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	Covalent organic frameworks for membrane separation. Chemical Society Reviews, 2019, 48, 2665-2681.	38.1	733
2	Rheology and morphology of compatibilized polymer blends. Current Opinion in Colloid and Interface Science, 2001, 6, 457-463.	7.4	187
3	Effect of PA12 powder reuse on coalescence behaviour and microstructure of SLS parts. European Polymer Journal, 2017, 92, 250-262.	5.4	140
4	Characterization of polyamide powders for determination of laser sintering processability. European Polymer Journal, 2016, 75, 163-174.	5.4	135
5	Interfacial elasticity and coalescence suppression in compatibilized polymer blends. Journal of Rheology, 2004, 48, 143-158.	2.6	128
6	Effect of Confinement on Droplet Breakup in Sheared Emulsions. Langmuir, 2006, 22, 3972-3974.	3.5	106
7	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
8	Sustainable bisphenols from renewable softwood lignin feedstock for polycarbonates and cyanate ester resins. Green Chemistry, 2017, 19, 2561-2570.	9.0	102
9	Hydrogel assisted interfacial polymerization for advanced nanofiltration membranes. Journal of Materials Chemistry A, 2020, 8, 3238-3245.	10.3	99
10	Toward Functional Polyester Building Blocks from Renewable Glycolaldehyde with Sn Cascade Catalysis. ACS Catalysis, 2013, 3, 1786-1800.	11.2	97
11	Review on morphology development of immiscible blends in confined shear flow. Polymer, 2008, 49, 5363-5372.	3.8	94
12	Effect of confinement on the steady-state behavior of single droplets during shear flow. Journal of Rheology, 2007, 51, 139-153.	2.6	80
13	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
14	Semi-crystalline feedstock for filament-based 3D printing of polymers. Progress in Polymer Science, 2021, 118, 101411.	24.7	79
15	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
16	Methyl methacrylate as a healing agent for self-healing cementitious materials. Smart Materials and Structures, 2011, 20, 125016.	3.5	71
17	Effect of compatibilization on the breakup of polymeric drops in shear flow. Journal of Rheology, 2001, 45, 1007-1019.	2.6	70
18	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

#	Article	IF	Citations
19	Promising bulk production of a potentially benign bisphenol A replacement from a hardwood lignin platform. Green Chemistry, 2018, 20, 1050-1058.	9.0	66
20	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
21	Effect of Particles on the Flow-Induced Crystallization of Polypropylene at Processing Speeds. Macromolecules, 2010, 43, 2933-2941.	4.8	61
22	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
23	Anisotropy and Orientation of the Microstructure in Viscous Emulsions during Shear Flow. Langmuir, 1998, 14, 1612-1617.	3.5	60
24	Evaluation and comparison of routes to obtain pressure coefficients from high-pressure capillary rheometry data. Rheologica Acta, 2007, 46, 495-505.	2.4	59
25	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
26	Influence of Carbon Nanoparticle Addition (and Impurities) on Selective Laser Melting of Pure Copper. Materials, 2019, 12, 2469.	2.9	58
27	New promising polymer for organic solvent nanofiltration: Oxidized poly (arylene sulfide sulfone). Journal of Membrane Science, 2018, 549, 438-445.	8.2	54
28	Assessing polymer powder flow for the application of laser sintering. Powder Technology, 2015, 286, 151-155.	4.2	52
29	Generalized behavior of the breakup of viscous drops in confinements. Journal of Rheology, 2010, 54, 1047-1060.	2.6	48
30	Insights on shear rheology of inks for extrusion-based 3D bioprinting. Bioprinting, 2021, 22, e00129.	5.8	48
31	Breakup of filaments in blends during simple shear flow. Journal of Rheology, 2000, 44, 1401-1415.	2.6	46
32	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
33	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
34	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
35	Diffuse interface modeling of the morphology and rheology of immiscible polymer blends. Physics of Fluids, 2003, 15, 2567-2575.	4.0	44
36	Steady-shear rheological properties of model compatibilized blends. Journal of Rheology, 2004, 48, 725-744.	2.6	44

