

# Gregory M Odegard

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

127  
papers

5,793  
citations

35  
h-index

74  
g-index

158  
ext. papers

6,601  
ext. citations

5.1  
avg. IF

5.93  
L-index

#	Paper	IF	Citations
127	Molecular Dynamics Modeling of Interfacial Interactions between Flattened Carbon Nanotubes and Amorphous Carbon: Implications for Ultra-Lightweight Composites.. <i>ACS Applied Nano Materials</i> , <b>2022</b> , 5, 5915-5924	5.6	2
126	Predicting Mechanical Properties Using Continuum Mechanics-Based Approach: Micro-mechanics and Finite Element Analysis. <i>Springer Series in Materials Science</i> , <b>2021</b> , 203-233	0.9	2
125	Cure Behavior Changes and Compression of Carbon Nanotubes in Aerospace Grade Bismaleimide-Carbon Nanotube Sheet Nanocomposites. <i>ACS Applied Nano Materials</i> , <b>2021</b> , 4, 2476-2485	5.6	3
124	Interfacial modeling of flattened CNT composites with cyanate ester and PEEK polymers. <i>Composites Part B: Engineering</i> , <b>2021</b> , 211, 108672	10	11
123	Molecular Dynamics Modeling to Probe the Effect of Surface Functionalization on the Interfacial Adhesion and Shear Strength of Graphene/Epoxy Nanocomposites <b>2021</b> ,		2
122	Multiscale Modeling of Epoxy-Based Nanocomposites Reinforced with Functionalized and Non-Functionalized Graphene Nanoplatelets. <i>Polymers</i> , <b>2021</b> , 13,	4.5	6
121	Wetting Simulations of High-Performance Polymer Resins on Carbon Surfaces as a Function of Temperature Using Molecular Dynamics. <i>Polymers</i> , <b>2021</b> , 13,	4.5	5
120	A machine learning framework for predicting the shear strength of carbon nanotube-polymer interfaces based on molecular dynamics simulation data. <i>Composites Science and Technology</i> , <b>2021</b> , 207, 108627	8.6	17
119	A Novel Approach to Characterization of Composite Polymer Matrix Materials for Integrated Computational Materials Engineering Approaches <b>2021</b> ,		1
118	Mechanical Response of Polymer Epoxy/BMI Composites with Graphene and a Boron Nitride Monolayer from First Principles. <i>ACS Applied Polymer Materials</i> , <b>2021</b> , 3, 1052-1059	4.3	3
117	Prediction of the Interfacial Properties of High-Performance Polymers and Flattened CNT-Reinforced Composites Using Molecular Dynamics. <i>Langmuir</i> , <b>2021</b> , 37, 11526-11534	4	4
116	Mechanical Properties and Characterization of Epoxy Composites Containing Highly Entangled As-Received and Acid Treated Carbon Nanotubes. <i>Nanomaterials</i> , <b>2021</b> , 11,	5.4	1
115	Computational Investigation of Large-Diameter Carbon Nanotubes in Bundles for High-Strength Materials. <i>ACS Applied Nano Materials</i> , <b>2020</b> , 3, 5014-5018	5.6	6
114	Multiscale Modeling for Virtual Manufacturing of Thermoset Composites <b>2020</b> ,		3
113	Interfacial characteristics between flattened CNT stacks and polyimides: A molecular dynamics study. <i>Computational Materials Science</i> , <b>2020</b> , 185, 109970	3.2	16
112	The assessment of carbon nanotube (CNT) geometry on the mechanical properties of epoxy nanocomposites. <i>Journal of Micromechanics and Molecular Physics</i> , <b>2020</b> , 05, 2050005	1.4	7
111	ReaxFF Reactive Force Field Study of Polymerization of a Polymer Matrix in a Carbon Nanotube-Composite System. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 20488-20497	3.8	12

