

# Marcio Carvalho

## List of Publications by Year in descending order

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145  
papers

3,026  
citations

185998

28  
h-index

214527

47  
g-index

145  
all docs

145  
docs citations

145  
times ranked

1846  
citing authors

#	ARTICLE	IF	CITATIONS
1	Microfluidic approach to produce emulsion-filled alginate microgels. <i>Journal of Food Engineering</i> , 2022, 315, 110812.	2.7	9
2	Computational study of planar extrudate swell flows with a viscous liquid-gas interface. <i>AIChE Journal</i> , 2022, 68, e17503.	1.8	2
3	Effect of interfacial rheology on drop coalescence in water-oil emulsion. <i>Soft Matter</i> , 2022, 18, 1423-1434.	1.2	17
4	Effect of contamination from direct sonication on characterization of nanofluid stability. <i>Powder Technology</i> , 2022, 399, 117157.	2.1	11
5	Petroleum reservoir parameters estimation using non-isothermal transient model and optimization methods. <i>Journal of Petroleum Science and Engineering</i> , 2022, 212, 110269.	2.1	1
6	Effect of viscoelasticity on oil displacement in a microfluidic porous medium. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2022, 44, .	0.8	3
7	Freeze-Dried Microfluidic Monodisperse Microbubbles as a New Generation of Ultrasound Contrast Agents. <i>Ultrasound in Medicine and Biology</i> , 2022, , .	0.7	2
8	Thin-film flows on rotating noncircular cylinders with large curvature variations. <i>Physical Review Fluids</i> , 2022, 7, .	1.0	1
9	Enhancement of oil recovery by emulsion injection: A pore scale analysis from X-ray micro-tomography measurements. <i>Journal of Petroleum Science and Engineering</i> , 2021, 198, 108134.	2.1	12
10	Mobility Reduction in the Flow of an Elastic Microcapsule through a Constricted Channel. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 2278-2289.	1.8	2
11	Deformation and rupture of microcapsules flowing through constricted capillary. <i>Scientific Reports</i> , 2021, 11, 7707.	1.6	7
12	Pore-scale compositional modeling of gas-condensate flow: Effects of interfacial tension and flow velocity on relative permeability. <i>Journal of Petroleum Science and Engineering</i> , 2021, 202, 108454.	2.1	8
13	Models for the mechanical characterization of core-shell microcapsules under uniaxial deformation. <i>Food Hydrocolloids</i> , 2021, 119, 106762.	5.6	11
14	Formation and stability of oil-in-water emulsions based on components of bioprocesses: A microfluidic analysis. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 626, 126994.	2.3	5
15	Effects of aging on the shelf life and viscoelasticity of gellan gum microcapsules. <i>Food Hydrocolloids</i> , 2021, 121, 106982.	5.6	3
16	Contact line dynamics in curtain coating of non-Newtonian liquids. <i>Physics of Fluids</i> , 2021, 33, .	1.6	10
17	Microcapsules with controlled magnetic response. <i>Microfluidics and Nanofluidics</i> , 2021, 25, 1.	1.0	2
18	Microfluidic production of aqueous suspensions of gellan-based microcapsules containing hydrophobic compounds. <i>Chemical Engineering Science</i> , 2020, 211, 115314.	1.9	27

