Oscar Bautista

List of Publications by Year
in descending order

76 papers	1,200 citations	331670 21 h-index	434195 31 g-index
77 all docs	77 docs citations	77 times ranked	534 citing authors

#	Article	IF	Citations
1	Kinetic study of boron diffusion in the paste-boriding process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 352, 261-265.	5.6	122
2	Effect of boron paste thickness on the growth kinetics of Fe2B boride layers during the boriding process. Applied Surface Science, 2005, 243, 429-436.	6.1	84
3	Transient electroosmotic flow of Maxwell fluids in a slit microchannel with asymmetric zeta potentials. European Journal of Mechanics, B/Fluids, 2015, 53, 180-189.	2.5	50
4	Lubrication theory for electro-osmotic flow in a slit microchannel with the Phan-Thien and Tanner model. Journal of Fluid Mechanics, 2013, 722, 496-532.	3.4	47
5	Entropy generation in purely electroosmotic flows of non-Newtonian fluids in a microchannel. Energy, 2013, 55, 486-496.	8.8	46
6	Hydrodynamics and thermal analysis of a mixed electromagnetohydrodynamic-pressure driven flow for Phanâ€“Thienâ€“Tanner fluids in a microchannel. International Journal of Thermal Sciences, 2014, 86, 246-257.	4.9	42
7	Start-up electroosmotic flow of Maxwell fluids in a rectangular microchannel with high zeta potentials. Journal of Non-Newtonian Fluid Mechanics, 2016, 227, 17-29.	2.4	40
8	Joule heating effect on a purely electroosmotic flow of non-Newtonian fluids in a slit microchannel. Journal of Non-Newtonian Fluid Mechanics, 2013, 192, 1-9.	2.4	34
9	Effect of boron paste thickness on the growth kinetics of polyphase boride coatings during the boriding process. Applied Surface Science, 2006, 252, 2396-2403.	6.1	33
10	Electroosmotic flow of a Phan-Thienâ€“Tanner fluid in a wavy-wall microchannel. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 498, 7-19.	4.7	33
11	Hydrodynamic dispersion in a combined magnetohydrodynamic- electroosmotic-driven flow through a microchannel with slowly varying wall zeta potentials. Physics of Fluids, 2017, 29, .	4.0	33
12	Pulsatile electroosmotic flow in a microchannel with asymmetric wall zeta potentials and its effect on mass transport enhancement and mixing. Chemical Engineering Science, 2018, 184, 259-272.	3.8	29
13	Oscillatory electroosmotic flow in a parallel-plate microchannel under asymmetric zeta potentials. Fluid Dynamics Research, 2017, 49, 035514.	1.3	28
14	Pulsatile electroosmotic flow in a microcapillary with the slip boundary condition. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 513, 57-65.	4.7	26
15	Mass transfer through a concentric-annulus microchannel driven by an oscillatory electroosmotic flow of a Maxwell fluid. Journal of Non-Newtonian Fluid Mechanics, 2020, 279, 104281.	2.4	26
16	Theoretical conjugate heat transfer analysis in a parallel flat plate microchannel under electro-osmotic and pressure forces with a Phan-Thien-Tanner fluid. International Journal of Thermal Sciences, 2011, 50, 1022-1030.	4.9	25
17	Dispersion coefficient in an electro-osmotic flow of a viscoelastic fluid through a microchannel with a slowly varying wall zeta potential. Journal of Fluid Mechanics, 2018, 839, 348-386.	3.4	25
18	Theoretical analysis of non-linear Joule heating effects on an electroosmotic flow with patterned surface charges. Physics of Fluids, 2018, 30, .	4.0	25

