Dimitrios Papavassiliou

List of Publications by Year
in descending order

146 papers	4,274 citations	101496 36 h-index	133188 59 g-index
147 all docs	147 docs citations	147 times ranked	3931 citing authors

#	Article	IF	Citations
1	Effect of Janus particles and non-ionic surfactants on the collapse of the oil-water interface under compression. Journal of Colloid and Interface Science, 2022, 609, 158-169.	5.0	14
2	Distribution and history of extensional stresses on vWF surrogate molecules in turbulent flow. Scientific Reports, 2022, 12, 171.	1.6	6
3	Coarse Grained Modeling of Multiphase Flows with Surfactants. Polymers, 2022, 14, 543.	2.0	6
4	Sublethal Damage to Erythrocytes during Blood Flow. Fluids, 2022, 7, 66.	0.8	0
5	Contamination in Sodium Dodecyl Sulfate Solutions: Insights from the Measurements of Surface Tension and Surface Rheology. Langmuir, 2022, 38, 7179-7189.	1.6	8
6	Production of erythrocyte microparticles in a sub-hemolytic environment. Journal of Artificial Organs, 2021, 24, 135-145.	0.4	9
7	Hemolysis estimation in turbulent flow for the FDA critical path initiative centrifugal blood pump. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1709-1722.	1.4	4
8	Elongational Stresses and Cells. Cells, 2021, 10, 2352.	1.8	9
9	Recycling Polymeric Solid Wastes for Energyâ€Efficient Water Purification, Organic Distillation, and Oil Spill Cleanup. Small, 2021, 17, e2102459.	5.2	11
10	Velocity Magnitude Distribution for Flow in Porous Media. Industrial & Engineering Chemistry Research, 2021, 60, 13979-13990.	1.8	5
11	Recycling Polymeric Solid Wastes for Energyâ€Efficient Water Purification, Organic Distillation, and Oil Spill Cleanup (Small 46/2021). Small, 2021, 17, 2170244.	5.2	2
12	Modeling of cancer photothermal therapy using nearâ€infrared radiation and functionalized graphene nanosheets. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3275.	1.0	12
13	Solid waste and graphite derived solar steam generator for highly-efficient and cost-effective water purification. Applied Energy, 2020, 261, 114410.	5.1	70
14	Hydrodynamic Dispersion in Porous Media and the Significance of Lagrangian Time and Space Scales. Fluids, 2020, 5, 79.	0.8	17
15	Coupled Flow and Heat or Mass Transfer. Fluids, 2020, 5, 66.	0.8	0
16	Agricultural waste-derived moisture-absorber for all-weather atmospheric water collection and electricity generation. Nano Energy, 2020, 74, 104922.	8.2	91
17	Using helicity to investigate scalar transport in wall turbulence. Physical Review Fluids, 2020, 5, .	1.0	9
18	Synergistic effects of surfactants and heterogeneous nanoparticles at oil-water interface: Insights from computations. Journal of Colloid and Interface Science, 2019, 553, 50-58.	5.0	27

