

# Tomasz Wierzbicki

## List of Publications by Citations

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70  
papers

8,840  
citations

40  
h-index

73  
g-index

73  
ext. papers

10,229  
ext. citations

4.7  
avg, IF

6.69  
L-index

#	Paper	IF	Citations
70	On fracture locus in the equivalent strain and stress triaxiality space. <i>International Journal of Mechanical Sciences</i> , <b>2004</b> , 46, 81-98	5.5	1226
69	A new model of metal plasticity and fracture with pressure and Lode dependence. <i>International Journal of Plasticity</i> , <b>2008</b> , 24, 1071-1096	7.6	1000
68	Application of extended Mohr-Coulomb criterion to ductile fracture. <i>International Journal of Fracture</i> , <b>2010</b> , 161, 1-20	2.3	693
67	Calibration and evaluation of seven fracture models. <i>International Journal of Mechanical Sciences</i> , <b>2005</b> , 47, 719-743	5.5	613
66	Experimental and numerical studies of foam-filled sections. <i>International Journal of Impact Engineering</i> , <b>2000</b> , 24, 509-534	4	423
65	Relative merits of single-cell, multi-cell and foam-filled thin-walled structures in energy absorption. <i>Thin-Walled Structures</i> , <b>2001</b> , 39, 287-306	4.7	338
64	Crushing analysis of metal honeycombs. <i>International Journal of Impact Engineering</i> , <b>1983</b> , 1, 157-174	4	327
63	A Comparative Study on Various Ductile Crack Formation Criteria. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , <b>2004</b> , 126, 314-324	1.8	275
62	On the cut-off value of negative triaxiality for fracture. <i>Engineering Fracture Mechanics</i> , <b>2005</b> , 72, 1049-1069	4.69	274
61	Calibration and finite element simulation of pouch lithium-ion batteries for mechanical integrity. <i>Journal of Power Sources</i> , <b>2012</b> , 201, 307-321	8.9	218
60	A review of safety-focused mechanical modeling of commercial lithium-ion batteries. <i>Journal of Power Sources</i> , <b>2018</b> , 378, 153-168	8.9	204
59	Modeling and short circuit detection of 18650 Li-ion cells under mechanical abuse conditions. <i>Journal of Power Sources</i> , <b>2012</b> , 220, 360-372	8.9	204
58	Ductile fracture initiation and propagation modeling using damage plasticity theory. <i>Engineering Fracture Mechanics</i> , <b>2008</b> , 75, 3276-3293	4.2	199
57	Characterizing and modeling mechanical properties and onset of short circuit for three types of lithium-ion pouch cells. <i>Journal of Power Sources</i> , <b>2014</b> , 247, 503-516	8.9	175
56	Prediction of shear-induced fracture in sheet metal forming. <i>Journal of Materials Processing Technology</i> , <b>2010</b> , 210, 1858-1869	5.3	169
55	Partially coupled anisotropic fracture model for aluminum sheets. <i>Engineering Fracture Mechanics</i> , <b>2010</b> , 77, 1128-1152	4.2	155
54	Homogenized mechanical properties for the jellyroll of cylindrical Lithium-ion cells. <i>Journal of Power Sources</i> , <b>2013</b> , 241, 467-476	8.9	142

