

# Oscar Bautista

## List of Publications by Year in descending order

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76  
papers

1,200  
citations

331259

21  
h-index

433756

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. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 352, 261-265.	2.6	122
2	Effect of boron paste thickness on the growth kinetics of Fe <sub>2</sub> B boride layers during the boriding process. <i>Applied Surface Science</i> , 2005, 243, 429-436.	3.1	84
3	Transient electroosmotic flow of Maxwell fluids in a slit microchannel with asymmetric zeta potentials. <i>European Journal of Mechanics, B/Fluids</i> , 2015, 53, 180-189.	1.2	50
4	Lubrication theory for electro-osmotic flow in a slit microchannel with the Phan-Thien and Tanner model. <i>Journal of Fluid Mechanics</i> , 2013, 722, 496-532.	1.4	47
5	Entropy generation in purely electroosmotic flows of non-Newtonian fluids in a microchannel. <i>Energy</i> , 2013, 55, 486-496.	4.5	46
6	Hydrodynamics and thermal analysis of a mixed electromagnetohydrodynamic-pressure driven flow for Phan-Thien-Tanner fluids in a microchannel. <i>International Journal of Thermal Sciences</i> , 2014, 86, 246-257.	2.6	42
7	Start-up electroosmotic flow of Maxwell fluids in a rectangular microchannel with high zeta potentials. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 227, 17-29.	1.0	40
8	Joule heating effect on a purely electroosmotic flow of non-Newtonian fluids in a slit microchannel. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 192, 1-9.	1.0	34
9	Effect of boron paste thickness on the growth kinetics of polyphase boride coatings during the boriding process. <i>Applied Surface Science</i> , 2006, 252, 2396-2403.	3.1	33
10	Electroosmotic flow of a Phan-Thien-Tanner fluid in a wavy-wall microchannel. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2016, 498, 7-19.	2.3	33
11	Hydrodynamic dispersion in a combined magnetohydrodynamic- electroosmotic-driven flow through a microchannel with slowly varying wall zeta potentials. <i>Physics of Fluids</i> , 2017, 29, .	1.6	33
12	Pulsatile electroosmotic flow in a microchannel with asymmetric wall zeta potentials and its effect on mass transport enhancement and mixing. <i>Chemical Engineering Science</i> , 2018, 184, 259-272.	1.9	29
13	Oscillatory electroosmotic flow in a parallel-plate microchannel under asymmetric zeta potentials. <i>Fluid Dynamics Research</i> , 2017, 49, 035514.	0.6	28
14	Pulsatile electroosmotic flow in a microcapillary with the slip boundary condition. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2017, 513, 57-65.	2.3	26
15	Mass transfer through a concentric-annulus microchannel driven by an oscillatory electroosmotic flow of a Maxwell fluid. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 279, 104281.	1.0	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. <i>International Journal of Thermal Sciences</i> , 2011, 50, 1022-1030.	2.6	25
17	Dispersion coefficient in an electro-osmotic flow of a viscoelastic fluid through a microchannel with a slowly varying wall zeta potential. <i>Journal of Fluid Mechanics</i> , 2018, 839, 348-386.	1.4	25
18	Theoretical analysis of non-linear Joule heating effects on an electroosmotic flow with patterned surface charges. <i>Physics of Fluids</i> , 2018, 30, .	1.6	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. <i>Physics of Fluids</i> , 2020, 32, .	1.6	23
20	Effect of temperature-dependent consistency index on the exiting sheet thickness in the calendering of power-law fluids. <i>International Journal of Heat and Mass Transfer</i> , 2011, 54, 3979-3986.	2.5	22
21	Influence of slip wall effect on a non-isothermal electro-osmotic flow of a viscoelastic fluid. <i>International Journal of Thermal Sciences</i> , 2015, 98, 352-363.	2.6	22
22	Theoretical analysis of the calendered exiting thickness of viscoelastic sheets. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2012, 177-178, 29-36.	1.0	21
23	Combined viscoelectric and steric effects on the electroosmotic flow in nano/microchannels with heterogeneous zeta potentials. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2019, 577, 347-359.	2.3	21
24	Pulsatile electroosmotic flow of a Maxwell fluid in a parallel flat plate microchannel with asymmetric zeta potentials. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2018, 39, 667-684.	1.9	20
25	Slippage effect on the dispersion coefficient of a passive solute in a pulsatile electro-osmotic flow in a microcapillary. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	20
26	Asymptotic analysis for the conjugate heat transfer problem in an electro-osmotic flow with temperature-dependent properties in a capillary. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 8163-8171.	2.5	19
27	(Bejan's) early vs. late regimes method applied to entropy generation in one-dimensional conduction. <i>International Journal of Thermal Sciences</i> , 2005, 44, 570-576.	2.6	18
28	Mass transport and separation of species in an oscillating electro-osmotic flow caused by distinct periodic electric fields. <i>Physica Scripta</i> , 2019, 94, 115012.	1.2	17
29	Effect of pressure-dependent viscosity on the exiting sheet thickness in the calendering of Newtonian fluids. <i>Applied Mathematical Modelling</i> , 2013, 37, 6952-6963.	2.2	16
30	Combined viscoelectric and steric effects on the electroosmotic flow in a microchannel under induced high zeta potentials. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2017, 531, 221-233.	2.3	16
31	Evaluation of the diffusion coefficient of nitrogen in Fe <sub>4</sub> N <sub>1-x</sub> nitride layers during microwave post-discharge nitriding. <i>Applied Surface Science</i> , 2005, 249, 54-59.	3.1	14
32	Thermodiffusive effect on the local Debye-length in an electroosmotic flow of a viscoelastic fluid in a slit microchannel. <i>International Journal of Heat and Mass Transfer</i> , 2022, 187, 122522.	2.5	14
33	A perturbative thermal analysis for an electro-osmotic flow in a slit microchannel based on a Lubrication theory. <i>International Journal of Thermal Sciences</i> , 2017, 111, 499-510.	2.6	13
34	Effect of temperature-dependent properties on electroosmotic mobility at arbitrary zeta potentials. <i>Applied Mathematical Modelling</i> , 2019, 68, 616-628.	2.2	13
35	Mass transport by an oscillatory electroosmotic flow of power-law fluids in hydrophobic slit microchannels. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2021, 43, 1.	0.8	13
36	Viscoelectric effect on electroosmotic flow in a cylindrical microcapillary. <i>Fluid Dynamics Research</i> , 2016, 48, 035503.	0.6	12