#	Article	IF	Citations
37	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^{âˆ'1}. Macromolecular Rapid Communications, 2015, 36, 1184-1191.	3.9	44
38	Structure Development in Confined Polymer Blends:Â Steady-State Shear Flow and Relaxation. Langmuir, 2006, 22, 2273-2280.	3.5	43
39	Production of polyamide-12 membranes for microfiltration through selective laser sintering. Journal of Membrane Science, 2017, 525, 157-162.	8.2	42
40	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
41	Effect of reactive compatibilization on the interfacial slip in nylon-6/EPR blends. Polymer Engineering and Science, 2003, 43, 71-77.	3.1	40
42	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
43	Analysis of the material properties involved in laser sintering of thermoplastic polyurethane. Additive Manufacturing, 2017, 15, 12-19.	3.0	39
44	Rheo-Optical Probing of Relaxational Phenomena in Immiscible Polymer Blends. Journal of Colloid and Interface Science, 1998, 200, 86-94.	9.4	38
45	Rheological behavior of polyamide 11 with varying initial moisture content. Journal of Applied Polymer Science, 2005, 97, 666-670.	2.6	38
46	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
47	Small-angle light scattering study of droplet break-up in emulsions and polymer blends. Chemical Engineering Science, 1998, 53, 2231-2239.	3.8	36
48	Interfacial tension of aqueous biopolymer mixtures close to the critical point. International Journal of Biological Macromolecules, 2004, 34, 29-35.	7.5	35
49	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
50	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
51	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
52	Morphology evolution of aqueous biopolymer emulsions during a weak shear flow. Food Hydrocolloids, 2003, 17, 327-332.	10.7	33
53	Assessment of Crystallinity Development during Fused Filament Fabrication through Fast Scanning Chip Calorimetry. Applied Sciences (Switzerland), 2019, 9, 2676.	2.5	33
54	Microconfined equiviscous droplet deformation: Comparison of experimental and numerical results. Physics of Fluids, 2008, 20, .	4.0	32

#	Article	IF	Citations
55	Bulk rheometry at high frequencies: a review of experimental approaches. Rheologica Acta, 2020, 59, 1-22.	2.4	32
56	Rheo-optical measurement of the interfacial tension of aqueous biopolymer mixtures. Food Hydrocolloids, 2002, 16, 395-402.	10.7	31
57	Effect of Shear Flow on the Phase Behavior of an Aqueous Gelatinâ^'Dextran Emulsion. Biomacromolecules, 2004, 5, 276-283.	5.4	31
58	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
59	Density Fluctuations during the Early Stages of Polymer Crystallization: An Overview. Macromolecular Materials and Engineering, 2008, 293, 255-273.	3.6	28
60	Breakup Criteria for Confined Droplets: Effects of Compatibilization and Component Viscoelasticity. Macromolecular Materials and Engineering, 2011, 296, 214-222.	3.6	28
61	Regioselective synthesis of renewable bisphenols from 2,3-pentanedione and their application as plasticizers. Green Chemistry, 2014, 16, 1999-2007.	9.0	28
62	Regioselective synthesis, isomerisation, in vitro oestrogenic activity, and copolymerisation of bisguaiacol F (BGF) isomers. Green Chemistry, 2019, 21, 6622-6633.	9.0	28
63	A practical development of engineering simulation-assisted educational AR environments. Education for Chemical Engineers, 2021, 35, 81-93.	4.8	28
64	3D Printing of Poly(lactic acid). Advances in Polymer Science, 2017, , 139-158.	0.8	27
65	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
66	Suspension-like hardening behavior of HDPE and time-hardening superposition. Rheologica Acta, 2012, 51, 97-109.	2.4	25
67	A novel approach for the closure of large damage in self-healing elastomers using magnetic particles. Polymer, 2020, 204, 122819.	3.8	25
68	Controlling wheat gluten cross-linking for high temperature processing. Industrial Crops and Products, 2015, 72, 119-124.	5.2	24
69	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
70	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
71	RheoDSC: A hyphenated technique for the simultaneous measurement of calorimetric and rheological evolutions. Review of Scientific Instruments, 2008, 79, 023905.	1.3	20
72	Boosting PLA melt strength by controlling the chirality of co-monomer incorporation. Chemical Science, 2021, 12, 5672-5681.	7.4	20