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19	Hydrodynamics rheological impact of an oscillatory electroosmotic flow on a mass transfer process in a microcapillary with a reversible wall reaction. Physics of Fluids, 2020, 32, .	4.0	23
20	Effect of temperature-dependent consistency index on the exiting sheet thickness in the calendering of power-law fluids. International Journal of Heat and Mass Transfer, 2011, 54, 3979-3986.	4.8	22
21	Influence of slip wall effect on a non-isothermal electro-osmotic flow of a viscoelastic fluid. International Journal of Thermal Sciences, 2015, 98, 352-363.	4.9	22
22	Theoretical analysis of the calendered exiting thickness of viscoelastic sheets. Journal of Non-Newtonian Fluid Mechanics, 2012, 177-178, 29-36.	2.4	21
23	Combined viscoelectric and steric effects on the electroosmotic flow in nano/microchannels with heterogeneous zeta potentials. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 577, 347-359.	4.7	21
24	Pulsatile electroosmotic flow of a Maxwell fluid in a parallel flat plate microchannel with asymmetric zeta potentials. Applied Mathematics and Mechanics (English Edition), 2018, 39, 667-684.	3.6	20
25	Slippage effect on the dispersion coefficient of a passive solute in a pulsatile electro-osmotic flow in a microcapillary. Physical Review Fluids, 2018, 3, .	2.5	20
26	Asymptotic analysis for the conjugate heat transfer problem in an electro-osmotic flow with temperature-dependent properties in a capillary. International Journal of Heat and Mass Transfer, 2012, 55, 8163-8171.	4.8	19
27	(Bejan's) early vs. late regimes method applied to entropy generation in one-dimensional conduction. International Journal of Thermal Sciences, 2005, 44, 570-576.	4.9	18
28	Mass transport and separation of species in an oscillating electro-osmotic flow caused by distinct periodic electric fields. Physica Scripta, 2019, 94, 115012.	2.5	17
29	Effect of pressure-dependent viscosity on the exiting sheet thickness in the calendering of Newtonian fluids. Applied Mathematical Modelling, 2013, 37, 6952-6963.	4.2	16
30	Combined viscoelectric and steric effects on the electroosmotic flow in a microchannel under induced high zeta potentials. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 531, 221-233.	4.7	16
31	Evaluation of the diffusion coefficient of nitrogen in Fe4N1â^'x nitride layers during microwave post-discharge nitriding. Applied Surface Science, 2005, 249, 54-59.	6.1	14
32	Thermodiffusive effect on the local Debye-length in an electroosmotic flow of a viscoelastic fluid in a slit microchannel. International Journal of Heat and Mass Transfer, 2022, 187, 122522.	4.8	14
33	A perturbative thermal analysis for an electro-osmotic flow in a slit microchannel based on a Lubrication theory. International Journal of Thermal Sciences, 2017, 111, 499-510.	4.9	13
34	Effect of temperature-dependent properties on electroosmotic mobility at arbitrary zeta potentials. Applied Mathematical Modelling, 2019, 68, 616-628.	4.2	13
35	Mass transport by an oscillatory electroosmotic flow of power-law fluids in hydrophobic slit microchannels. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2021, 43, 1.	1.6	13
36	Viscoelectric effect on electroosmotic flow in a cylindrical microcapillary. Fluid Dynamics Research, 2016, 48, 035503.	1.3	12

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37	An endoreversible three heat source refrigerator with finite heat capacities. Energy Conversion and Management, 2003, 44, 1433-1449.	9.2	11
38	General performance of an irreversible three heat source refrigerator. Energy Conversion and Management, 2005, 46, 433-449.	9.2	10
39	Propagation of shallow water waves in an open parabolic channel using the WKB perturbation technique. Applied Ocean Research, 2011, 33, 186-192.	4.1	8
40	Sensitivity of calendered thickness to temperature variations for Newtonian fluids. European Journal of Mechanics, B/Fluids, 2012, 36, 97-103.	2.5	8
41	Internal heat generation in a discrete heat source: Conjugate heat transfer analysis. Applied Thermal Engineering, 2006, 26, 2201-2208.	6.0	7
42	Steric and Slippage Effects on Mass Transport by Using an Oscillatory Electroosmotic Flow of Power-Law Fluids. Micromachines, 2021, 12, 539.	2.9	7
43	Self-affine cracks in a brittle porous material. Theoretical and Applied Fracture Mechanics, 2005, 44, 187-191.	4.7	6
44	Theoretical analysis of the direct decomposition of methane gas in a laminar stagnation-point flow: CO2-free production of hydrogen. International Journal of Hydrogen Energy, 2008, 33, 7419-7426.	7.1	6
45	Propagation of linear long water waves on a cycloidal breakwater. Journal of Engineering Mathematics, 2016, 100, 187-210.	1.2	6
46	Phase-Change Transpiration Cooling in a Porous Medium: Determination of the Liquid/Two-Phase/Vapor Interfaces as a Problem of Eigenvalues. Transport in Porous Media, 2016, 112, 167-187.	2.6	6
47	Interfacial Electric Effects on a Non-Isothermal Electroosmotic Flow in a Microcapillary Tube Filled by Two Immiscible Fluids. Micromachines, 2017, 8, 232.	2.9	6
48	Fluid structure-interaction in a deformable microchannel conveying a viscoelastic fluid. Journal of Non-Newtonian Fluid Mechanics, 2021, 296, 104634.	2.4	6
49	Graetz Problem for the Conjugated Conduction-Film Condensation Process. Journal of Thermophysics and Heat Transfer, 2000, 14, 96-102.	1.6	5
50	Transient heat conduction in a solid slab using multiple-scale analysis. Heat and Mass Transfer, 2005, 42, 150-157.	2.1	5
51	Theoretical analysis of coupled thermal and denaturation processes in living tissues subject to a uniform surface heating condition. International Journal of Heat and Mass Transfer, 2015, 90, 728-742.	4.8	5
52	Capillary rise in a circular tube with interfacial condensation process. International Journal of Thermal Sciences, 2011, 50, 2422-2429.	4.9	4
53	Slippage Effect on the Oscillatory Electroosmotic Flow of Power-Law Fluids in a Microchannel. Defect and Diffusion Forum, 0, 399, 92-101.	0.4	4
54	Slippage effect on interfacial destabilization driven by standing surface acoustic waves under hydrophilic conditions. Physical Review Fluids, 2021, 6, .	2.5	4

