Peter Van Puyvelde

List of Publications by Year in descending order

142 papers	5,257 citations	76326 40 h-index	102487 66 g-index
144 all docs	144 docs citations	144 times ranked	4959 citing authors

#	Article	IF	Citations
1	Mobile Augmented Reality Laboratory for Learning Acidâ€“Base Titration. Journal of Chemical Education, 2022, 99, 531-537.	2.3	19
2	Humins Blending in Thermoreversible Dielsâ€“Alder Networks for Stiffness Tuning and Enhanced Healing Performance for Soft Robotics. Polymers, 2022, 14, 1657.	4.5	5
3	Magnetic Self-Healing Composites: Synthesis and Applications. Molecules, 2022, 27, 3796.	3.8	15
4	Laser sintering of self-healable and recyclable thermoset networks. European Polymer Journal, 2022, 175, 111383.	5.4	9
5	A guide towards safe, functional and renewable BPA alternatives by rational molecular design: structureâ€“property and structureâ€“toxicity relationships. Polymer Chemistry, 2021, 12, 5870-5901.	3.9	19
6	Boosting PLA melt strength by controlling the chirality of co-monomer incorporation. Chemical Science, 2021, 12, 5672-5681.	7.4	20
7	Assessment of the environmental sustainability of solvent-less fatty acid ketonization to bio-based ketones for wax emulsion applications. Green Chemistry, 2021, 23, 7137-7161.	9.0	9
8	A practical development of engineering simulation-assisted educational AR environments. Education for Chemical Engineers, 2021, 35, 81-93.	4.8	28
9	Insights on shear rheology of inks for extrusion-based 3D bioprinting. Bioprinting, 2021, 22, e00129.	5.8	48
10	Semi-crystalline feedstock for filament-based 3D printing of polymers. Progress in Polymer Science, 2021, 118, 101411.	24.7	79
11	The Extent of Interlayer Bond Strength during Fused Filament Fabrication of Nylon Copolymers: An Interplay between Thermal History and Crystalline Morphology. Polymers, 2021, 13, 2677.	4.5	12
12	Exploring the potential usage of 3D printed membranes combined with PVDF coating in direct contact membrane distillation. Desalination, 2021, 513, 115134.	8.2	13
13	Mobile Augmented Reality Apps in Education: Exploring the User Experience Through Large-Scale Public Reviews. Lecture Notes in Computer Science, 2021, , 428-450.	1.3	5
14	The crystallization of<scp>PA11</scp>,<scp>PA12</scp>, and their random copolymers at increasing supercooling: From eutectic segregation to mesomorphic solid solutions. Polymer Crystallization, 2021, 4, e10216.	0.8	5
15	Removal of organic pollutants in coking wastewater based on coal-based adsorbents: A pilot-scale study of static adsorption and flotation. Journal of Environmental Chemical Engineering, 2021, 9, 106844.	6.7	16
16	Hydrogel assisted interfacial polymerization for advanced nanofiltration membranes. Journal of Materials Chemistry A, 2020, 8, 3238-3245.	10.3	99
17	3D printed chemically and mechanically robust membrane by selective laser sintering for separation of oil/water and immiscible organic mixtures. Chemical Engineering Journal, 2020, 385, 123816.	12.7	29
18	Bulk rheometry at high frequencies: a review of experimental approaches. Rheologica Acta, 2020, 59, 1-22.	2.4	32

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19	A novel approach for the closure of large damage in self-healing elastomers using magnetic particles. Polymer, 2020, 204, 122819.	3.8	25
20	Tuning intermolecular pores of resorcin[4]arene-based membranes for enhanced nanofiltration performance. Journal of Membrane Science, 2020, 610, 118282.	8.2	9
21	Viscoelastic cluster densification in sheared colloidal gels. Soft Matter, 2020, 16, 2437-2447.	2.7	13
