	Superhydrophilic Wrinkle-Free Cotton Fabrics via Plasma and Nanofluid Treatment. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 38109-38116.	8.0	36
26	Highly porous scaffolds of PEDOT:PSS for bone tissue engineering. <i>Acta Biomaterialia</i> , 2017, 62, 91-101.	8.3	198
27	Highly Elastic, Transparent, and Conductive 3D-Printed Ionic Composite Hydrogels. <i>Advanced Functional Materials</i> , 2017, 27, 1701807.	14.9	162
28	Recent Progress in EUV Metal Oxide Photoresists. <i>Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi]</i> , 2017, 30, 93-97.	0.3	6
29	Design Principles for Optimum Performance of Porous Carbons in Lithium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2016, 6, 1600134.	19.5	98
30	Positive Tone Nanoparticle Photoresists: New Insight on the Patterning Mechanism. <i>Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi]</i> , 2016, 29, 509-512.	0.3	7
31	Yellow emitting carbon dots with superior colloidal, thermal, and photochemical stabilities. <i>Journal of Materials Chemistry C</i> , 2016, 4, 9798-9803.	5.5	50
32	Solubility studies of inorganic-organic hybrid nanoparticle photoresists with different surface functional groups. <i>Nanoscale</i> , 2016, 8, 1338-1343.	5.6	51
33	Oxide Nanoparticle EUV (ONE) Photoresists: Current Understanding of the Unusual Patterning Mechanism. <i>Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi]</i> , 2015, 28, 515-518.	0.3	21
34	Solution-printed organic semiconductor blends exhibiting transport properties on par with single crystals. <i>Nature Communications</i> , 2015, 6, 8598.	12.8	219
35	Studying the Mechanism of Hybrid Nanoparticle Photoresists: Effect of Particle Size on Photopatterning. <i>Chemistry of Materials</i> , 2015, 27, 5027-5031.	6.7	73
36	Entanglements in marginal solutions: a means of tuning pre-aggregation of conjugated polymers with positive implications for charge transport. <i>Journal of Materials Chemistry C</i> , 2015, 3, 7394-7404.	5.5	75

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37	3D conducting polymer platforms for electrical control of protein conformation and cellular functions. <i>Journal of Materials Chemistry B</i> , 2015, 3, 5040-5048.	5.8	116
38	Sponges with covalently tethered amines for high-efficiency carbon capture. <i>Nature Communications</i> , 2014, 5, 5796.	12.8	103
39	In situ formation of silver nanoparticles on thin-film composite reverse osmosis membranes for biofouling mitigation. <i>Water Research</i> , 2014, 62, 260-270.	11.3	244
40	Carbon-dot organic surface modifier analysis by solution-state NMR spectroscopy. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	1.9	10
41	Polyacrylonitrile/polyaniline core/shell nanofiber mat for removal of hexavalent chromium from aqueous solution: mechanism and applications. <i>RSC Advances</i> , 2013, 3, 8978.	3.6	114
42	Nanostructured Materials for Environmentally Conscious Applications. <i>ACS Symposium Series</i> , 2013, , 59-72.	0.5	2
43	A facile approach for the synthesis of monolithic hierarchical porous carbons – high performance materials for amine based CO ₂ capture and supercapacitor electrode. <i>Energy and Environmental Science</i> , 2013, 6, 1785.	30.8	181
44	Hairy nanoparticle assemblies as one-component functional polymer nanocomposites: opportunities and challenges. <i>MRS Communications</i> , 2013, 3, 13-29.	1.8	169
45	Nanoparticle photoresists from HfO ₂ and ZrO ₂ for EUV patterning. <i>Journal of Photopolymer Science and Technology = [Fotopolyma Konwakai Shi]</i> , 2012, 25, 583-586.	0.3	54
46	A new nanocomposite polymer electrolyte based on poly(vinyl alcohol) incorporating hypergrafted nano-silica. <i>Journal of Materials Chemistry</i> , 2012, 22, 18961.	6.7	78
47	Photoluminescent carbogenic nanoparticles directly derived from crude biomass. <i>Green Chemistry</i> , 2012, 14, 3141.	9.0	70
48	Gd(III)-doped carbon dots as a dual fluorescent-MRI probe. <i>Journal of Materials Chemistry</i> , 2012, 22, 23327.	6.7	199
49	Efficient CO ₂ sorbents based on silica foam with ultra-large mesopores. <i>Energy and Environmental Science</i> , 2012, 5, 7368.	30.8	140
50	Luminescent Surface Quaternized Carbon Dots. <i>Chemistry of Materials</i> , 2012, 24, 6-8.	6.7	176
51	An improved process for the surface modification of SiO ₂ nanoparticles. <i>Green Chemistry</i> , 2012, 14, 3013.	9.0	17
