

Albert Van Bael

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

111
papers

1,987
citations

25
h-index

42
g-index

125
ext. papers

2,171
ext. citations

2.4
avg, IF

4.68
L-index

#	Paper	IF	Citations
111	Measurement and analysis of yield locus and work hardening characteristics of steel sheets with different r-values. <i>Acta Materialia</i> , 2002 , 50, 3717-3729	8.4	135
110	Force prediction for single point incremental forming deduced from experimental and FEM observations. <i>International Journal of Advanced Manufacturing Technology</i> , 2010 , 46, 969-982	3.2	130
109	Marciniak-Kuczynski type modelling of the effect of Through-Thickness Shear on the forming limits of sheet metal. <i>International Journal of Plasticity</i> , 2009 , 25, 2249-2268	7.6	103
108	Multi-level modelling of mechanical anisotropy of commercial pure aluminium plate: Crystal plasticity models, advanced yield functions and parameter identification. <i>International Journal of Plasticity</i> , 2015 , 66, 3-30	7.6	99
107	Finite element modeling of plastic anisotropy induced by texture and strain-path change. <i>International Journal of Plasticity</i> , 2003 , 19, 647-674	7.6	90
106	Prediction of forming limit strains under strain-path changes: Application of an anisotropic model based on texture and dislocation structure. <i>International Journal of Plasticity</i> , 1998 , 14, 647-669	7.6	87
105	Forming forces in single point incremental forming: prediction by finite element simulations, validation and sensitivity. <i>Computational Mechanics</i> , 2011 , 47, 573-590	4	85
104	Multiscale modelling of the plastic anisotropy and deformation texture of polycrystalline materials. <i>European Journal of Mechanics, A/Solids</i> , 2006 , 25, 634-648	3.7	79
103	Model identification and FE simulations: Effect of different yield loci and hardening laws in sheet forming. <i>International Journal of Plasticity</i> , 2007 , 23, 420-449	7.6	70
102	Strain evolution in the single point incremental forming process: digital image correlation measurement and finite element prediction. <i>International Journal of Material Forming</i> , 2011 , 4, 55-71	2	64
101	Residual stress determination in cold drawn steel wire by FEM simulation and X-ray diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 346, 101-107	5.3	61
100	The Facet method: A hierarchical multilevel modelling scheme for anisotropic convex plastic potentials. <i>International Journal of Plasticity</i> , 2009 , 25, 332-360	7.6	57
99	An evolving plane stress yield criterion based on crystal plasticity virtual experiments. <i>International Journal of Plasticity</i> , 2015 , 75, 141-169	7.6	51
98	An extended Marciniak-Kuczynski model for anisotropic sheet subjected to monotonic strain paths with through-thickness shear. <i>International Journal of Plasticity</i> , 2011 , 27, 1577-1597	7.6	51
97	Towards accuracy improvement in single point incremental forming of shallow parts formed under laser assisted conditions. <i>International Journal of Material Forming</i> , 2016 , 9, 339-351	2	47
96	Modelling of plastic anisotropy based on texture and dislocation structure. <i>Computational Materials Science</i> , 1997 , 9, 274-284	3.2	43
95	Hierarchical multi-scale modeling of texture induced plastic anisotropy in sheet forming. <i>Computational Materials Science</i> , 2013 , 66, 65-83	3.2	36

