

# Albert Van Bael

## List of Publications by Year in descending order

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119  
papers

2,444  
citations

236925

25  
h-index

223800

46  
g-index

125  
all docs

125  
docs citations

125  
times ranked

1285  
citing authors

#	ARTICLE	IF	CITATIONS
1	Predicting the replication fidelity of injection molded solid polymer microneedles. International Polymer Processing, 2022, .	0.5	3
2	Analysis of ESAFORM 2021 cup drawing benchmark of an Al alloy, critical factors for accuracy and efficiency of FE simulations. International Journal of Material Forming, 2022, 15, .	2.0	18
3	Reactive wetting of polyethylene on ethylene-propylene-diene terpolymer. Colloids and Interface Science Communications, 2021, 40, 100343.	4.1	5
4	Controlling the geometry of laser ablated microneedle cavities in different mould materials and assessing the replication fidelity within polymer injection moulding. Journal of Manufacturing Processes, 2021, 62, 535-545.	5.9	10
5	Effect of curing agents on adhesion between peroxide cured ethylene-propylene diene monomer and thermoplastics in two-component injection molding. Journal of Applied Polymer Science, 2020, 137, 48414.	2.6	7
6	Unravelling Anisotropy Evolution during Spiral Pipe Forming: a Multiscale Approach. Procedia Manufacturing, 2020, 47, 1434-1441.	1.9	1
7	A novel method for producing solid polymer microneedles using laser ablated moulds in an injection moulding process. Manufacturing Letters, 2020, 24, 29-32.	2.2	37
8	Adhesion between ethylene-propylene diene monomer and thermoplastics in two-component injection molding: Effect of dicumylperoxide as curing agent. Journal of Applied Polymer Science, 2020, 137, 49233.	2.6	4
9	Multi-scale material modelling to predict the material anisotropy of multi-phase steels. Computational Materials Science, 2019, 160, 382-396.	3.0	8
10	Prediction of interfacial strength of HDPE overmolded with EPDM. Polymer Engineering and Science, 2019, 59, 1489-1498.	3.1	6
11	The Influence of Mechanical Recycling on Properties in Injection Molding of Fiber-Reinforced Polypropylene. International Polymer Processing, 2019, 34, 398-407.	0.5	25
12	On the synergy between physical and virtual sheet metal testing: calibration of anisotropic yield functions using a microstructure-based plasticity model. International Journal of Material Forming, 2019, 12, 741-759.	2.0	20
13	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. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 721, 154-164.	5.6	29
14	Effect of process parameters on the adhesion strength in two-component injection molding of thermoset rubbers and thermoplastics. Journal of Applied Polymer Science, 2018, 135, 46495.	2.6	9
15	Process parameter influence on texture heterogeneity in asymmetric rolling of aluminium sheet alloys. International Journal of Material Forming, 2018, 11, 297-309.	2.0	19
16	Wetting measurements as a tool to predict the thermoplastic/thermoset rubber compatibility in two-component injection molding. Journal of Applied Polymer Science, 2018, 135, 46046.	2.6	13
17	Study of Asymmetric Rolling to Improve Textures and $r$ -Values of Aluminium Deep Drawing Alloys. Materials Science Forum, 2018, 941, 1330-1335.	0.3	0
18	Yield locus prediction using statistical and RVE-based fast Fourier transform crystal plasticity models and validation for drawing steels. Journal of Physics: Conference Series, 2018, 1063, 012051.	0.4	1