52	Synthesis and properties of core-shell fluorescent hybrids with distinct morphologies based on carbon dots. <i>Journal of Materials Chemistry</i> , 2012, 22, 16219.	6.7	40
53	Self-Assembled Complexes of Horseradish Peroxidase with Magnetic Nanoparticles Showing Enhanced Peroxidase Activity. <i>Advanced Functional Materials</i> , 2012, 22, 1940-1951.	14.9	31
54	High efficiency nanocomposite sorbents for CO ₂ capture based on amine-functionalized mesoporous capsules. <i>Energy and Environmental Science</i> , 2011, 4, 444-452.	30.8	446

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55	Dielectric study of Poly(styrene- <i>co</i> -butadiene) Composites with Carbon Black, Silica, and Nanoclay. <i>Macromolecules</i> , 2011, 44, 6162-6171.	4.8	106
56	Mesoporous amine-bridged polysilsesquioxane for CO ₂ capture. , 2011, 1, 278-284.		13
57	Nanohybrid Nafion Membranes for Fuel Cells. <i>ACS Symposium Series</i> , 2010, , 171-185.	0.5	5
58	The synthesis and properties of nanoscale ionic materials. <i>Applied Organometallic Chemistry</i> , 2010, 24, 581-589.	3.5	76
59	High refractive index and high transparency HfO ₂ nanocomposites for next generation lithography. <i>Journal of Materials Chemistry</i> , 2010, 20, 5186.	6.7	56
60	Facile and Scalable Synthesis of Monodispersed Spherical Capsules with a Mesoporous Shell. <i>Chemistry of Materials</i> , 2010, 22, 2693-2695.	6.7	205
61	Superhydrophilic and solvent resistant coatings on polypropylene fabrics by a simple deposition process. <i>Journal of Materials Chemistry</i> , 2010, 20, 1651.	6.7	35
62	Silicate Dispersion and Mechanical Reinforcement in Polysiloxane/Layered Silicate Nanocomposites. <i>Chemistry of Materials</i> , 2010, 22, 167-174.	6.7	60
63	Functionalized graphene sheet-Poly(vinylidene fluoride) conductive nanocomposites. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009, 47, 888-897.	2.1	421
64	A plasmonic fluid with dynamically tunable optical properties. <i>Journal of Materials Chemistry</i> , 2009, 19, 8728.	6.7	24
65	Solvent-mediated pathways to gelation and phase separation in suspensions of grafted nanoparticles. <i>Soft Matter</i> , 2009, 5, 4256.	2.7	16
66	Photoluminescent Carbogenic Dots. <i>Chemistry of Materials</i> , 2008, 20, 4539-4541.	6.7	571
67	Compatibilizing Poly(vinylidene fluoride)/Nylon-6 Blends with Nanoclay. <i>Macromolecules</i> , 2007, 40, 8271-8276.	4.8	146
68	Nanofibers from Polylactic Acid Nanocomposites: Effect of Nanoclays on Molecular Structures. <i>ACS Symposium Series</i> , 2006, , 217-230.	0.5	8
69	Nanobiohybrids: Bioinspired Sensors. <i>Materials Research Society Symposia Proceedings</i> , 2005, 873, 1.	0.1	0
70	High Quality, Low Cost Continuous Poly-GaN Film on Si and Glass Substrates Produced by Spin Coating. <i>Materials Research Society Symposia Proceedings</i> , 2004, 831, 619.	0.1	0
71	Clay-Organosiloxane Hybrids: A Route to Cross-Linked Clay Particles and Clay Monoliths. <i>Chemistry of Materials</i> , 2004, 16, 2404-2410.	6.7	70
72	Engineering of silica monoliths and the effect of clay doping on their properties. <i>Journal of Materials Chemistry</i> , 2004, 14, 1995.	6.7	3

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73	Synthesis of Poly(butylene terephthalate) Nanocomposite by In-situ Interlayer Polymerization and Characterization of Its Fiber (I). Polymer Bulletin, 2003, 51, 69-75.	3.3	24
74	Deintercalation of a chemically switchable polymer from a layered silicate nanocomposite. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 3151-3159.	2.1	7
75	Poly(styrene-block-isoprene) nanocomposites: Kinetics of intercalation and effects of copolymer on intercalation behaviors. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 3264-3271.	2.1	15
76	From nanocomposite to nanogel polymer electrolytes. Journal of Materials Chemistry, 2003, 13, 1-5.	6.7	149
77	Strain Hardening in Model Polymer Brushes under Shear. Langmuir, 2001, 17, 1448-1452.	3.5	62
78	Nanostructure and properties of polysiloxane-layered silicate nanocomposites. Journal of Polymer Science, Part B: Polymer Physics, 2000, 38, 1595-1604.	2.1	144
79	Polymer-layered silicate nanocomposites: Synthesis, properties and applications. Applied Organometallic Chemistry, 1998, 12, 675-680.	3.5	620
80	The Nature of Nanometer-Thick Lubricating Films. Materials Research Society Symposia Proceedings, 1998, 522, 165.	0.1	1
