Viriato Semiao

List of Publications by Year
in descending order

83 papers	2,281 citations	257357 24 h-index	223716 46 g-index
84 all docs	84 docs citations	84 times ranked	1922 citing authors

#	Article	IF	Citations
1	Rheological characterization of polymeric solutions used in spray drying process. European Journal of Pharmaceutical Sciences, 2021, 158, 105650.	1.9	10
2	The effect of ultrafiltration transmembrane permeation on the flow field in a surrogate system of an artificial kidney. Experimental Results, 2021, 2, .	0.2	5
3	ESIMPLE, a new pressure–velocity coupling algorithm for built-environment CFD simulations. Building and Environment, 2021, 204, 108170.	3.0	5
4	Thermoeconomic analysis and optimization of a hybrid solar-thermal power plant using a genetic algorithm. Energy Conversion and Management, 2021, 247, 114669.	4.4	8
5	Synthesis of Composites of Polyurethane Membranes/Polycaprolactone Fibers for Membrane Blood Oxygenators. IFMBE Proceedings, 2020, , 1465-1468.	0.2	0
6	The effect of hemicylindrical disruptors on the cell free layer thickness in animal blood flows inside microchannels. Experimental Results, 2020, 1, .	0.2	0
7	Rotating microchannel flow velocity measurements using the stationary micro-PIV technique with application to lab-on-a-CD devices. Flow Measurement and Instrumentation, 2019, 67, 153-165.	1.0	7
8	Comparison between microfluidic tangential flow nanofiltration and centrifugal nanofiltration for the concentration of small-volume samples. Journal of Membrane Science, 2019, 578, 27-35.	4.1	11
9	Is air moisture relevant on radiative heat exchange inside built environments?. Engineering Computations, 2019, 37, 1291-1316.	0.7	2
10	Oxygen mass transfer in a gas/membrane/liquid system surrogate of membrane blood oxygenators. AICHE Journal, 2018, 64, 3756-3763.	1.8	8
11	Convergence and dynamics of structurally identical root finding methods. Applied Numerical Mathematics, 2017, 120, 257-269.	1.2	3
12	Experimental characterization of pulsed Newtonian fluid flows inside T-shaped micromixers with variable inlets widths. Experimental Thermal and Fluid Science, 2017, 89, 249-258.	1.5	14
13	Consistent lattice Boltzmann modeling of low-speed isothermal flows at finite Knudsen numbers in slip-flow regime: Application to plane boundaries. Physical Review E, 2017, 96, 013311.	0.8	26
14	Centrifugal nanofiltration for small-volume samples. Journal of Membrane Science, 2017, 540, 411-421.	4.1	3
15	Characterization of the mixing regimes of Newtonian fluid flows in asymmetrical T-shaped micromixers. Experimental Thermal and Fluid Science, 2016, 72, 218-227.	1.5	16
16	Efficient CFD-based method for designing cross-flow nanofiltration small devices. Journal of Membrane Science, 2016, 500, 190-202.	4.1	14
17	Horse and dog blood flows in PDMS rectangular microchannels: Experimental characterization of the plasma layer under different flow conditions. Experimental Thermal and Fluid Science, 2015, 68, 205-215.	1.5	12
18	Enhancement of mass transfer in spacer-filled channels under laminar regime by pulsatile flow. Chemical Engineering Science, 2015, 123, 536-541.	1.9	19

