Jose M Montanero

List of Publications by Year
in descending order

156 papers	3,589 citations	117625 34 h-index	175258 52 g-index
159 all docs	159 docs citations	159 times ranked	1978 citing authors

#	Article	IF	Citations
1	Stability and tip streaming of a surfactant-loaded drop in an extensional flow. Influence of surface viscosity. Journal of Fluid Mechanics, 2022, 934, .	3.4	17
2	On the hydrodynamic focusing for producing microemulsions via tip streaming. Journal of Fluid Mechanics, 2022, 934, .	3.4	5
3	Applicability of near-field electrospinning for the development of TCP-based thin fibres and scaffold 3D printing. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2022, , .	1.9	0
4	Unexpected stability of micrometer weakly viscoelastic jets. Physics of Fluids, 2022, 34, .	4.0	4
5	Viscoelastic transition in transonic flow focusing. Physical Review Fluids, 2022, 7, .	2.5	3
6	Viscoelastic liquid bridge breakup and liquid transfer between two surfaces. Journal of Colloid and Interface Science, 2021, 582, 1251-1256.	9.4	5
7	Global stability analysis of axisymmetric liquidâ€"liquid flow focusing. Journal of Fluid Mechanics, 2021, 909, .	3.4	10
8	Self-similar electrohydrodynamic solutions in multiple coaxial Taylor cones. Journal of Fluid Mechanics, 2021, 915, .	3.4	4
9	Electrical Conductivity of a Stretching Viscoelastic Filament. Materials, 2021, 14, 1294.	2.9	1
10	Diameter and charge of the first droplet emitted in electrospray. Physics of Fluids, 2021, 33, .	4.0	14
11	Analytical model for managing hypotony after implantation surgery of a glaucoma drainage device. Biomechanics and Modeling in Mechanobiology, 2021, 20, 2061-2070.	2.8	1
12	The Natural Breakup Length of a Steady Capillary Jet: Application to Serial Femtosecond Crystallography. Crystals, 2021, 11, 990.	2.2	6
13	Transonic flow focusing: stability analysis and jet diameter. International Journal of Multiphase Flow, 2021, 142, 103720.	3.4	3
14	Effect of an axial electric field on the breakup of a leaky-dielectric liquid filament. Physics of Fluids, 2021, 33, .	4.0	8
15	Influence of the dynamical free surface deformation on the stability of thermal convection in high-Prandtl-number liquid bridges. International Journal of Heat and Mass Transfer, 2020, 146, 118831.	4.8	17
16	Experimental Analysis of the Extensional Flow of Very Weakly Viscoelastic Polymer Solutions. Materials, 2020, 13, 192.	2.9	7
17	Dripping, jetting and tip streaming. Reports on Progress in Physics, 2020, 83, 097001.	20.1	91
18	Influence of the surface viscous stress on the pinch-off of free surfaces loaded with nearly-inviscid surfactants. Scientific Reports, 2020, 10, 16065.	3.3	12