94	Convex plastic potentials of fourth and sixth rank for anisotropic materials. <i>International Journal of Plasticity</i> , 2004 , 20, 1505-1524	7.6	35
93	The prediction of differential hardening behaviour of steels by multi-scale crystal plasticity modelling. <i>International Journal of Plasticity</i> , 2015 , 73, 119-141	7.6	29
92	A new cluster-type model for the simulation of textures of polycrystalline metals. <i>Acta Materialia</i> , 2014 , 69, 175-186	8.4	28
91	The design of a biaxial tensile test and its use for the validation of crystallographic yield loci. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2000 , 8, 423-433	2	28
90	Identification of material parameters to predict Single Point Incremental Forming forces. <i>International Journal of Material Forming</i> , 2008 , 1, 1147-1150	2	27
89	Effects of the isotropic and anisotropic hardening within each grain on the evolution of the flow stress, the r-value and the deformation texture of tensile tests for AA6016 sheets. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 724, 151-164	5.3	26
88	MK modelling of sheet formability in the incremental sheet forming process, taking into account through-thickness shear. <i>International Journal of Material Forming</i> , 2009 , 2, 379-382	2	25
87	Application of a Texture-Based Plastic Potential in Earing Prediction of an IF Steel. <i>Advanced Engineering Materials</i> , 2001 , 3, 990	3.5	25
86	Benchmark tests for 3-D, elasto-plastic, finite-element codes for the modelling of metal forming processes. <i>Journal of Materials Processing Technology</i> , 1992 , 34, 61-68	5.3	23
85	Single Point Incremental Forming of an Aged AL-Cu-Mg Alloy: Influence of Pre-heat Treatment and Warm Forming. <i>Journal of Materials Engineering and Performance</i> , 2016 , 25, 2478-2488	1.6	21
84	Polycrystal plasticity models based on crystallographic and morphologic texture: Evaluation of predictions of plastic anisotropy and deformation texture. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 581, 66-72	5.3	19
83	Determination of the flow stress and contact friction of sheet metal in a multi-layered upsetting test. <i>Journal of Materials Processing Technology</i> , 2010 , 210, 1290-1296	5.3	19
82	Forming Limit Predictions for the Serrated Strain Paths in Single Point Incremental Sheet Forming. <i>AIP Conference Proceedings</i> , 2007 ,	0	18
81	Finite Element Modeling of Incremental Forming of Aluminum Sheets. <i>Advanced Materials Research</i> , 2005 , 6-8, 525-532	0.5	18
80	A novel method for producing solid polymer microneedles using laser ablated moulds in an injection moulding process. <i>Manufacturing Letters</i> , 2020 , 24, 29-32	4.5	16
79	Improvements in thermoforming simulation by use of 3D digital image correlation. <i>EXPRESS Polymer Letters</i> , 2015 , 9, 119-128	3.4	16
78	Advances in force modelling for SPIF. <i>International Journal of Material Forming</i> , 2009 , 2, 25-28	2	16
77	The significance of friction in the single point incremental forming process. <i>International Journal of Material Forming</i> , 2010 , 3, 947-950	2	15