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37	An endoreversible three heat source refrigerator with finite heat capacities. <i>Energy Conversion and Management</i> , 2003, 44, 1433-1449.	4.4	11
38	General performance of an irreversible three heat source refrigerator. <i>Energy Conversion and Management</i> , 2005, 46, 433-449.	4.4	10
39	Propagation of shallow water waves in an open parabolic channel using the WKB perturbation technique. <i>Applied Ocean Research</i> , 2011, 33, 186-192.	1.8	8
40	Sensitivity of calendered thickness to temperature variations for Newtonian fluids. <i>European Journal of Mechanics, B/Fluids</i> , 2012, 36, 97-103.	1.2	8
41	Internal heat generation in a discrete heat source: Conjugate heat transfer analysis. <i>Applied Thermal Engineering</i> , 2006, 26, 2201-2208.	3.0	7
42	Steric and Slippage Effects on Mass Transport by Using an Oscillatory Electroosmotic Flow of Power-Law Fluids. <i>Micromachines</i> , 2021, 12, 539.	1.4	7
43	Self-affine cracks in a brittle porous material. <i>Theoretical and Applied Fracture Mechanics</i> , 2005, 44, 187-191.	2.1	6
44	Theoretical analysis of the direct decomposition of methane gas in a laminar stagnation-point flow: CO <sub>2</sub> -free production of hydrogen. <i>International Journal of Hydrogen Energy</i> , 2008, 33, 7419-7426.	3.8	6
45	Propagation of linear long water waves on a cycloidal breakwater. <i>Journal of Engineering Mathematics</i> , 2016, 100, 187-210.	0.6	6
46	Phase-Change Transpiration Cooling in a Porous Medium: Determination of the Liquid/Two-Phase/Vapor Interfaces as a Problem of Eigenvalues. <i>Transport in Porous Media</i> , 2016, 112, 167-187.	1.2	6
47	Interfacial Electric Effects on a Non-Isothermal Electroosmotic Flow in a Microcapillary Tube Filled by Two Immiscible Fluids. <i>Micromachines</i> , 2017, 8, 232.	1.4	6
48	Fluid structure-interaction in a deformable microchannel conveying a viscoelastic fluid. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 296, 104634.	1.0	6
49	Graetz Problem for the Conjugated Conduction-Film Condensation Process. <i>Journal of Thermophysics and Heat Transfer</i> , 2000, 14, 96-102.	0.9	5
50	Transient heat conduction in a solid slab using multiple-scale analysis. <i>Heat and Mass Transfer</i> , 2005, 42, 150-157.	1.2	5
51	Theoretical analysis of coupled thermal and denaturation processes in living tissues subject to a uniform surface heating condition. <i>International Journal of Heat and Mass Transfer</i> , 2015, 90, 728-742.	2.5	5
52	Capillary rise in a circular tube with interfacial condensation process. <i>International Journal of Thermal Sciences</i> , 2011, 50, 2422-2429.	2.6	4
53	Slippage Effect on the Oscillatory Electroosmotic Flow of Power-Law Fluids in a Microchannel. <i>Defect and Diffusion Forum</i> , 0, 399, 92-101.	0.4	4
54	Slippage effect on interfacial destabilization driven by standing surface acoustic waves under hydrophilic conditions. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	4