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19	Breakup of an electrified viscoelastic liquid bridge. Physical Review E, 2020, 102, 033103.	2.1	6
20	Whipping in gaseous flow focusing. International Journal of Multiphase Flow, 2020, 130, 103367.	3.4	9
21	Review on the Dynamics of Isothermal Liquid Bridges. Applied Mechanics Reviews, 2020, 72, .	10.1	35
22	Numerical model to predict and compare the hypotensive efficacy and safety of minimally invasive glaucoma surgery devices. PLoS ONE, 2020, 15, e0239324.	2.5	12
23	A method for measuring the interfacial tension for density-matched liquids. Journal of Colloid and Interface Science, 2020, 566, 90-97.	9.4	1
24	Gaseous flow focusing for spinning micro and nanofibers. Polymer, 2019, 178, 121623.	3.8	12
25	Electrospray cone-jet mode for weakly viscoelastic liquids. Physical Review E, 2019, 100, 043114.	2.1	4
26	Stability of a jet moving in a rectangular microchannel. Physical Review E, 2019, 100, 053104.	2.1	4
27	Influence of an iris-fixed phakic intraocular lens on the transport of nutrients by the aqueous humor. Biomechanics and Modeling in Mechanobiology, 2019, 18, 491-502.	2.8	3
28	Magnetic PDMS Microparticles for Biomedical and Energy Applications. Lecture Notes in Computational Vision and Biomechanics, 2019, , 578-584.	0.5	2
29	Complex behavior very close to the pinching of a liquid free surface. Physical Review Fluids, 2019, 4, .	2.5	10
30	Stabilization of axisymmetric liquid bridges through vibration-induced pressure fields. Journal of Colloid and Interface Science, 2018, 513, 409-417.	9.4	9
31	The steady cone-jet mode of electrospraying close to the minimum volume stability limit. Journal of Fluid Mechanics, 2018, 857, 142-172.	3.4	34
32	Review on the physics of electrospray: From electrokinetics to the operating conditions of single and coaxial Taylor cone-jets, and AC electrospray. Journal of Aerosol Science, 2018, 125, 32-56.	3.8	182
33	On the validity of the Jeffreys (Oldroyd-B) model to describe the oscillations of a viscoelastic pendant drop. Journal of Non-Newtonian Fluid Mechanics, 2018, 260, 69-75.	2.4	4
34	Computational simulation of aqueous humour dynamics in the presence of a posterior-chamber versus iris-fixed phakic intraocular lens. PLoS ONE, 2018, 13, e0202128.	2.5	16
35	Numerical analysis of the pressure drop across highly-eccentric coronary stenoses: application to the calculation of the fractional flow reserve. BioMedical Engineering OnLine, 2018, 17, 67.	2.7	12
36	Influence of the Surface Viscosity on the Breakup of a Surfactant-Laden Drop. Physical Review Letters, 2017, 118, 024501.	7.8	49

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37	Numerical and experimental analysis of the transitional flow across a real stenosis. Biomechanics and Modeling in Mechanobiology, 2017, 16, 1447-1458.	2.8	9
38	Global stability of axisymmetric flow focusing. Journal of Fluid Mechanics, 2017, 832, 329-344.	3.4	22
39	Mean flow produced by small-amplitude vibrations of a liquid bridge with its free surface covered with an insoluble surfactant. Physical Review E, 2017, 96, 033101.	2.1	1
40	Smooth printing of viscoelastic microfilms with a flow focusing ejector. Journal of Non-Newtonian Fluid Mechanics, 2017, 249, 1-7.	2.4	10
41	Measurement of relaxation times in extensional flow of weakly viscoelastic polymer solutions. Rheologica Acta, 2017, 56, 11-20.	2.4	57
42	Theoretical and Experimental Analysis of the Steady Flow Across the Cylinderhead of a Low-Capacity Engine. Journal of Applied Mechanics, Transactions ASME, 2016, 83, .	2.2	1
43	Monosized dripping mode of axisymmetric flow focusing. Physical Review E, 2016, 94, 053122.	2.1	21
44	Linear and nonlinear dynamics of an insoluble surfactant-laden liquid bridge. Physics of Fluids, 2016, 28, 112103.	4.0	14
45	Analysis of a resonance liquid bridge oscillation on board of the International Space Station. European Journal of Mechanics, B/Fluids, 2016, 57, 15-21.	2.5	7
46	Influence of the manufacturing process tolerance on the swirl number of a low-capacity engine. Journal of Manufacturing Systems, 2016, 41, 157-164.	13.9	1
47	The onset of electrospray: the universal scaling laws of the first ejection. Scientific Reports, 2016, 6, 32357.	3.3	58
48	Effects of surface-active impurities on the liquid bridge dynamics. Experiments in Fluids, 2016, 57, 1.	2.4	15
49	A numerical method to study the dynamics of capillary fluid systems. Journal of Computational Physics, 2016, 306, 137-147.	3.8	65
50	A hybrid flow focusing nozzle design to produce micron and sub-micron capillary jets. International Journal of Mass Spectrometry, 2016, 403, 32-38.	1.5	3
51	The production of viscoelastic capillary jets with gaseous flow focusing. Journal of Non-Newtonian Fluid Mechanics, 2016, 229, 8-15.	2.4	13
52	Convective-to-absolute instability transition in a viscoelastic capillary jet subject to unrelaxed axial elastic tension. Physical Review E, 2015, 92, 023006.	2.1	12
53	Stability of a rivulet flowing in a microchannel. International Journal of Multiphase Flow, 2015, 69, 1-7.	3.4	16
54	Dynamics of an axisymmetric liquid bridge close to the minimum-volume stability limit. Physical Review E, 2014, 90, 013015.	2.1	22