76	Process parameter influence on texture heterogeneity in asymmetric rolling of aluminium sheet alloys. <i>International Journal of Material Forming</i> , 2018 , 11, 297-309	2	14
75	Small-scale Finite Element Modelling of the Plastic Deformation Zone in the Incremental Forming Process. <i>International Journal of Material Forming</i> , 2008 , 1, 1159-1162	2	14
74	Strain rate effect in high-speed wire drawing process. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2002 , 10, 267-276	2	13
73	Effect of Laser Transformation Hardening on the Accuracy of SPIF Formed Parts. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2017 , 139,	3.3	11
72	Analysis and Prediction of the Earing Behaviour of Low Carbon Steel Sheet. <i>Textures and Microstructures</i> , 1996 , 26, 553-570		11
71	Two-component injection moulding of thermoset rubber in combination with thermoplastics by thermally separated mould cavities and rapid heat cycling. <i>International Journal of Advanced Manufacturing Technology</i> , 2017 , 92, 2599-2607	3.2	10
70	Determination of Strain in Incremental Sheet Forming Process. <i>Key Engineering Materials</i> , 2007 , 344, 503-510	0.4	10
69	FEM-Aided Taylor Simulations of Radial Texture Gradient in Wire Drawing. <i>Materials Science Forum</i> , 2002 , 408-412, 439-444	0.4	10
68	Application of a texture parameter model to study planar anisotropy of rolled steel sheets. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2000 , 8, 413-422	2	10
67	On the synergy between physical and virtual sheet metal testing: calibration of anisotropic yield functions using a microstructure-based plasticity model. <i>International Journal of Material Forming</i> , 2019 , 12, 741-759	2	10
66	Comparison of FEM Simulations for the Incremental Forming Process. <i>Advanced Materials Research</i> , 2005 , 6-8, 533-542	0.5	9
65	Wetting measurements as a tool to predict the thermoplastic/thermoset rubber compatibility in two-component injection molding. <i>Journal of Applied Polymer Science</i> , 2018 , 135, 46046	2.9	8
64	Comparison of FEM Simulations for the Incremental Forming Process. <i>Advanced Materials Research</i> , 2005 , 6-8, 533-542	0.5	7
63	The Influence of Mechanical Recycling on Properties in Injection Molding of Fiber-Reinforced Polypropylene. <i>International Polymer Processing</i> , 2019 , 34, 398-407	1	7
62	Multi-scale material modelling to predict the material anisotropy of multi-phase steels. <i>Computational Materials Science</i> , 2019 , 160, 382-396	3.2	6
61	Formability Enhancement in Incremental Forming for an Automotive Aluminium Alloy Using Laser Assisted Incremental Forming. <i>Key Engineering Materials</i> , 2015 , 639, 195-202	0.4	6
60	Effect of process parameters on the adhesion strength in two-component injection molding of thermoset rubbers and thermoplastics. <i>Journal of Applied Polymer Science</i> , 2018 , 135, 46495	2.9	6
59	Bending Properties of Locally Laser Heat Treated AA2024-T3 Aluminium Alloy. <i>Physics Procedia</i> , 2012 , 39, 257-264		6

58	Evolving texture-informed anisotropic yield criterion for sheet forming 2013 ,		6
57	The Application of Multiscale Modelling for the Prediction of Plastic Anisotropy and Deformation Textures. <i>Materials Science Forum</i> , 2005 , 495-497, 31-44	0.4	6
56	Consistency of Strain Fields and Thickness Distributions in Thermoforming Experiments Through Stereo DIC. <i>Experimental Techniques</i> , 2016 , 40, 1409-1420	1.4	5
55	Enhanced Formability of Age-Hardenable Aluminium Alloys by Incremental Forming of Solution-Treated Blanks. <i>Key Engineering Materials</i> , 2013 , 549, 164-171	0.4	5
54	Advanced Plasticity Modeling for Ultra-Low-Cycle-Fatigue Simulation of Steel Pipe. <i>Metals</i> , 2017 , 7, 140	2.3	5
53	Polycrystalline Model Predictions of Flow Stress and Textural Hardening during Monotonic Deformation. <i>Key Engineering Materials</i> , 2013 , 554-557, 1157-1163	0.4	5
52	Digital Image Correlation for On-Line Wall Thickness Measurements in Thick Gauge Thermoforming. <i>Key Engineering Materials</i> , 2013 , 554-557, 1583-1591	0.4	5
51	In-Process Hardening in Laser Supported Incremental Sheet Metal Forming. <i>Key Engineering Materials</i> , 2012 , 504-506, 827-832	0.4	5
50	Texture-Based Explicit Finite-Element Analysis of Sheet Metal Forming. <i>Materials Science Forum</i> , 2005 , 495-497, 1535-1540	0.4	5
49	Finite Element Modeling of Incremental Forming of Aluminum Sheets. <i>Advanced Materials Research</i> , 2012 , 525-532		5
48	Benchmarking of depth of field for large out-of-plane deformations with single camera digital image correlation. <i>Optics and Lasers in Engineering</i> , 2017 , 91, 134-143	4.6	4
47	Prediction of Transient Hardening after Strain Path Change by a Multi-scale Crystal Plasticity Model with Anisotropic Grain Substructure. <i>Procedia Engineering</i> , 2014 , 81, 1318-1323		4
46	A Combined Experimental and Modelling Approach towards an Optimized Heating Strategy in Thermoforming of Thermoplastics Sheets. <i>International Polymer Processing</i> , 2017 , 32, 378-386	1	4
45	The Application of Multiscale Modelling for the Prediction of Plastic Anisotropy and Deformation Textures. <i>Materials Science Forum</i> , 2007 , 550, 13-22	0.4	4
44	Side-Bulging during Tensile Tests of IF-Steels with Cross-Thickness Texture Gradients. <i>Materials Science Forum</i> , 1998 , 273-275, 417-424	0.4	4
43	Influence of laser assisted single point incremental forming on the accuracy of shallow sloped parts 2013 ,		4
42	Effect of co-agents on adhesion between peroxide cured ethylene-propylene-diene monomer and thermoplastics in two-component injection molding. <i>Journal of Applied Polymer Science</i> , 2020 , 137, 4841-4849	1.9	4
41	Influence of Global Forced-air Warming on the Bulge Formation in Shallow Sloped SPIF Parts. <i>Procedia Engineering</i> , 2017 , 183, 149-154		3

