Emmanuel P Giannelis

List of Publications by Year
in descending order

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107 papers	15,355 citations	53939 47 h-index	42259 96 g-index
107 all docs	107 docs citations	107 times ranked	16099 citing authors

#	Article	IF	Citations
1	Acoustophoretic Liquefaction for 3D Printing Ultrahighâ€Viscosity Nanoparticle Suspensions. Advanced Materials, 2022, 34, e2106183.	11.1	14
2	Electrocatalysis in Alkaline Media and Alkaline Membrane-Based Energy Technologies. Chemical Reviews, 2022, 122, 6117-6321.	23.0	195
3	Monitoring the Early Stages of Formation of Oilâ€“Water Emulsions Using Flow Cytometry. Langmuir, 2022, 38, 62-71.	1.6	4
4	Simple synthesis of soft, tough, and cytocompatible biohybrid composites. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	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. ACS Omega, 2021, 6, 5689-5697.	1.6	17
6	Making bioinspired 3D-printed autonomic perspiring hydrogel actuators. Nature Protocols, 2021, 16, 2068-2087.	5.5	18
7	Stimuli-Responsive, Hydrolyzable Poly(Vinyl Laurate-co-vinyl Acetate) Nanoparticle Platform for In Situ Release of Surfactants. ACS Applied Materials & Interfaces, 2021, 13, 25553-25562.	4.0	6
8	Mastering Superior Performance Origins of Ionic Polyurethane/Silica Hybrids. ACS Applied Polymer Materials, 2021, 3, 6684-6693.	2.0	6
9	3D printable tough silicone double networks. Nature Communications, 2020, 11, 4000.	5.8	74
10	3D Printing of Viscoelastic Suspensions via Digital Light Synthesis for Tough Nanoparticleâ€“Elastomer Composites. Advanced Materials, 2020, 32, e2001646.	11.1	31
11	Autonomic perspiration in 3D-printed hydrogel actuators. Science Robotics, 2020, 5, .	9.9	121
12	Development of Effective Lipase-Hybrid Nanoflowers Enriched with Carbon and Magnetic Nanomaterials for Biocatalytic Transformations. Nanomaterials, 2019, 9, 808.	1.9	50
13	Scalable Synthesis of Switchable Assemblies of Gold Nanorod Lyotropic Liquid Crystal Nanocomposites. Small, 2019, 15, 1901666.	5.2	12
14	Role of Mesopore Structure of Hierarchical Porous Carbons on the Electrosorption Performance of Capacitive Deionization Electrodes. ACS Sustainable Chemistry and Engineering, 2019, 7, 7580-7596.	3.2	27
15	Metal Organic Cluster Photoresists for EUV Lithography. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2019, 32, 711-714.	0.1	3
16	Simple Synthesis of Elastomeric Photomechanical Switches That Selfâ€Heal. Macromolecular Rapid Communications, 2019, 40, e1800815.	2.0	21
17	Progress in metal organic cluster EUV photoresists. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, .	0.6	7
18	The Challenges of Highly Sensitive EUV Photoresists. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2018, 31, 261-265.	0.1	8

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19	Metalâ€“Organic Framework-Inspired Metal-Containing Clusters for High-Resolution Patterning. Chemistry of Materials, 2018, 30, 4124-4133.	3.2	65
20	EUV photolithography: resist progress in metalâ€“organic complex photoresists. Journal of Micro/Nanolithography, MEMS, and MOEMS, 2018, 18, 1.	1.0	17
21	Characterization of Sulfur and Nanostructured Sulfur Battery Cathodes in Electron Microscopy Without Sublimation Artifacts. Microscopy and Microanalysis, 2017, 23, 155-162.	0.2	40
22	A novel fabrication approach for three-dimensional hierarchical porous metal oxide/carbon nanocomposites for enhanced solar photocatalytic performance. Catalysis Science and Technology, 2017, 7, 1965-1970.	2.1	13
23	Nanostructured Polymer Particles as Additives for High Conductivity, High Modulus Solid Polymer Electrolytes. Macromolecules, 2017, 50, 4699-4706.	2.2	44
24	Shape-Memory Behavior of Polylactide/Silica Ionic Hybrids. Macromolecules, 2017, 50, 2896-2905.	2.2	43
25	Superhydrophilic Wrinkle-Free Cotton Fabrics via Plasma and Nanofluid Treatment. ACS Applied Materials & Interfaces, 2017, 9, 38109-38116.	4.0	36
26	Highly porous scaffolds of PEDOT:PSS for bone tissue engineering. Acta Biomaterialia, 2017, 62, 91-101.	4.1	198
27	Highly Elastic, Transparent, and Conductive 3Dâ€Printed Ionic Composite Hydrogels. Advanced Functional Materials, 2017, 27, 1701807.	7.8	162
28	Recent Progress in EUV Metal Oxide Photoresists. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2017, 30, 93-97.	0.1	6
29	Design Principles for Optimum Performance of Porous Carbons in Lithiumâ€“Sulfur Batteries. Advanced Energy Materials, 2016, 6, 1600134.	10.2	98
30	Positive Tone Nanoparticle Photoresists: New Insight on the Patterning Mechanism. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2016, 29, 509-512.	0.1	7
31	Yellow emitting carbon dots with superior colloidal, thermal, and photochemical stabilities. Journal of Materials Chemistry C, 2016, 4, 9798-9803.	2.7	50
32	Solubility studies of inorganicâ€“organic hybrid nanoparticle photoresists with different surface functional groups. Nanoscale, 2016, 8, 1338-1343.	2.8	51
33	Oxide Nanoparticle EUV (ONE) Photoresists: Current Understanding of the Unusual Patterning Mechanism. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2015, 28, 515-518.	0.1	21
34	Solution-printed organic semiconductor blends exhibiting transport properties on par with single crystals. Nature Communications, 2015, 6, 8598.	5.8	219
35	Studying the Mechanism of Hybrid Nanoparticle Photoresists: Effect of Particle Size on Photopatterning. Chemistry of Materials, 2015, 27, 5027-5031.	3.2	73
36	Entanglements in marginal solutions: a means of tuning pre-aggregation of conjugated polymers with positive implications for charge transport. Journal of Materials Chemistry C, 2015, 3, 7394-7404.	2.7	75