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55	Dynamical response of liquid bridges to a step change in the mass force magnitude. Physics of Fluids, 2014, 26, 012108.	4.0	8
56	A novel technique to produce metallic microdrops for additive manufacturing. International Journal of Advanced Manufacturing Technology, 2014, 70, 1395-1402.	3.0	22
57	Modeling infiltration rates in a saturated/unsaturated soil under the free draining condition. Journal of Hydrology, 2014, 515, 10-15.	5.4	38
58	An experimental technique to produce micrometer waves on a cylindrical sub-millimeter free surface. Measurement Science and Technology, 2014, 25, 075303.	2.6	2
59	How does a shear boundary layer affect the stability of a capillary jet?. Physics of Fluids, 2014, 26, .	4.0	8
60	Production of microbubbles from axisymmetric flow focusing in the jetting regime for moderate Reynolds numbers. Physical Review E, 2014, 89, 063012.	2.1	12
61	Dynamical behavior of electrified pendant drops. Physics of Fluids, 2013, 25, .	4.0	40
62	On the validity and applicability of the one-dimensional approximation in cone-jet electrospray. Journal of Aerosol Science, 2013, 61, 60-69.	3.8	3
63	A new flow focusing technique to produce very thin jets. Journal of Micromechanics and Microengineering, 2013, 23, 065009.	2.6	26
64	Experimental analysis of the evolution of an electrified drop following high voltage switching. European Journal of Mechanics, B/Fluids, 2013, 38, 58-64.	2.5	4
65	A novel technique for producing metallic microjets and microdrops. Microfluidics and Nanofluidics, 2013, 14, 101-111.	2.2	13
66	Building functional materials for health care and pharmacy from microfluidic principles and Flow Focusing. Advanced Drug Delivery Reviews, 2013, 65, 1447-1469.	13.7	96
67	Theoretical investigation of a technique to produce microbubbles by a microfluidicTjunction. Physical Review E, 2013, 88, 033027.	2.1	15
68	The minimum or natural rate of flow and droplet size ejected by Taylor coneâ€"jets: physical symmetries and scaling laws. New Journal of Physics, 2013, 15, 033035.	2.9	71
69	On the use of hypodermic needles in electrospray. EPJ Web of Conferences, 2013, 45, 01128.	0.3	2
70	Surface Wave Damping. Understanding Complex Systems, 2013, , 349-361.	0.6	0
71	Enhancement of the stability of the flow focusing technique for low-viscosity liquids. Journal of Micromechanics and Microengineering, 2012, 22, 115039.	2.6	13
72	Experimental and Numerical Investigation of the Flow in a Micropump Model. , 2012, , .		0