110	Modeling-Driven Damage Tolerant Design of Graphene Nanoplatelet/Carbon Fiber/Epoxy Hybrid Composite Panels for Full-Scale Aerospace Structures <b>2019</b> ,		2
109	Multiscale modeling of carbon fiber- graphene nanoplatelet-epoxy hybrid composites using a reactive force field. <i>Composites Part B: Engineering</i> , <b>2019</b> , 172, 628-635	10	31
108	Microstructure and properties of precipitation-hardened Zr and Zn-Zr based aluminum alloys. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 788, 1218-1230	5.7	6
107	Accelerated hygrothermal aging of Talc/Cycloaliphatic epoxy composites. <i>Polymer Composites</i> , <b>2019</b> , 40, 2946-2953	3	3
106	Insight into Geometry-Controlled Mechanical Properties of Spiral Carbon-Based Nanostructures. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 3226-3238	3.8	14
105	How to characterize interfacial load transfer in spiral carbon-based nanostructure-reinforced nanocomposites: is this a geometry-dependent process?. <i>Physical Chemistry Chemical Physics</i> , <b>2019</b> , 21, 23880-23892	3.6	6
104	Multiscale modeling of PEEK using reactive molecular dynamics modeling and micromechanics. <i>Polymer</i> , <b>2019</b> , 163, 96-105	3.9	16
103	Investigation of Al-Zn-Zr and Al-Zn-Ni alloys for high electrical conductivity and strength application. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2019</b> , 743, 785-797	5.3	8
102	Molecular Modeling of Cross-Linked Polymers with Complex Cure Pathways: A Case Study of Bismaleimide Resins. <i>Macromolecules</i> , <b>2018</b> , 51, 1830-1840	5.5	37
101	Multiscale thermal modeling of cured cycloaliphatic epoxy/carbon fiber composites. <i>Journal of Applied Polymer Science</i> , <b>2018</b> , 135, 46371	2.9	17
100	Tensile and conductivity properties of epoxy composites containing carbon black and graphene nanoplatelets. <i>Journal of Composite Materials</i> , <b>2018</b> , 52, 3909-3918	2.7	13
99	Simulating the effects of carbon nanotube continuity and interfacial bonding on composite strength and stiffness. <i>Composites Science and Technology</i> , <b>2018</b> , 166, 10-19	8.6	18
98	Cations controlled growth of EMnO2 crystals with tunable facets for electrochemical energy storage. <i>Nano Energy</i> , <b>2018</b> , 48, 301-311	17.1	32
97	Multiscale modeling of carbon fiber/carbon nanotube/epoxy hybrid composites: Comparison of epoxy matrices. <i>Composites Science and Technology</i> , <b>2018</b> , 166, 20-26	8.6	31
96	Effects of carbon fillers on the conductivity and tensile properties of polyetheretherketone composites. <i>Polymer Composites</i> , <b>2018</b> , 39, E807-E816	3	12
95	Determination and Modeling of Mechanical Properties for Graphene Nanoplatelet/Epoxy Composites. <i>Polymer Composites</i> , <b>2018</b> , 39, 1845-1851	3	22
94	6.2 Computational Multiscale Modeling [Nanoscale to Macroscale <b>2018</b> , 28-51		1
93	Thermal, electrical, and mechanical properties of talc- and glass microsphere-Reinforced Cycloaliphatic epoxy composites. <i>Polymer Composites</i> , <b>2018</b> , 39, E1581-E1588	3	2

92	Modeling Skeletal Muscle Stress and Intramuscular Pressure: A Whole Muscle Active-Passive Approach. <i>Journal of Biomechanical Engineering</i> , <b>2018</b> , 140,	2.1	11
91	Advanced Nanoengineered Materials <b>2018</b> , 275-304		
90	Comparing the Mechanical Response of Di-, Tri-, and Tetra-functional Resin Epoxies with Reactive Molecular Dynamics. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>2018</b> , 56, 255-264	2.6	35
89	The development of multiscale models for predicting the mechanical response of GNP reinforced composite plate. <i>Composite Structures</i> , <b>2018</b> , 206, 526-534	5.3	10
88	Thermal conductivity of graphene nanoplatelet/cycloaliphatic epoxy composites: Multiscale modeling. <i>Carbon</i> , <b>2018</b> , 140, 653-663	10.4	32
87	A case for poroelasticity in skeletal muscle finite element analysis: experiment and modeling. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2017</b> , 20, 598-601	2.1	7
86	A validated model of passive skeletal muscle to predict force and intramuscular pressure. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2017</b> , 16, 1011-1022	3.8	19
85	Multiscale modeling and analysis of graphene nanoplatelet/carbon fiber/epoxy hybrid composite. <i>Composites Part B: Engineering</i> , <b>2017</b> , 131, 82-90	10	41
84	Shielding effectiveness of carbon-filled polypropylene composites. <i>Journal of Composite Materials</i> , <b>2016</b> , 50, 2177-2189	2.7	18
83	Accelerated hydrothermal aging of cycloaliphatic epoxy/graphene nanoparticle composites. <i>Polymer Degradation and Stability</i> , <b>2016</b> , 133, 131-135	4.7	12
82	Simulation of mechanical performance limits and failure of carbon nanotube composites. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2016</b> , 24, 025012	2	10
81	Skeletal muscle tensile strain dependence: Hyperviscoelastic nonlinearity. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2016</b> , 53, 445-454	4.1	25
80	Atomic Resolution Studies of W Dopants Effect on the Phase Transformation of VO <sub>2</sub> . <i>Microscopy and Microanalysis</i> , <b>2016</b> , 22, 884-885	0.5	1
79	How does tissue preparation affect skeletal muscle transverse isotropy?. <i>Journal of Biomechanics</i> , <b>2016</b> , 49, 3056-3060	2.9	15
78	Fracture properties of nanographene reinforced EPON 862 thermoset polymer system. <i>Composites Science and Technology</i> , <b>2015</b> , 114, 87-93	8.6	35
77	Asynchronous Crystal Cell Expansion during Lithiation of K(+)-Stabilized $\text{EMnO}_2$ . <i>Nano Letters</i> , <b>2015</b> , 15, 2998-3007	11.5	137
76	The effect of time step, thermostat, and strain rate on ReaxFF simulations of mechanical failure in diamond, graphene, and carbon nanotube. <i>Journal of Computational Chemistry</i> , <b>2015</b> , 36, 1587-96	3.5	61
75	Mechanical properties of graphene nanoplatelet/carbon fiber/epoxy hybrid composites: Multiscale modeling and experiments. <i>Carbon</i> , <b>2015</b> , 95, 100-112	10.4	146