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19	Rheological and dynamical characterization of blood analogue flows in a slit. International Journal of Heat and Fluid Flow, 2014, 46, 17-28.	1.1	17
20	Truncation errors and the rotational invariance of three-dimensional lattice models in the lattice Boltzmann method. Journal of Computational Physics, 2014, 269, 259-279.	1.9	47
21	Concentration boundary layer visualization in nanofiltration by holographic interferometry with light deflection correction. Journal of Membrane Science, 2013, 447, 306-314.	4.1	8
22	Characterization of non-isothermal flows typical of built environments in a laboratory scale model. Part II â€" Numerical predictions with CFD. Building and Environment, 2013, 68, 239-248.	3.0	5
23	Contrasts in the basins of attraction of structurally identical iterative root finding methods. Applied Mathematics and Computation, 2013, 219, 7997-8008.	1.4	3
24	Characterization of non-isothermal flows typical of built environments in a laboratory scale model. Part I â€" Experiments with 3D PIV. Building and Environment, 2013, 68, 225-238.	3.0	11
25	Operation costs and pollutant emissions reduction by definition of new collection scheduling and optimization of MSW collection routes using GIS. The case study of Barreiro, Portugal. Waste Management, 2013, 33, 793-806.	3.7	89
26	First- and second-order forcing expansions in a lattice Boltzmann method reproducing isothermal hydrodynamics in artificial compressibility form. Journal of Fluid Mechanics, 2012, 698, 282-303.	1.4	40
27	Mass-transfer entrance effects in narrow rectangular channels with ribbed walls or mesh-type spacers. Chemical Engineering Science, 2012, 78, 38-45.	1.9	22
28	Kinematic characterization of the advancing liquidâ€"gas interface in microfluidic components combining digital processing of microscope images with curve matching technique. Experimental Thermal and Fluid Science, 2012, 38, 40-53.	1.5	0
29	Monitoring, fault detection and operation prediction of MSW incinerators using multivariate statistical methods. Waste Management, 2011, 31, 1635-1644.	3.7	12
30	Multi-criteria GIS-based siting of an incineration plant for municipal solid waste. Waste Management, 2011, 31, 1960-1972.	3.7	139
31	A study on the inclusion of body forces in the lattice Boltzmann BGK equation to recover steady-state hydrodynamics. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 1085-1095.	1.2	17
32	Dynamics on Spectral Solutions of Forced Burgers Equation. Springer Proceedings in Mathematics, 2011, , 187-190.	0.5	0
33	Microflow hydrodynamics in slits: Effects of the walls relative roughness and spacer inter-filaments distance. Chemical Engineering Science, 2010, 65, 3660-3670.	1.9	13
34	Critical pressure for capillary valves in a Lab-on-a-Disk: CFD and flow visualization. Computers and Structures, 2010, 88, 1300-1309.	2.4	12
35	Comparing displacement ventilation and mixing ventilation as HVAC strategies through CFD. Engineering Computations, 2009, 26, 950-971.	0.7	12
36	Integrated waste-to-energy conversion and waste transportation within island communities. Energy, 2009, 34, 623-635.	4.5	63

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37	Optimisation of MSW collection routes for minimum fuel consumption using 3D GIS modelling. Waste Management, 2009, 29, 1176-1185.	3.7	236
38	Determination of microchannels geometric parameters using micro-PIV. Chemical Engineering Research and Design, 2009, 87, 298-306.	2.7	10
39	Dynamics and synchronization of numerical solutions of the Burgers equation. Journal of Computational and Applied Mathematics, 2009, 231, 793-806.	1.1	23
40	Estimation of residual MSW heating value as a function of waste component recycling. Waste Management, 2008, 28, 2675-2683.	3.7	35
41	Micro-PIV and CFD characterization of flows in a microchannel: Velocity profiles, surface roughness and Poiseuille numbers. International Journal of Heat and Fluid Flow, 2008, 29, 1211-1220.	1.1	45
42	On the effect of MSW moisture content on meeting target recycling rates. Waste Management, 2008, 28, 310-317.	3.7	14
43	A case study of fuel savings through optimisation of MSW transportation routes. Management of Environmental Quality, 2008, 19, 444-454.	2.2	76
44	Dynamics in spectral solutions of Burgers equation. Journal of Computational and Applied Mathematics, 2007, 205, 296-304.	1.1	14
45	Numerical study of modified Adomian's method applied to Burgers equation. Journal of Computational and Applied Mathematics, 2007, 206, 927-949.	1.1	26
46	The effect of turbulence–radiation interaction on radiative entropy generation and heat transfer. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 104, 12-23.	1.1	15
47	On the effect of annual evolution of rejected and non-rejected rates in the screening process of packaging wastes on meeting target recycling rates. Resources, Conservation and Recycling, 2007, 51, 561-576.	5.3	3
48	Effect of Membrane Pore Size and Membrane-Solute Interactions on Lysozyme Ultrafiltration. Materials Science Forum, 2006, 514-516, 1483-1487.	0.3	0
49	Cross diffusion effects in lysozyme/sodium chloride/water ultrafiltration. Desalination, 2006, 199, 445-447.	4.0	0
50	A new iterative method to compute nonlinear equations. Applied Mathematics and Computation, 2006, 173, 468-483.	1.4	57
51	Integrated modelling of lysozyme ultrafiltration. Journal of Membrane Science, 2006, 286, 133-143.	4.1	5
52	Municipal solid waste disposal in Portugal. Waste Management, 2006, 26, 1477-1489.	3.7	112
53	Effects of ultrafiltration permeation rates on the hydrodynamics of a minichannel/slit laminar flow. Chemical Engineering Science, 2006, 61, 7139-7150.	1.9	8
54	Entropy generation through radiative transfer in participating media: analysis and numerical computation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 96, 423-437.	1.1	54

