Jeffrey W Gilman

List of Publications by Year
in descending order

39	4,404	218381	315357
papers	citations	26 h-index	38 g-index

40	40	40	3945
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Flammability Properties of Polymerâ^'Layered-Silicate Nanocomposites. Polypropylene and Polystyrene Nanocompositesâ€. Chemistry of Materials, 2000, 12, 1866-1873.	3.2	1,451
2	Characterization of polymer-layered silicate (clay) nanocomposites by transmission electron microscopy and X-ray diffraction: A comparative study. Journal of Applied Polymer Science, 2003, 87, 1329-1338.	1.3	575
3	An overview of flame retardancy of polymeric materials: application, technology, and future directions. Fire and Materials, 2013, 37, 259-279.	0.9	352
4	Polymer/Layered Silicate Nanocomposites from Thermally Stable Trialkylimidazolium-Treated Montmorillonite. Chemistry of Materials, 2002, 14, 3776-3785.	3.2	281
5	Kinetic analysis of the thermal degradation of polystyreneâ€“montmorillonite nanocomposite. Polymer Degradation and Stability, 2004, 84, 483-492.	2.7	196
6	Investigation of nanodispersion in polystyrene-montmorillonite nanocomposites by solid-state NMR. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 3188-3213.	2.4	122
7	A study of the flammability reduction mechanism of polystyrene-layered silicate nanocomposite: layered silicate reinforced carbonaceous char. Polymers for Advanced Technologies, 2006, 17, 263-271.	1.6	116
8	Effect of carbon nanotubes and montmorillonite on the flammability of epoxy nanocomposites. Polymer Degradation and Stability, 2010, 95, 870-879.	2.7	97
9	Solid state NMR characterization and flammability of styreneâ€“acrylonitrile copolymer montmorillonite nanocomposite. Polymer, 2004, 45, 7627-7638.	1.8	96
10	Flammability reduction of flexible polyurethane foams via carbon nanofiber network formation. Polymers for Advanced Technologies, 2008, 19, 588-595.	1.6	93
11	Characterization of the Dispersion of Clay in a Polyetherimide Nanocomposite. Macromolecules, 2001, 34, 2735-2738.	2.2	89
12	Synthesis and characterization of isosorbide-based polyphosphonates as biobased flame-retardants. Polymer Chemistry, 2014, 5, 5139.	1.9	85
13	Use of a Polyhedral Oligomeric Silsesquioxane (POSS)-Imidazolium Cation as an Organic Modifier for Montmorillonite. Langmuir, 2007, 23, 7707-7714.	1.6	75
14	Improved Thermal Stability of Organically Modified Layered Silicates. Clays and Clay Minerals, 2004, 52, 171-179.	0.6	72
15	Revealing the Interface in Polymer Nanocomposites. ACS Nano, 2011, 5, 3391-3399.	7.3	66
16	Bioinspired Bouligand cellulose nanocrystal composites: a review of mechanical properties. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170050.	1.6	66
17	Binary Cellulose Nanocrystal Blends for Bioinspired Damage Tolerant Photonic Films. Advanced Functional Materials, 2018, 28, 1800032.	7.8	63
18	Relationships between Structure and Rheology in Model Nanocomposites of Ethyleneâ^'Vinyl-Based Copolymers and Organoclays. Macromolecules, 2005, 38, 3765-3775.	2.2	60

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19	Lengthâ€Dependent Mechanics of Carbonâ€Nanotube Networks. Advanced Materials, 2009, 21, 874-878.	11.1	58
20	Orientation dynamics in multiwalled carbon nanotube dispersions under shear flow. Journal of Chemical Physics, 2009, 130, 214903.	1.2	57
21	Simultaneously Tailoring Surface Energies and Thermal Stabilities of Cellulose Nanocrystals Using Ion Exchange: Effects on Polymer Composite Properties for Transportation, Infrastructure, and Renewable Energy Applications. ACS Applied Materials & Interfaces, 2016, 8, 27270-27281.	4.0	47
22	Dielectric Characterization of Confined Water in Chiral Cellulose Nanocrystal Films. ACS Applied Materials & Interfaces, 2017, 9, 14222-14231.	4.0	45
23	Optical Probes for Monitoring Intercalation and Exfoliation in Melt-Processed Polymer Nanocomposites. Macromolecular Rapid Communications, 2004, 25, 788-792.	2.0	37
24	Char-forming behavior of nanofibrillated cellulose treated with glycidyl phenyl POSS. Carbohydrate Polymers, 2012, 88, 847-858.	5.1	34
25	Observation of Interfacial Damage in a Silkâ€Epoxy Composite, Using a Simple Mechanoresponsive Fluorescent Probe. Advanced Materials Interfaces, 2017, 4, 1601018.	1.9	33
26	Ionic liquids-based processing of electrically conducting chitin nanocomposite scaffolds for stem cell growth. Green Chemistry, 2013, 15, 1192.	4.6	30
27	Characterization of flame-retarded polymer combustion chars by solid-state13C and29Si NMR and EPR. Fire and Materials, 1998, 22, 61-67.	0.9	25
28	The pillaring effect of the 1,2-dimethyl-3(benzyl ethyl iso-butyl POSS) imidazolium cation in polymer/montmorillonite nanocomposites. Polymer, 2011, 52, 5335-5343.	1.8	14
29	The Effect of Cellulose Nanocrystal Coatings on the Glass Fiberâ€“Epoxy Interphase. Materials, 2019, 12, 1951.	1.3	14
30	Fluorescently Labeled Cellulose Nanofibers for Environmental Health and Safety Studies. Nanomaterials, 2021, 11, 1015.	1.9	13
31	Flame retardancy of poly(styrene-co-acrylonitrile) by the synergistic interaction between clay and phosphomolybdate hydrates. Polymer Degradation and Stability, 2011, 96, 1000-1008.	2.7	11
32	Tuning the Highâ€Temperature Wetting Behavior of Metals toward Ultrafine Nanoparticles. Angewandte Chemie - International Edition, 2018, 57, 2625-2629.	7.2	9
33	Activation of Mechanophores in a Thermoset Matrix by Instrumented Scratch. ACS Applied Materials & Interfaces, 2021, 13, 55498-55506.	4.0	9
34	Smoldering in Flexible Polyurethane Foams: The Effect of Foam Morphology. ACS Symposium Series, 2012, , 459-479.	0.5	3
35	Formation of extended ionomeric network by bulk polymerization of l,d-lactide with layered-double-hydroxide. Polymer, 2013, 54, 90-101.	1.8	3
36	Quantifying Fluorogenic Dye Hydration in an Epoxy Resin by Noncontact Microwave Dielectric Spectroscopy. Journal of Physical Chemistry B, 2020, 124, 2914-2919.	1.2	3

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37	Visualization of Polymer Dynamics in Cellulose Nanocrystal Matrices Using Fluorescence Lifetime Measurements. ACS Applied Materials & Interfaces, 2022, 14, 10793-10804.	4.0	3
38	Tuning the Highâ€Temperature Wetting Behavior of Metals toward Ultrafine Nanoparticles. Angewandte Chemie, 2018, 130, 2655-2659.	1.6	1
39	Fluorescence Lifetime Imaging of Alkyl Ammonium Modified Self-Assembled Helicoidal Cellulose Nano Crystal Films: How Reactivity Controls Polymer Dynamics. ECS Meeting Abstracts, 2020, MA2020-02, 3018-3018.	0.0	0