22	Assessment of Crystallinity Development during Fused Filament Fabrication through Fast Scanning Chip Calorimetry. Applied Sciences (Switzerland), 2019, 9, 2676.	2.5	33
23	Influence of Carbon Nanoparticle Addition (and Impurities) on Selective Laser Melting of Pure Copper. Materials, 2019, 12, 2469.	2.9	58
24	Structure architecture of micro/nanoscale ZIF-L on a 3D printed membrane for a superhydrophobic and underwater superoleophobic surface. Journal of Materials Chemistry A, 2019, 7, 2723-2729.	10.3	79
25	Stress Contributions in Colloidal Suspensions: The Smooth, the Rough, and the Hairy. Physical Review Letters, 2019, 122, 218001.	7.8	14
26	Covalent organic frameworks for membrane separation. Chemical Society Reviews, 2019, 48, 2665-2681.	38.1	733
27	Ultrafast imaging of soft materials during shear flow. Korea Australia Rheology Journal, 2019, 31, 229-240.	1.7	10
28	Regioselective synthesis, isomerisation, in vitro oestrogenic activity, and copolymerisation of bisguaiacol F (BGF) isomers. Green Chemistry, 2019, 21, 6622-6633.	9.0	28
29	Facile synthesis of Kevlar nanofibrous membranes via regeneration of hydrogen bonds for organic solvent nanofiltration. Journal of Membrane Science, 2019, 573, 612-620.	8.2	63
30	Promising bulk production of a potentially benign bisphenol A replacement from a hardwood lignin platform. Green Chemistry, 2018, 20, 1050-1058.	9.0	66
31	New promising polymer for organic solvent nanofiltration: Oxidized poly (arylene sulfide sulfone). Journal of Membrane Science, 2018, 549, 438-445.	8.2	54
32	Nano/microstructure decorated thin film composite poly (arylene sulfide sulfone) membrane constructed by induced fouling in organic solvent ultrafiltration. Chemical Engineering Journal, 2018, 348, 180-190.	12.7	26
33	Effect of adding a reactive plasticizer on the mechanical, thermal, and morphology properties of nylon toughened wheat gluten materials. Journal of Applied Polymer Science, 2018, 135, 45931.	2.6	7
34	Selective laser sintering of polystyrene: a single-layer approach. Plastics, Rubber and Composites, 2018, 47, 2-8.	2.0	19
35	Development of a method for pressure-free volumetric dilatometry of polymer melts and solids. Polymer Testing, 2018, 69, 219-224.	4.8	4
36	Flow-Induced Crystallization of Polyamide-6. International Polymer Processing, 2018, 33, 327-335.	0.5	8

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37	Hydrophilic nanofiltration membranes with reduced humic acid fouling fabricated from copolymers designed by introducing carboxyl groups in the pendant benzene ring. Journal of Membrane Science, 2018, 563, 655-663.	8.2	58
38	Fracture toughness of unidirectional flax fiber composites with rigid gliadin matrix. Journal of Reinforced Plastics and Composites, 2018, 37, 1163-1174.	3.1	2
39	Effect of thermal treatments on the laser sinterability of cryogenically milled polybutene-1. Materials and Design, 2018, 153, 15-23.	7.0	16
40	Analysis of the material properties involved in laser sintering of thermoplastic polyurethane. Additive Manufacturing, 2017, 15, 12-19.	3.0	39
41	Sustainable bisphenols from renewable softwood lignin feedstock for polycarbonates and cyanate ester resins. Green Chemistry, 2017, 19, 2561-2570.	9.0	102
42	Effect of PA12 powder reuse on coalescence behaviour and microstructure of SLS parts. European Polymer Journal, 2017, 92, 250-262.	5.4	140
43	Quantifying the dispersion quality of partially aggregated colloidal dispersions by high frequency rheology. Soft Matter, 2017, 13, 7897-7906.	2.7	19
44	Super-hydrophobic 3D printed polysulfone membranes with a switchable wettability by self-assembled candle soot for efficient gravity-driven oil/water separation. Journal of Materials Chemistry A, 2017, 5, 25401-25409.	10.3	103
