Wojciech Plazinski

List of Publications by Citations

87 papers	2,310 citations	21 h-index	46 g-index
93 ext. papers	2,669 ext. citations	4.8 avg, IF	5.69 L-index

#	Paper	IF	Citations
87	Theoretical models of sorption kinetics including a surface reaction mechanism: a review. *Advances in Colloid and Interface Science*, **2009**, 152, 2-13	14.3	589
86	Kinetics of solute adsorption at solid/solution interfaces: a theoretical development of the empirical pseudo-first and pseudo-second order kinetic rate equations, based on applying the statistical rate theory of interfacial transport. *Journal of Physical Chemistry B*, **2006**, 110, 16514-25	3.4	240
85	Modeling of sorption kinetics: the pseudo-second order equation and the sorbate intraparticle diffusivity. *Adsorption*, **2013**, 19, 1055-1064	2.6	151
84	Studies of the Kinetics of Solute Adsorption at Solid/Solution Interfaces: On the Possibility of Distinguishing between the Diffusional and the Surface Reaction Kinetic Models by Studying the Pseudo-First-order Kinetics. *Journal of Physical Chemistry C*, **2007**, 111, 15100-15110	3.8	97
83	Theoretical description of the kinetics of solute adsorption at heterogeneous solid/solution interfaces. *Applied Surface Science*, **2007**, 253, 5827-5840	6.7	88
82	On the applicability of the pseudo-second order equation to represent the kinetics of adsorption at solid/solution interfaces: a theoretical analysis based on the statistical rate theory. *Adsorption*, **2009**, 15, 181-192	2.6	87
81	Molecular basis of calcium binding by polyguluronate chains. Revising the egg-box model. *Journal of Computational Chemistry*, **2011**, 32, 2988-95	3.5	72
80	Revision of the GROMOS 56A6(CARBO) force field: Improving the description of ring-conformational equilibria in hexopyranose-based carbohydrates chains. *Journal of Computational Chemistry*, **2016**, 37, 354-65	3.5	65
79	Kinetics of dyes adsorption at the solid-solution interfaces: a theoretical description based on the two-step kinetic model. *Environmental Science & Technology*, **2008**, 42, 2470-5	10.3	56
78	Kinetics of Adsorption at Solid/Solution Interfaces Controlled by Intraparticle Diffusion: A Theoretical Analysis. *Journal of Physical Chemistry C*, **2009**, 113, 12495-12501	3.8	47
77	Binding of heavy metals by algal biosorbents. Theoretical models of kinetics, equilibria and thermodynamics. *Advances in Colloid and Interface Science*, **2013**, 197-198, 58-67	14.3	45
76	Kinetics of solute adsorption at solid/aqueous interfaces: searching for the theoretical background of the modified pseudo-first-order kinetic equation. *Langmuir*, **2008**, 24, 5393-9	4	44
75	Modeling the effect of surface heterogeneity in equilibrium of heavy metal ion biosorption by using the ion exchange model. *Environmental Science & Technology*, **2009**, 43, 7465-71	10.3	38
74	Kinetics of solute adsorption at solid/solution interfaces: on the special features of the initial adsorption kinetics. *Langmuir*, **2008**, 24, 6738-44	4	38
73	Sorption of lead, copper, and cadmium by calcium alginate. Metal binding stoichiometry and the pH effect. *Environmental Science and Pollution Research*, **2012**, 19, 3516-24	5.1	25
72	Applicability of the film-diffusion model for description of the adsorption kinetics at the solid/solution interfaces. *Applied Surface Science*, **2010**, 256, 5157-5163	6.7	25
71	The influence of the hexopyranose ring geometry on the conformation of glycosidic linkages investigated using molecular dynamics simulations. *Carbohydrate Research*, **2015**, 415, 17-27	2.9	22