#	Article	IF	Citations
19	Use of Computational Fluid Dynamics to Analyze Blood Flow, Hemolysis and Sublethal Damage to Red Blood Cells in a Bileaflet Artificial Heart Valve. Fluids, 2019, 4, 19.	0.8	14
20	A Flow Induced Autoimmune Response and Accelerated Senescence of Red Blood Cells in Cardiovascular Devices. Scientific Reports, 2019, 9, 19443.	1.6	16
21	Scalable, eco-friendly and ultrafast solar steam generators based on one-step melamine-derived carbon sponges toward water purification. Nano Energy, 2019, 58, 322-330.	8.2	246
22	Enhanced Electrochemical and Thermal Transport Properties of Graphene/MoS₂ Heterostructures for Energy Storage: Insights from Multiscale Modeling. ACS Applied Materials & Interfaces, 2018, 10, 14614-14621.	4.0	56
23	Scalar mixing in anisotropic turbulent flow. AIChE Journal, 2018, 64, 2803-2815.	1.8	7
24	Hydrodynamic effects on the aggregation of nanoparticles in porous media. International Journal of Heat and Mass Transfer, 2018, 121, 477-487.	2.5	13
25	Molybdenum and tungsten disulfides-based nanocomposite films for energy storage and conversion: A review. Chemical Engineering Journal, 2018, 348, 908-928.	6.6	98
26	Quality Measures of Mixing in Turbulent Flow and Effects of Molecular Diffusivity. Fluids, 2018, 3, 53.	0.8	2
27	Modification of Oilâ€“Water Interfaces by Surfactant-Stabilized Carbon Nanotubes. Journal of Physical Chemistry C, 2018, 122, 27734-27744.	1.5	15
28	Flow and Heat or Mass Transfer in the Chemical Process Industry. Fluids, 2018, 3, 61.	0.8	0
29	Predictions of the thermal conductivity of multiphase nanocomposites with complex structures. Journal of Materials Science, 2018, 53, 12157-12166.	1.7	13
30	Oil-water interfaces with surfactants: A systematic approach to determine coarse-grained model parameters. Journal of Chemical Physics, 2018, 148, 204704.	1.2	24
31	Recent Advances in Graphene-Based Free-Standing Films for Thermal Management: Synthesis, Properties, and Applications. Coatings, 2018, 8, 63.	1.2	43
32	Flowâ€Field Simulations and Hemolysis Estimates for the Food and Drug Administration Critical Path Initiative Centrifugal Blood Pump. Artificial Organs, 2017, 41, E129-E140.	1.0	32
33	Effects of Temperature and Shear on the Adsorption of Surfactants on Carbon Nanotubes. Journal of Physical Chemistry C, 2017, 121, 14339-14348.	1.5	8
34	An Approach for Assessing Turbulent Flow Damage to Blood in Medical Devices. Journal of Biomechanical Engineering, 2017, 139, .	0.6	10
35	Effect of spatial distribution of porous matrix surface charge heterogeneity on nanoparticle attachment in a packed bed. Physics of Fluids, 2017, 29, .	1.6	3
36	Interaction between polymer-coated carbon nanotubes with coarse-grained computations. Chemical Physics Letters, 2017, 685, 77-83.	1.2	2

#	Article	IF	Citations
37	Effective thermal transport properties in multiphase biological systems containing carbon nanomaterials. RSC Advances, 2017, 7, 13615-13622.	1.7	18
38	Nanoparticle transport in heterogeneous porous media with particle tracking numerical methods. Computational Particle Mechanics, 2017, 4, 87-100.	1.5	9
39	A Facile Approach to Tune the Electrical and Thermal Properties of Graphene Aerogels by Including Bulk MoS2. Nanomaterials, 2017, 7, 420.	1.9	28
40	Lagrangian Modeling of Turbulent Dispersion from Instantaneous Point Sources at the Center of a Turbulent Flow Channel. Fluids, 2017, 2, 46.	0.8	5
41	Reynolds Stresses and Hemolysis in Turbulent Flow Examined by Threshold Analysis. Fluids, 2016, 1, 42.	0.8	8
42	Effect of Sodium Dodecyl Sulfate Adsorption on the Behavior of Water inside Single Walled Carbon Nanotubes with Dissipative Particle Dynamics Simulation. Molecules, 2016, 21, 500.	1.7	14
43	Review of Recent Developments on Using an Off-Lattice Monte Carlo Approach to Predict the Effective Thermal Conductivity of Composite Systems with Complex Structures. Nanomaterials, 2016, 6, 142.	1.9	17
44	Transport and deposition kinetics of polymerâ€coated multiwalled carbon nanotubes in packed beds. AIChE Journal, 2016, 62, 3774-3783.	1.8	7
45	Image-based modeling: A novel tool for realistic simulations of artificial bone cultures. Technology, 2016, 04, 229-233.	1.4	13
46	Adsorption of anionic and non-ionic surfactants on carbon nanotubes in water with dissipative particle dynamics simulation. Journal of Chemical Physics, 2016, 144, 204701.	1.2	26
47	A statistical model to predict streamwise turbulent dispersion from the wall at small times. Physics of Fluids, 2016, 28, .	1.6	7
48	Chemical Fate and Transport in the Environment. AIAA Journal, 2016, 54, 3320-3320.	1.5	0
49	The effects of shear and particle shape on the physical adsorption of polyvinyl pyrrolidone on carbon nanoparticles. Nanotechnology, 2016, 27, 325709.	1.3	9
50	Mesoscopic modeling of heat transfer in carbon nanotube multiphase polymer composites. AIP Conference Proceedings, 2016, , .	0.3	4
51	Physical adsorption of polyvinyl pyrrolidone on carbon nanotubes under shear studied with dissipative particle dynamics simulations. Carbon, 2016, 100, 291-301.	5.4	21
52	Interaction parameters between carbon nanotubes and water in Dissipative Particle Dynamics. Molecular Simulation, 2016, 42, 737-744.	0.9	8
53	Hemolysis Related to Turbulent Eddy Size Distributions Using Comparisons of Experiments to Computations. Artificial Organs, 2015, 39, E227-39.	1.0	21
54	Hemodynamics of the renal artery ostia with implications for their structural development and efficiency of flow. Biorheology, 2015, 52, 257-268.	1.2	1

