

# Tomonaga Okabe

## List of Publications by Year in descending order

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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	Open-hole tensile properties of 3D-printed continuous carbon-fiber-reinforced thermoplastic laminates: Experimental study and multiscale analysis. <i>Journal of Thermoplastic Composite Materials</i> , 2023, 36, 2836-2861.	4.2	5
2	Micromechanical modeling for the in-plane mechanical behavior of orthogonal three-dimensional woven ceramic matrix composites with transverse and matrix cracking. <i>International Journal of Damage Mechanics</i> , 2022, 31, 165-189.	4.2	5
3	Density Functional Theory for Polymer Phase Separations Induced by Coupling of Chemical Reaction and Elastic Stress. <i>Advanced Theory and Simulations</i> , 2022, 5, 2100385.	2.8	5
4	Prediction of transverse crack progression based on continuum damage mechanics and its application to composite laminates and filament-wound cylindrical pressure vessels. <i>Advanced Composite Materials</i> , 2022, 31, 600-616.	1.9	5
5	Uncovering the Mechanism of Size Effect on the Thermomechanical Properties of Highly Cross-Linked Epoxy Resins. <i>Journal of Physical Chemistry B</i> , 2022, 126, 2593-2607.	2.6	18
6	Experimental and numerical study on open-hole tension/compression properties of carbon-fiber-reinforced thermoplastic laminates. <i>Journal of Composite Materials</i> , 2022, 56, 2211-2225.	2.4	10
7	Multiscale modeling of process-induced residual deformation on carbon-fiber-reinforced plastic laminate from quantum calculation to laminate scale finite-element analysis. <i>Mechanics of Materials</i> , 2022, 170, 104332.	3.2	16
8	Generalized coordinate smoothed particle hydrodynamics with an overset method in total Lagrangian formulation. <i>International Journal for Numerical Methods in Engineering</i> , 2022, 123, 4518-4544.	2.8	2
9	A decoupling scheme for two-scale finite thermoviscoelasticity with thermal and cure-induced deformations. <i>International Journal for Numerical Methods in Engineering</i> , 2021, 122, 1133-1166.	2.8	9
10	Molecular dynamics simulation of cross-linking processes and material properties for epoxy resins using first-principle calculation combined with global reaction route mapping algorithms. <i>Chemical Physics Letters</i> , 2021, 762, 138104.	2.6	17
11	Fluid-structural design analysis for composite aircraft wings with various fiber properties. <i>Journal of Fluid Science and Technology</i> , 2021, 16, JFST0009-JFST0009.	0.6	4
12	Thermoset resin curing simulation using quantum-chemical reaction path calculation and dissipative particle dynamics. <i>Soft Matter</i> , 2021, 17, 6707-6717.	2.7	23
13	Amine/epoxy stoichiometric ratio dependence of crosslinked structure and ductility in cured epoxy thermosetting resins. <i>Journal of Applied Polymer Science</i> , 2021, 138, 50542.	2.6	29
14	Accurate Tensile Strength Distribution of PAN-based Carbon Fibers. <i>Journal of the Japan Society for Composite Materials</i> , 2021, 47, 51-64.	0.2	0
15	Evaluation of Relationship between Molecular Structure and Viscosity Development of Thermoset Resin by Employing All-Atom Molecular Dynamics Simulation. <i>Journal of the Japan Society for Composite Materials</i> , 2021, 47, 97-108.	0.2	0
16	Gate optimization for resin transfer molding in dual-scale porous media: Numerical simulation and experiment measurement. <i>Journal of Composite Materials</i> , 2020, 54, 2131-2145.	2.4	6
17	Structure-Property Correlation Study for Organic Photovoltaic Polymer Materials Using Data Science Approach. <i>Journal of Physical Chemistry C</i> , 2020, 124, 12871-12882.	3.1	19
18	Prediction of Fill Time in Compression Resin Transfer Molding of Composite Structures. <i>Journal of the Japan Society for Composite Materials</i> , 2020, 46, 92-97.	0.2	1

