

Kunio Hayakawa

List of Publications by Year in descending order

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72
papers

670
citations

1040056

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h-index

580821

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73
all docs

73
docs citations

73
times ranked

457
citing authors

#	ARTICLE	IF	CITATIONS
1	Constitutive and damage evolution equations of elastic-brittle materials based on irreversible thermodynamics. International Journal of Mechanical Sciences, 1997, 39, 473-486.	6.7	225
2	Thermodynamical Modeling of Elastic-Plastic Damage and Experimental Validation of Damage Potential. International Journal of Damage Mechanics, 1997, 6, 333-363.	4.2	128
3	Damage Evolution and Damage Surface of Elastic-Plastic-Damage Materials under Multiaxial Loading. International Journal of Damage Mechanics, 1998, 7, 103-128.	4.2	37
4	Residual Stress In Sheet Metal Parts Made By Incremental Forming Process. AIP Conference Proceedings, 2007, , .	0.4	37
5	Friction coefficients in cold forging: A global perspective. CIRP Annals - Manufacturing Technology, 2018, 67, 261-264.	3.6	31
6	Evaluation of environmentally friendly lubricant for aluminum cold forging using friction test based on spline extrusion. Journal of Manufacturing Processes, 2013, 15, 96-101.	5.9	27
7	A Study of the Lubrication Behavior of Solid Lubricants in the Upsetting Process. Journal of Tribology, 2000, 122, 803-808.	1.9	20
8	Bonding Characteristics of Various Metals by DC Pulse Resistance Heat Pressure Welding. Materials Transactions, 2005, 46, 292-297.	1.2	19
9	Effect of Hardening Rule for Spring Back Behavior of Forging. Procedia Engineering, 2017, 207, 167-172.	1.2	11
10	Evaluation of strength of stainless steel bolt without heat treatment considering Bauschinger effect during manufacturing process. Journal of Materials Processing Technology, 2020, 278, 116481.	6.3	10
11	Modification of Isotropic Hardening Model and Application of Kinematic Hardening Model to Constitutive Equation for Plastic Behavior of Hydrostatic-Pressure-Dependent Polymers. Zairyo/Journal of the Society of Materials Science, Japan, 2004, 53, 143-149.	0.2	9
12	An analysis of relationship between contact resistance and fracture of oxide film for connector contacts using finite element method. , 2014, , .		8
13	Mesh Dependence and Stress Singularity in Local Approach to Creep-Crack Growth Analysis.. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 1993, 59, 1811-1818.	0.2	7
14	Detection of Damage and Fracture of Forging Die by Fractal Property of Acoustic Emission. Materials Transactions, 2004, 45, 3136-3141.	1.2	7
15	Analysis of Fatigue Crack Initiation and Propagation in Cold Forging Tools by Local Approach of Fracture. Materials Transactions, 2004, 45, 461-468.	1.2	7
16	Elastic-plastic Behavior of WC-Co Cemented Carbide Used for Forging Tool Considering Anisotropic Damage and Stress Unilaterality. International Journal of Damage Mechanics, 2010, 19, 421-439.	4.2	7
17	Numerical analysis on effect of surface asperity of piston skirt on lubrication performance. Procedia Manufacturing, 2018, 15, 496-503.	1.9	6
18	Influence of Flow Stress on Lubricating Ability of Environmentally-Friendly Lubricant for Aluminum Alloy Cold Forging. Advanced Materials Research, 2014, 966-967, 301-310.	0.3	5