#	Article	IF	Citations
55	Flow-induced separation in wall turbulence. Physical Review E, 2015, 91, 033019.	0.8	6
56	Inter-Carbon Nanotube Contact and Thermal Resistances in Heat Transport of Three-Phase Composites. Journal of Physical Chemistry C, 2015, 119, 7614-7620.	1.5	21
57	Mesoscopic modeling of cancer photothermal therapy using single-walled carbon nanotubes and near infrared radiation: insights through an off-lattice Monte Carlo approach. Nanotechnology, 2014, 25, 205101.	1.3	24
58	Flow Recovery Downstream from Nanoposts Grown at the Wall of a Microchannel. Nanoscale and Microscale Thermophysical Engineering, 2014, 18, 1-17.	1.4	2
59	Transport of nanoparticles and kinetics in packed beds: A numerical approach with lattice Boltzmann simulations and particle tracking. International Journal of Heat and Mass Transfer, 2014, 72, 319-328.	2.5	15
60	Bulk stress distributions in the pore space of sphere-packed beds under Darcy flow conditions. Physical Review E, 2014, 89, 033016.	0.8	18
61	Off-Lattice Monte Carlo Simulation of Heat Transfer through Carbon Nanotube Multiphase Systems Taking into Account Thermal Boundary Resistances. Numerical Heat Transfer; Part A: Applications, 2014, 65, 1023-1043.	1.2	18
62	Thermal transport phenomena and limitations in heterogeneous polymer composites containing carbon nanotubes and inorganic nanoparticles. Carbon, 2014, 78, 305-316.	5.4	50
63	Drag Coefficient Correction for Spherical and Nonspherical Particles Suspended in Square Microducts. Industrial & Engineering Chemistry Research, 2014, 53, 10465-10474.	1.8	15
64	Numerical Calculation of the Effective Thermal Conductivity of Nanocomposites. Numerical Heat Transfer; Part A: Applications, 2013, 63, 590-603.	1.2	6
65	EFFECTS OF HYDROPHOBICITY-INDUCING ROUGHNESS ON MICRO-FLOWS. Chemical Engineering Communications, 2013, 200, 919-934.	1.5	8
66	Effect of carbon nanotube persistence length on heat transfer in nanocomposites: A simulation approach. Applied Physics Letters, 2013, 102, 203116.	1.5	10
67	Turbulent plane Poiseuille-Couette flow as a model for fluid slip over superhydrophobic surfaces. Physical Review E, 2013, 88, 063015.	0.8	10
68	Heat Transfer Scaling Close to the Wall for Turbulent Channel Flows. Applied Mechanics Reviews, 2013, 65, .	4.5	6
69	3D Tissue-Engineered Construct Analysis via Conventional High-Resolution Microcomputed Tomography Without X-Ray Contrast. Tissue Engineering - Part C: Methods, 2013, 19, 327-335.	1.1	17
70	Arterial deformation with renal artery aneurysm as a basis for secondary hypertension. Biorheology, 2013, 50, 17-31.	1.2	11
71	Near-wall velocity structures that drive turbulent transport from a line source at the wall. Physics of Fluids, 2012, 24, .	1.6	7
72	Modifying Air Fields To Improve Melt Blowing. Industrial & Engineering Chemistry Research, 2012, 51, 3472-3482.	1.8	14