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55	Numerical analysis of the transient conjugated heat transfer in a circular duct with a power-law fluid. Heat and Mass Transfer, 2005, 41, 659-666.	2.1	3
56	Dimensional analysis in the growth kinetics of FeB and Fe<SUB align=right>2B layers during the boriding process. International Journal of Microstructure and Materials Properties, 2007, 2, 73.	0.1	3
57	The conjugate heat transfer from an internal heated small strip in a forced laminar flow. Heat and Mass Transfer, 2001, 37, 485-491.	2.1	2
58	Cooling of a Heat-Generating Strip Immersed in a Laminar Channel Flow. Journal of Thermophysics and Heat Transfer, 2006, 20, 415-421.	1.6	2
59	VARIABLE VISCOSITY EFFECTS ON A CONJUGATE LAMINAR FILM-CONDENSATION PROCESS. Chemical Engineering Communications, 2007, 195, 229-242.	2.6	2
60	Conjugate Heat Transfer Analysis of the Film Condensation on a Vertical Fin Immersed in a Porous Medium. Journal of Porous Media, 2007, 11, 145-157.	1.9	2
61	Asymptotic Formulas for the Reflection/Transmission of Long Water Waves Propagating in a Tapered and Slender Harbor. Journal of Applied Mathematics, 2015, 2015, 1-10.	0.9	2
62	A note on â€œStart-up electroosmotic flow of Maxwell fluids in a rectangular microchannel with high zeta potentialsâ€•[J. Non-Newton Fluid Mech. 227 (2016) 17â€"29]. Journal of Non-Newtonian Fluid Mechanics, 2016, 234, 114-117.	2.4	2
63	Influence of the wicking process on the heat transfer in a homogeneous porous medium. Journal of Petroleum Science and Engineering, 2009, 67, 91-96.	4.2	1
64	Thermal dispersion driven by the spontaneous imbibition process. Applied Mathematical Modelling, 2010, 34, 4184-4195.	4.2	1
65	Asymptotic Analysis of Non-Newtonian Fluid Flow in a Microchannel under a Combination of EO and MHD Micropumps. Defect and Diffusion Forum, 0, 348, 147-152.	0.4	1
66	Critical DamkhÃ¶ler number for the thermal decomposition of methane gas in a fluid-wall aerosol flow reactor. Energy Conversion and Management, 2014, 77, 152-162.	9.2	1
67	Study of the Transient Electroosmotic Flow of Maxwell Fluids in Square Cross-Section Microchannels. , 2015, , .		1
68	Acoustic streaming in Maxwell fluids generated by standing waves in two-dimensional microchannels. Journal of Fluid Mechanics, 2022, 933, .	3.4	1
69	Moving Sheet With Variable Thermal Conductivity Emerging From a Slot. , 2007, , .		0
70	Numerical Analysis of the Conjugated Heat Transfer Problem for Mixed Electro-Osmotic and Pressure-Driven Flows of Phan-Thien Tanner Fluids in Microchannels. , 2010, , .		0
71	Simultaneous Wicking-Convection Heat Transfer Process with Non-Newtonian Power-Law Fluid. Defect and Diffusion Forum, 2010, 297-301, 117-125.	0.4	0
72	Second Law Analysis for a Mixed Electro-Osmotic and Pressure Driven Flow of a Viscoelastic Fluid in a Micro-Channel. , 2012, , .		0

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73	Analysis of a Viscoelastic Fluid Flow in a Microchannel With Asymmetric Zeta Potentials Under a Combination of Electroosmotic and Magnetohydrodynamic Driven Forces. , 2014, , .		0
74	Effect of Hydrodynamic Slippage on Oscillating Electroosmotic Flows in Infinitely Extended Microcapillary. , 2015, , .		0
75	Wicking process in a capillary tube: a new zero-order asymptotic solution. , 2011, , .		0
76	SURFACE TENSION EFFECTS ON A CONJUGATE LAMINAR FILM-CONDENSATION PROCESS FOR A VERTICAL FIN PLACED IN A POROUS MEDIUM. Journal of Porous Media, 2015, 18, 811-823.	1.9	0