

# Wei Tong

## List of Publications by Year in descending order

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75  
papers

2,474  
citations

257450

24  
h-index

197818

49  
g-index

78  
all docs

78  
docs citations

78  
times ranked

1694  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fast, Robust and Accurate Digital Image Correlation Calculation Without Redundant Computations. <i>Experimental Mechanics</i> , 2013, 53, 1277-1289.	2.0	400
2	An Evaluation of Digital Image Correlation Criteria for Strain Mapping Applications. <i>Strain</i> , 2005, 41, 167-175.	2.4	227
3	Spatio-temporal characteristics of the Portevinâ€œLe Châtelier effect in austenitic steel with twinning induced plasticity. <i>International Journal of Plasticity</i> , 2009, 25, 2298-2330.	8.8	161
4	Microstructural effects of AZ31 magnesium alloy on its tensile deformation and failure behaviors. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 418, 341-356.	5.6	143
5	Pressure-shear impact investigation of strain rate history effects in oxygen-free high-conductivity copper. <i>Journal of the Mechanics and Physics of Solids</i> , 1992, 40, 1251-1294.	4.8	111
6	Deformation and fracture of miniature tensile bars with resistance-spot-weld microstructures. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005, 36, 2651-2669.	2.2	100
7	An experimental study on grain deformation and interactions in an Al-0.5%Mg multicrystal. <i>International Journal of Plasticity</i> , 2004, 20, 523-542.	8.8	98
8	Time-resolved strain mapping measurements of individual Portevinâ€œLe Chatelier deformation bands. <i>Scripta Materialia</i> , 2005, 53, 87-92.	5.2	97
9	Cracking and decohesion of a thin Al <sub>2</sub> O <sub>3</sub> film on a ductile Alâ€œ5%Mg substrate. <i>Acta Materialia</i> , 2005, 53, 477-485.	7.9	82
10	Detection of plastic deformation patterns in a binary aluminum alloy. <i>Experimental Mechanics</i> , 1997, 37, 452-459.	2.0	76
11	ERROR ASSESSMENT FOR STRAIN MAPPING BY DIGITAL IMAGE CORRELATION. <i>Experimental Techniques</i> , 1998, 22, 19-21.	1.5	74
12	Inertial Effects on Void Growth in Porous Viscoplastic Materials. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1995, 62, 633-639.	2.2	64
13	Fatigue properties of a dental implant produced by electron beam melting Â® (EBM). <i>Journal of Materials Processing Technology</i> , 2015, 226, 255-263.	6.3	64
14	In-situ surface characterization of a binary aluminum alloy during tensile deformation. <i>Scripta Materialia</i> , 1997, 36, 1339-1344.	5.2	43
15	Strain characterization of propagative deformation bands. <i>Journal of the Mechanics and Physics of Solids</i> , 1998, 46, 2087-2102.	4.8	42
16	Identification of post-necking strain hardening behavior of thin sheet metals from image-based surface strain data in uniaxial tension tests. <i>International Journal of Solids and Structures</i> , 2015, 75-76, 12-31.	2.7	42
17	Dynamic pore collapse in viscoplastic materials. <i>Journal of Applied Physics</i> , 1993, 74, 2425-2435.	2.5	40
18	An iterative procedure for determining effective stressâ€œstrain curves of sheet metals. <i>International Journal of Mechanics and Materials in Design</i> , 2009, 5, 13-27.	3.0	37