74	Molecular Dynamics and Finite Element Investigation of Polymer Interphase Effects on Effective Stiffness of Wavy Aligned Carbon Nanotube Composites <b>2015</b> ,		1
73	Atomic Origins of Monoclinic-Tetragonal (Rutile) Phase Transition in Doped VO <sub>2</sub> Nanowires. <i>Nano Letters</i> , <b>2015</b> , 15, 7179-88	11.5	39
72	Simulation of the Elastic and Ultimate Tensile Properties of Diamond, Graphene, Carbon Nanotubes, and Amorphous Carbon Using a Revised ReaxFF Parametrization. <i>Journal of Physical Chemistry A</i> , <b>2015</b> , 119, 9710-21	2.8	74
71	Error analysis of cine phase contrast MRI velocity measurements used for strain calculation. <i>Journal of Biomechanics</i> , <b>2015</b> , 48, 95-103	2.9	13
70	Shielding effectiveness of carbon-filled polycarbonate composites. <i>Journal of Applied Polymer Science</i> , <b>2015</b> , 132, n/a-n/a	2.9	9
69	Predicting mechanical response of crosslinked epoxy using ReaxFF. <i>Chemical Physics Letters</i> , <b>2014</b> , 591, 175-178	2.5	93
68	Direct Evidence of Lithium-Induced Atomic Ordering in Amorphous TiO <sub>2</sub> Nanotubes. <i>Chemistry of Materials</i> , <b>2014</b> , 26, 1660-1669	9.6	65
67	Molecular modeling of physical aging in epoxy polymers. <i>Journal of Applied Polymer Science</i> , <b>2013</b> , 128, 660-666	2.9	11
66	Giant stretchability and reversibility of tightly wound helical carbon nanotubes. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 13775-85	16.4	46
65	Molecular modeling of EPON-862/graphite composites: Interfacial characteristics for multiple crosslink densities. <i>Composites Science and Technology</i> , <b>2013</b> , 76, 92-99	8.6	73
64	Effect of chain architecture on the compression behavior of nanoscale polyethylene particles. <i>Nanoscale Research Letters</i> , <b>2013</b> , 8, 322	5	7
63	Size-dependent mechanical behavior of nanoscale polymer particles through coarse-grained molecular dynamics simulation. <i>Nanoscale Research Letters</i> , <b>2013</b> , 8, 541	5	13
62	Mechanical properties of graphene nanoplatelet/epoxy composites. <i>Journal of Applied Polymer Science</i> , <b>2013</b> , 128, 4217-4223	2.9	196
61	Use of a Poroelastic Model to Predict Intramuscular Pressure <b>2013</b> , 2013, 2174-2183		2
60	Finite size effect on the piezoelectric properties of ZnO nanobelts: A molecular dynamics approach. <i>Acta Materialia</i> , <b>2012</b> , 60, 5117-5124	8.4	50
59	Parametric Study of ReaxFF Simulation Parameters for Molecular Dynamics Modeling of Reactive Carbon Gases. <i>Journal of Chemical Theory and Computation</i> , <b>2012</b> , 8, 3003-8	6.4	27
58	Molecular Modeling of the Influence of Crosslink Distribution on Epoxy Polymers <b>2012</b> ,		1
57	Regional and fiber orientation dependent shear properties and anisotropy of bovine meniscus. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2011</b> , 4, 2024-30	4.1	31