70	Calcium-L-guluronate complexes: Ca2+ binding modes from DFT-MD simulations. *Journal of Physical Chemistry B*, **2013**, 117, 12105-12	3.4	22
69	Molecular modeling of Ca2+-oligo(L-guluronate) complexes: toward the understanding of the junction zone structure in calcium alginate gels. *Structural Chemistry*, **2012**, 23, 1409-1415	1.8	22
68	Interactions between CD44 protein and hyaluronan: insights from the computational study. *Molecular BioSystems*, **2012**, 8, 543-7		21
67	Modeling the effect of pH on kinetics of heavy metal ion biosorption. A theoretical approach based on the statistical rate theory. *Langmuir*, **2009**, 25, 298-304	4	21
66	A novel two-resistance model for description of the adsorption kinetics onto porous particles. *Langmuir*, **2010**, 26, 802-8	4	19
65	A GROMOS Force Field for Furanose-Based Carbohydrates. *Journal of Chemical Theory and Computation*, **2019**, 15, 1168-1186	6.4	18
64	Kinetics of metal ions adsorption at heterogeneous solid/solution interfaces: A theoretical treatment based on statistical rate theory. *Journal of Colloid and Interface Science*, **2008**, 327, 36-43	9.3	17
63	Resolving the nanostructure of sodium carbonate extracted pectins (DASP) from apple cell walls with atomic force microscopy and molecular dynamics. *Food Hydrocolloids*, **2020**, 104, 105726	10.6	17
62	The water-catalyzed mechanism of the ring-opening reaction of glucose. *Physical Chemistry Chemical Physics*, **2015**, 17, 21622-9	3.6	15
61	Acyclic forms of aldohexoses and ketohexoses in aqueous and DMSO solutions: conformational features studied using molecular dynamics simulations. *Physical Chemistry Chemical Physics*, **2016**, 18, 9626-35	3.6	15
60	Benzo[b]thiophene-thiazoles as potent anti-Toxoplasma gondii agents: Design, synthesis, tyrosinase/tyrosine hydroxylase inhibitors, molecular docking study, and antioxidant activity. *European Journal of Medicinal Chemistry*, **2019**, 184, 111765	6.8	15
59	Binding of bivalent metal cations by L-guluronate: insights from the DFT-MD simulations. *New Journal of Chemistry*, **2015**, 39, 3987-3994	3.6	14
58	Extension of the GROMOS 56a6 Force Field for Charged, Protonated, and Esterified Uronates. *Journal of Physical Chemistry B*, **2018**, 122, 3696-3710	3.4	14
57	The dynamics of the conformational changes in the hexopyranose ring: a transition path sampling approach. *RSC Advances*, **2014**, 4, 25028-25039	3.7	14
56	Kinetics of isothermal gas adsorption on heterogeneous solid surfaces: equations based on generalization of the statistical rate theory of interfacial transport. *Journal of Physical Chemistry B*, **2005**, 109, 21868-78	3.4	14
55	Molecular dynamics simulations of hexopyranose ring distortion in different force fields. *Pure and Applied Chemistry*, **2017**, 89, 1283-1294	2.1	12
54	Pyranose ring conformations in mono- and oligosaccharides: a combined MD and DFT approach. *Physical Chemistry Chemical Physics*, **2017**, 19, 20760-20772	3.6	12
53	HPLC-DAD Determination of Nitrite and Nitrate in Human Saliva Utilizing a Phosphatidylcholine Column. *Molecules*, **2019**, 24,	4.8	11