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19	The Application of Crystal Plasticity Material Files in Stamping Simulations. Journal of Physics: Conference Series, 2018, 1063, 012103.	0.4	0
20	Multiscale modelling of asymmetric rolling with an anisotropic constitutive law. Comptes Rendus - Mecanique, 2018, 346, 724-742.	2.1	4
21	Effect of Laser Transformation Hardening on the Accuracy of SPIF Formed Parts. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2017, 139, .	2.2	12
22	Influence of Global Forced-air Warming on the Bulge Formation in Shallow Sloped SPIF Parts. Procedia Engineering, 2017, 183, 149-154.	1.2	4
23	Benchmarking of depth of field for large out-of-plane deformations with single camera digital image correlation. Optics and Lasers in Engineering, 2017, 91, 134-143.	3.8	4
24	Experimental validation and effect of modelling assumptions in the hierarchical multi-scale simulation of the cup drawing of AA6016 sheets. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 015002.	2.0	3
25	Spatial clustering strategies for hierarchical multi-scale modelling of metal plasticity. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 074003.	2.0	0
26	Optimization of the IR-heating phase in thermoforming of thermoplastic sheets: Characterization and modelling. AIP Conference Proceedings, 2017, , .	0.4	2
27	Two-component injection moulding of thermoset rubber in combination with thermoplastics by thermally separated mould cavities and rapid heat cycling. International Journal of Advanced Manufacturing Technology, 2017, 92, 2599-2607.	3.0	13
28	A numerical multi-scale model to predict macroscopic material anisotropy of multi-phase steels from crystal plasticity material definitions. AIP Conference Proceedings, 2017, , .	0.4	0
29	A Combined Experimental and Modelling Approach towards an Optimized Heating Strategy in Thermoforming of Thermoplastics Sheets. International Polymer Processing, 2017, 32, 378-386.	0.5	10
30	Advanced Plasticity Modeling for Ultra-Low-Cycle-Fatigue Simulation of Steel Pipe. Metals, 2017, 7, 140.	2.3	6
31	Two-component injection moulding of thermoplastics with thermoset rubbers: Process development. AIP Conference Proceedings, 2017, , .	0.4	4
32	Consistency of Strain Fields and Thickness Distributions in Thermoforming Experiments Through Stereo DIC. Experimental Techniques, 2016, 40, 1409-1420.	1.5	10
33	Multiscale Modelling of Mechanical Anisotropy. ESAFORM Bookseries on Material Forming, 2016, , 79-134.	0.1	1
34	Single Point Incremental Forming of an Aged AL-Cu-Mg Alloy: Influence of Pre-heat Treatment and Warm Forming. Journal of Materials Engineering and Performance, 2016, 25, 2478-2488.	2.5	26
35	Towards accuracy improvement in single point incremental forming of shallow parts formed under laser assisted conditions. International Journal of Material Forming, 2016, 9, 339-351.	2.0	51
36	SPATIAL CLUSTERING STRATEGIES FOR HIERARCHICAL MULTI-SCALE MODELLING OF METAL PLASTICITY. , 2016, , .		0

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37	Inverse Identification of Plastic Material Behavior Using Multi-Scale Virtual Experiments. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 37-42.	0.5	0
38	A new cluster-type statistical model for the prediction of deformation textures. IOP Conference Series: Materials Science and Engineering, 2015, 82, 012015.	0.6	0
39	Effect of the grain shape on the q-value evolution of steel sheets. IOP Conference Series: Materials Science and Engineering, 2015, 82, 012096.	0.6	1
40	Improvements in thermoforming simulation by use of 3D digital image correlation. EXPRESS Polymer Letters, 2015, 9, 119-128.	2.1	22
41	The prediction of differential hardening behaviour of steels by multi-scale crystal plasticity modelling. International Journal of Plasticity, 2015, 73, 119-141.	8.8	31
42	Experimental and Computational Analysis of the Heating Step during Thermoforming of Thermoplastics. Key Engineering Materials, 2015, 651-653, 1003-1008.	0.4	2
43	An evolving plane stress yield criterion based on crystal plasticity virtual experiments. International Journal of Plasticity, 2015, 75, 141-169.	8.8	68
44	Modelling the stored energy of plastic deformation for individual crystal orientations. IOP Conference Series: Materials Science and Engineering, 2015, 82, 012052.	0.6	2
45	Editorial: In honor of Paul Van Houtte. International Journal of Plasticity, 2015, 66, 1-2.	8.8	0
46	Multi-level modelling of mechanical anisotropy of commercial pure aluminium plate: Crystal plasticity models, advanced yield functions and parameter identification. International Journal of Plasticity, 2015, 66, 3-30.	8.8	127
47	Validation of a Multi-Scale Model for Shear Deformation of an Aluminium Sheet Alloy. Key Engineering Materials, 2014, 611-612, 553-561.	0.4	0
48	A new cluster-type model for the simulation of textures of polycrystalline metals. Acta Materialia, 2014, 69, 175-186.	7.9	30
49	Prediction of Transient Hardening after Strain Path Change by a Multi-scale Crystal Plasticity Model with Anisotropic Grain Substructure. Procedia Engineering, 2014, 81, 1318-1323.	1.2	4
50	Enhanced Formability of Age-Hardenable Aluminium Alloys by Incremental Forming of Solution-Treated Blanks. Key Engineering Materials, 2013, 549, 164-171.	0.4	7
51	Polycrystal plasticity models based on crystallographic and morphologic texture: Evaluation of predictions of plastic anisotropy and deformation texture. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 581, 66-72.	5.6	21
52	Hierarchical multi-scale modeling of texture induced plastic anisotropy in sheet forming. Computational Materials Science, 2013, 66, 65-83.	3.0	45
53	Evolving texture-informed anisotropic yield criterion for sheet forming. , 2013, , .		6
54	Influence of laser assisted single point incremental forming on the accuracy of shallow sloped parts. , 2013, , .		4