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19	Subpixel image registration with reduced bias. Optics Letters, 2011, 36, 763.	3.3	37
20	The bio-compatible dental implant designed by using non-stochastic porosity produced by Electron Beam Melting® (EBM). Journal of Materials Processing Technology, 2014, 214, 1728-1739.	6.3	37
21	Formulation of Lucas-Kanade Digital Image Correlation Algorithms for Non-contact Deformation Measurements: A Review. Strain, 2013, 49, 313-334.	2.4	35
22	A plane stress anisotropic plastic flow theory for orthotropic sheet metals. International Journal of Plasticity, 2006, 22, 497-535.	8.8	34
23	A high resolution DIC technique for measuring small thermal expansion of film specimens. Optics and Lasers in Engineering, 2013, 51, 30-33.	3.8	34
24	Particle-level modeling of dynamic consolidation of Ti-SiC powders. Modelling and Simulation in Materials Science and Engineering, 1995, 3, 771-796.	2.0	27
25	Effective elastic moduli and characterization of a particulate metal-matrix composite with damaged particles. Composites Science and Technology, 1994, 52, 247-252.	7.8	24
26	Uniaxial Tensile and Simple Shear Behavior of Resistance Spot-Welded Dual-Phase Steel Joints. Journal of Materials Engineering and Performance, 2008, 17, 517-534.	2.5	24
27	Plastic surface strain mapping of bent sheets by image correlation. Experimental Mechanics, 2004, 44, 502-511.	2.0	22
28	A Finite Element Analysis of a Tapered Flat Sheet Tensile Specimen. Experimental Mechanics, 2009, 49, 317-330.	2.0	21
29	Processing SiC-particulate reinforced titanium-based metal matrix composites by shock wave consolidation. Acta Metallurgica Et Materialia, 1995, 43, 235-250.	1.8	20
30	Strain Accumulation in Polymer Electrolyte Membrane and Membrane Electrode Assembly Materials During a Single Hydration/Dehydration Cycle. Journal of Fuel Cell Science and Technology, 2007, 4, 19-28.	0.8	18
31	A Constitutive Model for Friction in Forming. CIRP Annals - Manufacturing Technology, 1993, 42, 361-366.	3.6	16
32	Technical Application Series. AN ADAPTIVE BACKWARD IMAGE CORRELATION TECHNIQUE FOR DEFORMATION MAPPING OF A GROWING CRACK IN THIN SHEETS. Experimental Techniques, 2004, 28, 63-67.	1.5	14
33	Modeling the Rotation of Orthotropic Axes of Sheet Metals Subjected to Off-Axis Uniaxial Tension. Journal of Applied Mechanics, Transactions ASME, 2004, 71, 521-531.	2.2	13
34	Mode I Fracture at Spot Welds in Dual-Phase Steel: An Application of Reverse Digital Image Correlation. Experimental Mechanics, 2010, 50, 1199-1212.	2.0	13
35	An Improved Error Evaluation in One-Dimensional Deformation Measurements by Linear Digital Image Correlation. Experimental Mechanics, 2011, 51, 1019-1031.	2.0	13
36	On Serrated Plastic Flow in an AA5052-H32 Sheet. Journal of Engineering Materials and Technology, Transactions of the ASME, 2007, 129, 332-341.	1.4	12

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37	Comparative evaluation of non-associated quadratic and associated quartic plasticity models for orthotropic sheet metals. International Journal of Solids and Structures, 2017, 128, 133-148.	2.7	12
38	Pressure-shear stress wave analysis in plate impact experiments. International Journal of Impact Engineering, 1997, 19, 147-164.	5.0	11
39	Generalized fourth-order Hill's 1979 yield function for modeling sheet metals in plane stress. Acta Mechanica, 2016, 227, 2719-2733.	2.1	11
40	An improved method of determining Gotoh's nine material constants for a sheet metal with only seven or less experimental inputs. International Journal of Mechanical Sciences, 2018, 140, 394-406.	6.7	11
41	Local Plastic Deformation and Failure Behavior of Nd:YAG Laser Welds in AA5182-O and AA6111-T4. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 3063-3086.	2.2	10
42	Calibration of a complete homogeneous polynomial yield function of six degrees for modeling orthotropic steel sheets. Acta Mechanica, 2018, 229, 2495-2519.	2.1	10
43	Rise time in shock consolidation of materials. Applied Physics Letters, 1994, 65, 2783-2785.	3.3	9
44	Application of Gotoh's Orthotropic Yield Function for Modeling Advanced High-Strength Steel Sheets. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	2.2	8
45	Algebraic Convexity Conditions for Gotoh's Nonquadratic Yield Function. Journal of Applied Mechanics, Transactions ASME, 2018, 85, .	2.2	8
46	Process optimization of laser hot-wire cladding with high-power direct diode laser via the response surface methodology. International Journal of Advanced Manufacturing Technology, 2022, 120, 8089-8103.	3.0	8
47	Interaction between dislocations and alloying elements and its implication on crystal plasticity of aluminum alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 309-310, 300-303.	5.6	7
48	A planar plastic flow theory of orthotropic sheet metals and the experimental procedure for its evaluations. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 1775-1809.	2.1	6
49	A perturbation analysis of the unstable plastic flow pattern evolution in an aluminum alloy. International Journal of Solids and Structures, 2006, 43, 5931-5952.	2.7	6
50	Mechanical Properties of Metallic Thin Films: Tensile Tests vs. Indentation Tests. Materials Research Society Symposia Proceedings, 2003, 782, 1.	0.1	5
51	Reduction of Noise-Induced Bias in Displacement Estimation by Linear Off-Pixel Digital Image Correlation. Strain, 2013, 49, 158-166.	2.4	5
52	On the Parameter Identification of Polynomial Anisotropic Yield Functions. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	2.2	5
53	On the New Shear Constraint for Plane-Stress Orthotropic Plasticity Modeling of Sheet Metals. Experimental Mechanics, 2020, 60, 889-905.	2.0	4
54	Recent Developments in Modeling Shock Compression of Porous Materials. , 1997, , 177-203.		4