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19	Pore network model for retrograde gas flow in porous media. Journal of Petroleum Science and Engineering, 2020, 185, 106635.	2.1	8
20	Delaying breakup and avoiding air entrainment in curtain coating using a two-layer liquid structure. Chemical Engineering Science, 2020, 213, 115376.	1.9	10
21	Pore-Scale Analysis of Condensate Blockage Mitigation by Wettability Alteration. Energies, 2020, 13, 4673.	1.6	4
22	Transcriptome of Two Canine Prostate Cancer Cells Treated With Toceranib Phosphate Reveals Distinct Antitumor Profiles Associated With the PDGFR Pathway. Frontiers in Veterinary Science, 2020, 7, 561212.	0.9	6
23	Thermal impacts on pressure transient tests using a coupled wellbore/reservoir analytical model. Journal of Petroleum Science and Engineering, 2020, 191, 106992.	2.1	11
24	Dynamics of viscoelastic flow through axisymmetric constricted microcapillary at high elasticity number. Journal of Non-Newtonian Fluid Mechanics, 2020, 286, 104438.	1.0	4
25	Dynamic wetting failure in shear-thinning and shear-thickening liquids. Journal of Fluid Mechanics, 2020, 892, .	1.4	11
26	Cavity filling with shear-thinning liquids. Physical Review Fluids, 2020, 5, .	1.0	5
27	Effects of shear and extensional rheology on liquid transfer between two flat surfaces. Journal of Non-Newtonian Fluid Mechanics, 2019, 274, 104173.	1.0	10
28	Analytical Models for Interpretation and Analysis of Transient Sandface and Wellbore Temperature Data. , 2019, , .		3
29	Pore Scale Visualization of Drainage in 3D Porous Media by Confocal Microscopy. Scientific Reports, 2019, 9, 12333.	1.6	18
30	A Coupled Transient Wellbore/Reservoir-Temperature Analytical Model. SPE Journal, 2019, 24, 2335-2361.	1.7	26
31	Numerical and experimental evaluation of droplet breakage of O/W emulsions in rotor-stator mixers. Chemical Engineering Science, 2019, 204, 270-286.	1.9	22
32	Defining Metabolic Rewiring in Lung Squamous Cell Carcinoma. Metabolites, 2019, 9, 47.	1.3	6
33	Emptying of gravure cavities containing shear-thinning and shear-thickening liquids. Journal of Non-Newtonian Fluid Mechanics, 2019, 268, 46-55.	1.0	7
34	A computational study of the effect of particle migration on the low-flow limit in slot coating of particle suspensions. Journal of Coatings Technology Research, 2019, 16, 1619-1628.	1.2	10
35	Comprehensive Genomic Profiling of Androgen-Receptor-Negative Canine Prostate Cancer. International Journal of Molecular Sciences, 2019, 20, 1555.	1.8	23
36	Effect of Surface Wettability on Immiscible Displacement in a Microfluidic Porous Media. Energies, 2019, 12, 664.	1.6	27

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37	Effect of rheological properties of shear thinning liquids on curtain stability. Journal of Non-Newtonian Fluid Mechanics, 2019, 263, 69-76.	1.0	11
38	p-mTOR, p-4EBP-1 and eIF4E expression in canine prostatic carcinoma. Research in Veterinary Science, 2019, 122, 86-92.	0.9	17
39	Dynamic wetting failure in curtain coating: Comparison of model predictions and experimental observations. Chemical Engineering Science, 2019, 195, 74-82.	1.9	14
40	Effect of viscoelasticity on liquid sheet rupture. Journal of Non-Newtonian Fluid Mechanics, 2019, 264, 107-116.	1.0	11
41	Electrostatic assist of liquid transfer between plates and cavities. Physical Review Fluids, 2019, 4, .	1.0	3
42	Transfer of rate-thinning and rate-thickening liquids between separating plates and cavities. Journal of Non-Newtonian Fluid Mechanics, 2018, 255, 57-69.	1.0	9
43	Slot coating flow of particle suspensions: Particle migration in shear sensitive liquids. Journal of Non-Newtonian Fluid Mechanics, 2018, 258, 22-31.	1.0	14
44	Shear-induced particle migration in the flow of particle suspensions through a sudden plane expansion. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2018, 40, 1.	0.8	2
45	Effect of viscoelasticity on stability of liquid curtain. Journal of Non-Newtonian Fluid Mechanics, 2018, 257, 83-94.	1.0	20
46	Embedding of polytopes for topology optimization. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2018, 40, 1.	0.8	1
47	Deregulation of E-cadherin, $\beta$ -catenin, APC and Caveolin-1 expression occurs in canine prostate cancer and metastatic processes. Research in Veterinary Science, 2018, 118, 254-261.	0.9	20
48	Effect of viscosity on liquid curtain stability. AIChE Journal, 2018, 64, 1448-1457.	1.8	16
49	Nonlinear Vortex Light Beams Supported and Stabilized by Dissipation. Understanding Complex Systems, 2018, , 111-138.	0.3	0
50	Particle migration and alignment in slot coating flows of elongated particle suspensions. AIChE Journal, 2017, 63, 3187-3198.	1.8	21
51	Migration and alignment in the flow of elongated particle suspensions through a converging-diverging channel. Journal of Non-Newtonian Fluid Mechanics, 2017, 243, 56-63.	1.0	9
52	Flow of Tunable Elastic Microcapsules through Constrictions. Scientific Reports, 2017, 7, 11898.	1.6	31
53	Histological, morphometric, protein and gene expression analyses of rat retinas with ischaemia-reperfusion injury model treated with sildenafil citrate. International Journal of Experimental Pathology, 2017, 98, 147-157.	0.6	14
54	Mechanisms of dynamic wetting failure in the presence of soluble surfactants. Journal of Fluid Mechanics, 2017, 825, 677-703.	1.4	12

