

# Gang Liu

## List of Publications by Year in descending order

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103  
papers

1,634  
citations

279487

23  
h-index

395343

33  
g-index

104  
all docs

104  
docs citations

104  
times ranked

740  
citing authors

#	ARTICLE	IF	CITATIONS
1	Explanation of the mushroom effect in the rotary forging of a cylinder. Journal of Materials Processing Technology, 2004, 151, 178-182.	3.1	73
2	Effect of post-weld heat treatment on the microstructure and plastic deformation behavior of friction stir welded 2024. Materials & Design, 2011, 32, 5055-5060.	5.1	65
3	Behavior and modeling of flow softening and ductile damage evolution in hot forming of TA15 alloy sheets. Materials and Design, 2015, 85, 135-148.	3.3	65
4	Control and use of wrinkles in tube hydroforming. Journal of Materials Processing Technology, 2007, 182, 6-11.	3.1	58
5	Formability and microstructure evolution for hot gas forming of laser-welded TA15 titanium alloy tubes. Materials and Design, 2016, 91, 269-277.	3.3	50
6	Effects of strain state and slip mode on the texture evolution of a near- $\beta$ TA15 titanium alloy during hot deformation based on crystal plasticity method. Journal of Materials Science and Technology, 2020, 38, 125-134.	5.6	44
7	The precision forming of pin parts by cold-drawing and rotary-forging. Journal of Materials Processing Technology, 1999, 86, 252-256.	3.1	42
8	Formability testing of AZ31B magnesium alloy tube at elevated temperature. Journal of Materials Processing Technology, 2010, 210, 877-884.	3.1	42
9	Analysis of thinning at the transition corner in tube hydroforming. Journal of Materials Processing Technology, 2006, 177, 688-691.	3.1	41
10	Characterization of Organic Surfactant on Montmorillonite Nanoclay to Be Used in Bitumen. Journal of Materials in Civil Engineering, 2010, 22, 794-799.	1.3	38
11	Mechanism of saturated flow stress during hot tensile deformation of a TA15 Ti alloy. Materials and Design, 2015, 86, 146-151.	3.3	38
12	Microstructural investigations for laser welded joints of Ti-22Al-25Nb alloy sheets upon large deformation at elevated temperature. Materials and Design, 2016, 90, 723-732.	3.3	35
13	Creep behavior and effects of heat treatment on creep resistance of Ti-22Al-24Nb-0.5Mo alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 680, 182-189.	2.6	35
14	High-efficiency forming processes for complex thin-walled titanium alloys components: state-of-the-art and perspectives. International Journal of Extreme Manufacturing, 2020, 2, 032001.	6.3	31
15	Study on the mixed dynamic recrystallization mechanism during the globularization process of laser-welded TA15 Ti-alloy joint under hot tensile deformation. Materials Characterization, 2017, 126, 57-63.	1.9	30
16	New Developments of Hydroforming in China. Materials Transactions, 2012, 53, 787-795.	0.4	29
17	Progress in shell hydroforming. Journal of Materials Processing Technology, 2005, 167, 230-236.	3.1	28
18	Dielectric Behavior of Na <sub>0.5</sub> Bi <sub>0.5</sub> Ti <sub>3</sub> -Based Composites Incorporating Silver Particles. Journal of the American Ceramic Society, 2004, 87, 742-745.	1.9	27