#	Article	IF	Citations
73	Synthesis of Novel Renewable Polyesters and Polyamides with Olefin Metathesis. ACS Sustainable Chemistry and Engineering, 2016, 4, 5943-5952.	6.7	19
74	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
75	Quantifying the dispersion quality of partially aggregated colloidal dispersions by high frequency rheology. Soft Matter, 2017, 13, 7897-7906.	2.7	19
76	Selective laser sintering of polystyrene: a single-layer approach. Plastics, Rubber and Composites, 2018, 47, 2-8.	2.0	19
77	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
78	Mobile Augmented Reality Laboratory for Learning Acidâ€“Base Titration. Journal of Chemical Education, 2022, 99, 531-537.	2.3	19
79	Dynamic light scattering during shear: measurements of diffusion coefficients. Polymer, 1999, 40, 1353-1357.	3.8	18
80	RheoDSC: design and validation of a new hybrid measurement technique. Journal of Thermal Analysis and Calorimetry, 2009, 98, 675-681.	3.6	18
81	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
82	Effect of short chain branching upon the crystallization of model polyamides-11. Polymer, 2005, 46, 10331-10338.	3.8	17
83	RheoDSC Analysis of Hardening of Semi-Crystalline Polymers during Quiescent Isothermal Crystallization. International Polymer Processing, 2010, 25, 304-310.	0.5	17
84	Amino acids and poly(amino acids) as nucleating agents for poly(lactic acid). Journal of Polymer Engineering, 2015, 35, 169-180.	1.4	17
85	Influence of flow on the global crystallization kinetics of iso-tactic polypropylene. Polymer Testing, 2006, 25, 460-469.	4.8	16
86	Deformation and orientation of single droplets during shear flow: combined effects of confinement and compatibilization. Rheologica Acta, 2011, 50, 231-242.	2.4	16
87	TTS in LAOS: validation of time-temperature superposition under large amplitude oscillatory shear. Rheologica Acta, 2011, 50, 795-807.	2.4	16
88	Effect of thermal treatments on the laser sinterability of cryogenically milled polybutene-1. Materials and Design, 2018, 153, 15-23.	7.0	16
89	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
90	Magnetic Self-Healing Composites: Synthesis and Applications. Molecules, 2022, 27, 3796.	3.8	15

#	Article	IF	Citations
91	Rheology and Morphology of Highly Compatibilized Polymer Blends. Macromolecular Symposia, 2006, 233, 51-58.	0.7	14
92	Flow-induced crystallization in poly-1-butene: the shish-kebab transition. International Journal of Material Forming, 2008, 1, 667-670.	2.0	14
93	Processing rigid wheat gluten biocomposites for high mechanical performance. Composites Part A: Applied Science and Manufacturing, 2015, 79, 74-81.	7.6	14
94	Stress Contributions in Colloidal Suspensions: The Smooth, the Rough, and the Hairy. Physical Review Letters, 2019, 122, 218001.	7.8	14
95	On the pressure correction of capillary melt rheology data. Rheologica Acta, 2011, 50, 117-124.	2.4	13
96	Poly(alanine): Structure and Stability of the <scp>d</scp> and <scp>l</scp>-Enantiomers. Biomacromolecules, 2016, 17, 183-191.	5.4	13
97	Viscoelastic cluster densification in sheared colloidal gels. Soft Matter, 2020, 16, 2437-2447.	2.7	13
98	Exploring the potential usage of 3D printed membranes combined with PVDF coating in direct contact membrane distillation. Desalination, 2021, 513, 115134.	8.2	13
99	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
100	Flow-induced crystallization studied in the RheoDSC device: Quantifying the importance of edge effects. Rheologica Acta, 2015, 54, 1-8.	2.4	12
101	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
102	Modelling and scaling of dichroism during relaxation in emulsions and polymer blends. Physical Chemistry Chemical Physics, 1999, 1, 2505-2511.	2.8	11
103	Morphology Development During Microconfined Flow of Viscous Emulsions. Applied Rheology, 2006, 16, 242-247.	5.2	11
104	Droplet dynamics in mixed flow conditions: Effect of shear/elongation balance and viscosity ratio. Journal of Rheology, 2010, 54, 1285-1306.	2.6	11
105	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
106	Flow-induced phase behaviour and structure development in aqueous emulsion of associative biopolymers. Food Hydrocolloids, 2012, 27, 264-268.	10.7	11
107	Droplet dynamics in sub-critical complex flows. Rheologica Acta, 2009, 48, 359-371.	2.4	10
108	Influence of temperature on the flowability of polymer powders in laser sintering. AIP Conference Proceedings, 2017, , .	0.4	10

