Igor V Pivkin

List of Publications by Year
in descending order

40	2,494	236925 25	345221 36
papers	citations	h-index	g-index

41	41	41	2686
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Accurate Coarse-Grained Modeling of Red Blood Cells. Physical Review Letters, 2008, 101, 118105.	7.8	308
2	A microfabricated deformability-based flow cytometer with application to malaria. Lab on A Chip, 2011, 11, 1065.	6.0	223
3	Biomechanics of red blood cells in human spleen and consequences for physiology and disease. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7804-7809.	7.1	193
4	A new method to impose no-slip boundary conditions in dissipative particle dynamics. Journal of Computational Physics, 2005, 207, 114-128.	3.8	173
5	Lipid bilayer and cytoskeletal interactions in a red blood cell. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13356-13361.	7.1	155
6	Blood flow velocity effects and role of activation delay time on growth and form of platelet thrombi. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17164-17169.	7.1	149
7	The Fluid Mechanics of Cancer and Its Therapy. Annual Review of Fluid Mechanics, 2013, 45, 325-355.	25.0	117
8	Controlling Density Fluctuations in Wall-Bounded Dissipative Particle Dynamics Systems. Physical Review Letters, 2006, 96, 206001.	7.8	99
9	Shape Transformations of Membrane Vesicles from Amphiphilic Triblock Copolymers: A Dissipative Particle Dynamics Simulation Study. Macromolecules, 2009, 42, 3195-3200.	4.8	92
10	Velocity limit in DPD simulations of wall-bounded flows. Journal of Computational Physics, 2008, 227, 2540-2559.	3.8	88
11	Combined Simulation and Experimental Study of Large Deformation of Red Blood Cells in Microfluidic Systems. Annals of Biomedical Engineering, 2011, 39, 1041-1050.	2.5	88
12	Structure and Response to Flow of the Glycocalyx Layer. Biophysical Journal, 2014, 106, 232-243.	0.5	70
13	Coarse-graining limits in open and wall-bounded dissipative particle dynamics systems. Journal of Chemical Physics, 2006, 124, 184101.	3.0	69
14	A comparative study between dissipative particle dynamics and molecular dynamics for simple- and complex-geometry flows. Journal of Chemical Physics, 2005, 123, 104107.	3.0	68
15	The SIB Swiss Institute of Bioinformaticsâ€™ resources: focus on curated databases. Nucleic Acids Research, 2016, 44, D27-D37.	14.5	64
16	Deep neural networks outperform human expert's capacity in characterizing bioleaching bacterial biofilm composition. Biotechnology Reports (Amsterdam, Netherlands), 2019, 22, e00321.	4.4	57
17	Single-particle hydrodynamics in DPD: A new formulation. Europhysics Letters, 2008, 84, 10012.	2.0	53
18	Inflow/Outflow Boundary Conditions for Particle-Based Blood Flow Simulations: Application to Arterial Bifurcations and Trees. PLoS Computational Biology, 2015, 11, e1004410.	3.2	51

#	Article	IF	Citations
19	Combined effects of pulsatile flow and dynamic curvature on wall shear stress in a coronary artery bifurcation model. Journal of Biomechanics, 2005, 38, 1283-1290.	2.1	43
20	Effect of red blood cells on platelet aggregation. IEEE Engineering in Medicine and Biology Magazine, 2009, 28, 32-37.	0.8	41
21	Feature article - Particle flurries synoptic 3d pulsatile flow visualization. IEEE Computer Graphics and Applications, 2004, 24, 76-85.	1.2	36
22	Weak Iron Oxidation by Sulfobacillus thermosulfidooxidans Maintains a Favorable Redox Potential for Chalcopyrite Bioleaching. Frontiers in Microbiology, 2018, 9, 3059.	3.5	35
23	Probing eukaryotic cell mechanics via mesoscopic simulations. PLoS Computational Biology, 2017, 13, e1005726.	3.2	31
24	A polarizable coarse-grained water model for dissipative particle dynamics. Journal of Chemical Physics, 2014, 141, 164506.	3.0	29
25	A polarizable coarse-grained protein model for dissipative particle dynamics. Physical Chemistry Chemical Physics, 2015, 17, 24452-24461.	2.8	26
26	Hydrodynamic effects on flow-induced polymer translocation through a microfluidic channel. Polymer, 2013, 54, 4309-4317.	3.8	22
27	S100A4 and its role in metastasis â€“ simulations of knockout and amplification of epithelial growth factor receptor and matrix metalloproteinases. Molecular BioSystems, 2015, 11, 2247-2254.	2.9	20
28	The in-silico lab-on-a-chip. , 2015, , .		14
29	S100A4 and its role in metastasis â€“ computational integration of data on biological networks. Molecular BioSystems, 2015, 11, 2238-2246.	2.9	14
30	Coarse kMC-based replica exchange algorithms for the accelerated simulation of protein folding in explicit solvent. Physical Chemistry Chemical Physics, 2016, 18, 13052-13065.	2.8	11
31	A kMC-MD method with generalized move-sets for the simulation of folding of Î±-helical and Î²-stranded peptides. Journal of Chemical Physics, 2015, 142, 144903.	3.0	10
32	Reverse engineering directed gene regulatory networks from transcriptomics and proteomics data of biomining bacterial communities with approximate Bayesian computation and steady-state signalling simulations. BMC Bioinformatics, 2020, 21, 23.	2.6	9
33	How water layers on graphene affect folding and adsorption of TrpZip2. Journal of Chemical Physics, 2014, 141, 22D511.	3.0	8
34	A canonical replica exchange molecular dynamics implementation with normal pressure in each replica. Journal of Chemical Physics, 2016, 145, 044903.	3.0	6
35	Multiscale modelling of hematologic disorders. Modeling, Simulation and Applications, 2012, , 289-331.	1.3	2
36	Systems Biology of Acidophile Biofilms for Efficient Metal Extraction. Advanced Materials Research, 2015, 1130, 312-315.	0.3	1

#	Article	IF	Citations
37	Towards an Engineering Methodology for Multi-model Scientific Simulations. , 2015, , .		1
38	Visualization of blood platelets in a virtual environment. , 2004, , .		0
39	Computational Models of Eukaryotic Cells in Health and Disease. , 2018, , 1-13.		0
40	Computational Models of Eukaryotic Cells in Health and Disease. , 2020, , 2611-2623.		0