Tomonaga Okabe

List of Publications by Year
in descending order

75 papers	1,016 citations	516710 16 h-index	454955 30 g-index
76 all docs	76 docs citations	76 times ranked	782 citing authors

#	Article	IF	Citations
1	Molecular dynamics simulation of crosslinked epoxy resins: Curing and mechanical properties. European Polymer Journal, 2016, 80, 78-88.	5.4	99
2	Investigating nanostructures in carbon fibres using Raman spectroscopy. Carbon, 2018, 130, 178-184.	10.3	91
3	Curing reaction of epoxy resin composed of mixed base resin and curing agent: Experiments and molecular simulation. Polymer, 2013, 54, 4660-4668.	3.8	85
4	Factors controlling the strength of carbon fibres in tension. Composites Part A: Applied Science and Manufacturing, 2014, 57, 88-94.	7.6	67
5	The effect of nanostructure upon the deformation micromechanics of carbon fibres. Carbon, 2013, 52, 372-378.	10.3	57
6	Numerical simulation of interlaminar damage propagation in CFRP cross-ply laminates under transverse loading. International Journal of Solids and Structures, 2007, 44, 3101-3113.	2.7	56
7	Estimation of strength distribution for a fiber embedded in a single-fiber composite: experiments and statistical simulation based on the elasto-plastic shear-lag approach. Composites Science and Technology, 2001, 61, 1789-1800.	7.8	42
8	Structural Health Monitoring of Cracked Aircraft Panels Repaired with Bonded Patches Using Fiber Bragg Grating Sensors. Applied Composite Materials, 2006, 13, 87-98.	2.5	36
9	Mechanical properties of fiber/matrix interface in polymer matrix composites. Advanced Composite Materials, 2014, 23, 551-570.	1.9	36
10	Tensile failure phenomena in carbon fibres. Carbon, 2016, 107, 474-481.	10.3	36
11	Amine/epoxy stoichiometric ratio dependence of crosslinked structure and ductility in<scp>amineâ€cured</scp>epoxy thermosetting resins. Journal of Applied Polymer Science, 2021, 138, 50542.	2.6	29
12	The effect of nanostructure upon the compressive strength of carbon fibres. Journal of Materials Science, 2013, 48, 2104-2110.	3.7	25
13	Thermoset resin curing simulation using quantum-chemical reaction path calculation and dissipative particle dynamics. Soft Matter, 2021, 17, 6707-6717.	2.7	23
14	Structureâ€“Property Correlation Study for Organic Photovoltaic Polymer Materials Using Data Science Approach. Journal of Physical Chemistry C, 2020, 124, 12871-12882.	3.1	19
15	Uncovering the Mechanism of Size Effect on the Thermomechanical Properties of Highly Cross-Linked Epoxy Resins. Journal of Physical Chemistry B, 2022, 126, 2593-2607.	2.6	18
16	Molecular dynamics simulation of cross-linking processes and material properties for epoxy resins using first-principle calculation combined with global reaction route mapping algorithms. Chemical Physics Letters, 2021, 762, 138104.	2.6	17
17	Characterization of tensile damage progress in stitched CFRP laminates. Advanced Composite Materials, 2007, 16, 223-244.	1.9	16
18	Multiscale modeling of process-induced residual deformation on carbon-fiber-reinforced plastic laminate from quantum calculation to laminate scale finite-element analysis. Mechanics of Materials, 2022, 170, 104332.	3.2	16