56	Transverse mechanical properties of collagen fibers from nanoindentation. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2011</b> , 22, 1375-81	4.5	16
55	Physical aging of epoxy polymers and their composites. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>2011</b> , 49, 1695-1716	2.6	210
54	Nanoclay-modified asphalt materials: Preparation and characterization. <i>Construction and Building Materials</i> , <b>2011</b> , 25, 1072-1078	6.7	278
53	Hyperelastic properties of human meniscal attachments. <i>Journal of Biomechanics</i> , <b>2011</b> , 44, 413-8	2.9	40
52	Molecular modeling of crosslinked epoxy polymers: The effect of crosslink density on thermomechanical properties. <i>Polymer</i> , <b>2011</b> , 52, 2445-2452	3.9	209
51	Multiscale modeling of polymer-carbon nanotube composites <b>2011</b> , 376-399		
50	A method for assessing the fit of a constitutive material model to experimental stress-strain data. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2010</b> , 13, 247-56	2.1	12
49	Nanocomposite electrical generator based on piezoelectric zinc oxide nanowires. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 114303	2.5	43
48	Atomistic Modeling of Cross-linked Epoxy Polymer <b>2010</b> ,		5
47	Transversely isotropic tensile material properties of skeletal muscle tissue. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2010</b> , 3, 124-9	4.1	132
46	Nanoindentation of the insertional zones of human meniscal attachments into underlying bone. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2009</b> , 2, 339-47	4.1	32
45	Multiscale modeling of polymer materials using a statistics-based micromechanics approach. <i>Acta Materialia</i> , <b>2009</b> , 57, 525-532	8.4	16
44	Thermodynamically-Consistent Multiscale Constitutive Modeling of Glassy Polymer Materials. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2009</b> , 43-51	0.3	1
43	Multiscale Modeling of Nanocomposite Materials <b>2009</b> , 221-245		1
42	Intraneural ganglia: a clinical problem deserving a mechanistic explanation and model. <i>Neurosurgical Focus</i> , <b>2009</b> , 26, E11	4.2	15
41	An elastic micropolar mixture theory for predicting elastic properties of cellular materials. <i>Mechanics of Materials</i> , <b>2008</b> , 40, 602-615	3.3	10
40	Nonlinear multiscale modeling of polymer materials. <i>International Journal of Solids and Structures</i> , <b>2007</b> , 44, 1161-1179	3.1	39
39	Multiscale Constitutive Modeling of Polymer Materials <b>2007</b> , 179		0

38	Modeling and Testing of the Viscoelastic Properties of a Graphite Nanoplatelet/Epoxy Composite. <i>Journal of Intelligent Material Systems and Structures</i> , <b>2006</b> , 17, 239-246	2.3	16
37	Facesheet delamination of composite sandwich materials at cryogenic temperatures. <i>Composites Science and Technology</i> , <b>2006</b> , 66, 2423-2435	8.6	32
36	Prediction of Mechanical Properties of Polymers with Various Force Fields <b>2005</b> ,		6
35	Modeling of the mechanical properties of nanoparticle/polymer composites. <i>Polymer</i> , <b>2005</b> , 46, 553-562	3.9	466
34	Computational materials: Multi-scale modeling and simulation of nanostructured materials. <i>Composites Science and Technology</i> , <b>2005</b> , 65, 2416-2434	8.6	169
33	Structure-property relationships in polymer composites with micrometer and submicrometer graphite platelets. <i>Experimental Mechanics</i> , <b>2005</b> , 45, 507-516	2.6	25
32	Characterization of viscoelastic properties of polymeric materials through nanoindentation. <i>Experimental Mechanics</i> , <b>2005</b> , 45, 130-136	2.6	166
31	Effect of Nanotube Functionalization on the Elastic Properties of Polyethylene Nanotube Composites. <i>AIAA Journal</i> , <b>2005</b> , 43, 1828-1835	2.1	73
30	Characterization of viscoelastic properties of polymeric materials through nanoindentation <b>2005</b> , 45, 130		5
29	Modeling of Carbon Nanotube/Polymer Composites <b>2005</b> ,		1
28	Synthesis, Characterization, and Modeling of Nanotube Materials with Variable Stiffness Tethers. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 851, 206		
27	Constitutive modeling of piezoelectric polymer composites. <i>Acta Materialia</i> , <b>2004</b> , 52, 5315-5330	8.4	153
26	Comparison of two models of SWCN polymer composites. <i>Composites Science and Technology</i> , <b>2004</b> , 64, 1011-1020	8.6	49
25	Constitutive Modeling of Crosslinked Nanotube Materials <b>2004</b> ,		3
24	Predicting the Influence of Nano-scale Material Structure on the In-plane Buckling of Orthotropic Plates <b>2004</b> ,		2
23	The stress-strain behavior of polymer-nanotube composites from molecular dynamics simulation. <i>Composites Science and Technology</i> , <b>2003</b> , 63, 1655-1661	8.6	386
22	Constitutive modeling of nanotube-reinforced polymer composites. <i>Composites Science and Technology</i> , <b>2003</b> , 63, 1671-1687	8.6	606
21	2-D nano-scale finite element analysis of a polymer field. <i>Composites Science and Technology</i> , <b>2003</b> , 63, 1581-1590	8.6	36

