

Samit Roy

List of Publications by Year in descending order

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67
papers

1,398
citations

471509

17
h-index

345221

36
g-index

68
all docs

68
docs citations

68
times ranked

1307
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanoclay-modified asphalt materials: Preparation and characterization. <i>Construction and Building Materials</i> , 2011, 25, 1072-1078.	7.2	349
2	Chemical, Physical, and Mechanical Characterization of Isocyanate Cross-linked Amine-Modified Silica Aerogels. <i>Chemistry of Materials</i> , 2006, 18, 285-296.	6.7	259
3	Modeling of moisture diffusion in the presence of bi-axial damage in polymer matrix composite laminates. <i>International Journal of Solids and Structures</i> , 2001, 38, 7627-7641.	2.7	53
4	Modeling of permeation and damage in graphite/epoxy laminates for cryogenic fuel storage. <i>Composites Science and Technology</i> , 2004, 64, 2051-2065.	7.8	48
5	The changes in flexural properties and microstructures of carbon fiber bismaleimide composite after exposure to a high temperature. <i>Composite Structures</i> , 2014, 108, 57-64.	5.8	48
6	Fracture properties of nanographene reinforced EPON 862 thermoset polymer system. <i>Composites Science and Technology</i> , 2015, 114, 87-93.	7.8	48
7	Modeling of diffusion in the presence of damage in polymer matrix composites. <i>International Journal of Solids and Structures</i> , 2001, 38, 115-126.	2.7	34
8	Characterization of mixed mode fracture properties of nanographene reinforced epoxy and Mode I delamination of its carbon fiber composite. <i>Composites Part B: Engineering</i> , 2018, 134, 98-105.	12.0	34
9	Dynamic compressive behavior of unidirectional IM7/5250-4 laminate after thermal oxidation. <i>Composites Science and Technology</i> , 2012, 72, 159-166.	7.8	32
10	Modeling of permeation and damage in graphite/epoxy laminates for cryogenic tanks in the presence of delaminations and stitch cracks. <i>Composites Science and Technology</i> , 2007, 67, 2592-2605.	7.8	30
11	On the use of polar decomposition in the integration of hypoelastic constitutive laws. <i>International Journal of Engineering Science</i> , 1992, 30, 119-133.	5.0	28
12	Modeling of Anomalous Moisture Diffusion in Polymer Composites: A Finite Element Approach. <i>Journal of Composite Materials</i> , 1999, 33, 1318-1343.	2.4	27
13	Simplified Bulk Experiments and Hygrothermal Nonlinear Viscoelasticity. <i>Mechanics of Time-Dependent Materials</i> , 2004, 8, 303-344.	4.4	24
14	E-Glass/Polypropylene Pultruded Nanocomposite: Manufacture, Characterization, Thermal and Mechanical Properties. <i>Journal of Thermoplastic Composite Materials</i> , 2007, 20, 411-434.	4.2	23
15	A computational investigation of length-scale effects in the fracture behaviour of a graphene sheet using the atomistic J-integral. <i>Engineering Fracture Mechanics</i> , 2019, 207, 165-180.	4.3	23
16	Characterization and modeling of strain assisted diffusion in an epoxy adhesive layer. <i>International Journal of Solids and Structures</i> , 2006, 43, 27-52.	2.7	22
17	Characterization of the viscoelastic behavior of bismaleimide resin before and after exposure to high temperatures. <i>Mechanics of Time-Dependent Materials</i> , 2013, 17, 369-399.	4.4	20
18	A mechanism-based multi-scale model for predicting thermo-oxidative degradation in high temperature polymer matrix composites. <i>Composites Science and Technology</i> , 2011, 71, 1309-1315.	7.8	18