40	Prediction of interfacial strength of HDPE overmolded with EPDM. <i>Polymer Engineering and Science</i> , 2019 , 59, 1489-1498	2.3	3
39	Two-component injection moulding of thermoplastics with thermoset rubbers: Process development 2017 ,		3
38	On the Geometric Accuracy in Shallow Sloped Parts in Single Point Incremental Forming. <i>Key Engineering Materials</i> , 2013 , 554-557, 1443-1450	0.4	3
37	An Efficient Strategy to Take Texture-Induced Anisotropy Point-by-Point into Account during FE Simulations of Metal Forming Processes. <i>Materials Science Forum</i> , 2011 , 702-703, 26-33	0.4	3
36	A Coupled Multiscale Model of Texture Evolution and Plastic Anisotropy 2010 ,		3
35	Effect of Plastic Anisotropy on Forming Limit Prediction. <i>Materials Science Forum</i> , 2005 , 495-497, 1573-1578		3
34	Controlling the geometry of laser ablated microneedle cavities in different mould materials and assessing the replication fidelity within polymer injection moulding. <i>Journal of Manufacturing Processes</i> , 2021 , 62, 535-545	5	3
33	Experimental validation and effect of modelling assumptions in the hierarchical multi-scale simulation of the cup drawing of AA6016 sheets. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2017 , 25, 015002	2	2
32	Experimental and Computational Analysis of the Heating Step during Thermoforming of Thermoplastics. <i>Key Engineering Materials</i> , 2015 , 651-653, 1003-1008	0.4	2
31	Modelling the stored energy of plastic deformation for individual crystal orientations. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015 , 82, 012052	0.4	2
30	Identification of constitutive equation in hierarchical multiscale modelling of cup drawing process 2011 ,		2
29	Validation of the Texture-Based ALAMEL and VPSC Models by Measured Anisotropy of Plastic Yielding. <i>Materials Science Forum</i> , 2011 , 702-703, 233-236	0.4	2
28	Adhesion between ethylene-propylene-diene monomer and thermoplastics in two-component injection molding: Effect of dicumylperoxide as curing agent. <i>Journal of Applied Polymer Science</i> , 2020 , 137, 49233	2.9	2
27	Texture-Based Plastic Potentials in Stress Space. <i>Ceramic Transactions</i> , 809-815	0.1	2
26	Optimization of the IR-heating phase in thermoforming of thermoplastic sheets: Characterization and modelling 2017 ,		1
25	Effect of the grain shape on the q-value evolution of steel sheets. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015 , 82, 012096	0.4	1
24	Tool Directionality in Contour-Based Incremental Sheet Forming: an Experimental Study on Product Properties and Formability. <i>Key Engineering Materials</i> , 2011 , 473, 897-904	0.4	1
23	Finite-Element Prediction of Heterogeneous Material Flow during Tensile Testing of Anisotropic Material. <i>Materials Science Forum</i> , 1994 , 157-162, 1909-1916	0.4	1