52	How does mechanism of biosorption determine the differences between the initial and equilibrium adsorption states?. *Adsorption*, **2010**, 16, 351-357	2.6	11
51	The systematic influence of solvent on the conformational features of furanosides. *Organic and Biomolecular Chemistry*, **2019**, 17, 2479-2485	3.9	10
50	Fast, metadynamics-based method for prediction of the stereochemistry-dependent relative free energies of ligand-receptor interactions. *Journal of Computational Chemistry*, **2014**, 35, 876-82	3.5	10
49	Sorption of metal cations by alginate-based biosorbents. On the correct determination of the thermodynamic parameters. *Journal of Colloid and Interface Science*, **2012**, 368, 547-51	9.3	10
48	Conformational properties of acidic oligo- and disaccharides and their ability to bind calcium: a molecular modeling study. *Carbohydrate Research*, **2012**, 357, 111-7	2.9	10
47	The dynamics of the calcium-induced chain-chain association in the polyuronate systems. *Journal of Computational Chemistry*, **2012**, 33, 1709-15	3.5	10
46	Molecular dynamics study of the interactions between phenolic compounds and alginate/alginic acid chains. *New Journal of Chemistry*, **2011**, 35, 1607	3.6	10
45	Binding stoichiometry in sorption of divalent metal ions: a theoretical analysis based on the ion-exchange model. *Journal of Colloid and Interface Science*, **2010**, 344, 165-70	9.3	10
44	Sorption of Heavy Metal Ions of Chromium, Manganese, Selenium, Nickel, Cobalt, Iron from Aqueous Acidic Solutions in Batch and Dynamic Conditions on Natural and Synthetic Aluminosilicate Sorbents. *Materials*, **2020**, 13,	3.5	10
43	Pyranose ring puckering in aldopentoses, ketohexoses and deoxyaldohexoses. A molecular dynamics study. *Carbohydrate Research*, **2018**, 455, 62-70	2.9	10
42	Agonist binding by the □-adrenergic receptor: an effect of receptor conformation on ligand association-dissociation characteristics. *European Biophysics Journal*, **2015**, 44, 149-63	1.9	9
41	Ring inversion properties of 1-□, 1-□ and 1-□-linked hexopyranoses and their correlation with the conformation of glycosidic linkages. *Carbohydrate Research*, **2016**, 423, 43-8	2.9	9
40	Thermodynamic aspects of calcium binding by poly(□L-guluronate) chains. A molecular simulation study. *Applied Surface Science*, **2012**, 262, 153-155	6.7	9
39	Kinetic characteristics of conformational changes in the hexopyranose rings. *Carbohydrate Research* , **2015**, 416, 41-50	2.9	8
38	The 'order-to-disorder' conformational transition in CD44 protein: an umbrella sampling analysis. *Journal of Molecular Graphics and Modelling*, **2013**, 45, 122-7	2.8	8
37	The endo- and exo-Anomeric Effects in Furanosides. A Computational Study. *European Journal of Organic Chemistry*, **2020**, 2020, 674-679	3.2	8
36	Dissipative particle dynamics model of homogalacturonan based on molecular dynamics simulations. *Scientific Reports*, **2020**, 10, 14691	4.9	8
35	A novel derivatives of thiazol-4(5H)-one and their activity in the inhibition of 11□hydroxysteroid dehydrogenase type 1. *Bioorganic Chemistry*, **2018**, 79, 115-121	5.1	7

34	Effect of the dichloro-substitution on antiproliferative activity of phthalimide-thiazole derivatives. Rational design, synthesis, elastase, caspase 3/7, and EGFR tyrosine kinase activity and molecular modeling study. *Bioorganic Chemistry*, **2021**, 110, 104819	5.1	7
33	Stereoselective binding of agonists to the adrenergic receptor: insights into molecular details and thermodynamics from molecular dynamics simulations. *Molecular BioSystems*, **2017**, 13, 910-920		6
32	Solid-phase extraction using octadecyl-bonded silica modified with photosynthetic pigments from Spinacia oleracea L. for the preconcentration of lead(II) ions from aqueous samples. *Journal of Separation Science*, **2018**, 41, 3129-3142	3.4	6
31	Equilibrium and kinetic modeling of metal ion biosorption: on the ways of model generalization for the case of multicomponent systems. *Adsorption*, **2013**, 19, 659-666	2.6	6
30	Tedizolid-Cyclodextrin System as Delayed-Release Drug Delivery with Antibacterial Activity. *International Journal of Molecular Sciences*, **2020**, 22,	6.3	6
29	Aggregation and weak gel formation by pectic polysaccharide homogalacturonan. *Carbohydrate Polymers*, **2021**, 256, 117566	10.3	6
28	Molecular Structure of Cefuroxime Axetil Complexes with , , and 2-Hydroxypropyl-Cyclodextrins: Molecular Simulations and Raman Spectroscopic and Imaging Studies. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	6
27	Conformational Properties of Glycosaminoglycan Disaccharides: A Molecular Dynamics Study. *Journal of Physical Chemistry B*, **2021**, 125, 10900-10916	3.4	6
26	Statistical Rate Theory Approach to Description of the pH-Dependent Kinetics of Metal Ion Adsorption. *Journal of Physical Chemistry C*, **2010**, 114, 9952-9954	3.8	5
25	Biosorption of Heavy Metal Ions: Ion-Exchange versus Adsorption and the Heterogeneity of Binding Sites. *Adsorption Science and Technology*, **2011**, 29, 479-486	3.6	5
24	Heavy metals binding to biosorbents. Insights into Non-competitive models from a simple pH-dependent model. *Colloids and Surfaces B: Biointerfaces*, **2010**, 80, 133-7	6	5
23	Tropinone-Derived Alkaloids as Potent Anticancer Agents: Synthesis, Tyrosinase Inhibition, Mechanism of Action, DFT Calculation, and Molecular Docking Studies. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	5
22	Force-induced structural changes in non-sulfated carrageenan based oligosaccharides - a theoretical study. *Soft Matter*, **2018**, 14, 6264-6277	3.6	4
21	Conformations of saturated five-membered heterocycles evaluated by MP2 calculations. *Chemistry of Heterocyclic Compounds*, **2020**, 56, 1599-1604	1.4	4
20	Comparison of Carbohydrate Force Fields in Molecular Dynamics Simulations of Protein-Carbohydrate Complexes. *Journal of Chemical Theory and Computation*, **2021**, 17, 2575-2585	6.4	4
19	Thermodynamic study of new antiepileptic compounds by combining chromatography on the phosphatidylcholine biomimetic stationary phase and differential scanning calorimetry. *Journal of Separation Science*, **2019**, 42, 2628-2639	3.4	3
18	Synthesis of the N-methyl Derivatives of 2-Aminothiazol-4(5H)-one and Their Interactions with 11HSD1-Molecular Modeling and in Vitro Studies. *Chemistry and Biodiversity*, **2019**, 16, e1900065	2.5	3
17	Conformational properties of inulin, levan and arabinan studied by molecular dynamics simulations. *Carbohydrate Polymers*, **2020**, 240, 116266	10.3	3