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19	Effect of particle size on mixed-mode fracture of nanographene reinforced epoxy and mode I delamination of its carbon fiber composite. <i>Composite Structures</i> , 2017, 181, 1-8.	5.8	18
20	Modeling of evolving damage in high temperature polymer matrix composites subjected to thermal oxidation. <i>Journal of Materials Science</i> , 2008, 43, 6651-6660.	3.7	17
21	Influence of nano-clay compounding on thermo-oxidative stability and mechanical properties of a thermoset polymer system. <i>Composites Science and Technology</i> , 2013, 84, 8-14.	7.8	17
22	A novel numerical“experimental approach for predicting delamination in high temperature polymer matrix composites. <i>Composite Structures</i> , 2013, 104, 118-124.	5.8	16
23	A Review of In Situ Mechanical Characterization of Polymer Nanocomposites: Prospect and Challenges. <i>Applied Mechanics Reviews</i> , 2017, 69, .	10.1	16
24	A multiscale model to study the enhancement in the compressive strength of multi-walled CNT sheet overwrapped carbon fiber composites. <i>Composite Structures</i> , 2019, 219, 170-178.	5.8	16
25	Analytical modeling of orthotropic diffusivities in a fiber reinforced composite with discontinuities using homogenization. <i>Composites Science and Technology</i> , 2009, 69, 1962-1967.	7.8	15
26	Implicit Time Integration in the Generalized Interpolation Material Point Method for Finite Deformation Hyperelasticity. <i>Mechanics of Advanced Materials and Structures</i> , 2012, 19, 465-473.	2.6	15
27	Modeling of Diffusion in a Micro-Cracked Composite Laminate Using Approximate Solutions. <i>Journal of Composite Materials</i> , 1999, 33, 872-905.	2.4	13
28	Modeling of anomalous moisture diffusion in nanographene reinforced thermoset polymers. <i>Composite Structures</i> , 2015, 122, 1-7.	5.8	13
29	E-Glass/Polypropylene Pultruded Nanocomposite: Manufacture, Characterisation, Thermal and Mechanical Properties. <i>Polymers and Polymer Composites</i> , 2007, 15, 91-102.	1.9	12
30	Characterization and Modeling of the Effect of Environmental Degradation on Interlaminar Shear Strength of Carbon/Epoxy Composites. <i>Polymers and Polymer Composites</i> , 2008, 16, 165-179.	1.9	10
31	Matrix Cracking and Delaminations in Orthotropic Laminates Subjected to Freeze-Thaw: Model Development. <i>Polymers and Polymer Composites</i> , 2002, 10, 327-340.	1.9	8
32	Failure in Composite Materials due to Volumetric Expansion of Freezing Moisture. <i>Journal of Cold Regions Engineering - ASCE</i> , 2004, 18, 135-154.	1.1	8
33	Stress Intensity Factor for an Elliptic Inclusion in Orthotropic Laminates Subjected to Freeze-thaw: Model Verification. <i>Polymers and Polymer Composites</i> , 2002, 10, 571-588.	1.9	7
34	Cohesive Layer Modeling of Time-Dependent Debond Growth in Aggressive Environments. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2006, 128, 11-17.	1.4	7
35	Determination of atomistic integral of graphene sheet using the molecular dynamics method. <i>Composite Interfaces</i> , 2013, 20, 431-442.	2.3	7
36	Modeling of fracture behavior in polymer composites using concurrent multi-scale coupling approach. <i>Mechanics of Advanced Materials and Structures</i> , 2018, 25, 1342-1350.	2.6	7