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19	Evaluation of the In-situ Damage and Strength Properties of Thin-ply CFRP Laminates by Micro-scale Finite Element Analysis. <i>Journal of the Japan Society for Composite Materials</i> , 2020, 46, 212-222.	0.2	1
20	Validation of micromechanics models including imperfect interfaces for short fiber thermoplastic composites. <i>Advanced Composite Materials</i> , 2019, 28, 625-638.	1.9	5
21	Experimental and smoothed particle hydrodynamics analysis of interfacial bonding between aluminum powder particles and aluminum substrate by cold spray technique. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 103, 4519-4527.	3.0	12
22	A multiscale model for the synthesis of thermosetting resins: From the addition reaction to cross-linked network formation. <i>Chemical Physics Letters</i> , 2019, 720, 64-69.	2.6	13
23	Numerical study for tensile strength prediction of unidirectional carbon fiber-reinforced composite considering fiber surface stress concentration. <i>Mechanical Engineering Journal</i> , 2019, 6, 19-00020-19-00020.	0.4	2
24	Analysis of structure characteristics in laminated graphene oxide nanocomposites using molecular dynamics simulation. <i>Advanced Composite Materials</i> , 2018, 27, 427-438.	1.9	15
25	Investigating nanostructures in carbon fibres using Raman spectroscopy. <i>Carbon</i> , 2018, 130, 178-184.	10.3	91
26	1.4 Historical Review of Processing, Microstructures, and Mechanical Properties of PAN-Based Carbon Fibers. , 2018, , 66-85.		9
27	Prediction for progression of transverse cracking in CFRP cross-ply laminates using Monte Carlo method. <i>Advanced Composite Materials</i> , 2017, 26, 477-491.	1.9	13
28	Clustering Approach for Multidisciplinary Optimum Design of Cross-Linked Polymer. <i>Macromolecular Theory and Simulations</i> , 2017, 26, 1600072.	1.4	9
29	Validation of Micromechanics Models Including Imperfect Interfaces Using Injection Molded Parts of Short Fiber Reinforced Thermoplastics. <i>Journal of the Japan Society for Composite Materials</i> , 2017, 43, 81-89.	0.2	1
30	Tensile Strength Prediction of Discontinuous Carbon Fiber Reinforced Thermoplastics with an Open Circular Hole. <i>Journal of the Japan Society for Composite Materials</i> , 2017, 43, 104-111.	0.2	0
31	Prediction of the Progression of Transverse Cracking in Carbon Fiber-Reinforced Plastic Cross-Ply Laminates Using Monte Carlo Method. <i>Journal of the Japan Society for Composite Materials</i> , 2017, 43, 124-132.	0.2	0
32	Numerical Simulation for Open-Hole Tensile Failure of Lamina-Based and Fabric-Based CFRP Laminates with Explicit Dynamic Finite Element Method. <i>Journal of the Japan Society for Composite Materials</i> , 2016, 42, 125-137.	0.2	0
33	Molecular dynamics simulation of crosslinked epoxy resins: Curing and mechanical properties. <i>European Polymer Journal</i> , 2016, 80, 78-88.	5.4	99
34	Process design for heat fusion of thermoplastic composites using molecular dynamics and a response surface method. <i>Advanced Composite Materials</i> , 2016, 25, 33-49.	1.9	10
35	Effects of CNT Addition on Interlaminar Fracture Toughness of Carbon Fiber-Reinforced Plastic Composites. <i>Journal of the Japan Society for Composite Materials</i> , 2016, 42, 193-200.	0.2	0
36	Validation of Micromechanics Models Including Imperfect Interfaces for Short Fiber Composites. <i>Journal of the Japan Society for Composite Materials</i> , 2016, 42, 220-227.	0.2	0

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37	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
38	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
39	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
40	Tensile failure phenomena in carbon fibres. Carbon, 2016, 107, 474-481.	10.3	36
41	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
42	Torsional modulus and internal friction of polyacrylonitrile- and pitch-based carbon fibers. Journal of Materials Science, 2015, 50, 7018-7025.	3.7	15
43	Smoothed particle hydrodynamics in a generalized coordinate system with a finite deformation constitutive model. International Journal for Numerical Methods in Engineering, 2015, 103, 781-797.	2.8	5
44	Factors controlling the strength of carbon fibres in tension. Composites Part A: Applied Science and Manufacturing, 2014, 57, 88-94.	7.6	67
45	Mechanical properties of fiber/matrix interface in polymer matrix composites. Advanced Composite Materials, 2014, 23, 551-570.	1.9	36
46	Flow Simulation of Thermoplastic Stampable Sheet Using Particle Method. Journal of the Japan Society for Composite Materials, 2014, 40, 227-237.	0.2	1
47	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
48	The effect of nanostructure upon the deformation micromechanics of carbon fibres. Carbon, 2013, 52, 372-378.	10.3	57
49	The effect of nanostructure upon the compressive strength of carbon fibres. Journal of Materials Science, 2013, 48, 2104-2110.	3.7	25
50	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
51	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
52	Damage Growth Analysis in Particle-Reinforced Composite Using Cohesive Element. Advanced Composite Materials, 2011, 20, 569-583.	1.9	6
53	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
54	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

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55	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
56	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
57	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
58	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
59	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
60	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
61	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
62	Micromechanics of Failure Mode in Fiber Reinforced Plastics. Journal of the Japan Society for Composite Materials, 2009, 35, 256-265.	0.2	6
63	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
64	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
65	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
66	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
67	Characterization of tensile damage progress in stitched CFRP laminates. Advanced Composite Materials, 2007, 16, 223-244.	1.9	16
68	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
69	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
70	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
71	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
72	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

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73	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
74	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
75	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