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55	Fluid flow and mass transfer modelling in lysozyme ultrafiltration. International Journal of Heat and Mass Transfer, 2005, 48, 1716-1726.	2.5	12
56	Optimization of ladder-type spacers for nanofiltration and reverse osmosis spiral-wound modules by computational fluid dynamics. Computer Aided Chemical Engineering, 2004, , 187-192.	0.3	2
57	Concentration polarisation and flow structure within nanofiltration spiral-wound modules with ladder-type spacers. Computers and Structures, 2004, 82, 1561-1568.	2.4	37
58	CO-COMBUSTION OF PULVERIZED COAL, PINE SHELLS, AND TEXTILE WASTES IN A PROPANE-FIRED FURNACE: MEASUREMENTS AND PREDICTIONS. Combustion Science and Technology, 2004, 176, 2071-2104.	1.2	20
59	A new second-moment closure approach for turbulent swirling confined flows. International Journal for Numerical Methods in Fluids, 2003, 41, 133-150.	0.9	14
60	Hydrodynamics and concentration polarization in NF/RO spiral-wound modules with ladder-type spacers. Desalination, 2003, 157, 395-402.	4.0	61
61	A consistent-splitting approach to computing stiff steady-state reacting flows with adaptive chemistry. Combustion Theory and Modelling, 2003, 7, 383-399.	1.0	42
62	On the effect of the local turbulence scales on the mixing rate of diffusion flames: assessment of two different combustion models. International Journal of Energy Research, 2002, 26, 893-920.	2.2	5
63	Flow management in nanofiltration spiral wound modules with ladder-type spacers. Journal of Membrane Science, 2002, 203, 87-102.	4.1	111
64	Integrated modeling of transport processes in fluid/nanofiltration membrane systems. Journal of Membrane Science, 2002, 206, 189-200.	4.1	56
65	The effect of the ladder-type spacers configuration in NF spiral-wound modules on the concentration boundary layers disruption. Desalination, 2002, 146, 187-194.	4.0	74
66	The effect on mass transfer of momentum and concentration boundary layers at the entrance region of a slit with a nanofiltration membrane wall. Chemical Engineering Science, 2002, 57, 735-748.	1.9	55
67	Radiative properties of small particles:â€ƒextension of the Penndorf model. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 831.	0.8	4
68	Temperature distribution around polar habitation modules buried in ice: numerical modelling. Cold Regions Science and Technology, 2001, 32, 45-62.	1.6	0
69	Flow and mass transfer modelling of nanofiltration. Journal of Membrane Science, 2001, 191, 109-128.	4.1	134
70	A new approximate phase function for isolated particles and polydispersions. Journal of Quantitative Spectroscopy and Radiative Transfer, 2001, 68, 521-542.	1.1	14
71	Energy and environmental analysis of an entire coke production plant using ECLIPSE. International Journal of Energy Research, 2001, 25, 93-106.	2.2	2
72	Numerical Simulation of the Momentum and Concentration Boundary Layers at the Entrance Region of a Slit with a Nanofiltration Membrane Wall. Chemie-Ingenieur-Technik, 2001, 73, 711-712.	0.4	2

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73	Prediction of the droplet size and velocity joint distribution for sprays. Fuel, 2001, 80, 383-394.	3.4	27
74	An efficient procedure to evaluate asymptotic limits of particles scattering efficiency and asymmetry factor. International Journal of Heat and Mass Transfer, 2001, 44, 2375-2378.	2.5	2
75	Numerical modelling of mass transfer in slits with semiâ€permeable membrane walls. Engineering Computations, 2000, 17, 192-218.	0.7	52
76	Modeling of optical properties for a polydispersion/gas mixture. Journal of Quantitative Spectroscopy and Radiative Transfer, 1999, 62, 495-510.	1.1	6
77	Modelling of scattering and absorption coefficients for a polydispersion. International Journal of Heat and Mass Transfer, 1999, 42, 4535-4548.	2.5	16
78	On the use of ECLIPSE code for optimizing industrial processes. International Journal of Energy Research, 1998, 22, 373-381.	2.2	2
79	Nanofiltration Mass Transfer at the Entrance Region of a Slit Laminar Flow. Industrial & Engineering Chemistry Research, 1998, 37, 4792-4800.	1.8	33
80	Fouling of combustion chambers and high-temperature filters. Applied Thermal Engineering, 1997, 17, 763-775.	3.0	9
81	Modelling and validation of the formation and oxidation of cenospheres in a confined spray flame. International Journal of Energy Research, 1997, 21, 1331-1344.	2.2	4
82	Spray characterization: Numerical prediction of Sauter mean diameter and droplet size distribution. Fuel, 1996, 75, 1707-1714.	3.4	72
83	Modelling and Optimization of the NO Formation in an Industrial Glass Furnace. Journal of Engineering for Industry, 1992, 114, 514-523.	0.8	7