#	Article	IF	Citations
73	Comparison of backwards and forwards scalar relative dispersion in turbulent shear flow. International Journal of Heat and Mass Transfer, 2012, 55, 5650-5664.	2.5	6
74	Thermal Behavior of Double-Walled Carbon Nanotubes and Evidence of Thermal Rectification. Journal of Physical Chemistry C, 2012, 116, 4449-4454.	1.5	26
75	Predicting the stress distribution within scaffolds with ordered architecture. Biorheology, 2012, 49, 235-247.	1.2	12
76	Entropy Generation in Laminar Flow Junctions. , 2012, , .		2
77	Thermal boundary resistance at the grapheneâ€“graphene interface estimated by molecular dynamics simulations. Chemical Physics Letters, 2012, 527, 47-50.	1.2	77
78	Effects of Scaffold Architecture on Preosteoblastic Cultures under Continuous Fluid Shear. Industrial & Engineering Chemistry Research, 2011, 50, 620-629.	1.8	31
79	Effective Heat Transfer Properties of Graphene Sheet Nanocomposites and Comparison to Carbon Nanotube Nanocomposites. Journal of Physical Chemistry C, 2011, 115, 3872-3880.	1.5	41
80	Prediction of the Turbulent Prandtl Number in Wall Flows with Lagrangian Simulations. Industrial & Engineering Chemistry Research, 2011, 50, 8881-8891.	1.8	17
81	Simulation insights into thermally conductive graphene-based nanocomposites. Molecular Physics, 2011, 109, 97-111.	0.8	58
82	Next-Generation Modeling of Melt Blowing. Industrial & Engineering Chemistry Research, 2011, 50, 12233-12245.	1.8	30
83	Interfacial water on crystalline silica: a comparative molecular dynamics simulation study. Molecular Simulation, 2011, 37, 172-195.	0.9	81
84	Significance of Extensional Stresses to Red Blood Cell Lysis in a Shearing Flow. Annals of Biomedical Engineering, 2011, 39, 1632-1642.	1.3	40
85	Efficient Lagrangian scalar tracking method for reactive local mass transport simulation through porous media. International Journal for Numerical Methods in Fluids, 2011, 67, 501-517.	0.9	26
86	Heat transfer in high volume fraction CNT nanocomposites: Effects of inter-nanotube thermal resistance. Chemical Physics Letters, 2011, 508, 248-251.	1.2	60
87	Liquid water can slip on a hydrophilic surface. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16170-16175.	3.3	223
88	Heat Transfer in Nanocomposites with Monte-Carlo Simulations. Defect and Diffusion Forum, 2011, 312-315, 177-182.	0.4	2
89	Direction of scalar transport in turbulent channel flow. Physics of Fluids, 2011, 23, .	1.6	7
90	Computational modeling of flow-induced shear stresses within 3D salt-leached porous scaffolds imaged via micro-CT. Journal of Biomechanics, 2010, 43, 1279-1286.	0.9	99