53	Damage of cells and battery packs due to ground impact. <i>Journal of Power Sources</i> , <b>2014</b> , 267, 78-97	8.9	132
52	Numerical failure analysis of a stretch-bending test on dual-phase steel sheets using a phenomenological fracture model. <i>International Journal of Solids and Structures</i> , <b>2010</b> , 47, 3084-3102	3.1	131
51	On the modeling of crush behavior of a closed-cell aluminum foam structure. <i>Journal of the Mechanics and Physics of Solids</i> , <b>1998</b> , 46, 645-669	5	121
50	On the Application of Stress Triaxiality Formula for Plane Strain Fracture Testing. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , <b>2009</b> , 131,	1.8	118
49	A comparative study of three groups of ductile fracture loci in the 3D space. <i>Engineering Fracture Mechanics</i> , <b>2015</b> , 135, 147-167	4.2	115
48	Deformation and failure mechanisms of 18650 battery cells under axial compression. <i>Journal of Power Sources</i> , <b>2016</b> , 336, 332-340	8.9	114
47	Effect of an ultralight metal filler on the bending collapse behavior of thin-walled prismatic columns. <i>International Journal of Mechanical Sciences</i> , <b>1999</b> , 41, 995-1019	5.5	102
46	Modelling of cracks developed in lithium-ion cells under mechanical loading. <i>RSC Advances</i> , <b>2015</b> , 5, 80369-80380	5.7	100
45	Dynamic impact tests on lithium-ion cells. <i>International Journal of Impact Engineering</i> , <b>2017</b> , 108, 205-216	4	82
44	Prediction of plane strain fracture of AHSS sheets with post-initiation softening. <i>International Journal of Solids and Structures</i> , <b>2010</b> , 47, 2316-2327	3.1	78
43	Fracture prediction of thin plates under localized impulsive loading. Part II: discing and petalling. <i>International Journal of Impact Engineering</i> , <b>2005</b> , 31, 1277-1308	4	69
42	Numerical simulation of fracture mode transition in ductile plates. <i>International Journal of Solids and Structures</i> , <b>2009</b> , 46, 1423-1435	3.1	67
41	Data-Driven Safety Envelope of Lithium-Ion Batteries for Electric Vehicles. <i>Joule</i> , <b>2019</b> , 3, 2703-2715	27.8	64
40	Characterization of plasticity and fracture of shell casing of lithium-ion cylindrical battery. <i>Journal of Power Sources</i> , <b>2015</b> , 280, 47-56	8.9	58
39	Fracture prediction of thin plates under hemi-spherical punch with calibration and experimental verification. <i>International Journal of Mechanical Sciences</i> , <b>2004</b> , 46, 751-781	5.5	54
38	Protection performance of double-layered metal shields against projectile impact. <i>Journal of Mechanics of Materials and Structures</i> , <b>2007</b> , 2, 1309-1329	1.2	53
37	Forming severity concept for predicting sheet necking under complex loading histories. <i>International Journal of Mechanical Sciences</i> , <b>2008</b> , 50, 1012-1022	5.5	49
36	FE simulation of edge fracture considering pre-damage from blanking process. <i>International Journal of Solids and Structures</i> , <b>2015</b> , 71, 206-218	3.1	47

35	Failure in lithium-ion batteries under transverse indentation loading. <i>Journal of Power Sources</i> , <b>2018</b> , 389, 148-159	8.9	47
34	Prediction of crack initiation and propagation in X70 pipeline steels. <i>Engineering Fracture Mechanics</i> , <b>2016</b> , 168, 92-111	4.2	47
33	Deformation and failure of lithium-ion batteries treated as a discrete layered structure. <i>International Journal of Plasticity</i> , <b>2019</b> , 121, 293-311	7.6	45
32	Fracture prediction of thin plates under localized impulsive loading. Part I: dishing. <i>International Journal of Impact Engineering</i> , <b>2005</b> , 31, 1253-1276	4	45
31	Experiments and modeling of edge fracture for an AHSS sheet. <i>International Journal of Fracture</i> , <b>2014</b> , 187, 245-268	2.3	40
30	DUCTILE FRACTURE CHARACTERIZATION OF ALUMINUM ALLOY 2024-T351 USING DAMAGE PLASTICITY THEORY. <i>International Journal of Applied Mechanics</i> , <b>2009</b> , 01, 267-304	2.4	37
29	Mechanism of strengthening of battery resistance under dynamic loading. <i>International Journal of Impact Engineering</i> , <b>2019</b> , 131, 78-84	4	30
28	Prediction of shear crack formation of lithium-ion batteries under rod indentation: Comparison of seven failure criteria. <i>Engineering Fracture Mechanics</i> , <b>2019</b> , 217, 106520	4.2	26
27	New calibration method for high and low triaxiality and validation on SENT specimens of API X70. <i>International Journal of Pressure Vessels and Piping</i> , <b>2013</b> , 111-112, 187-201	2.4	25
26	Sandia Fracture Challenge: blind prediction and full calibration to enhance fracture predictability. <i>International Journal of Fracture</i> , <b>2014</b> , 186, 155-175	2.3	23
25	Experimental and numerical study on shear-punch test of 6060 T6 extruded aluminum profile. <i>International Journal of Mechanical Sciences</i> , <b>2016</b> , 118, 205-218	5.5	22
24	Mixed mode stable tearing of thin sheet Al 6061-T6 specimens: experimental measurements and finite element simulations using a modified Mohr-Coulomb fracture criterion. <i>International Journal of Fracture</i> , <b>2011</b> , 168, 53-71	2.3	21
23	Fracture of prismatic aluminum tubes under reverse straining. <i>International Journal of Impact Engineering</i> , <b>2006</b> , 32, 671-701	4	21
22	Damage of plastic cylinders under localized pressure loading. <i>International Journal of Mechanical Sciences</i> , <b>1991</b> , 33, 999-1016	5.5	21
21	EFFECT OF FRACTURE CRITERIA ON HIGH VELOCITY PERFORATION OF THIN BEAMS. <i>International Journal of Computational Methods</i> , <b>2004</b> , 01, 171-200	1.1	20
20	Experimental and numerical study on the plane-strain blanking process on an AHSS sheet. <i>International Journal of Fracture</i> , <b>2015</b> , 194, 19-36	2.3	19
19	Crash Safety of Lithium-Ion Batteries Towards Development of a Computational Model <b>2010</b> ,		16
18	Modeling of plasticity and fracture behavior of X65 steels: seam weld and seamless pipes. <i>International Journal of Fracture</i> , <b>2018</b> , 213, 17-36	2.3	15