16	Reply to Comment on Kinetics of Solute Adsorption at Solid/Solution Interfaces: A Theoretical Development of the Empirical Pseudo-First and Pseudo-Second Order Kinetic Rate Equations, Based on Applying the Statistical Rate Theory of Interfacial Transport *Journal of Physical Chemistry B*, **2007**, 111, 319-319	3.4	3
15	Deciphering the conformational preferences of furanosides. A molecular dynamics study. *Journal of Biomolecular Structure and Dynamics*, **2020**, 38, 3359-3370	3.6	3
14	Relation between the NMR data and the pseudorotational free-energy profile for oxolane. *Journal of Theoretical and Computational Chemistry*, **2019**, 18, 1950012	1.8	2
13	Efficient sampling of high-energy states by machine learning force fields. *Physical Chemistry Chemical Physics*, **2020**, 22, 14364-14374	3.6	2
12	Tautomeric and epimeric equilibria of aldo- and ketohexoses studied by the MD simulations and QM calculations. *Carbohydrate Research*, **2019**, 474, 8-15	2.9	2
11	Combinations of Piperine with Hydroxypropyl- Cyclodextrin as a Multifunctional System. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	2
10	Tautomers of N-acetyl-d-allosamine: an NMR and computational chemistry study. *Organic and Biomolecular Chemistry*, **2021**, 19, 7190-7201	3.9	2
9	Ligand-induced action of the W286 rotamer toggle switch in the adrenergic receptor. *Physical Chemistry Chemical Physics*, **2017**, 20, 581-594	3.6	2
8	Novel 2-(Adamantan-1-ylamino)Thiazol-4(5)-One Derivatives and Their Inhibitory Activity towards 11 HSD1-Synthesis, Molecular Docking and In Vitro Studies. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	2
7	Chirality Effects in Biomolecular Systems: Calculation of the Relative Free Energies by Molecular Dynamics Simulations. *Journal of Chemical Information and Modeling*, **2020**, 60, 5424-5436	6.1	1
6	Polymers Sorption Properties towards Photosynthetic Pigments and Fungicides. *Materials*, **2021**, 14,	3.5	1
5	Macroion molecule properties from slender body hydrodynamics. *Polymers for Advanced Technologies*, **2021**, 32, 3900-3908	3.2	1
4	Carrageenan molecule conformations and electrokinetic properties in electrolyte solutions: Modeling and experimental measurements. *Food Hydrocolloids*, **2021**, 121, 107033	10.6	1
3	Adsorption of hyaluronan saccharides on the surface of a single walled carbon nanotube. A computational study. *Applied Surface Science*, **2022**, 584, 152599	6.7	0
2	Chitosan characteristics in electrolyte solutions: Combined molecular dynamics modeling and slender body hydrodynamics. *Carbohydrate Polymers*, **2022**, 119676	10.3	0
1	The Val34Met, Thr164Ile and Ser220Cys Polymorphisms of the -Adrenergic Receptor and Their Consequences on the Receptor Conformational Features: A Molecular Dynamics Simulation Study. *International Journal of Molecular Sciences*, **2022**, 23, 5449	6.3	