#	Article	IF	Citations
91	Backwards and forwards dispersion of a scalar in turbulent wall flows. International Journal of Heat and Mass Transfer, 2010, 53, 1023-1035.	2.5	7
92	Distribution of flow-induced stresses in highly porous media. Applied Physics Letters, 2010, 97, 024101.	1.5	20
93	Morphology Effects on Nonisotropic Thermal Conduction of Aligned Single-Walled and Multi-Walled Carbon Nanotubes in Polymer Nanocomposites. Journal of Physical Chemistry C, 2010, 114, 8851-8860.	1.5	44
94	Turbulence structure for plane Poiseuilleâ€"Couette flow and implications for drag reduction over surfaces with slip. Canadian Journal of Chemical Engineering, 2009, 87, 38-46.	0.9	12
95	A physical picture of the mechanism of turbulent heat transfer from the wall. International Journal of Heat and Mass Transfer, 2009, 52, 4873-4882.	2.5	16
96	A numerical study on the effective thermal conductivity of biological fluids containing single-walled carbon nanotubes. International Journal of Heat and Mass Transfer, 2009, 52, 5591-5597.	2.5	29
97	A computational investigation of the geometric factors affecting the severity of renal arterial stenoses. Journal of Biorheology, 2009, 23, 102-110.	0.2	2
98	Online Measurement of Fiber Diameter and Temperature in the Melt-Spinning and Melt-Blowing Processes. Industrial & Engineering Chemistry Research, 2009, 48, 8736-8744.	1.8	27
99	Unsteady State Heat Transfer from Cylinders to Air in Normal and Parallel Flow. Industrial & Engineering Chemistry Research, 2009, 48, 4119-4126.	1.8	3
100	Transient stenotic-like occlusions as a possible mechanism forÂrenovascular hypertension due to aneurysm. Journal of the American Society of Hypertension, 2009, 3, 192-200.	2.3	5
101	Inter-carbon nanotube contact in thermal transport of controlled-morphology polymer nanocomposites. Nanotechnology, 2009, 20, 155702.	1.3	41
102	Effects of a reacting channel wall on turbulent mass transfer. International Journal of Heat and Mass Transfer, 2008, 51, 2940-2949.	2.5	9
103	Carotid geometry effects on blood flow and on risk for vascular disease. Journal of Biomechanics, 2008, 41, 11-19.	0.9	95
104	Flow effects on the kinetics of a second-order reaction. Chemical Engineering Journal, 2008, 140, 370-380.	6.6	9
105	On the scaling of heat transfer using thermal flux gradients for fully developed turbulent channel and Couette flows. International Communications in Heat and Mass Transfer, 2008, 35, 404-412.	2.9	3
106	Computational modeling of the thermal conductivity of single-walled carbon nanotubeâ€"polymer composites. Nanotechnology, 2008, 19, 065702.	1.3	63
107	Calculated Thermal Properties of Single-Walled Carbon Nanotube Suspensions. Journal of Physical Chemistry C, 2008, 112, 19860-19865.	1.5	34
108	Unique Thermal Conductivity Behavior of Single-Walled Carbon Nanotubeâˆ'Polystyrene Composites. Macromolecules, 2008, 41, 7274-7277.	2.2	95

#	Article	IF	Citations
109	Review of Fluid Slip over Superhydrophobic Surfaces and Its Dependence on the Contact Angle. Industrial & Engineering Chemistry Research, 2008, 47, 2455-2477.	1.8	253
110	Simulation of Thermal Conductivity in Fabricated Variable Volume Fraction Aligned Carbon Nanotube Polymer Composites. , 2008, , .		0
111	Effects of the Polymer Fiber on the Flow Field from a Slot Melt Blowing Die. Industrial & Engineering Chemistry Research, 2008, 47, 935-945.	1.8	22
112	Simulations to Determine Laminar Loss Coefficients for Flow in Circular Ducts With Arbitrary Planar Bifurcation Geometries. , 2008, , .		1
113	Non-Darcy Flow Pore Network Simulation: Development and Validation of a 3D Model. , 2007, , 1331.		3
114	Effects of the Polymer Fiber on the Flow Field from an Annular Melt-Blowing Die. Industrial & Engineering Chemistry Research, 2007, 46, 655-666.	1.8	19
115	Use of an Infrared Camera for Accurate Determination of the Temperature of Polymer Filaments. Industrial & Engineering Chemistry Research, 2007, 46, 336-344.	1.8	16
116	Slip length and contact angle over hydrophobic surfaces. Chemical Physics Letters, 2007, 441, 273-276.	1.2	65
117	Modeling the Melt Blowing of Hollow Fibers. Industrial & Engineering Chemistry Research, 2006, 45, 407-415.	1.8	10
118	Flow around Surface-Attached Carbon Nanotubes. Industrial & Engineering Chemistry Research, 2006, 45, 1797-1804.	1.8	8
119	Using Swirl Dies To Spin Solid and Hollow Fibers. Industrial & Engineering Chemistry Research, 2006, 45, 2331-2340.	1.8	7
120	Analysis of the Temperature Field from Multiple Jets in the Schwarz Melt Blowing Die Using Computational Fluid Dynamics. Industrial & Engineering Chemistry Research, 2006, 45, 5098-5109.	1.8	28
121	On temperature prediction at low Re turbulent flows using the Churchill turbulent heat flux correlation. International Journal of Heat and Mass Transfer, 2006, 49, 3681-3690.	2.5	8
122	Turbulent Heat Transfer in Plane Couette Flow. Journal of Heat Transfer, 2006, 128, 53-62.	1.2	22
123	Understanding Macroscopic Heat/Mass Transfer Using Meso- and Macro-Scale Simulations. , 2006, , 489-513.		2
124	Boundary slip and wetting properties of interfaces: Correlation of the contact angle with the slip length. Journal of Chemical Physics, 2006, 124, 204701.	1.2	130
125	Knowledge-Based Multiclass Support Vector Machines Applied to Vertical Two-Phase Flow. Lecture Notes in Computer Science, 2006, , 188-195.	1.0	7
126	Simulation of Heat Transfer With LBM and Lagrangian Methods for Microfluidic Applications. , 2005, , 563.		1