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55	Full-Field Multi-Scale Modelling of Sheet Metal Forming Taking the Evolution of Texture and Plastic Anisotropy Into Account. , 2013, , 213-218.		0
56	In-Process Hardening in Laser Supported Incremental Sheet Metal Forming. Key Engineering Materials, 2012, 504-506, 827-832.	0.4	5
57	Bending Properties of Locally Laser Heat Treated AA2024-T3 Aluminium Alloy. Physics Procedia, 2012, 39, 257-264.	1.2	10
58	Anisotropic Sheet Forming Simulations Based on the ALAMEL Model: Application on Cup Deep Drawing and Ironing. , 2011, , .		1
59	An extended Marciniak-Kuczynski model for anisotropic sheet subjected to monotonic strain paths with through-thickness shear. International Journal of Plasticity, 2011, 27, 1577-1597.	8.8	59
60	Forming forces in single point incremental forming: prediction by finite element simulations, validation and sensitivity. Computational Mechanics, 2011, 47, 573-590.	4.0	100
61	Strain evolution in the single point incremental forming process: digital image correlation measurement and finite element prediction. International Journal of Material Forming, 2011, 4, 55-71.	2.0	80
62	Identification of constitutive equation in hierarchical multiscale modelling of cup drawing process. , 2011, , .		2
63	Tool Directionality in Contour-Based Incremental Sheet Forming: an Experimental Study on Product Properties and Formability. Key Engineering Materials, 2011, 473, 897-904.	0.4	4
64	A Coupled Multiscale Model of Texture Evolution and Plastic Anisotropy. , 2010, , .		4
65	Force prediction for single point incremental forming deduced from experimental and FEM observations. International Journal of Advanced Manufacturing Technology, 2010, 46, 969-982.	3.0	150
66	Determination of the flow stress and contact friction of sheet metal in a multi-layered upsetting test. Journal of Materials Processing Technology, 2010, 210, 1290-1296.	6.3	25
67	The significance of friction in the single point incremental forming process. International Journal of Material Forming, 2010, 3, 947-950.	2.0	18
68	The Facet method: A hierarchical multilevel modelling scheme for anisotropic convex plastic potentials. International Journal of Plasticity, 2009, 25, 332-360.	8.8	70
69	MK modelling of sheet formability in the incremental sheet forming process, taking into account through-thickness shear. International Journal of Material Forming, 2009, 2, 379-382.	2.0	29
70	Advances in force modelling for SPIF. International Journal of Material Forming, 2009, 2, 25-28.	2.0	18
71	Marciniak-Kuczynski type modelling of the effect of Through-Thickness Shear on the forming limits of sheet metal. International Journal of Plasticity, 2009, 25, 2249-2268.	8.8	117
72	The Facet Method for the Description of Yield Loci of Textured Materials. , 2009, , 445-450.		0

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73	The facet method for plastic anisotropy of textured materials. International Journal of Material Forming, 2008, 1, 101-104.	2.0	0
74	Identification of material parameters to predict Single Point Incremental Forming forces. International Journal of Material Forming, 2008, 1, 1147-1150.	2.0	29
75	Small-scale Finite Element Modelling of the Plastic Deformation Zone in the Incremental Forming Process. International Journal of Material Forming, 2008, 1, 1159-1162.	2.0	19
76	Assessment of Convex Plastic Potentials Derived from Crystallographic Textures. AIP Conference Proceedings, 2007, , .	0.4	0
77	Anisotropy and Formability in Sheet Metal Forming. AIP Conference Proceedings, 2007, , .	0.4	1
78	Forming Limit Predictions for the Serrated Strain Paths in Single Point Incremental Sheet Forming. AIP Conference Proceedings, 2007, , .	0.4	25
79	Determination of Strain in Incremental Sheet Forming Process. Key Engineering Materials, 2007, 344, 503-510.	0.4	11
80	The Application of Multiscale Modelling for the Prediction of Plastic Anisotropy and Deformation Textures. Materials Science Forum, 2007, 550, 13-22.	0.3	4
81	Multiscale Modelling of Plastic Deformation of Polycrystals: Implementation of Texture-Based Anisotropy in Engineering Applications (FE Codes for Forming, Prediction of Forming Limit Curves). Materials Science Forum, 2007, 539-543, 3454-3459.	0.3	0
82	Model identification and FE simulations: Effect of different yield loci and hardening laws in sheet forming. International Journal of Plasticity, 2007, 23, 420-449.	8.8	79
83	Multiscale modelling of the plastic anisotropy and deformation texture of polycrystalline materials. European Journal of Mechanics, A/Solids, 2006, 25, 634-648.	3.7	95
84	The Application of Multiscale Modelling for the Prediction of Plastic Anisotropy and Deformation Textures. Materials Science Forum, 2005, 495-497, 31-44.	0.3	7
85	Effect of Plastic Anisotropy on Forming Limit Prediction. Materials Science Forum, 2005, 495-497, 1573-1578.	0.3	4
86	Finite Element Modeling of Incremental Forming of Aluminum Sheets. Advanced Materials Research, 2005, 6-8, 525-532.	0.3	23
87	Comparison of FEM Simulations for the Incremental Forming Process. Advanced Materials Research, 2005, 6-8, 533-542.	0.3	12
88	Texture-Based Explicit Finite-Element Analysis of Sheet Metal Forming. Materials Science Forum, 2005, 495-497, 1535-1540.	0.3	5
89	Convex plastic potentials of fourth and sixth rank for anisotropic materials. International Journal of Plasticity, 2004, 20, 1505-1524.	8.8	41
90	Finite element modeling of plastic anisotropy induced by texture and strain-path change. International Journal of Plasticity, 2003, 19, 647-674.	8.8	108