20	The Effect of Chemical Functionalization on Mechanical Properties of Nanotube/Polymer Composites <b>2003</b> ,		11
19	Modeling and Characterization of Elastic Constants of Functionalized Nanotube Materials. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 791, 340		2
18	Equivalent-continuum modeling of nano-structured materials. <i>Composites Science and Technology</i> , <b>2002</b> , 62, 1869-1880	8.6	486
17	The Effect of Eccentric Loads on the Macroscopic Strain and Stress Distributions in Woven Fabric Composite Iosipescu Specimens. <i>Journal of Composite Materials</i> , <b>2002</b> , 36, 571-588	2.7	10
16	Nano-Scale Finite Element Analysis of Polymer Networks <b>2002</b> ,		1
15	Constitutive Modeling of Nanotube-Reinforced Polymer Composites <b>2002</b> ,		19
14	A continuum elastic-plastic model for woven-fabric/polymer-matrix composite materials under biaxial stresses. <i>Composites Science and Technology</i> , <b>2001</b> , 61, 2501-2510	8.6	12
13	Micro- and mesomechanics of 8-harness satin woven fabric composites: I Evaluation of elastic behavior. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2001</b> , 32, 1627-1655	8.4	47
12	Determination of shear strength of unidirectional composite materials with the Iosipescu and 10° off-axis shear tests. <i>Composites Science and Technology</i> , <b>2000</b> , 60, 2917-2943	8.6	71
11	Elastic-plastic and failure properties of a unidirectional carbon/PMR-15 composite at room and elevated temperatures. <i>Composites Science and Technology</i> , <b>2000</b> , 60, 2979-2988	8.6	60
10	Nonlinear Analysis of Woven Fabric-Reinforced Graphite/PMR-15 Composites under Shear-Dominated Biaxial Loads. <i>Mechanics of Advanced Materials and Structures</i> , <b>2000</b> , 7, 129-152	1.8	23
9	Failure Investigation of Graphite/Polyimide Fabric Composites at Room and Elevated Temperatures Using the Biaxial Iosipescu Test. <i>Journal of Composite Materials</i> , <b>1999</b> , 33, 2038-2079	2.7	15
8	Critical Examination of the Iosipescu Shear Test as Applied to 0degrees Unidirectional Composite Materials. <i>Mechanics of Advanced Materials and Structures</i> , <b>1999</b> , 6, 229-256	1.8	10
7	Elasto-Plastic Analysis of the Iosipescu Shear Test. <i>Journal of Composite Materials</i> , <b>1999</b> , 33, 1981-2001	2.7	14
6	Prediction of Residual Stress Build-up in Polymer Matrix Composite During Cure using a Two-scale Approach		3
5	Multi-scale Approach to Predict Cure-Induced Residual Stresses in an Epoxy System		3
4	Reactive Molecular Dynamics Simulation of Epoxy for the Full Cross-Linking Process. <i>ACS Applied Polymer Materials</i> ,	4.3	1
3	Molecular Dynamics Modeling of Epoxy Resins Using the Reactive Interface Force Field. <i>Macromolecules</i> ,	5.5	2



2	Computationally Guided Design of Large-Diameter Carbon Nanotube Bundles for High-Strength Materials. <i>ACS Applied Nano Materials</i> ,	5.6	2
1	Process modeling and characterization of thermoset composites for residual stress prediction. <i>Mechanics of Advanced Materials and Structures</i> ,1-12	1.8	1