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37	3D conducting polymer platforms for electrical control of protein conformation and cellular functions. Journal of Materials Chemistry B, 2015, 3, 5040-5048.	2.9	116
38	Sponges with covalently tethered amines for high-efficiency carbon capture. Nature Communications, 2014, 5, 5796.	5.8	103
39	In situ formation of silver nanoparticles on thin-film composite reverse osmosis membranes for biofouling mitigation. Water Research, 2014, 62, 260-270.	5.3	244
40	Carbon-dot organic surface modifier analysis by solution-state NMR spectroscopy. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	10
41	Polyacrylonitrile/polyaniline core/shell nanofiber mat for removal of hexavalent chromium from aqueous solution: mechanism and applications. RSC Advances, 2013, 3, 8978.	1.7	114
42	Nanostructured Materials for Environmentally Conscious Applications. ACS Symposium Series, 2013, , 59-72.	0.5	2
43	A facile approach for the synthesis of monolithic hierarchical porous carbons â€“ high performance materials for amine based CO2 capture and supercapacitor electrode. Energy and Environmental Science, 2013, 6, 1785.	15.6	181
44	Hairy nanoparticle assemblies as one-component functional polymer nanocomposites: opportunities and challenges. MRS Communications, 2013, 3, 13-29.	0.8	169
45	Nanoparticle photoresists from HfO2 and ZrO2 for EUV patterning. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2012, 25, 583-586.	0.1	54
46	A new nanocomposite polymer electrolyte based on poly(vinyl alcohol) incorporating hypergrafted nano-silica. Journal of Materials Chemistry, 2012, 22, 18961.	6.7	78
47	Photoluminescent carbogenic nanoparticles directly derived from crude biomass. Green Chemistry, 2012, 14, 3141.	4.6	70
48	Gd(iii)-doped carbon dots as a dual fluorescent-MRI probe. Journal of Materials Chemistry, 2012, 22, 23327.	6.7	199
49	Efficient CO2 sorbents based on silica foam with ultra-large mesopores. Energy and Environmental Science, 2012, 5, 7368.	15.6	140
50	Luminescent Surface Quaternized Carbon Dots. Chemistry of Materials, 2012, 24, 6-8.	3.2	176
51	An improved process for the surface modification of SiO2 nanoparticles. Green Chemistry, 2012, 14, 3013.	4.6	17
52	Synthesis and properties of coreâ€“shell fluorescent hybrids with distinct morphologies based on carbon dots. Journal of Materials Chemistry, 2012, 22, 16219.	6.7	40
53	Selfâ€Assembled Complexes of Horseradish Peroxidase with Magnetic Nanoparticles Showing Enhanced Peroxidase Activity. Advanced Functional Materials, 2012, 22, 1940-1951.	7.8	31
54	High efficiency nanocomposite sorbents for CO2 capture based on amine-functionalized mesoporous capsules. Energy and Environmental Science, 2011, 4, 444-452.	15.6	446