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55	A New Perspective on the Mathematical Modeling of Highly Nonlinear Anisotropic Plastic Flows in a Heterogeneous Solid. Solid State Phenomena, 2005, 105, 271-276.	0.3	3
56	On the Certification of Positive and Convex Gotoh's Fourth-Order Yield Function. Journal of Physics: Conference Series, 2018, 1063, 012093.	0.4	3
57	The Effect of Material Inhomogeneity on Serrated Plastic Flows. Materials Research Society Symposia Proceedings, 1999, 578, 33.	0.1	2
58	Mechanical Properties and Stresses in Thin Gold Films on a Silicon Substrate. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	2
59	Crack Initiation and Growth in a Notched NiTi Shape Memory Alloy Sheet. Materials Research Society Symposia Proceedings, 2003, 785, 771.	0.1	2
60	Tensile behavior of fusion-brazed aluminum alloy coach-peel joints fabricated by a dual-beam laser. Journal of Materials Processing Technology, 2018, 261, 184-192.	6.3	2
61	Plastic Surface Strain Mapping of Bent Sheets by Image Correlation. Experimental Mechanics, 2004, 44, 502-511.	2.0	2
62	Characterizing and Modeling Plastic Strain Inhomogeneity in Thin Metallic Sheets. Materials Research Society Symposia Proceedings, 1998, 538, 179.	0.1	1
63	On the convexity bound of the generalized Drucker's yield function CB2001 for orthotropic sheets. Acta Mechanica, 2021, 232, 3259-3275.	2.1	1
64	Non-Quadratic Pseudo Dual Potentials for Plastic Flow Modeling. IOP Conference Series: Materials Science and Engineering, 2022, 1238, 012004.	0.6	1
65	Coarse Slip Bands in a Single-Crystalline Aluminum Alloy. Materials Research Society Symposia Proceedings, 2000, 653, 1.	0.1	0
66	Microindentation of Coarse-Grained Polycrystalline $\alpha$ -Brass. Materials Research Society Symposia Proceedings, 2002, 750, 1.	0.1	0
67	On the Image Correlation Measurement of Displacement Fields With Strong Strain Gradients Or Discontinuities. , 2007, , 673-674.		0
68	Mechanical Characterization of Biological Tissue: Finite Element Modeling. , 2010, , .		0
69	Finite element calculations of hole expansion in a thin steel sheet with polynomial yield functions of four and six degrees. Journal of Physics: Conference Series, 2018, 1063, 012095.	0.4	0
70	Finite Element Calculation of Anisotropy of Hole Expansion in a Thin Steel Sheet with Six Degrees Polynomial Yield Function. Key Engineering Materials, 2019, 794, 260-266.	0.4	0
71	A kinematics perspective on the micro-to-macro transition in anisotropic plasticity modeling of polycrystalline solids. , 2003, , 693-695.		0
72	3D Surface Elastic-Plastic Strain Mapping in Hemming, Bending, and Indentation Tests. , 2007, , 559-560.		0

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73	Microstructure-Based Modeling of Ti-6Al-4V Lattice Structures and Trabecular Bone. , 2010, , .		0
74	Processing and properties of SiC-particulate reinforced titanium matrix composites by shock wave consolidation. European Physical Journal Special Topics, 1994, 04, C8-331-C8-336.	0.2	0
75	Implicitization of the Vegter Yield Criterion. IOP Conference Series: Materials Science and Engineering, 2022, 1238, 012007.	0.6	0