45	3D Printing of Poly(lactic acid). Advances in Polymer Science, 2017, , 139-158.	0.8	27
46	Production of polyamide-12 membranes for microfiltration through selective laser sintering. Journal of Membrane Science, 2017, 525, 157-162.	8.2	42
47	The effect of shear history on urea containing gliadin solutions. Journal of Polymer Engineering, 2017, 37, 861-867.	1.4	1
48	Influence of temperature on the flowability of polymer powders in laser sintering. AIP Conference Proceedings, 2017, , .	0.4	10
49	Barriers and Chemistry in a Bottle: Mechanisms in Todayâ€™s Oxygen Barriers for Tomorrowâ€™s Materials. Applied Sciences (Switzerland), 2017, 7, 665.	2.5	35
50	Developing rigid gliadin based biocomposites with high mechanical performance. Composites Part A: Applied Science and Manufacturing, 2016, 85, 76-83.	7.6	6
51	Effect of Powder Size and Shape on the SLS Processability and Mechanical Properties of a TPU Elastomer. Physics Procedia, 2016, 83, 971-980.	1.2	61
52	Synthesis of Novel Renewable Polyesters and Polyamides with Olefin Metathesis. ACS Sustainable Chemistry and Engineering, 2016, 4, 5943-5952.	6.7	19
53	Improvement in impact resistance of polylactic acid by masticated and compatibilized natural rubber. Iranian Polymer Journal (English Edition), 2016, 25, 169-178.	2.4	19
54	Poly(alanine): Structure and Stability of the <scp>d</scp> and <scp>l</scp>-Enantiomers. Biomacromolecules, 2016, 17, 183-191.	5.4	13

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55	Random Copolymers from Polyamide 11 and Polyamide 12 by Reactive Extrusion: Synthesis, Eutectic Phase Behavior, and Polymorphism. Macromolecules, 2016, 49, 876-890.	4.8	45
56	Characterization of polyamide powders for determination of laser sintering processability. European Polymer Journal, 2016, 75, 163-174.	5.4	135
57	Simultaneous Synchrotron WAXD and Fast Scanning (Chip) Calorimetry: On the (Isothermal) Crystallization of HDPE and PA11 at High Supercoolings and Cooling Rates up to 200 Â°C s^{â^'1}. Macromolecular Rapid Communications, 2015, 36, 1184-1191.	3.9	44
58	Defect Occurrence in Waterâ€Assisted Injectionâ€Molded Products: Definition and Responsible Formation Mechanisms. Advances in Polymer Technology, 2015, 34, .	1.7	6
59	Controlling wheat gluten cross-linking for high temperature processing. Industrial Crops and Products, 2015, 72, 119-124.	5.2	24
60	Amino acids and poly(amino acids) as nucleating agents for poly(lactic acid). Journal of Polymer Engineering, 2015, 35, 169-180.	1.4	17
61	Surfactant Assisted Emulsion Crystallization of Hydrogenated Castor Oil. Crystal Growth and Design, 2015, 15, 635-641.	3.0	8
62	Wheat gluten/LDPE based thermoplastic vulcanizates containing LDPE-g-MA as compatibilizer. Industrial Crops and Products, 2015, 74, 824-838.	5.2	6
63	Processing rigid wheat gluten biocomposites for high mechanical performance. Composites Part A: Applied Science and Manufacturing, 2015, 79, 74-81.	7.6	14
64	Effect of aqueous and alcoholic shear treatments on the properties of rigid plastics from wheat gluten. Industrial Crops and Products, 2015, 77, 146-155.	5.2	5
65	Assessing polymer powder flow for the application of laser sintering. Powder Technology, 2015, 286, 151-155.	4.2	52
66	Flow-induced crystallization studied in the RheoDSC device: Quantifying the importance of edge effects. Rheologica Acta, 2015, 54, 1-8.	2.4	12
67	Regioselective synthesis of renewable bisphenols from 2,3-pentanedione and their application as plasticizers. Green Chemistry, 2014, 16, 1999-2007.	9.0	28