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73	An experimental setup for the study of the steady air flow in a diesel engine chamber. EPJ Web of Conferences, 2012, 25, 01014.	0.3	1
74	Numerical simulation of electrospray in the cone-jet mode. Physical Review E, 2012, 86, 026305.	2.1	75
75	Focusing liquid microjets with nozzles. Journal of Micromechanics and Microengineering, 2012, 22, 065011.	2.6	31
76	An experimental technique to measure the capillary waves in electrified microjets. EPJ Web of Conferences, 2012, 25, 01097.	0.3	0
77	Stability of Liquid Bridges Between Coaxial Equidimensional Disks to Axisymmetric Finite Perturbations: A Review. Microgravity Science and Technology, 2012, 24, 65-77.	1.4	9
78	Universal size and shape of viscous capillary jets: application to gas-focused microjets. Journal of Fluid Mechanics, 2011, 670, 427-438.	3.4	27
79	Exploring the precision of backlight optical imaging in microfluidics close to the diffraction limit. Measurement: Journal of the International Measurement Confederation, 2011, 44, 1300-1311.	5.0	27
80	The effect of surface shear viscosity on the damping of oscillations in millimetric liquid bridges. Physics of Fluids, 2011, 23, .	4.0	20
81	Global stability of the focusing effect of fluid jet flows. Physical Review E, 2011, 83, 036309.	2.1	41
82	On the validity of a universal solution for viscous capillary jets. Physics of Fluids, 2011, 23, .	4.0	15
83	Numerical simulation of a liquid bridge in a coaxial gas flow. Physics of Fluids, 2011, 23, .	4.0	24
84	Analysis of the drippingâ€“jetting transition in compound capillary jets. Journal of Fluid Mechanics, 2010, 649, 523-536.	3.4	48
85	Absolute lateral instability in capillary coflowing jets. Physics of Fluids, 2010, 22, 064104.	4.0	14
86	Global and local instability of flow focusing: The influence of the geometry. Physics of Fluids, 2010, 22, .	4.0	72
87	Micrometer glass nozzles for flow focusing. Journal of Micromechanics and Microengineering, 2010, 20, 075035.	2.6	22
88	Publisher's Note: Revision of capillary cone-jet physics: Electrospray and flow focusing [Phys. Rev. E79, 066305 (2009)]. Physical Review E, 2009, 79, .	2.1	3
89	Damping of linear oscillations in axisymmetric liquid bridges. Physics of Fluids, 2009, 21, .	4.0	17
90	The second and third Sonine coefficients of a freely cooling granular gas revisited. Granular Matter, 2009, 11, 157-168.	2.2	34

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91	On the precision of optical imaging to study free surface dynamics at high frame rates. Experiments in Fluids, 2009, 47, 251-261.	2.4	19
92	Sub-micrometer precision of optical imaging to locate the free surface of a micrometer fluid shape. Journal of Colloid and Interface Science, 2009, 339, 271-274.	9.4	8
93	Revision of capillary cone-jet physics: Electrospray and flow focusing. Physical Review E, 2009, 79, 066305.	2.1	144
94	Modified Sonine approximation for granular binary mixtures. Journal of Fluid Mechanics, 2009, 623, 387-411.	3.4	22
95	Measurement of the dynamical free surface deformation in liquid bridges. Acta Astronautica, 2008, 62, 471-477.	3.2	2
96	Experimental study of the free surface deformation due to thermal convection in liquid bridges. Experiments in Fluids, 2008, 45, 1087.	2.4	52
97	A simple model to describe the lateral oscillations of axisymmetric liquid bridges. Physics of Fluids, 2008, 20, 022103.	4.0	9
98	A new experimental technique for measuring the dynamical free surface deformation in liquid bridges due to thermal convection. Measurement Science and Technology, 2008, 19, 015410.	2.6	27
99	Stability of coflowing capillary jets under nonaxisymmetric perturbations. Physical Review E, 2008, 77, 046301.	2.1	10
100	Viscoelastic effects on the jettingâ€"dripping transition in co-flowing capillary jets. Journal of Fluid Mechanics, 2008, 610, 249-260.	3.4	17
101	Experimental study of small-amplitude lateral vibrations of an axisymmetric liquid bridge. Physics of Fluids, 2007, 19, 118103.	4.0	10
102	Computational evaluation of the theoretical image fitting analysisâ€"axisymmetric interfaces (TIFA-AI) method of measuring interfacial tension. Measurement Science and Technology, 2007, 18, 1637-1650.	2.6	12
103	An analysis of the sensitivity of pendant drops and liquid bridges to measure the interfacial tension. Measurement Science and Technology, 2007, 18, 3713-3723.	2.6	37
104	Numerical analysis of the nonlinear vibration of axisymmetric liquid bridges. European Journal of Mechanics, B/Fluids, 2007, 26, 284-294.	2.5	2
105	First-order Chapmanâ€"Enskog velocity distribution function in a granular gas. Physica A: Statistical Mechanics and Its Applications, 2007, 376, 75-93.	2.6	18
106	Modified Sonine approximation for the Navierâ€"Stokes transport coefficients of a granular gas. Physica A: Statistical Mechanics and Its Applications, 2007, 376, 94-107.	2.6	57
107	Navierâ€"Stokes Transport Coefficients of d-Dimensional Granular Binary Mixtures at Low Density. Journal of Statistical Physics, 2007, 129, 27-58.	1.2	31
108	Determination of Surface Tension and Contact Angle from the Shapes of Axisymmetric Fluid Interfaces without Use of Apex Coordinates. Langmuir, 2006, 22, 10053-10060.	3.5	69