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55	Particle migration in planar die-swell flows. <i>Journal of Fluid Mechanics</i> , 2017, 825, 49-68.	1.4	10
56	Stationary and stable light-beam propagation in Kerr media with nonlinear absorption with controllable dissipation patterns. <i>Physical Review A</i> , 2017, 95, .	1.0	4
57	Trailing edge formation during slot coating of rectangular patches. <i>Journal of Coatings Technology Research</i> , 2017, 14, 1003-1013.	1.2	9
58	Water-alternating-macroemulsion reservoir simulation through capillary number-dependent modeling. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2017, 39, 4135-4145.	0.8	9
59	Sedimentation and Marangoni stress in slot coating flow of particle suspension. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017, 247, 53-61.	1.0	9
60	Slot coating flows of non-colloidal particle suspensions. <i>AIChE Journal</i> , 2017, 63, 1122-1131.	1.8	16
61	Mechanics of Pickering Drops Probed by Electric Field-Induced Stress. <i>Materials</i> , 2017, 10, 436.	1.3	12
62	Liquid-film coating on topographically patterned rotating cylinders. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	12
63	Viscous free-surface flows on rotating elliptical cylinders. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	5
64	Dynamic wetting failure and hydrodynamic assist in curtain coating. <i>Journal of Fluid Mechanics</i> , 2016, 808, 290-315.	1.4	22
65	Transition from glass- to gel-like states in clay at a liquid interface. <i>Scientific Reports</i> , 2016, 6, 37239.	1.6	11
66	Snap-off in constricted capillary with elastic interface. <i>Physics of Fluids</i> , 2016, 28, .	1.6	18
67	Dynamic wetting failure in surfactant solutions. <i>Journal of Fluid Mechanics</i> , 2016, 789, 285-309.	1.4	23
68	Injection of Dilute Oil-in-Water Emulsion as an Enhanced Oil Recovery Method for Heavy Oil: 1D and 3D Flow Configurations. <i>Transport in Porous Media</i> , 2016, 113, 267-281.	1.2	21
69	Fluid flow topology optimization in PolyTop: stability and computational implementation. <i>Structural and Multidisciplinary Optimization</i> , 2016, 54, 1345-1364.	1.7	39
70	Stretching liquid bridges with moving contact lines: comparison of liquid-transfer predictions and experiments. <i>Soft Matter</i> , 2016, 12, 7457-7469.	1.2	29
71	Controlled microfluidic emulsification of oil in a clay nanofluid: Role of salt for Pickering stabilization. <i>European Physical Journal: Special Topics</i> , 2016, 225, 757-765.	1.2	9
72	Stabilization of vortex beams in Kerr media by nonlinear absorption. <i>Physical Review A</i> , 2016, 94, .	1.0	12