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19	Analysis on critical conditions of sidewall wrinkling for hydroforming of thin-walled Tee-joint. International Journal of Machine Tools and Manufacture, 2015, 97, 42-49.	6.2	27
20	Formability and microstructure of Ti22Al24.5Nb0.5Mo rolled sheet within hot gas bulging tests at constant equivalent strain rate. Materials and Design, 2016, 108, 298-307.	3.3	27
21	Recrystallization behavior during hot tensile deformation of TA15 titanium alloy sheet with substantial prior deformed substructures. Materials Characterization, 2019, 151, 429-435.	1.9	27
22	Analysis of deformation inhomogeneity and slip mode of TA15 titanium alloy sheets during the hot tensile process based on crystal plasticity model. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 30-39.	2.6	27
23	Enhanced formability and forming efficiency for two-phase titanium alloys by Fast light Alloys Stamping Technology (FAST). Materials and Design, 2020, 194, 108948.	3.3	26
24	High Pressure Pneumatic Forming of Ti-3Al-2.5V Titanium Tubes in a Square Cross-Sectional Die. Materials, 2014, 7, 5992-6009.	1.3	24
25	Effect of vacuum annealing on microstructure and mechanical properties of TA15 titanium alloy sheets. Transactions of Nonferrous Metals Society of China, 2015, 25, 1881-1888.	1.7	23
26	Effect of feeding length on deforming behavior of Ti-3Al-2.5V tubular components prepared by tube gas forming at elevated temperature. International Journal of Advanced Manufacturing Technology, 2015, 81, 1809-1816.	1.5	22
27	Research of Metal Flow Behavior during Extrusion with Active Friction. Journal of Materials Engineering and Performance, 2008, 17, 7-14.	1.2	21
28	Experimental and modelling study of an approach to enhance gas bulging formability of TA15 titanium alloy tube based on dynamic recrystallization. Journal of Materials Processing Technology, 2018, 259, 387-396.	3.1	21
29	Microstructure analysis on enhancing mechanical properties at 750°C and room temperature of Ti-22Al-24Nb-0.5Mo alloy tubes fabricated by hot gas forming. Journal of Alloys and Compounds, 2019, 789, 639-646.	2.8	20
30	A unified internal state variable material model for Ti2AlNb-alloy and its applications in hot gas forming. International Journal of Mechanical Sciences, 2019, 164, 105126.	3.6	19
31	FEA on deformation behavior of tailor-welded tube in hydroforming. Journal of Materials Processing Technology, 2007, 187-188, 287-291.	3.1	18
32	Effect of recrystallization on hot deformation mechanism of TA15 titanium alloy under uniaxial tension and biaxial gas bulging conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 708, 149-158.	2.6	18
33	Process optimization diagram based on FEM simulation for extrusion of AZ31 profile. Transactions of Nonferrous Metals Society of China, 2008, 18, s247-s251.	1.7	17
34	Effect of tool temperature and punch speed on hot stamping of ultra high strength steel. Transactions of Nonferrous Metals Society of China, 2012, 22, s534-s541.	1.7	17
35	Simulating sheet metal double-sided hydroforming by using thick shell element. Journal of Materials Processing Technology, 2015, 221, 13-20.	3.1	17
36	Finite Element Simulation of Magnesium Extrusion to Manufacture a Cross-Shaped Profile. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2007, 129, 607-614.	1.3	16

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37	Wrinkling behavior of magnesium alloy tube in warm hydroforming. Transactions of Nonferrous Metals Society of China, 2010, 20, 1288-1293.	1.7	16
38	Warm hydroforming of magnesium alloy tube with large expansion ratio. Transactions of Nonferrous Metals Society of China, 2010, 20, 2071-2075.	1.7	16
39	Overview on constitutive modeling for hydroforming with the existence of through-thickness normal stress. Journal of Materials Processing Technology, 2012, 212, 2228-2237.	3.1	16
40	Effect of thermal cycling on the damping behavior in alumina borate whisker with and without Bi <sub>2</sub> O <sub>3</sub> coating reinforced pure aluminum composites. Materials & Design, 2014, 60, 244-249.	5.1	16
41	The deformation and microstructure of Ti-3Al-2.5V tubular component for non-uniform temperature hot gas forming. International Journal of Advanced Manufacturing Technology, 2017, 88, 2143-2152.	1.5	16
42	Wrinkling behavior of hydro bending of carbon steel/Al-alloy bi-layered tubes. Transactions of Nonferrous Metals Society of China, 2012, 22, s560-s565.	1.7	15
43	Warm hydroforming of magnesium alloy tube with large expansion ratio within non-uniform temperature field. Transactions of Nonferrous Metals Society of China, 2012, 22, s408-s415.	1.7	15
44	Loading path and microstructure study of Ti-3Al-2.5V tubular components within hot gas forming at 800°C. International Journal of Advanced Manufacturing Technology, 2016, 87, 1823-1833.	1.5	15
45	Effects of annealing on microstructure and deformation uniformity of Ti-22Al-24Nb-0.5Mo laser-welded joints. Materials and Design, 2017, 130, 166-174.	3.3	15
46	An Approach to Improve Thickness Uniformity of TA15 Tubular Part Formed by Gas Bulging Process. Advanced Materials Research, 2013, 712-715, 651-657.	0.3	13
47	Microstructure and mechanical properties of Ti <sub>2</sub> AlNb cup-shaped part prepared by hot gas forming: determining forming temperature, strain rate, and heat treatment. International Journal of Advanced Manufacturing Technology, 2017, 92, 4583-4594.	1.5	13
48	Investigations on the NiAl-Cr(Mo) eutectic alloy with optimized microstructure and improved room-temperature compressive properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 813, 141138.	2.6	13
49	Effect of grain size on the yield stress and microscopic mechanism of a near- $\beta$ titanium alloy during non-superplastic hot deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 840, 142932.	2.6	13
50	Experimental investigation into the electropulsing assisted pulsating gas forming of CP-Ti tubes. Journal of Materials Processing Technology, 2020, 278, 116492.	3.1	12
51	Effect of microstructure on mechanical properties of net-structured TiBw/TA15 composite subjected to hot plastic deformation. Composites Part B: Engineering, 2020, 187, 107798.	5.9	12
52	Microstructure and mechanical properties of Ti-6Al-4V/Ti-22Al-25Nb joint formed by diffusion bonding. Transactions of Nonferrous Metals Society of China, 2021, 31, 1339-1349.	1.7	12
53	Hot Tensile Behavior and Self-consistent Constitutive Modeling of TA15 Titanium Alloy Sheets. Journal of Materials Engineering and Performance, 2015, 24, 4647-4655.	1.2	11
54	Fundamentals, processes and equipment for hot medium pressure forming of light material tubular components. International Journal of Lightweight Materials and Manufacture, 2020, 3, 1-19.	1.3	11

