David C Venerus

List of Publications by Year
in descending order

43 papers	989 citations	430442 18 h-index	433756 31 g-index
44 all docs	44 docs citations	44 times ranked	908 citing authors

#	Article	IF	Citations
1	Reprocessable Polyhydroxyurethane Network Composites: Effect of Filler Surface Functionality on Cross-link Density Recovery and Stress Relaxation. ACS Applied Materials & Interfaces, 2019, 11, 2398-2407.	4.0	103
2	Simultaneous stress and birefringence measurements during uniaxial elongation of polystyrene melts with narrow molecular weight distribution. Rheologica Acta, 2005, 45, 83-91.	1.1	77
3	Dynamic Shear Modulus of Tricresyl Phosphate and Squalane. Journal of Physical Chemistry B, 1999, 103, 4066-4070.	1.2	64
4	Flow field visualization of entangled polybutadiene solutions under nonlinear viscoelastic flow conditions. Journal of Rheology, 2013, 57, 1411-1428.	1.3	57
5	A critical evaluation of step strain flows of entangled linear polymer liquids. Journal of Rheology, 2005, 49, 277-295.	1.3	51
6	Tears of wine: new insights on an old phenomenon. Scientific Reports, 2015, 5, 16162.	1.6	48
7	Characterization of Biodegradable Microsphere-Hydrogel Ocular Drug Delivery System for Controlled and Extended Release of Ranibizumab. Translational Vision Science and Technology, 2019, 8, 12.	1.1	47
8	Equibiaxial extensional flow of polymer melts via lubricated squeezing flow. I. Experimental analysis. Rheologica Acta, 2000, 39, 444-451.	1.1	43
9	Relaxation of Anisotropic Thermal Diffusivity in a Polymer Melt Following Step Shear Strain. Physical Review Letters, 1999, 82, 366-369.	2.9	37
10	Laminar capillary flow of compressible viscous fluids. Journal of Fluid Mechanics, 2006, 555, 59.	1.4	34
11	Transport analysis of diffusion-induced bubble growth and collapse in viscous liquids. AICHE Journal, 1997, 43, 2948-2959.	1.8	32
12	Anisotropic Thermal Conduction in a Polymer Liquid Subjected to Shear Flow. Physical Review Letters, 2004, 93, 098301.	2.9	28
13	Equibiaxial extensional flow of polymer melts via lubricated squeezing flow. II. Flow modeling. Rheologica Acta, 2000, 39, 574-582.	1.1	27
14	Anisotropic thermal conduction in polymer melts in uniaxial elongation flows. Journal of Rheology, 2013, 57, 427-439.	1.3	26
15	Evaluation of rheological constitutive equations for branched polymers in step shear strain flows. Rheologica Acta, 2003, 42, 123-131.	1.1	23
16	Measurement of anisotropic energy transport in flowing polymers by using a holographic technique. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 13142-13146.	3.3	23
17	Molecular origins of anisotropy in the thermal conductivity of deformed polymer melts: stress versus orientation contributions. Soft Matter, 2012, 8, 11781.	1.2	21
18	Protease-Sensitive Hydrogel Biomaterials with Tunable Modulus and Adhesion Ligand Gradients for 3D Vascular Sprouting. Biomacromolecules, 2018, 19, 4168-4181.	2.6	21

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19	The dynamics of parallel-plate and coneâ€“plate flows. Physics of Fluids, 2021, 33, .	1.6	21
20	Measurements of Flow-Induced Anisotropic Thermal Conduction in a Polyisobutylene Melt Following Step Shear Flow. Macromolecules, 2005, 38, 6210-6215.	2.2	18
21	Anisotropic Thermal Conductivity in Cross-Linked Polybutadienes Subjected to Uniaxial Elongation. Macromolecules, 2009, 42, 2594-2598.	2.2	18
22	Polymer rheology predictions from first principles using the slip-link model. Journal of Rheology, 2020, 64, 1035-1043.	1.3	17
23	Linear viscoelastic behavior of bidisperse polystyrene blends: experiments and slip-link predictions. Rheologica Acta, 2018, 57, 327-338.	1.1	16
24	Pomâ€“Pom theory evaluation in double-step strain flows. Journal of Rheology, 2003, 47, 413-427.	1.3	15
25	Stress Relaxation in Polymer Melts Following Equibiaxial Step Strain. Macromolecules, 2010, 43, 5874-5880.	2.2	14
26	Anisotropic thermal transport in a crosslinked polyisoprene rubber subjected to uniaxial elongation. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 1638-1644.	2.4	14
27	Immobilized RGD concentration and proteolytic degradation synergistically enhance vascular sprouting within hydrogel scaffolds of varying modulus. Journal of Biomaterials Science, Polymer Edition, 2020, 31, 324-349.	1.9	10
28	Thermal conductivity of amorphous polymers and its dependence on molecular weight. Polymer, 2021, 228, 123881.	1.8	10
29	Thermodynamic approach to interfacial transport phenomena: Singleâ€component systems. AICHE Journal, 2014, 60, 1424-1433.	1.8	9
30	Free Surface Effects on Normal Stress Measurements in Cone and Plate Flow. Applied Rheology, 2007, 17, 36494-1-36494-6.	3.5	9
31	Determining the Dilution Exponent for Entangled 1,4-Polybutadienes Using Blends of Near-Monodisperse Star with Unentangled, Low Molecular Weight Linear Polymers. Macromolecules, 2019, 52, 1757-1771.	2.2	8
32	Equibiaxial elongational viscosity measurements of commercial polymer melts. Polymer Engineering and Science, 2015, 55, 1012-1017.	1.5	7
33	Squeeze flows in liquid films bound by porous disks. Journal of Fluid Mechanics, 2018, 855, 860-881.	1.4	7
34	Evidence of Deformation-Dependent Heat Capacity and Energetic Elasticity in a Cross-Linked Elastomer Subjected to Uniaxial Elongation. Macromolecules, 2018, 51, 589-597.	2.2	6
35	Investigation of thermal transport in colloidal silica dispersions (nanofluids). Journal of Nanoparticle Research, 2011, 13, 3075-3083.	0.8	5
36	Investigation of Anisotropic Thermal Conductivity in Polymers Using Infrared Thermography. Journal of Heat Transfer, 2014, 136, .	1.2	5

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37	Equibiaxial elongational rheology of entangled polystyrene melts. Journal of Rheology, 2019, 63, 157-165.	1.3	5
38	THERMAL TRANSPORT IN CROSS-LINKED ELASTOMERS SUBJECTED TO ELONGATIONAL DEFORMATIONS. Rubber Chemistry and Technology, 2019, 92, 639-652.	0.6	5
39	Thermal conductivity of poly(Lâ€Lactic Acid) subjected to elongational deformations. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 547-553.	2.4	4
40	A novel technique for conducting creep experiments in equibiaxial elongation. Rheologica Acta, 2017, 56, 591-596.	1.1	2
41	Diffusion of organic solvents in isobutylene-based polymers. Korean Journal of Chemical Engineering, 1996, 13, 255-260.	1.2	1
42	On using the anisotropy in the thermal resistance of solidâ€“fluid interfaces to more effectively cool nano-electronics. Molecular Simulation, 2020, 46, 162-167.	0.9	1
43	A Continuous Lubricated Squeezing Flow Technique to Study the Rheological Behavior of Polymer Melts in Equibiaxial Elongational Flow. AIP Conference Proceedings, 2008, , .	0.3	0