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73	Three dimensional flow of liquid transfer between a cavity and a moving roll. Chemical Engineering Science, 2016, 149, 169-180.	1.9	10
74	On the pressure-driven flow of suspensions: Particle migration in shear sensitive liquids. Journal of Non-Newtonian Fluid Mechanics, 2016, 234, 178-187.	1.0	26
75	A Quantum Relativistic Prisoner's Dilemma Cellular Automaton. International Journal of Theoretical Physics, 2016, 55, 4310-4323.	0.5	8
76	Alterations in PTEN, MDM2, TP53 and AR protein and gene expression are associated with canine prostate carcinogenesis. Research in Veterinary Science, 2016, 106, 56-61.	0.9	39
77	Flow of Complex Fluids Through Porous Media: Application in Oil Recovery. , 2015, , .		5
78	Efficient method to compute full eigenspectrum of incompressible viscous flows: Application on two-layer rectilinear flow. Korea Australia Rheology Journal, 2015, 27, 177-188.	0.7	1
79	Transient response of two-layer slot coating flows to periodic disturbances. AIChE Journal, 2015, 61, 1699-1707.	1.8	10
80	Simultaneous multilayer coating of water-based and alcohol-based solutions. Journal of Coatings Technology Research, 2015, 12, 819-826.	1.2	10
81	The value of Berlin questionnaire to identify patients at risk for the sleep apnea syndrome in the periodical medical examinations in companies. , 2015, , .		0
82	Liquid transfer from single cavities to rotating rolls. Journal of Fluid Mechanics, 2014, 747, 545-571.	1.4	19
83	Finite Element/Fictitious Domain programming for flows with particles made simple. Advances in Engineering Software, 2014, 70, 51-62.	1.8	0
84	Oil recovery modeling of macro-emulsion flooding at low capillary number. Journal of Petroleum Science and Engineering, 2014, 119, 112-122.	2.1	43
85	Polygonal finite elements for incompressible fluid flow. International Journal for Numerical Methods in Fluids, 2014, 74, 134-151.	0.9	61
86	Characteristics of air entrainment during dynamic wetting failure along a planar substrate. Journal of Fluid Mechanics, 2014, 747, 119-140.	1.4	40
87	Process limits in two-layer reverse roll transfer. Journal of Coatings Technology Research, 2013, 10, 485-492.	1.2	1
88	Dynamic Network Model of Mobility Control in Emulsion Flow Through Porous Media. Transport in Porous Media, 2013, 98, 427-441.	1.2	13
89	Flow of a drop through a constricted microcapillary. Computers and Fluids, 2013, 87, 50-56.	1.3	23
90	Spreading and merging of liquid streams flowing down an inclined plane: Modeling and experiments. Chemical Engineering Science, 2013, 95, 221-231.	1.9	3