17	Ductile tearing analysis of TC128 tank car steel under mode I loading condition. <i>Theoretical and Applied Fracture Mechanics</i> , <b>2018</b> , 96, 658-675	3.7	15
16	Effect of working environment and procedural strategies on mechanical performance of bioresorbable vascular scaffolds. <i>Acta Biomaterialia</i> , <b>2018</b> , 82, 34-43	10.8	14
15	Mechanical Deformation of Lithium-Ion Pouch Cells under In-Plane Loads Part I: Experimental Investigation. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 090533	3.9	12
14	Mechanical Deformation of Lithium-Ion Pouch Cells under in-plane Loads Part II: Computational Modeling. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 090556	3.9	11
13	Effect of an Ultralight Metal Filler on the Torsional Crushing Behaviour of Thin-Walled Prismatic Columns. <i>International Journal of Crashworthiness</i> , <b>1997</b> , 2, 305-332	1	11
12	AHSS Shear Fracture Predictions Based on a Recently Developed Fracture Criterion. <i>SAE International Journal of Materials and Manufacturing</i> , <b>2010</b> , 3, 723-731	1	10
11	The concept of double-walled sandwich columns for energy absorption. <i>International Journal of Crashworthiness</i> , <b>1999</b> , 4, 175-198	1	10
10	On mechanical response of Zircaloy-4 under a wider range of stress states: From uniaxial tension to uniaxial compression. <i>International Journal of Solids and Structures</i> , <b>2020</b> , 206, 198-223	3.1	9
9	On ductile fracture of 316L stainless steels at room and cryogenic temperature level: An engineering approach to determine material parameters. <i>Materialia</i> , <b>2020</b> , 10, 100624	3.2	9
8	Microstructural deformation patterns of a highly orthotropic polypropylene separator of lithium-ion batteries: Mechanism, model, and theory. <i>Extreme Mechanics Letters</i> , <b>2020</b> , 37, 100705	3.9	9
7	Structural Designs for Electric Vehicle Battery Pack against Ground Impact <b>2018</b> ,		8
6	Relationships between Material Ductility and Characteristic Size of Porosity Correlated before/after Testing of a Cast Aluminum Alloy. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2008</b> , 2, 924-942		6
5	Performance of Li-ion pouch battery under a high-velocity impact: experiment and numerical simulation. <i>International Journal of Impact Engineering</i> , <b>2021</b> , 155, 103915	4	6
4	Effect of receptors on the resonant and transient harmonic vibrations of Coronavirus. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2021</b> , 150, 104369	5	5
3	Effects of Mold Media and Porosity on Ductile Fracture Properties of Cast Aluminum Alloy A356. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , <b>2008</b> , 57, 913-920	0.1	2
2	On the Crashworthiness of Shear-Rigid Sandwich Structures. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2006</b> , 73, 633-641	2.7	1
1	Interactive Failure in High Velocity Impact of Two Box Beams <b>2003</b> , 23		1