68	Toward Functional Polyester Building Blocks from Renewable Glycolaldehyde with Sn Cascade Catalysis. ACS Catalysis, 2013, 3, 1786-1800.	11.2	97
69	On the Effect of Particle Size, Shape, Concentration, and Aggregation on the Flow-Induced Crystallization of Polymers. Macromolecules, 2013, 46, 3425-3434.	4.8	41
70	Timeâ€“temperature-transformation (TTT) and temperatureâ€“conversion-transformation (TxT) cure diagrams by RheoDSC: Combined rheometry and calorimetry on an epoxy-amine thermoset. Reactive and Functional Polymers, 2013, 73, 332-339.	4.1	18
71	Effect of molding conditions and moisture content on the mechanical properties of compression molded glassy, wheat gluten bioplastics. Industrial Crops and Products, 2013, 44, 480-487.	5.2	37
72	On the Pressure Dependency of the Bagley Correction. International Polymer Processing, 2013, 28, 558-564.	0.5	9

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73	8th Annual European Rheology Conference (ERC 2013). Applied Rheology, 2013, 23, 185-186.	5.2	0
74	Water Penetration Behavior in Water-assisted Injection Molding (WAIM): A Study of Product Quality for Different Process and Material Parameters. International Polymer Processing, 2012, 27, 602-616.	0.5	8
75	Flow-induced phase behaviour and structure development in aqueous emulsion of associative biopolymers. Food Hydrocolloids, 2012, 27, 264-268.	10.7	11
76	Suspension-like hardening behavior of HDPE and time-hardening superposition. Rheologica Acta, 2012, 51, 97-109.	2.4	25
77	On the Onset of Oriented Structures in Flow-Induced Crystallization of Polymers: A Comparison of Experimental Techniques. Macromolecules, 2011, 44, 1783-1787.	4.8	21
78	On the pressure correction of capillary melt rheology data. Rheologica Acta, 2011, 50, 117-124.	2.4	13
79	Deformation and orientation of single droplets during shear flow: combined effects of confinement and compatibilization. Rheologica Acta, 2011, 50, 231-242.	2.4	16
80	TTS in LAOS: validation of time-temperature superposition under large amplitude oscillatory shear. Rheologica Acta, 2011, 50, 795-807.	2.4	16
81	Breakup Criteria for Confined Droplets: Effects of Compatibilization and Component Viscoelasticity. Macromolecular Materials and Engineering, 2011, 296, 214-222.	3.6	28
82	The Influence of Calciumâ€Stearateâ€Coated Calcium Carbonate and Talc on the Quiescent and Flowâ€Induced Crystallization of Isotactic Poly(propylene). Macromolecular Materials and Engineering, 2011, 296, 603-616.	3.6	12
83	In situ SAXS under shear unveils the gelation of aqueous starch suspensions and the impact of added amyloseâ€“lipid complexes. Carbohydrate Polymers, 2011, 84, 1141-1150.	10.2	22
84	The Influence of Melt and Process Parameters on the Quality and Occurrence of Part Defects in Water-assisted Injection Molded Tubes. International Polymer Processing, 2011, 26, 551-559.	0.5	11
85	Methyl methacrylate as a healing agent for self-healing cementitious materials. Smart Materials and Structures, 2011, 20, 125016.	3.5	71
86	RheoDSC Analysis of Hardening of Semi-Crystalline Polymers during Quiescent Isothermal Crystallization. International Polymer Processing, 2010, 25, 304-310.	0.5	17
87	Generalized behavior of the breakup of viscous drops in confinements. Journal of Rheology, 2010, 54, 1047-1060.	2.6	48
88	Single Droplet Break-up in Controlled Mixed Flows. ACS Applied Materials & Interfaces, 2010, 2, 2140-2146.	8.0	9
89	Droplet dynamics in mixed flow conditions: Effect of shear/elongation balance and viscosity ratio. Journal of Rheology, 2010, 54, 1285-1306.	2.6	11
90	Effect of Particles on the Flow-Induced Crystallization of Polypropylene at Processing Speeds. Macromolecules, 2010, 43, 2933-2941.	4.8	61