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55	Adhesion-Shielding based synthesis of interfacially active magnetic Janus nanoparticles. Journal of Colloid and Interface Science, 2022, 607, 1741-1753.	5.0	11
56	Effects of flow stress behaviour, pressure loading path and temperature variation on high-pressure pneumatic forming of Ti-3Al-2.5V tubes. International Journal of Advanced Manufacturing Technology, 2016, 85, 869-879.	1.5	10
57	Study on fast gas forming with in-die quenching for titanium alloys and the strengthening mechanisms of the components. Journal of Materials Research and Technology, 2022, 18, 3916-3932.	2.6	10
58	Compressive formability of 7075 aluminum alloy rings under hydrostatic pressure. Transactions of Nonferrous Metals Society of China, 2006, 16, 1103-1109.	1.7	9
59	Formability Determination of Titanium Alloy Tube for High Pressure Pneumatic Forming at Elevated Temperature. Procedia Engineering, 2014, 81, 2243-2248.	1.2	9
60	Prediction of microstructure evolution during hot gas forming of Ti2AlNb-based alloy tubular component with square cross-section. Procedia Manufacturing, 2018, 15, 1156-1163.	1.9	9
61	Effect of internal pressure distribution on thickness uniformity of hydroforming Y-shaped tube. Transactions of Nonferrous Metals Society of China, 2011, 21, s423-s428.	1.7	8
62	The thermal behavior of alumina borate whisker with Bi(OH)3 and Sn(OH)4 coatings. Powder Technology, 2012, 218, 124-130.	2.1	8
63	Anisotropic Deformation Behavior and Forming Limit of Hot-Rolled Al/Mg/Al Three-Layered Composite Sheets. Jom, 2019, 71, 1696-1704.	0.9	8
64	Dynamic Softening and Hardening Behavior and the Micro-Mechanism of a TC31 High Temperature Titanium Alloy Sheet within Hot Deformation. Materials, 2021, 14, 6515.	1.3	8
65	Hydroforming of AZ61A tubular component with various cross sections. Transactions of Nonferrous Metals Society of China, 2009, 19, s398-s402.	1.7	7
66	Effects of Preform on Thickness Distribution of Hydroformed Y-Shaped Tube. Advanced Materials Research, 2011, 189-193, 2796-2800.	0.3	7
67	Damping peak and damping mechanism in Al18B4O33w/Al composite containing Sn and Bi interfacial phases at room temperature. Materials & Design, 2013, 46, 916-921.	5.1	7
68	Mechanism of Hydrojoining and Approach to Increase Torsion Strength of Assembled Camshafts. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2015, 137, .	1.3	7
69	Evolution and Distribution of Geometrically Necessary Dislocations for TA15 Titanium Alloy Sheets During the Hot Tensile Process. Jom, 2019, 71, 2303-2312.	0.9	7
70	Hot Gas Pressure Forming of Ti-55 High Temperature Titanium Alloy Tubular Component. Materials, 2020, 13, 4636.	1.3	6
71	Progress on rapid hot gas forming of titanium alloys: mechanism, modelling, innovations and applications. Procedia Manufacturing, 2020, 50, 265-270.	1.9	6
72	Subcritical crack growth at bimaterial interfaces: Part II. microstructural effects on fracture resistance of metal/ceramic interfaces. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 213-219.	1.1	5