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55	Dielectric study of Poly(styrene-co-butadiene) Composites with Carbon Black, Silica, and Nanoclay. Macromolecules, 2011, 44, 6162-6171.	2.2	106
56	Mesoporous amineâ€bridged polysilsesquioxane for CO₂ capture. , 2011, 1, 278-284.		13
57	Nanohybrid Nafion Membranes for Fuel Cells. ACS Symposium Series, 2010, , 171-185.	0.5	5
58	The synthesis and properties of nanoscale ionic materials. Applied Organometallic Chemistry, 2010, 24, 581-589.	1.7	76
59	High refractive index and high transparency HfO2 nanocomposites for next generation lithography. Journal of Materials Chemistry, 2010, 20, 5186.	6.7	56
60	Facile and Scalable Synthesis of Monodispersed Spherical Capsules with a Mesoporous Shell. Chemistry of Materials, 2010, 22, 2693-2695.	3.2	205
61	Superhydrophilic and solvent resistant coatings on polypropylene fabrics by a simple deposition process. Journal of Materials Chemistry, 2010, 20, 1651.	6.7	35
62	Silicate Dispersion and Mechanical Reinforcement in Polysiloxane/Layered Silicate Nanocomposites. Chemistry of Materials, 2010, 22, 167-174.	3.2	60
63	Functionalized graphene sheetâ€"Poly(vinylidene fluoride) conductive nanocomposites. Journal of Polymer Science, Part B: Polymer Physics, 2009, 47, 888-897.	2.4	421
64	A plasmonic fluid with dynamically tunable optical properties. Journal of Materials Chemistry, 2009, 19, 8728.	6.7	24
65	Solvent-mediated pathways to gelation and phase separation in suspensions of grafted nanoparticles. Soft Matter, 2009, 5, 4256.	1.2	16
66	Photoluminescent Carbogenic Dots. Chemistry of Materials, 2008, 20, 4539-4541.	3.2	571
67	Compatibilizing Poly(vinylidene fluoride)/Nylon-6 Blends with Nanoclay. Macromolecules, 2007, 40, 8271-8276.	2.2	146
68	Nanofibers from Polylactic Acid Nanocomposites: Effect of Nanoclays on Molecular Structures. ACS Symposium Series, 2006, , 217-230.	0.5	8
69	Nanobiohybrids: Bioinspired Sensors. Materials Research Society Symposia Proceedings, 2005, 873, 1.	0.1	0
70	High Quality, Low Cost Continuous Poly-GaN Film on Si and Glass Substrates Produced by Spin Coating. Materials Research Society Symposia Proceedings, 2004, 831, 619.	0.1	0
71	Clayâ"Organosiloxane Hybrids:â€‰ A Route to Cross-Linked Clay Particles and Clay Monoliths. Chemistry of Materials, 2004, 16, 2404-2410.	3.2	70
72	Engineering of silica monoliths and the effect of clay doping on their properties. Journal of Materials Chemistry, 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.	1.7	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.	2.4	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.	2.4	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.	1.6	62
78	Nanostructure and properties of polysiloxane-layered silicate nanocomposites. Journal of Polymer Science, Part B: Polymer Physics, 2000, 38, 1595-1604.	2.4	144
79	Polymer-layered silicate nanocomposites: Synthesis, properties and applications. , 1998, 12, 675-680.		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:Â Model Predictions and Experiment. Macromolecules, 1997, 30, 8000-8009.	2.2	977
83	Synthesis and magnetic properties of Niâ€“Al2O3 thin films. Journal of Applied Physics, 1997, 82, 1189-1195.	1.1	14
84	Rheology of End-Tethered Polymer Layered Silicate Nanocomposites. Macromolecules, 1997, 30, 4097-4102.	2.2	742
85	Lattice Model of Polymer Melt Intercalation in Organically-Modified Layered Silicates. Macromolecules, 1997, 30, 7990-7999.	2.2	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.	2.4	312
87	Relaxations of confined chains in polymer nanocomposites: Glass transition properties of poly(ethylene oxide) intercalated in montmorillonite. , 1997, 35, 59.		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.	3.2	864
90	Polymer Layered Silicate Nanocomposites. Advanced Materials, 1996, 8, 29-35.	11.1	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(É›-caprolactone)-layered silicate nanocomposites. Journal of Polymer Science Part A, 1995, 33, 1047-1057.	2.5	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.	1.9	62
95	Ion-Beam-Induced Densification of Zirconia Sol-Gel Thin Films. Journal of the American Ceramic Society, 1993, 76, 1369-1372.	1.9	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.	1.9	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.	1.9	4
98	Ferroelectric behavior of pulsed laser deposited Ba_xSr_{1â^'x}TiO₃ thin films. Journal of Materials Research, 1993, 8, 1209-1212.	1.2	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: Micaâ€type silicates and layered double hydroxides. Journal of Applied Physics, 1992, 72, 1039-1048.	1.1	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.	1.9	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.	1.9	18
106	On the Development of Biomimetic Sensors: Immobilizaton 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