#	ARTICLE	IF	CITATIONS
19	Electro-thermo-mechanical Finite Element Analysis on DC Pulse Resistance Pressure Sintering Process of Zirconia Part. <i>Procedia Engineering</i> , 2014, 81, 2421-2426.	1.2	5
20	Analysis of Interfacial Damage and Debonding Life Estimation of Cold Forging Tool Coated with Hard Film. <i>Materials Transactions</i> , 2004, 45, 2832-2837.	1.2	4
21	Effects of process conditions on Young's modulus and strength of extrudate in short-fiber-reinforced polypropylene. <i>Polymer Composites</i> , 2007, 28, 29-35.	4.6	4
22	Evaluation of the Mechanical and Electromagnetic Shielding Properties of Carbon Fiber Reinforced Thermoplastics Sheet Made of Unidirectional Tape. <i>Materials Transactions</i> , 2020, 61, 251-255.	1.2	4
23	Experimental investigation of the effects of super-elasticity on the machinability of NiTi alloys. <i>International Journal of Advanced Manufacturing Technology</i> , 2021, 115, 581-593.	3.0	4
24	Shaping of Internal Helical Gear by Two-Step Cold Extrusion. <i>Journal of the Japan Society for Technology of Plasticity</i> , 2013, 54, 64-68.	0.3	3
25	Effect of Hardening Rule on Analysis of Forming and Strength of Multistage Cold Forged Bolt without Heat Treatment. <i>Journal of the Japan Society for Technology of Plasticity</i> , 2016, 57, 1070-1076.	0.3	3
26	Effect of Workpiece Surface Topography on Friction in Cold Forging Using Environmentally-Friendly Lubricant. <i>Key Engineering Materials</i> , 0, 767, 157-162.	0.4	3
27	Difficult Cutting Property of NiTi Alloy and Its Mechanism. <i>Journal of Manufacturing and Materials Processing</i> , 2020, 4, 124.	2.2	3
28	Finite Element Analysis on Roller-straightening Process of Equal Leg Angles. <i>Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan</i> , 2009, 95, 773-779.	0.4	3
29	Prediction Method of Ductile Fracture in Cold Forging Using Anisotropic Ductile Fracture Criterion. <i>Journal of the Japan Society for Technology of Plasticity</i> , 2019, 60, 221-227.	0.3	3
30	Effect of Process Conditions on Young's Modulus and Strength of Extrudate in Short-Fiber-Reinforced Polypropylene. <i>Seikei-Kakou</i> , 2006, 18, 293-299.	0.0	3
31	Comparison of Lubrication Performance by Different Friction Testing Methods Based on Combined Extrusion-Type Forging Process. <i>Journal of the Japan Society for Technology of Plasticity</i> , 2007, 48, 56-60.	0.3	3
32	Constitutive and Damage Evolution Equations for Elastic-Plastic-Damaging Materials Based on Thermodynamics Theory.. <i>Zairyo/Journal of the Society of Materials Science</i> , Japan, 1996, 45, 176-182.	0.2	2
33	Finite Element Analysis of Hot Rolling Wear Test. <i>Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan</i> , 2018, 104, 728-734.	0.4	2
34	Cyclic simple shear test of material for cold forging. <i>Procedia Manufacturing</i> , 2018, 15, 1785-1791.	1.9	2
35	Evaluation of mechanical properties of randomly compression molded carbon fiber reinforced thermoplastic sheet made of unidirectional tape. <i>Procedia Manufacturing</i> , 2018, 15, 1708-1715.	1.9	2
36	Experimental and Numerical Investigation of Residual Stresses in Incremental Forming. <i>Materials Transactions</i> , 2020, 61, 228-233.	1.2	2

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37	Effect of Cutting Speed on Shape Recovery of Work Material in Cutting Process of Super-Elastic NiTi Alloy. International Journal of Automation Technology, 2021, 15, 24-33.	1.0	2
38	Mathematical Description of Anisotropic Damage State in Continuum Damage Mechanics.. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 1994, 60, 2750-2758.	0.2	1
39	Pressure Sintering Characteristics with Chemical Reaction between Dissimilar Metal Powders by DC Pulse Resistance-Sintering Process.. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2001, 67, 2692-2699.	0.2	1
40	Finite Element Analysis of V-Bending of Polypropylene Using Hydrostatic-Pressure Dependent Plastic Constitutive Equation. Key Engineering Materials, 2007, 340-341, 1103-1108.	0.4	1
41	Evaluation of Environmentally Friendly Lubricant for Aluminum Alloy Cold Forging. Journal of the Japan Society for Technology of Plasticity, 2016, 57, 473-478.	0.3	1
42	Electromagnetic shielding property of laminated carbon fiber tape reinforced thermoplastics. Polymer-Plastics Technology and Materials, 2020, 59, 1308-1316.	1.3	1
43	1003 Sintering of thin-walled cylindrical can made from zirconia powder by SPS process. The Proceedings of the Materials and Processing Conference, 2012, 2012.20, _1003-1_-_1003-5_.	0.0	1
44	Net Shape Forming of Dental Prosthetic Crown by DC Pulse Resistance Sintering Process of Titanium Powder Metal. Journal of the Japan Society for Technology of Plasticity, 2007, 48, 561-565.	0.3	1
45	Finite Element Analysis on Interfacial Stress of Scratch Test. Journal of the Japan Society for Technology of Plasticity, 2011, 52, 1181-1186.	0.3	1
46	Prevention of Hexavalent Chromium Formation by Iron-ion-added Electrolyte in Electrochemical Machining of Chromium-containing Steel. International Journal of Electrical Machining, 2021, 26, 9.	0.5	1
47	Milling of sintered carbide using electrochemical reaction $\frac{1}{4}$ Measurement of cutting force and investigation of machining phenomena $\frac{1}{4}$. Denki Kako Gakkaiishi, 2020, 54, 22.	0.3	1
48	Effect of Production Rate on Lubrication Performance of Environmentally-Friendly Lubricant in Combined Forward-Can and Backward-Can Cold Extrusion Test of Aluminum Alloy. Materials Transactions, 2020, 61, 289-294.	1.2	1
49	Milling of Sintered Carbide using Electrochemical Reaction. International Journal of Electrical Machining, 2021, 26, 16.	0.5	1
50	Irreversible Thermodynamic Theory for Constitutive and Damage Evolution Equations of Elastic-Brittle Materials.. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 1993, 59, 1917-1924.	0.2	0
51	Elastic-Plastic Constitutive Equation of WC-Co Cemented Carbides with Anisotropic Damage. AIP Conference Proceedings, 2007, , .	0.4	0
52	Finite Element Analysis of V-Bending of Polypropylene Using Hydrostatic-Pressure-Dependent Plastic Constitutive Equation. Materials Transactions, 2007, 48, 2659-2664.	1.2	0
53	Cold Extrusion of External Gear Having Borethrough Expansion of Inner Diameter. Journal of the Japan Society for Technology of Plasticity, 2012, 53, 140-144.	0.3	0
54	A Joining Method of Shaft and Holed Part Using Plastic Deformation. Procedia Engineering, 2017, 207, 944-949.	1.2	0