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91	Conceptual Darcy-Scale Model of Oil Displacement with Macroemulsion. Energy & Fuels, 2013, 27, 1967-1973.	2.5	21
92	On the mechanism of wetting failure during fluid displacement along a moving substrate. Physics of Fluids, 2013, 25, .	1.6	44
93	Delaying the onset of dynamic wetting failure through meniscus confinement. Journal of Fluid Mechanics, 2012, 707, 496-520.	1.4	50
94	The dynamics of three-dimensional liquid bridges with pinned and moving contact lines. Journal of Fluid Mechanics, 2012, 707, 521-540.	1.4	43
95	A Comprehensive Theoretical and Experimental Study on Fluid Displacement for Oilwell-Cementing Operations. SPE Drilling and Completion, 2012, 27, 596-603.	0.9	11
96	Minimization of Viscous Fluid Fingering: A Variational Scheme for Optimal Flow Rates. Physical Review Letters, 2012, 109, 144502.	2.9	87
97	Pore Scale and Macroscopic Displacement Mechanisms in Emulsion Flooding. Transport in Porous Media, 2012, 94, 197-206.	1.2	113
98	Capillary-driven mobility control in macro emulsion flow in porous media. International Journal of Multiphase Flow, 2012, 43, 62-65.	1.6	72
99	Stretching Liquid Bridges with Bubbles: The Effect of Air Bubbles on Liquid Transfer. Langmuir, 2011, 27, 1556-1559.	1.6	9
100	Experiments and network model of flow of oil-water emulsion in porous media. Physical Review E, 2011, 84, 046305.	0.8	59
101	Flows with suspended and floating particles. Journal of Computational Physics, 2011, 230, 7736-7754.	1.9	6
102	Operability limits of slide coating. Chemical Engineering Science, 2011, 66, 5077-5083.	1.9	4
103	Optimization of slot-coating processes: minimizing the amplitude of film-thickness oscillation. Journal of Engineering Mathematics, 2011, 71, 97-108.	0.6	12
104	Stability of viscoelastic liquid curtain. Chemical Engineering and Processing: Process Intensification, 2011, 50, 445-449.	1.8	28
105	Flow visualization and operating limits of tensioned-web-over slot die coating process. Chemical Engineering and Processing: Process Intensification, 2011, 50, 471-477.	1.8	13
106	Stretching liquid bridges with moving contact lines: The role of inertia. Physics of Fluids, 2011, 23, .	1.6	59
107	Two-layer tensioned-web-over-slot die coating: Effect of operating conditions on coating window. Chemical Engineering Science, 2010, 65, 4065-4079.	1.9	13
108	Linear stability analysis of two-layer rectilinear flow in slot coating. AIChE Journal, 2010, 56, 2503-2512.	1.8	8

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109	Leveling of thin films of colloidal suspensions. Journal of Colloid and Interface Science, 2010, 343, 306-313.	5.0	17
110	Flow in tensioned-web-over-slot die coating: Effect of die lip design. Chemical Engineering Science, 2010, 65, 3957-3971.	1.9	27
111	Two-layer tensioned-web-over-slot die coating: Effect of die lip geometry. Chemical Engineering Science, 2010, 65, 4014-4026.	1.9	2
112	Effects of repeated extracorporeal shock wave in urinary biochemical markers of rats. Acta Cirurgica Brasileira, 2009, 24, 496-501.	0.3	6
113	Snap-off of a liquid drop immersed in another liquid flowing through a constricted capillary. AIChE Journal, 2009, 55, 1993-1999.	1.8	34
114	Viscocapillary model of slide coating: Effect of operating parameters and range of validity. AIChE Journal, 2009, 55, 2491-2505.	1.8	6
115	Flow of oil-water emulsions through a constricted capillary. International Journal of Multiphase Flow, 2009, 35, 507-515.	1.6	139
116	Efficient computation of the spectrum of viscoelastic flows. Journal of Computational Physics, 2009, 228, 1172-1187.	1.9	6
117	Tracking birth of vortex in flows. Journal of Computational Physics, 2009, 228, 4549-4567.	1.9	27
118	Stretching and slipping of liquid bridges near plates and cavities. Physics of Fluids, 2009, 21, .	1.6	83
119	Mid-gap invasion in two-layer slot coating. Journal of Fluid Mechanics, 2009, 631, 397-417.	1.4	30
120	Response of slot coating flows to periodic disturbances. Chemical Engineering Science, 2008, 63, 2161-2173.	1.9	36
121	Flow of Oil-Water Emulsion Through Constricted Capillary Tubes. AIP Conference Proceedings, 2008, , .	0.3	6
122	Drying of Thin Films of Polymer Solutions Coated over Impermeable Substrates. Heat Transfer Engineering, 2007, 28, 559-566.	1.2	7
123	Measuring the velocity field in film-splitting flows of Newtonian liquids. AIChE Journal, 2007, 53, 281-289.	1.8	4
124	Displacement flows of dilute polymer solutions in capillaries. Journal of Non-Newtonian Fluid Mechanics, 2007, 147, 117-128.	1.0	9
125	Filtering the eigenvalues at infinite from the linear stability analysis of incompressible flows. Journal of Computational Physics, 2007, 227, 229-243.	1.9	8
126	Three-Dimensional Flow of a Newtonian Liquid Through an Annular Space with Axially Varying Eccentricity. Journal of Fluids Engineering, Transactions of the ASME, 2006, 128, 223-231.	0.8	15