81	Polymer-layered silicate nanocomposites: Synthesis, properties and applications. , 1998, 12, 675.		1
82	Polymer Melt Intercalation in Organically-Modified Layered Silicates: Model Predictions and Experiment. Macromolecules, 1997, 30, 8000-8009.	4.8	977
83	Synthesis and magnetic properties of $\text{Ni}^2+\text{Al}_2\text{O}_3$ thin films. Journal of Applied Physics, 1997, 82, 1189-1195.	2.5	14
84	Rheology of End-Tethered Polymer Layered Silicate Nanocomposites. Macromolecules, 1997, 30, 4097-4102.	4.8	742
85	Lattice Model of Polymer Melt Intercalation in Organically-Modified Layered Silicates. Macromolecules, 1997, 30, 7990-7999.	4.8	791
86	Relaxations of confined chains in polymer nanocomposites: Glass transition properties of poly(ethylene oxide) intercalated in montmorillonite. Journal of Polymer Science, Part B: Polymer Physics, 1997, 35, 59-67.	2.1	312
87	Relaxations of confined chains in polymer nanocomposites: Glass transition properties of poly(ethylene oxide) intercalated in montmorillonite. Journal of Polymer Science, Part B: Polymer Physics, 1997, 35, 59-67.	2.1	4
88	Direct Observation of Fracture Mechanisms in Polymer-Layered Silicate Nanocomposites. Materials Research Society Symposia Proceedings, 1996, 457, 495.	0.1	7
89	Structure and Dynamics of Polymer-Layered Silicate Nanocomposites. Chemistry of Materials, 1996, 8, 1728-1734.	6.7	864
90	Polymer Layered Silicate Nanocomposites. Advanced Materials, 1996, 8, 29-35.	21.0	3,291

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91	Fire Retardant Polyetherimide Nanocomposites. Materials Research Society Symposia Proceedings, 1996, 457, 513.	0.1	66
92	Synthesis and Oxidation Kinetics of Sol-Gel and Sputtered Tantalum Nitride Thin Films. Materials Research Society Symposia Proceedings, 1995, 410, 295.	0.1	1
93	Synthesis and barrier properties of poly(ϵ -caprolactone)-layered silicate nanocomposites. Journal of Polymer Science Part A, 1995, 33, 1047-1057.	2.3	1,159
94	Interrelationship between Densification, Crystallization, and Chemical Evolution in Sol-Gel Titania Thin Films. Journal of the American Ceramic Society, 1994, 77, 1592-1596.	3.8	62
95	Ion-Beam-Induced Densification of Zirconia Sol-Gel Thin Films. Journal of the American Ceramic Society, 1993, 76, 1369-1372.	3.8	33
96	Relationship between Water Desorption and Low-Temperature Densification of Colloidal Anatase Thin Films. Journal of the American Ceramic Society, 1993, 76, 2529-2533.	3.8	10
97	Neutron Reflectometry Characterization of Interface Width between Sol-Gel Titanium Dioxide and Silicon Dioxide Thin Films. Journal of the American Ceramic Society, 1993, 76, 2534-2538.	3.8	4
98	Ferroelectric behavior of pulsed laser deposited Ba _x Sr _{1-x} TiO ₃ thin films. Journal of Materials Research, 1993, 8, 1209-1212.	2.6	25
99	Ion-Irradiation-Induced Densification of Zirconia Sol -Gel Thin Films. Materials Research Society Symposia Proceedings, 1993, 316, 99.	0.1	1
100	Tribomechanical Properties of Ion-Beam-Densified Sol-Gel Zirconia Thin Films on Cubic Zirconia. Materials Research Society Symposia Proceedings, 1993, 308, 635.	0.1	0
101	Nanometer Size Lead Iodide Particles. Materials Research Society Symposia Proceedings, 1992, 242, 761.	0.1	0
102	New Chemical Processing Technique Deposits Good Quality TiN Thin Films for Microelectronic Applications. Materials and Processing Report, 1992, 7, 5-6.	0.0	0
103	On the dielectric response of complex layered oxides: Mica-type silicates and layered double hydroxides. Journal of Applied Physics, 1992, 72, 1039-1048.	2.5	36
104	Effect of Heating Rate on the Sintering of Titanium Dioxide Thin Films: Competition between Densification and Crystallization. Journal of the American Ceramic Society, 1991, 74, 2669-2671.	3.8	64
105	Effect of Nitridation Rate on the Composition and Conductivity of Titanium Nitride Films Prepared from Sol-Gel Titania. Journal of the American Ceramic Society, 1991, 74, 2937-2940.	3.8	18
106	On the Development of Biomimetic Sensors: Immobilization of Lipid Bilayers in Layered Ceramics. Materials Research Society Symposia Proceedings, 1990, 218, 153.	0.1	0
107	Nanometer-Scale Iron Oxide Magnetic Particles: Synthesis and Magnetic Properties. Materials Research Society Symposia Proceedings, 1990, 206, 561.	0.1	10