#	Article	IF	Citations
127	Turbulent dispersion from elevated line sources in channel and couette flow. AICHE Journal, 2005, 51, 2402-2414.	1.8	29
128	Random walks in nanotube composites: Improved algorithms and the role of thermal boundary resistance. Applied Physics Letters, 2005, 87, 013101.	1.5	48
129	Analysis of Multiple Jets in the Schwarz Melt-Blowing Die Using Computational Fluid Dynamics. Industrial & Engineering Chemistry Research, 2005, 44, 8922-8932.	1.8	26
130	Two-Phase Flow Regime Identification with a Multiclassification Support Vector Machine (SVM) Model. Industrial & Engineering Chemistry Research, 2005, 44, 4414-4426.	1.8	72
131	Analysis of isothermal annular jets: Comparison of computational fluid dynamics and experimental data. Journal of Applied Polymer Science, 2004, 94, 909-922.	1.3	38
132	Effects of a first-order chemical reaction on turbulent mass transfer. International Journal of Heat and Mass Transfer, 2004, 47, 43-61.	2.5	23
133	On the Prandtl or Schmidt number dependence of the turbulent heat or mass transfer coefficient. Chemical Engineering Science, 2004, 59, 543-555.	1.9	46
134	Effects of Temperature and Geometry on the Flow Field of the Melt Blowing Process. Industrial & Engineering Chemistry Research, 2004, 43, 4199-4210.	1.8	44
135	A PORE NETWORK MODEL FOR THE CALCULATION OF NON-DARCY FLOW COEFFICIENTS IN FLUID FLOW THROUGH POROUS MEDIA. Chemical Engineering Communications, 2004, 191, 1285-1322.	1.5	20
136	Transport properties for turbulent dispersion from wall sources. AICHE Journal, 2003, 49, 1095-1108.	1.8	19
137	Effects of Die Geometry on the Flow Field of the Melt-Blowing Process. Industrial & Engineering Chemistry Research, 2003, 42, 5541-5553.	1.8	57
138	Analysis of a Melt-Blowing Die:Â Comparison of CFD and Experiments. Industrial & Engineering Chemistry Research, 2002, 41, 5125-5138.	1.8	74
139	Scalar dispersion from an instantaneous line source at the wall of a turbulent channel for medium and high Prandtl number fluids. International Journal of Heat and Fluid Flow, 2002, 23, 161-172.	1.1	30
140	Turbulent transport from continuous sources at the wall of a channel. International Journal of Heat and Mass Transfer, 2002, 45, 3571-3583.	2.5	37
141	Validation of Non-darcy Well Models Using Direct Numerical Simulation. , 2000, , 156-169.		6
142	Use of direct numerical simulation to study the effect of Prandtl number on temperature fields. International Journal of Heat and Fluid Flow, 1999, 20, 187-195.	1.1	82
143	Turbulent flow in a channel at a low Reynolds number. Experiments in Fluids, 1998, 25, 503-511.	1.1	64
144	Transport of a passive scalar in a turbulent channel flow. International Journal of Heat and Mass Transfer, 1997, 40, 1303-1311.	2.5	106

#	Article	IF	Citations
145	Interpretation of large-scale structures observed in a turbulent plane Couette flow. International Journal of Heat and Fluid Flow, 1997, 18, 55-69.	1.1	87
146	The Use of Lagrangian Methods To Describe Turbulent Transport of Heat from a Wall. Industrial & Engineering Chemistry Research, 1995, 34, 3359-3367.	1.8	36