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109	Measurements of Dynamic Surface Deformation in Liquid Bridges. , 2006, , .		0
110	Rheology of Two- and Three-dimensional Granular Mixtures Under Uniform Shear Flow: Enskog Kinetic Theory Versus Molecular Dynamics Simulations. Granular Matter, 2006, 8, 103-115.	2.2	28
111	An experimental analysis of the linear vibration of axisymmetric liquid bridges. Physics of Fluids, 2006, 18, 082105.	4.0	38
112	Mass and heat fluxes for a binary granular mixture at low density. Physics of Fluids, 2006, 18, 083305.	4.0	37
113	A note on the use of one-dimensional models to describe the linear dynamics of liquid bridges. European Journal of Mechanics, B/Fluids, 2005, 24, 288-295.	2.5	5
114	A new method of image processing in the analysis of axisymmetric drop shapes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 255, 193-200.	4.7	53
115	Liquid bridge equilibrium contours between non-circular supports. Microgravity Science and Technology, 2005, 17, 18-30.	1.4	14
116	A note on the small oscillation regimes of rotating liquid bridges: Transition from surface to internal wave modes. Physics of Fluids, 2005, 17, 012101-012101-6.	4.0	4
117	Influence of isorotation on the linear dynamics of liquid bridges. Physics of Fluids, 2005, 17, 078105.	4.0	6
118	DSMC evaluation of the Navier-Stokes shear viscosity of a granular fluid. AIP Conference Proceedings, 2005, , .	0.4	16
119	On the use of liquid bridges as tensiometers. Journal of Computational Methods in Sciences and Engineering, 2004, 4, 75-85.	0.2	1
120	Diffusion of impurities in a granular gas. Physical Review E, 2004, 69, 021301.	2.1	44
121	On the experimental analysis of the linear dynamics of slender axisymmetric liquid bridges. Microgravity Science and Technology, 2004, 15, 3-11.	1.4	7
122	Influence of the Outer Bath on the Eigenfrequencies of Rotating Axisymmetric Liquid Bridges. Theoretical and Computational Fluid Dynamics, 2004, 17, 213-223.	2.2	2
123	A new drop-shape methodology for surface tension measurement. Applied Surface Science, 2004, 238, 480-484.	6.1	36
124	Theoretical Analysis of the Vibration of Axisymmetric Liquid Bridges of Arbitrary Shape. Theoretical and Computational Fluid Dynamics, 2003, 16, 171-186.	2.2	9
125	Effect of energy nonequipartition on the transport properties in a granular mixture. Granular Matter, 2003, 5, 165-168.	2.2	10
126	Linear dynamics of axisymmetric liquid bridges. European Journal of Mechanics, B/Fluids, 2003, 22, 167-178.	2.5	18