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91	Residual stress determination in cold drawn steel wire by FEM simulation and X-ray diffraction. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 346, 101-107.	5.6	69
92	Strain rate effect in high-speed wire drawing process. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2002, 10, 267-276.	2.0	15
93	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	0
94	FEM-Aided Taylor Simulations of Radial Texture Gradient in Wire Drawing. <i>Materials Science Forum</i> , 2002, 408-412, 439-444.	0.3	12
95	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.	7.9	153
96	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
97	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.	2.0	30
98	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.	2.0	10
99	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.	8.8	97
100	Side-Bulging during Tensile Tests of IF-Steels with Cross-Thickness Texture Gradients. <i>Materials Science Forum</i> , 1998, 273-275, 417-424.	0.3	6
101	Modelling of plastic anisotropy based on texture and dislocation structure. <i>Computational Materials Science</i> , 1997, 9, 274-284.	3.0	43
102	Analysis and Prediction of the Earing Behaviour of Low Carbon Steel Sheet. <i>Textures and Microstructures</i> , 1996, 26, 553-570.	0.2	13
103	Finite-Element Prediction of Heterogeneous Material Flow during Tensile Testing of Anisotropic Material. <i>Materials Science Forum</i> , 1994, 157-162, 1909-1916.	0.3	2
104	Anisotropic Finite-Element Prediction of Texture Evolution in Material Forming. <i>Materials Science Forum</i> , 1994, 157-162, 1901-1908.	0.3	1
105	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.	6.3	27
106	Analytical Representation of Polycrystal Yield Surfaces. , 1991, , 183-186.		5
107	Application of an Elastic-Plastic Finite Element Model for the Simulation of Forming Processes. , 1991, , 672-675.		1
108	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> , 0, 702-703, 26-33.	0.3	3

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109	Validation of the Texture-Based ALAMEL and VPSC Models by Measured Anisotropy of Plastic Yielding. Materials Science Forum, 0, 702-703, 233-236.	0.3	3
110	Polycrystalline Model Predictions of Flow Stress and Textural Hardening during Monotonic Deformation. Key Engineering Materials, 0, 554-557, 1157-1163.	0.4	5
111	Simulation of a Thick Plate Forming Benchmark Using a Multi Scale Texture Evolution and Anisotropic Plasticity Model. Key Engineering Materials, 0, 549, 436-443.	0.4	0
112	Digital Image Correlation for On-Line Wall Thickness Measurements in Thick Gauge Thermoforming. Key Engineering Materials, 0, 554-557, 1583-1591.	0.4	8
113	On the Geometric Accuracy in Shallow Sloped Parts in Single Point Incremental Forming. Key Engineering Materials, 0, 554-557, 1443-1450.	0.4	4
114	Formability Enhancement in Incremental Forming for an Automotive Aluminium Alloy Using Laser Assisted Incremental Forming. Key Engineering Materials, 0, 639, 195-202.	0.4	6
115	Texture-Based Plastic Potentials in Stress Space. Ceramic Transactions, 0, , 809-815.	0.1	2
116	Hierarchical Multi-Level Modelling of Plastic Anisotropy using Convex Plastic Potentials. Ceramic Transactions, 0, , 817-825.	0.1	1
117	Finite Element Modeling of Incremental Forming of Aluminum Sheets. Advanced Materials Research, 0, , 525-532.	0.3	6
118	Comparison of FEM Simulations for the Incremental Forming Process. Advanced Materials Research, 0, , 533-542.	0.3	7
119	Full-Field Multi-Scale Modelling of Sheet Metal Forming Taking the Evolution of Texture and Plastic Anisotropy into Account. , 0, , 213-218.		0