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19	Numerical Analysis of Interfacial Bonding of Al-Si Particle and Mild Steel Substrate by Cold Spray Technique Using the SPH Method. Journal of Solid Mechanics and Materials Engineering, 2012, 6, 241-250.	0.5	15
20	Torsional modulus and internal friction of polyacrylonitrile- and pitch-based carbon fibers. Journal of Materials Science, 2015, 50, 7018-7025.	3.7	15
21	Analysis of structure characteristics in laminated graphene oxide nanocomposites using molecular dynamics simulation. Advanced Composite Materials, 2018, 27, 427-438.	1.9	15
22	Prediction for progression of transverse cracking in CFRP cross-ply laminates using Monte Carlo method. Advanced Composite Materials, 2017, 26, 477-491.	1.9	13
23	A multiscale model for the synthesis of thermosetting resins: From the addition reaction to cross-linked network formation. Chemical Physics Letters, 2019, 720, 64-69.	2.6	13
24	Experimental and smoothed particle hydrodynamics analysis of interfacial bonding between aluminum powder particles and aluminum substrate by cold spray technique. International Journal of Advanced Manufacturing Technology, 2019, 103, 4519-4527.	3.0	12
25	Numerical Simulation of Tensile Damage Evolution in FRP Cross-ply Laminates. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2006, 72, 1254-1261.	0.2	11
26	Process design for heat fusion of thermoplastic composites using molecular dynamics and a response surface method. Advanced Composite Materials, 2016, 25, 33-49.	1.9	10
27	Experimental and numerical study on open-hole tension/compression properties of carbon-fiber-reinforced thermoplastic laminates. Journal of Composite Materials, 2022, 56, 2211-2225.	2.4	10
28	Numerical Simulation for Predicting Fatigue Damage Progress in Notched CFRP Laminates by Using Cohesive Elements. Journal of Solid Mechanics and Materials Engineering, 2009, 3, 1202-1211.	0.5	9
29	Clustering Approach for Multidisciplinary Optimum Design of Crossâ€Linked Polymer. Macromolecular Theory and Simulations, 2017, 26, 1600072.	1.4	9
30	1.4 Historical Review of Processing, Microstructures, and Mechanical Properties of PAN-Based Carbon Fibers. , 2018, , 66-85.		9
31	A decoupling scheme for twoâ€scale finite thermoviscoelasticity with thermal and cureâ€induced deformations. International Journal for Numerical Methods in Engineering, 2021, 122, 1133-1166.	2.8	9
32	Numerical Prediction of Fatigue Damage Progress in Holed CFRP Laminates Using Cohesive Elements. Journal of Solid Mechanics and Materials Engineering, 2009, 3, 1212-1221.	0.5	8
33	Development of Thermoplastic Press Sheet with In-Plane Randomly Oriented and Dispersed Carbon Mono-Fibers and Evaluation of the Mechanical Property. Journal of the Japan Society for Composite Materials, 2011, 37, 138-146.	0.2	7
34	Effect of the Microstructure on the Fracture Mode of Short-Fiber Reinforced Plastic Composites. Journal of Solid Mechanics and Materials Engineering, 2009, 3, 998-1009.	0.5	6
35	Damage Growth Analysis in Particle-Reinforced Composite Using Cohesive Element. Advanced Composite Materials, 2011, 20, 569-583.	1.9	6
36	Gate optimization for resin transfer molding in dual-scale porous media: Numerical simulation and experiment measurement. Journal of Composite Materials, 2020, 54, 2131-2145.	2.4	6

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37	Micromechanics of Failure Mode in Fiber Reinforced Plastics. Journal of the Japan Society for Composite Materials, 2009, 35, 256-265.	0.2	6
38	Smoothed particle hydrodynamics in a generalized coordinate system with a finiteâ€deformation constitutive model. International Journal for Numerical Methods in Engineering, 2015, 103, 781-797.	2.8	5
39	Validation of micromechanics models including imperfect interfaces for short fiber thermoplastic composites. Advanced Composite Materials, 2019, 28, 625-638.	1.9	5
40	Micromechanical modeling for the in-plane mechanical behavior of orthogonal three-dimensional woven ceramic matrix composites with transverse and matrix cracking. International Journal of Damage Mechanics, 2022, 31, 165-189.	4.2	5
41	Density Functional Theory for Polymer Phase Separations Induced by Coupling of Chemical Reaction and Elastic Stress. Advanced Theory and Simulations, 2022, 5, 2100385.	2.8	5
42	Prediction of transverse crack progression based on continuum damage mechanics and its application to composite laminates and filament-wound cylindrical pressure vessels. Advanced Composite Materials, 2022, 31, 600-616.	1.9	5
43	Open-hole tensile properties of 3D-printed continuous carbon-fiber-reinforced thermoplastic laminates: Experimental study and multiscale analysis. Journal of Thermoplastic Composite Materials, 2023, 36, 2836-2861.	4.2	5
44	Recent studies on numerical modelling of damage progression in fibre-reinforced plastic composites. Mechanical Engineering Reviews, 2015, 2, 14-00226-14-00226.	4.7	4
45	Fluid-structural design analysis for composite aircraft wings with various fiber properties. Journal of Fluid Science and Technology, 2021, 16, JFST0009-JFST0009.	0.6	4
46	Damage Analysis of CFRP Laminates under the Soft-Body Impact. Journal of the Japan Society for Composite Materials, 2011, 37, 164-171.	0.2	4
47	Numerical Simulation for Interlaminar Damage Growth in CFRP Cross-ply laminates Under Transverse Loading. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2006, 72, 1246-1253.	0.2	2
48	A Numerical Approach for Injection Molding of Short-fiber Reinforced Plastics by Using a Particle Method. Journal of the Japan Society for Composite Materials, 2010, 36, 11-18.	0.2	2
49	Numerical study for tensile strength prediction of unidirectional carbon fiber-reinforced composite considering fiber surface stress concentration. Mechanical Engineering Journal, 2019, 6, 19-00020-19-00020.	0.4	2
50	Generalized coordinate smoothed particle hydrodynamics with an overset method in total Lagrangian formulation. International Journal for Numerical Methods in Engineering, 2022, 123, 4518-4544.	2.8	2
51	Numerical Simulation for Predicting Fatigue Damage Progress in Notched CFRP Cross-Ply Laminates by Using Cohesive Elements. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2009, 75, 304-309.	0.2	1
52	Flow Simulation of Thermoplastic Stampable Sheet Using Particle Method. Journal of the Japan Society for Composite Materials, 2014, 40, 227-237.	0.2	1
53	Process Design for Heat Fusion of Thermoplastic Composites Using Molecular Dynamics and a Response Surface Method. Journal of the Japan Society for Composite Materials, 2016, 42, 67-75.	0.2	1
54	Damage Growth Analysis in Particle Reinforced Composites by Using Cohesive Elements. Journal of the Japan Society for Composite Materials, 2009, 35, 112-120.	0.2	1