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55	Numerical analysis of the transient conjugated heat transfer in a circular duct with a power-law fluid. <i>Heat and Mass Transfer</i> , 2005, 41, 659-666.	1.2	3
56	Dimensional analysis in the growth kinetics of FeB and Fe <sub>2</sub> B layers during the boriding process. <i>International Journal of Microstructure and Materials Properties</i> , 2007, 2, 73.	0.1	3
57	The conjugate heat transfer from an internal heated small strip in a forced laminar flow. <i>Heat and Mass Transfer</i> , 2001, 37, 485-491.	1.2	2
58	Cooling of a Heat-Generating Strip Immersed in a Laminar Channel Flow. <i>Journal of Thermophysics and Heat Transfer</i> , 2006, 20, 415-421.	0.9	2
59	VARIABLE VISCOSITY EFFECTS ON A CONJUGATE LAMINAR FILM-CONDENSATION PROCESS. <i>Chemical Engineering Communications</i> , 2007, 195, 229-242.	1.5	2
60	Conjugate Heat Transfer Analysis of the Film Condensation on a Vertical Fin Immersed in a Porous Medium. <i>Journal of Porous Media</i> , 2007, 11, 145-157.	1.0	2
61	Asymptotic Formulas for the Reflection/Transmission of Long Water Waves Propagating in a Tapered and Slender Harbor. <i>Journal of Applied Mathematics</i> , 2015, 2015, 1-10.	0.4	2
62	A note on the start-up electroosmotic flow of Maxwell fluids in a rectangular microchannel with high zeta potentials. <i>J. Non-Newtonian Fluid Mech.</i> 227 (2016) 17-29. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 234, 114-117.	1.0	2
63	Influence of the wicking process on the heat transfer in a homogeneous porous medium. <i>Journal of Petroleum Science and Engineering</i> , 2009, 67, 91-96.	2.1	1
64	Thermal dispersion driven by the spontaneous imbibition process. <i>Applied Mathematical Modelling</i> , 2010, 34, 4184-4195.	2.2	1
65	Asymptotic Analysis of Non-Newtonian Fluid Flow in a Microchannel under a Combination of EO and MHD Micropumps. <i>Defect and Diffusion Forum</i> , 0, 348, 147-152.	0.4	1
66	Critical Damköhler number for the thermal decomposition of methane gas in a fluid-wall aerosol flow reactor. <i>Energy Conversion and Management</i> , 2014, 77, 152-162.	4.4	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. <i>Journal of Fluid Mechanics</i> , 2022, 933, .	1.4	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. <i>Defect and Diffusion Forum</i> , 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.	1.0	0