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127	Shear viscosity for a moderately dense granular binary mixture. Physical Review E, 2003, 68, 041302.	2.1	35
128	Shear viscosity for a heated granular binary mixture at low density. Physical Review E, 2003, 67, 021308.	2.1	38
129	Energy Nonequipartition in a Sheared Granular Mixture. Molecular Simulation, 2003, 29, 357-362.	2.0	18
130	Detection of liquid bridge contours and its applications. Measurement Science and Technology, 2002, 13, 829-835.	2.6	7
131	Theoretical and experimental analysis of the equilibrium contours of liquid bridges of arbitrary shape. Physics of Fluids, 2002, 14, 682-693.	4.0	30
132	Equilibrium contour of liquid bridges connected by pressure. Microgravity Science and Technology, 2002, 13, 14-23.	1.4	6
133	Monte Carlo simulation of the homogeneous cooling state for a granular mixture. Granular Matter, 2002, 4, 17-24.	2.2	78
134	Transport coefficients of a heated granular gas. Physica A: Statistical Mechanics and Its Applications, 2002, 313, 336-356.	2.6	83
135	Rheological properties in a low-density granular mixture. Physica A: Statistical Mechanics and Its Applications, 2002, 310, 17-38.	2.6	34
136	Nonlinear Couette Flow in a Low Density Granular Gas. Journal of Statistical Physics, 2001, 103, 1035-1068.	1.2	30
137	Image Quality Enhancement for Liquid Bridge Parameter Estimation with DTCNN. Lecture Notes in Computer Science, 2001, , 246-253.	1.3	0
138	Computer simulation of uniformly heated granular fluids. Granular Matter, 2000, 2, 53-64.	2.2	155
139	Monte Carlo simulation of nonlinear Couette flow in a dilute gas. Physics of Fluids, 2000, 12, 3060.	4.0	17
140	Kinetic theory of simple granular shear flows of smooth hard spheres. Journal of Fluid Mechanics, 1999, 389, 391-411.	3.4	83
141	Simple and accurate theory for strong shock waves in a dense hard-sphere fluid. Physical Review E, 1999, 60, 7592-7595.	2.1	8
142	Nonlinear Couette flow in a dilute gas:â€‚Comparison between theory and molecular-dynamics simulation. Physical Review E, 1998, 58, 1836-1842.	2.1	13
143	Strong shock waves in a dense gas: Burnett theory versus Monte Carlo simulation. Physical Review E, 1998, 58, 7319-7324.	2.1	8
144	Stability of uniform shear flow. Physical Review E, 1998, 57, 546-556.	2.1	9

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145	Kinetic model for the hard-sphere fluid and solid. Physical Review E, 1998, 57, 1644-1660.	2.1	60
146	Distribution function for large velocities of a two-dimensional gas under shear flow. Journal of Statistical Physics, 1997, 88, 1165-1181.	1.2	6
147	Nonequilibrium entropy of a sheared gas. Physica A: Statistical Mechanics and Its Applications, 1996, 225, 7-18.	2.6	11
148	Kinetic models for diffusion generated by an external force. Physica A: Statistical Mechanics and Its Applications, 1996, 225, 235-253.	2.6	9
149	Monte Carlo simulation of the Boltzmann equation in the colour conductivity problem for general repulsive potentials. Molecular Physics, 1996, 88, 1249-1261.	1.7	5
150	Monte Carlo simulation method for the Enskog equation. Physical Review E, 1996, 54, 438-444.	2.1	79
151	Singular behavior of the velocity moments of a dilute gas under uniform shear flow. Physical Review E, 1996, 53, 1269-1272.	2.1	11
152	Monte Carlo simulation of the Boltzmann equation for uniform shear flow. Physics of Fluids, 1996, 8, 1981-1983.	4.0	14
153	Long Wavelength Instability for Uniform Shear Flow. Physical Review Letters, 1996, 76, 2702-2705.	7.8	13
154	Does the Gaussian thermostat maximize the phase-space compression factor?. Journal of Statistical Physics, 1995, 81, 989-1005.	1.2	3
155	Analysis on the stability of the uniform shear flow from a Monte Carlo simulation of the Boltzmann equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 203, 73-76.	2.1	2
156	Monte Carlo simulation of the Boltzmann equation for steady Fourier flow. Physical Review E, 1994, 49, 367-375.	2.1	32