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55	Periodic-Cell Simulations for the Microscopic Damage and Strength Properties of Discontinuous Carbon Fiber-Reinforced Plastic Composites. Journal of the Japan Society for Composite Materials, 2009, 35, 149-156.	0.2	1
56	Validation of Micromechanics Models Including Imperfect Interfaces Using Injection Molded Parts of Short Fiber Reinforced Thermoplastics. Journal of the Japan Society for Composite Materials, 2017, 43, 81-89.	0.2	1
57	Prediction of Fill Time in Compression Resin Transfer Molding of Composite Structures. Journal of the Japan Society for Composite Materials, 2020, 46, 92-97.	0.2	1
58	Evaluation of the In-situ Damage and Strength Properties of Thin-ply CFRP Laminates by Micro-scale Finite Element Analysis. Journal of the Japan Society for Composite Materials, 2020, 46, 212-222.	0.2	1
59	Influence of Matrix Plasticity on Local Stress Concentrations Near Loaded Fiber Breaks. Journal of Solid Mechanics and Materials Engineering, 2007, 1, 102-113.	0.5	0
60	Nondestructive Evaluation of Holed CFRP Laminates by a New Technique to Visualize Propagation of Ultrasonic Waves. Journal of Solid Mechanics and Materials Engineering, 2008, 2, 333-341.	0.5	0
61	Fatigue Simulation for Ti/GFRP Laminates by Using Cohesive Elements. Journal of the Japan Society for Composite Materials, 2009, 35, 141-148.	0.2	0
62	Numerical Simulation of the Effect of Interfacial Properties on the Strength of Unidirectional CFRP. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2010, 76, 876-883.	0.2	0
63	Numerical Simulation for Open-Hole Tensile Failure of Lamina-Based and Fabric-Based CFRP Laminates with Explicit Dynamic Finite Element Method. Journal of the Japan Society for Composite Materials, 2016, 42, 125-137.	0.2	0
64	Effects of CNT Addition on Interlaminar Fracture Toughness of Carbon Fiber-Reinforced Plastic Composites. Journal of the Japan Society for Composite Materials, 2016, 42, 193-200.	0.2	0
65	Validation of Micromechanics Models Including Imperfect Interfaces for Short Fiber Composites. Journal of the Japan Society for Composite Materials, 2016, 42, 220-227.	0.2	0
66	Analysis of Structure Characteristics in Laminated Graphene Oxide Nanocomposites Using Molecular Dynamics Simulation. Journal of the Japan Society for Composite Materials, 2016, 42, 76-81.	0.2	0
67	A Study of Stress Concentrations around Fiber Breaks in Unidirectional CF/Epoxy Composites Using Double-Fibers Fragmentation Tests. Journal of the Japan Society for Composite Materials, 2016, 42, 89-97.	0.2	0
68	OS09W0168 Health monitoring with electromagnetic wave transmission line. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003.2, _OS09W0168-_OS09W0168.	0.0	0
69	OS9(5)-22(OS09W0168) Health Monitoring with Electromagnetic Wave Transmission Line. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003, 256.	0.0	0
70	Monitoring of damage under FRP repair patch using electrical time-domain reflectometry. Proceedings of the 1992 Annual Meeting of JSME/MMD, 2003, 2003, 1033-1034.	0.0	0
71	SL11 THE EFFECT OF NANOSTRUCTURE UPON THE DEFORMATION MICROMECHANICS OF CARBON FIBRES. The Proceedings of the Materials and Mechanics Conference, 2012, 2012, _SL11-1_-_SL11-2_.	0.0	0
72	Tensile Strength Prediction of Discontinuous Carbon Fiber Reinforced Thermoplastics with an Open Circular Hole. Journal of the Japan Society for Composite Materials, 2017, 43, 104-111.	0.2	0

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73	Prediction of the Progression of Transverse Cracking in Carbon Fiber-Reinforced Plastic Cross-Ply Laminates Using Monte Carlo Method. Journal of the Japan Society for Composite Materials, 2017, 43, 124-132.	0.2	0
74	Accurate Tensile Strength Distribution of PAN-based Carbon Fibers. Journal of the Japan Society for Composite Materials, 2021, 47, 51-64.	0.2	0
75	Evaluation of Relationship between Molecular Structure and Viscosity Development of Thermoset Resin by Employing All-Atom Molecular Dynamics Simulation. Journal of the Japan Society for Composite Materials, 2021, 47, 97-108.	0.2	0