22	Analytical Representation of Polycrystal Yield Surfaces 1991 , 183-186		1
21	Yield locus prediction using statistical and RVE-based fast Fourier transform crystal plasticity models and validation for drawing steels. <i>Journal of Physics: Conference Series</i> , 2018 , 1063, 012051	0.3	1
20	Multiscale modelling of asymmetric rolling with an anisotropic constitutive law. <i>Comptes Rendus - Mecanique</i> , 2018 , 346, 724-742	2.1	1
19	Hierarchical Multi-Level Modelling of Plastic Anisotropy using Convex Plastic Potentials. <i>Ceramic Transactions</i> , 817-825	0.1	1
18	Reactive wetting of polyethylene on ethylene-propylene-diene terpolymer. <i>Colloids and Interface Science Communications</i> , 2021 , 40, 100343	5.4	0
17	Spatial clustering strategies for hierarchical multi-scale modelling of metal plasticity. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2017 , 25, 074003	2	
16	Unravelling Anisotropy Evolution during Spiral Pipe Forming: a Multiscale Approach. <i>Procedia Manufacturing</i> , 2020 , 47, 1434-1441	1.5	
15	Multiscale Modelling of Mechanical Anisotropy. <i>ESAFORM Bookseries on Material Forming</i> , 2016 , 79-134		
14	A new cluster-type statistical model for the prediction of deformation textures. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015 , 82, 012015	0.4	
13	Validation of a Multi-Scale Model for Shear Deformation of an Aluminium Sheet Alloy. <i>Key Engineering Materials</i> , 2014 , 611-612, 553-561	0.4	
12	Simulation of a Thick Plate Forming Benchmark Using a Multi Scale Texture Evolution and Anisotropic Plasticity Model. <i>Key Engineering Materials</i> , 2013 , 549, 436-443	0.4	
11	The Facet method for plastic anisotropy of textured materials. <i>International Journal of Material Forming</i> , 2008 , 1, 101-104	2	
10	Multiscale Modelling of Plastic Deformation of Polycrystals: Implementation of Texture-Based Anisotropy in Engineering Applications (FE Codes for Forming, Prediction of Forming Limit Curves). <i>Materials Science Forum</i> , 2007 , 539-543, 3454-3459	0.4	
9	Finite-Element Simulation and Experimental Validation of a Plasticity Model of Texture and Strain-Induced Anisotropy. <i>Key Engineering Materials</i> , 2002 , 230-232, 501-504	0.4	
8	Anisotropic Finite-Element Prediction of Texture Evolution in Material Forming. <i>Materials Science Forum</i> , 1994 , 157-162, 1901-1908	0.4	
7	Application of an Elastic-Plastic Finite Element Model for the Simulation of Forming Processes 1991 , 672-675		
6	Inverse Identification of Plastic Material Behavior Using Multi-Scale Virtual Experiments. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016 , 37-42	0.3	
5	The Facet Method for the Description of Yield Loci of Textured Materials 2009 , 445-450		

- 4 Full-Field Multi-Scale Modelling of Sheet Metal Forming Taking the Evolution of Texture and Plastic Anisotropy Into Account **2013**, 213-218
- 3 Full-Field Multi-Scale Modelling of Sheet Metal Forming Taking the Evolution of Texture and Plastic Anisotropy into Account 213-218
- 2 Study of Asymmetric Rolling to Improve Textures and r-Values of Aluminium Deep Drawing Alloys. *Materials Science Forum*, **2018**, 941, 1330-1335 0.4
- 1 The Application of Crystal Plasticity Material Files in Stamping Simulations. *Journal of Physics: Conference Series*, **2018**, 1063, 012103 0.3