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127	Gas-displacement of non-Newtonian liquids in capillary tubes. International Journal of Heat and Fluid Flow, 2006, 27, 95-104.	1.1	16
128	Slot coating of mildly viscoelastic liquids. Journal of Non-Newtonian Fluid Mechanics, 2006, 138, 63-75.	1.0	78
129	Effect of curvature of coating die edges on the pinning of contact line. AIChE Journal, 2006, 52, 447-455.	1.8	27
130	Forward roll coating flows of viscoelastic liquids. Journal of Non-Newtonian Fluid Mechanics, 2005, 130, 96-109.	1.0	44
131	Immiscible Liquid-Liquid Displacement in Capillary Tubes. Journal of Fluids Engineering, Transactions of the ASME, 2005, 127, 24-31.	0.8	40
132	Instability of Inelastic Shear-Thinning Liquids in a Couette Flow Between Concentric Cylinders. Journal of Fluids Engineering, Transactions of the ASME, 2004, 126, 385-390.	0.8	28
133	Low-flow limit in slot coating of dilute solutions of high molecular weight polymer. Journal of Non-Newtonian Fluid Mechanics, 2004, 118, 137-156.	1.0	110
134	Elastohydrodynamics of tensioned web roll coating process. International Journal for Numerical Methods in Fluids, 2003, 41, 561-576.	0.9	11
135	Effect of thickness and viscoelastic properties of roll cover on deformable roll coating flows. Chemical Engineering Science, 2003, 58, 4323-4333.	1.9	20
136	Elastohydrodynamics of a moving substrate over a curved plate. AIChE Journal, 2002, 48, 739-751.	1.8	4
137	Low-flow limit in slot coating: Theory and experiments. AIChE Journal, 2000, 46, 1907-1917.	1.8	187
138	Three-Dimensional Stability Analysis of Free Surface Flows: Application to Forward Deformable Roll Coating. Journal of Computational Physics, 1999, 151, 534-562.	1.9	50
139	Deformable roll coating flows: steady state and linear perturbation analysis. Journal of Fluid Mechanics, 1997, 339, 143-172.	1.4	62
140	MULTIPLE STATES OF A VISCOUS FREE SURFACE FLOW: TRANSITION FROM PRE-METERED TO A METERING INFLOW. International Journal for Numerical Methods in Fluids, 1997, 24, 813-831.	0.9	10
141	Flows in Forward Deformable Roll Coating Gaps: Comparison between Spring and Plane-Strain Models of Roll Cover. Journal of Computational Physics, 1997, 138, 449-479.	1.9	33
142	Capillary and Viscoelastic Effects on Elastohydrodynamic Lubrication in Roller Nips. Journal of Tribology, 1996, 118, 872-879.	1.0	5
143	Single-point correction for parallel disks rheometry. Journal of Rheology, 1994, 38, 1925-1936.	1.3	28
144	Heat Transfer in the Non-Newtonian Axisymmetric Flow in the Neighborhood of a Sudden Contraction. Journal of Heat Transfer, 1992, 114, 582-588.	1.2	8

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145	STABILIZATION OF EMULSIONS BY HETEROCOAGULATION OF CLAY MINERALS USING A MICROFLUIDIC DEVICE. , 0, , .		0