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91	Solvent quality as a key factor for shear-induced mixing in biopolymer emulsions. Food Hydrocolloids, 2009, 23, 262-270.	10.7	9
92	Influence of shear flow on polymorphic behavior and microstructural development during palm oil crystallization. European Journal of Lipid Science and Technology, 2009, 111, 290-302.	1.5	39
93	Droplet dynamics in sub-critical complex flows. Rheologica Acta, 2009, 48, 359-371.	2.4	10
94	Study of morphological hysteresis in partially immiscible polymers. Rheologica Acta, 2009, 48, 343-358.	2.4	3
95	RheoDSC: design and validation of a new hybrid measurement technique. Journal of Thermal Analysis and Calorimetry, 2009, 98, 675-681.	3.6	18
96	Droplet dynamics in sub-critical eccentric flows. International Journal of Material Forming, 2008, 1, 775-778.	2.0	1
97	Flow-induced crystallization in poly-1-butene: the shish-kebab transition. International Journal of Material Forming, 2008, 1, 667-670.	2.0	14
98	Effect of thermomechanical history on the crystallization of poly(etherâ€‹blockâ€‹amide). Polymer Engineering and Science, 2008, 48, 2418-2425.	3.1	8
99	Density Fluctuations during the Early Stages of Polymer Crystallization: An Overview. Macromolecular Materials and Engineering, 2008, 293, 255-273.	3.6	28
100	Development of a rheological method to characterize palm oil crystallizing under shear. European Journal of Lipid Science and Technology, 2008, 110, 521-529.	1.5	35
101	Transient interfacial tension and morphology evolution in partially miscible polymer blends. Journal of Colloid and Interface Science, 2008, 328, 48-57.	9.4	9
102	Review on morphology development of immiscible blends in confined shear flow. Polymer, 2008, 49, 5363-5372.	3.8	94
103	Effect of confinement and viscosity ratio on the dynamics of single droplets during transient shear flow. Journal of Rheology, 2008, 52, 1459-1475.	2.6	35
104	Density Fluctuations in Crystallizing Polymers: Fact or Fiction?. AIP Conference Proceedings, 2008, , .	0.4	0
105	RheoDSC: A hyphenated technique for the simultaneous measurement of calorimetric and rheological evolutions. Review of Scientific Instruments, 2008, 79, 023905.	1.3	20
106	Microconfined equiviscous droplet deformation: Comparison of experimental and numerical results. Physics of Fluids, 2008, 20, .	4.0	32
107	Effect of confinement on the steady-state behavior of single droplets during shear flow. Journal of Rheology, 2007, 51, 139-153.	2.6	80
108	Evaluation and comparison of routes to obtain pressure coefficients from high-pressure capillary rheometry data. Rheologica Acta, 2007, 46, 495-505.	2.4	59

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109	Effect of Confinement on Droplet Breakup in Sheared Emulsions. Langmuir, 2006, 22, 3972-3974.	3.5	106
110	Rheology and Morphology of Highly Compatibilized Polymer Blends. Macromolecular Symposia, 2006, 233, 51-58.	0.7	14
111	Flow-Induced Crystallization of PB-1:â€‰ From the Low Shear Rate Region up to Processing Rates. Macromolecules, 2006, 39, 9215-9222.	4.8	67
112	Structure Development in Confined Polymer Blends:Â Steady-State Shear Flow and Relaxation. Langmuir, 2006, 22, 2273-2280.	3.5	43
113	Morphology Development During Microconfined Flow of Viscous Emulsions. Applied Rheology, 2006, 16, 242-247.	5.2	11
114	Effect of molecular and processing parameters on the flow-induced crystallization of poly-1-butene. Part 1: Kinetics and morphology. Polymer, 2006, 47, 5871-5879.	3.8	46