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73	Influence of tube properties on quality of hydropiercing. Transactions of Nonferrous Metals Society of China, 2011, 21, s456-s460.	1.7	5
74	Welded double sheet hydroforming of complex hollow component. Transactions of Nonferrous Metals Society of China, 2012, 22, s309-s314.	1.7	5
75	Influence of punch shape on geometrical profile and quality of hole piercing-flanging under high pressure. International Journal of Advanced Manufacturing Technology, 2016, 86, 1253-1262.	1.5	5
76	Microstructure and texture evolution during the fabricating and hot gas free bulging process of a laser-welded Ti-22Al-25Nb alloy tube. Materials Characterization, 2017, 131, 116-127.	1.9	5
77	Correlation between softening mechanisms and deformation non-uniformity of laser-welded titanium alloy tube during gas bulging process. Materials Characterization, 2017, 133, 196-205.	1.9	5
78	Experimental and simulated analysis of texture evolution of TA15 titanium alloy sheet during hot tensile deformation at 750Å°C. Procedia Engineering, 2017, 207, 2179-2184.	1.2	5
79	Microstructure, mechanical properties and post-weld heat treatments of dissimilar laser-welded Ti2AlNb/Ti60 sheet. Rare Metals, 2023, 42, 1332-1342.	3.6	5
80	A novel composited process of solution treatment-hot gas forming and stress relaxation aging for titanium alloys. Journal of Materials Processing Technology, 2021, 288, 116904.	3.1	5
81	Tunable Friction Properties of Periodic Wrinkled BaTiO <sub>3</sub> Membranes. Advanced Materials Interfaces, 2022, 9, .	1.9	5
82	Fabrication and joining of NiAl and TiAl intermetallics by additive sintering. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 849, 143493.	2.6	5
83	Prediction and analysis of wrinkling in tube hydroforming process. International Journal of Materials and Product Technology, 2011, 40, 296.	0.1	4
84	Effects of sintering temperature of whisker preform on the microstructures and tensile properties of Bi(OH)3-coated Al18B4O33 whisker-reinforced aluminum matrix composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 5184-5189.	2.6	4
85	Simulation and Experiment on Warm Hydroforming of AZ31 Magnesium Alloy Tube. , 2013, , .		4
86	Progress on High Pressure Pneumatic Forming and Warm Hydroforming of Titanium and Magnesium Alloy Tubular Components. Materials Science Forum, 0, 783-786, 2456-2461.	0.3	4
87	Characteristics of thickness distribution of tailor-welded tube hydroforming. Central South University, 2011, 18, 1813-1818.	0.5	3
88	Deformation evolution mechanism during hydro-bulging of tailor-welded tube with dissimilar thickness. International Journal of Advanced Manufacturing Technology, 2010, 46, 111-116.	1.5	2
89	Deformation behaviour of laser-welded tube blank of TA15 Ti-alloy for gas forming at elevated temperature. MATEC Web of Conferences, 2015, 21, 06005.	0.1	2
90	Study of NiAl-based alloy parts produced by metal injection moulding. Powder Metallurgy, 2022, 65, 52-60.	0.9	2

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91	Hot Gas Pressure Forming and Post Aging Treatment of Ti-22Al-24.5Nb-0.5Mo Square Tubes. Journal of Materials Engineering and Performance, 0, , 1.	1.2	2
92	Effects of internal pressure on wrinkling in warm tube hydroforming. Materials Research Innovations, 2011, 15, s478-s481.	1.0	1
93	Effect of End Angle of Counterpunch on Y-Shape Hydroforming. Advanced Materials Research, 0, 753-755, 1539-1542.	0.3	1
94	An Approach for Increasing Branch Height of a Hydroforming T-Joint With Smaller Branch Diameter. , 2013, , .		1
95	The effect of pressurization path on high pressure gas forming of Ti-3Al-2.5V at elevated temperature. MATEC Web of Conferences, 2015, 21, 06007.	0.1	1
96	Approach to Enhance Gas Bulging Formability of TA15 Titanium Alloy Tube Based on Dynamic Recrystallization. Procedia Engineering, 2017, 207, 2340-2345.	1.2	1
97	Microstructure and mechanical properties at elevated temperature of laser-welded Ti-22Al-25Nb alloy sheets. Intermetallics, 2019, 112, 106516.	1.8	1
98	Preparation of high-performance NiAlV composite sheets with novel layered microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 833, 142586.	2.6	1
99	Effects of Nonconstant Strain Rate on Forming Limit and Efficiency in High Pressure Pneumatic Forming of Ti-Alloy Components. Key Engineering Materials, 0, 622-623, 347-352.	0.4	0
100	Effects of the UO forming process on microstructure evolution of TA15 tubes. Materials Research Innovations, 2015, 19, S5-1202-S5-1207.	1.0	0
101	Thickness and Microstructure Analysis on Hot Gas Bulged Cup-Shaped Parts of Ti-22Al-24.5Nb-0.5Mo. Key Engineering Materials, 0, 716, 138-143.	0.4	0
102	Investigation on precision and performance for hot gas forming of thin-walled components of Ti2AlNb-based alloy. MATEC Web of Conferences, 2018, 190, 07001.	0.1	0
103	Analysing the Interaction between Microscopic Deformation, Microstructure and Void Evolution of Near- $\pm$ Titanium Alloys during Non-Superplastic Hot Deformation by an Integrated Crystal Plasticity Finite Element Model. Materials, 2022, 15, 294.	1.3	0