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37	A Coupled Hygrothermal Cohesive-Layer Constitutive Model for Simulating Debond Growth. <i>Polymers and Polymer Composites</i> , 2003, 11, 633-648.	1.9	6
38	A computational procedure for the simulation of ductile fracture with large plastic deformation. <i>Engineering Fracture Mechanics</i> , 1993, 45, 277-293.	4.3	5
39	A nonlinear viscoelastic fracture analysis of concrete/FRP delamination in aggressive environments. <i>International Journal of Fracture</i> , 2007, 142, 9-27.	2.2	5
40	Prediction of Thermo-Oxidative Degradation in Polymer Matrix Composites Using Micromechanical Modeling and Homogenization at the Macro-Scale. <i>Mechanics of Advanced Materials and Structures</i> , 2012, 19, 68-78.	2.6	5
41	Multiscale modeling of progressive failure in polymer nanocomposites using nanoscale informed damage mechanics. <i>Mechanics of Advanced Materials and Structures</i> , 2017, 24, 45-63.	2.6	5
42	An investigation of flaw-size independence of cohesive traction-separation law at the nanoscale: A molecular dynamics study. <i>Engineering Fracture Mechanics</i> , 2019, 215, 235-245.	4.3	4
43	Moisture-Induced Degradation. , 2012, , 181-236.		4
44	A Three-Dimensional Viscoelastic Analysis of Thin Film Delamination in a Peninsula Blister Specimen. <i>Mechanics of Advanced Materials and Structures</i> , 2007, 14, 379-390.	2.6	3
45	Concurrent Multi-scale Modeling of Nano-Particle Reinforced Polymers using Statistical Coupling of MD and GIMPM. , 2011, , .		3
46	Modeling of toughness enhancement mechanisms in graphene nanocomposites. <i>Mechanics of Advanced Materials and Structures</i> , 2018, 25, 1197-1204.	2.6	3
47	Simulation of surface asperities on a carbon fiber using molecular dynamics and fourier series decomposition to predict interfacial shear strength in polymer matrix composites. <i>Composite Interfaces</i> , 0, , 1-24.	2.3	3
48	Characterization and Modelling of Hygrothermal Effects in Thermoplastic Nanocomposites. <i>Polymers and Polymer Composites</i> , 2011, 19, 527-542.	1.9	2
49	Modeling the Compressive Buckling Strain as a Function of the Nanocomposite Interphase Thickness in a Carbon Nanotube Sheet Wrapped Carbon Fiber Composite. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019, 86, .	2.2	2
50	A Nano-micro-macro-multiscale Model for Progressive Failure Prediction in Advanced Composites. , 2017, , 137-169.		2
51	Modeling of failure due to freezing of moisture and freeze-thaw cycling in composite materials. <i>International Journal of Materials and Product Technology</i> , 2007, 28, 141.	0.2	1
52	On solvent diffusion in a solid with large dilatation. <i>Composites Science and Technology</i> , 2008, 68, 2697-2704.	7.8	1
53	Preface: Special Issue Honoring the Lifelong Contributions of Professor J.N. Reddy. <i>Mechanics of Advanced Materials and Structures</i> , 2012, 19, 1-2.	2.6	1
54	Effect of Nanoparticle Size on Fracture Behavior in Polymer Nanocomposites. , 2020, , .		1

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55	Modeling of Permeation in Graphite/Epoxy Laminates at Cryogenics Temperatures in the Presence of Delaminations and Stitch Cracks. , 2007, , .		0
56	Mechanical Characterization and Simulation of Crosslinked Nanostructured Silica Aerogels. , 2007, , .		0
57	Simulation and Mechanical Characterization of Crosslinked Nanostructured Silica Aerogels. , 2008, , .		0
58	Multi-Scale Modeling of Nano-Particle Reinforced Composites Using Statistical Coupling of MD and MPM. , 2009, , .		0
59	Mechanical Characterization and Computer Simulation of Crosslinked Nanostructured Silica Aerogels. , 2009, , .		0
60	Multi-scale Modeling of Debond Behavior in Nano-Particle Reinforced Polymers. , 2013, , .		0
61	A Multi-Scale Viscoelastic Cohesive Layer Model for Predicting Delamination in HTPMC. , 2014, , .		0
62	Length-Scale Based Fracture Toughness Enhancement Mechanism in Polymer Composites. , 2018, , .		0
63	Predicting the enhancement in the compressive strength of Carbon Fiber Reinforced Polymer Composites by overwrapping Multiwalled Carbon Nanotubes using a Multiscale Approach. , 2018, , .		0
64	2.14 Moisture Diffusion in PMCs. , 2018, , 275-290.		0
65	Fracture Behavior in Polymer Nanocomposites: A Molecular Dynamics Study. , 2021, , .		0
66	Failure Simulation in Notched Polymer Nanocomposites using Molecular Dynamics. , 2022, , .		0
67	A modular concept for the solid-state healing of polymer resins and composites. , 2022, , 87-113.		0