115	Influence of flow on the global crystallization kinetics of iso-tactic polypropylene. Polymer Testing, 2006, 25, 460-469.	4.8	16
116	Rheological behavior of polyamide 11 with varying initial moisture content. Journal of Applied Polymer Science, 2005, 97, 666-670.	2.6	38
117	Effect of short chain branching upon the crystallization of model polyamides-11. Polymer, 2005, 46, 10331-10338.	3.8	17
118	The effect of block copolymer architecture on the coalescence and interfacial elasticity in compatibilized polymer blends. Journal of Rheology, 2005, 49, 783-798.	2.6	75
119	Rheology-Morphology Relationships in Immiscible Polymer Blends. , 2005, , 421-440.		3
120	Direct Evidence for Breakup of Liquid Fibrils via Rayleigh Instabilities in Model Polymer Blends in Step-up Experiments. Langmuir, 2004, 20, 3498-3500.	3.5	2
121	Effect of Shear Flow on the Phase Behavior of an Aqueous Gelatinâ^'Dextran Emulsion. Biomacromolecules, 2004, 5, 276-283.	5.4	31
122	Interfacial elasticity and coalescence suppression in compatibilized polymer blends. Journal of Rheology, 2004, 48, 143-158.	2.6	128
123	Steady-shear rheological properties of model compatibilized blends. Journal of Rheology, 2004, 48, 725-744.	2.6	44
124	Interfacial tension of aqueous biopolymer mixtures close to the critical point. International Journal of Biological Macromolecules, 2004, 34, 29-35.	7.5	35
125	Morphology evolution of aqueous biopolymer emulsions during a weak shear flow. Food Hydrocolloids, 2003, 17, 327-332.	10.7	33
126	Effect of reactive compatibilization on the interfacial slip in nylon-6/EPR blends. Polymer Engineering and Science, 2003, 43, 71-77.	3.1	40

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127	Diffuse interface modeling of the morphology and rheology of immiscible polymer blends. Physics of Fluids, 2003, 15, 2567-2575.	4.0	44
128	Biopolymer systems for low-fat foods. , 2003, , 109-129.		1
129	Sunny Rheology School in Leuven. Applied Rheology, 2003, 13, 317.	5.2	0
130	Rheo-optical measurement of the interfacial tension of aqueous biopolymer mixtures. Food Hydrocolloids, 2002, 16, 395-402.	10.7	31
131	Effect of marangoni stresses on the deformation and coalescence in compatibilized immiscible polymer blends. Polymer Engineering and Science, 2002, 42, 1956-1964.	3.1	45
132	Effect of compatibilization on the breakup of polymeric drops in shear flow. Journal of Rheology, 2001, 45, 1007-1019.	2.6	70
133	Rheology and morphology of compatibilized polymer blends. Current Opinion in Colloid and Interface Science, 2001, 6, 457-463.	7.4	187
134	Breakup of filaments in blends during simple shear flow. Journal of Rheology, 2000, 44, 1401-1415.	2.6	46
135	On the Existence of a Stressâ^'Optical Relation in Immiscible Polymer Blends. Langmuir, 2000, 16, 3740-3747.	3.5	3
136	Dynamic light scattering during shear: measurements of diffusion coefficients. Polymer, 1999, 40, 1353-1357.	3.8	18
137	Modelling and scaling of dichroism during relaxation in emulsions and polymer blends. Physical Chemistry Chemical Physics, 1999, 1, 2505-2511.	2.8	11
138	Small-angle light scattering study of droplet break-up in emulsions and polymer blends. Chemical Engineering Science, 1998, 53, 2231-2239.	3.8	36
139	Rheo-Optical Probing of Relaxational Phenomena in Immiscible Polymer Blends. Journal of Colloid and Interface Science, 1998, 200, 86-94.	9.4	38
140	Anisotropy and Orientation of the Microstructure in Viscous Emulsions during Shear Flow. Langmuir, 1998, 14, 1612-1617.	3.5	60
141	Rheology and Morphology of Immiscible Polymer Blends. , 1998, , 37-40.		0
142	Modeling and Scaling of Dichroism Relaxation in Immiscible Polymer Blends. , 1998, , 88-89.		1