#	Article	IF	Citations
109	Ultrafast imaging of soft materials during shear flow. Korea Australia Rheology Journal, 2019, 31, 229-240.	1.7	10
110	Transient interfacial tension and morphology evolution in partially miscible polymer blends. Journal of Colloid and Interface Science, 2008, 328, 48-57.	9.4	9
111	Solvent quality as a key factor for shear-induced mixing in biopolymer emulsions. Food Hydrocolloids, 2009, 23, 262-270.	10.7	9
112	Single Droplet Break-up in Controlled Mixed Flows. ACS Applied Materials & Interfaces, 2010, 2, 2140-2146.	8.0	9
113	On the Pressure Dependency of the Bagley Correction. International Polymer Processing, 2013, 28, 558-564.	0.5	9
114	Tuning intermolecular pores of resorcin[4]arene-based membranes for enhanced nanofiltration performance. Journal of Membrane Science, 2020, 610, 118282.	8.2	9
115	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
116	Laser sintering of self-healable and recyclable thermoset networks. European Polymer Journal, 2022, 175, 111383.	5.4	9
117	Effect of thermomechanical history on the crystallization of poly(etherâ€‹blockâ€‹amide). Polymer Engineering and Science, 2008, 48, 2418-2425.	3.1	8
118	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
119	Surfactant Assisted Emulsion Crystallization of Hydrogenated Castor Oil. Crystal Growth and Design, 2015, 15, 635-641.	3.0	8
120	Flow-Induced Crystallization of Polyamide-6. International Polymer Processing, 2018, 33, 327-335.	0.5	8
121	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
122	Defect Occurrence in Waterâ€‹Assisted Injectionâ€‹Molded Products: Definition and Responsible Formation Mechanisms. Advances in Polymer Technology, 2015, 34, .	1.7	6
123	Wheat gluten/LDPE based thermoplastic vulcanizates containing LDPE-g-MA as compatibilizer. Industrial Crops and Products, 2015, 74, 824-838.	5.2	6
124	Developing rigid gliadin based biocomposites with high mechanical performance. Composites Part A: Applied Science and Manufacturing, 2016, 85, 76-83.	7.6	6
125	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
126	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

#	Article	IF	Citations
127	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
128	Humins Blending in Thermoreversible Dielsâ€“Alder Networks for Stiffness Tuning and Enhanced Healing Performance for Soft Robotics. Polymers, 2022, 14, 1657.	4.5	5
129	Development of a method for pressure-free volumetric dilatometry of polymer melts and solids. Polymer Testing, 2018, 69, 219-224.	4.8	4
130	On the Existence of a Stressâ˜Optical Relation in Immiscible Polymer Blends. Langmuir, 2000, 16, 3740-3747.	3.5	3
131	Study of morphological hysteresis in partially immiscible polymers. Rheologica Acta, 2009, 48, 343-358.	2.4	3
132	Rheology-Morphology Relationships in Immiscible Polymer Blends. , 2005, , 421-440.		3
133	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
134	Fracture toughness of unidirectional flax fiber composites with rigid gliadin matrix. Journal of Reinforced Plastics and Composites, 2018, 37, 1163-1174.	3.1	2
135	Biopolymer systems for low-fat foods. , 2003, , 109-129.		1
136	Droplet dynamics in sub-critical eccentric flows. International Journal of Material Forming, 2008, 1, 775-778.	2.0	1
137	The effect of shear history on urea containing gliadin solutions. Journal of Polymer Engineering, 2017, 37, 861-867.	1.4	1
138	Modeling and Scaling of Dichroism Relaxation in Immiscible Polymer Blends. , 1998, , 88-89.		1
139	Sunny Rheology School in Leuven. Applied Rheology, 2003, 13, 317.	5.2	0
140	Density Fluctuations in Crystallizing Polymers: Fact or Fiction?. AIP Conference Proceedings, 2008, , .	0.4	0
141	8th Annual European Rheology Conference (ERC 2013). Applied Rheology, 2013, 23, 185-186.	5.2	0
142	Rheology and Morphology of Immiscible Polymer Blends. , 1998, , 37-40.		0