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55	Anisotropic Ductile Fracture Estimation of Diagonal Cracks in Flange-Shaped Parts. Minerals, Metals and Materials Series, 2021, , 227-238.	0.4	0
56	Application of Anisotropic Ductile Fracture Model for Prediction of Diagonal Cracks in Outer Rim of Flange-Shaped Parts. Journal of the Japan Society for Technology of Plasticity, 2021, 62, 31-36.	0.3	0
57	Fractal Property of Acoustic Emission of Cold Forward Extrusion Die in Practical Manufacturing-Scale Experiment Using Bolt Part Former. Journal of the Japan Society for Technology of Plasticity, 2006, 47, 606-610.	0.3	0
58	Formulation of Anisotropic Elastic Constitutive Equation for Drawn Polymers Based on Rational Continuum Mechanics. Seikei-Kakou, 2006, 18, 300-305.	0.0	0
59	708 Residual Stress Analysis of Carburized Gear by Elastoplastic Finite Element Method. The Proceedings of Conference of Tokai Branch, 2010, 2010.59, 411-412.	0.0	0
60	Effect of Anisotropic Property of Plastic-Strain-Dependent Young's Modulus of Stainless Steel Sheet on Analytical Accuracy of Springback. Journal of the Japan Society for Technology of Plasticity, 2011, 52, 1187-1192.	0.3	0
61	913 Deep drawing of Carbon Fiber Reinforced Thermoplastics and Its Numerical Analysis. The Proceedings of the Materials and Processing Conference, 2012, 2012.20, _913-1_-_913-5_.	0.0	0
62	Shaping of Gear by Cold Extrusion Using Double Cylindrically Layered Workpiece Consisting of Different Materials. Journal of the Japan Society for Technology of Plasticity, 2012, 53, 929-933.	0.3	0
63	Cold Extrusion of Spur Gear with Inner Spline with Reduction in Outer Diameter or Expansion of Inner Diameter of Workpiece. Journal of the Japan Society for Technology of Plasticity, 2013, 54, 262-266.	0.3	0
64	Cold Extrusion of Spur Gear with Inner Spline. Journal of the Japan Society for Technology of Plasticity, 2013, 54, 69-73.	0.3	0
65	409 Effect of Hardening Rule on Forming and Estimation of Strength of Multi-Step Cold Forged Bolt. The Proceedings of the Materials and Processing Conference, 2015, 2015.23, _409-1_-_409-5_.	0.0	0
66	Workpiece-Tool Coupled Analysis on Bulk Forming Process. Journal of the Japan Society for Technology of Plasticity, 2016, 57, 90-94.	0.3	0
67	Recovery of Sintered Carbide Material in Electrochemical Machining Process. Lecture Notes in Networks and Systems, 2019, , 11-19.	0.7	0
68	Prevention of Hexavalent Chromium Formation by Iron-ion-added Electrolyte in Electrochemical Machining of Chromium-containing Steel. Denki Kako Gakkaishi, 2020, 54, 2.	0.3	0
69	Effects of Tool Surface Geometry on Temperature Distribution and Material Properties of an Aluminum Alloy in Friction Stir Welding. Materials Transactions, 2020, 61, 276-281.	1.2	0
70	Effect of Cutting Temperature on Phase Transformation in Cutting of NiTi Alloy. , 2020, , .		0
71	Influence of Tool pin Profiles in Friction Stir Welding of Aluminum Alloy and Polycarbonate. Defect and Diffusion Forum, 0, 414, 185-190.	0.4	0
72	Temperature Dependency of Friction of Titanium Alloy by Forward Rod-Backward can Combined Extrusion Test. Defect and Diffusion Forum, 0, 414, 163-168.	0.4	0