Miloslav PekaÅ

List of Publications by Year in descending order

		394421	414414
100 papers	1,378 citations	19 h-index	32 g-index
110 all docs	110 docs citations	110 times ranked	1729 citing authors

#	Article	IF	Citations
1	Sorption of metal ions on lignite and the derived humic substances. Journal of Hazardous Materials, 2009, 161, 559-564.	12.4	105
2	Hydrogen peroxide oxidation of humic acids and lignite. Fuel, 2014, 134, 406-413.	6.4	97
3	Antibacterial activity and cell viability of hyaluronan fiber with silver nanoparticles. Carbohydrate Polymers, 2013, 92, 1177-1187.	10.2	81
4	Production of Polyhydroxyalkanoates Using Hydrolyzates of Spruce Sawdust: Comparison of Hydrolyzates Detoxification by Application of Overliming, Active Carbon, and Lignite. Bioengineering, 2017, 4, 53.	3.5	61
5	Solubility and dissociation of lignitic humic acids in water suspension. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 252, 157-163.	4.7	54
6	Thermoanalytical investigation of lignite humic acids fractions. Journal of Thermal Analysis and Calorimetry, 2004, 76, 55-65.	3.6	50
7	Removal of metal ions from multi-component mixture using natural lignite. Fuel Processing Technology, 2012, 101, 29-34.	7.2	41
8	Lignite pre-treatment and its effect on bio-stimulative properties of respective lignite humic acids. Soil Biology and Biochemistry, 2009, 41, 1894-1901.	8.8	33
9	Thermodynamics and foundations of mass-action kinetics. Progress in Reaction Kinetics and Mechanism, 2005, 30, 3-113.	2.1	32
10	Characterization of humic acids in a continuous-feeding vermicomposting system with horse manure. Waste Management, 2019, 99, 1-11.	7.4	30
11	Thermal degradation of high molar mass hyaluronan in solution and in powder; comparison with BSA. Polymer Degradation and Stability, 2015, 120, 107-113.	5.8	29
12	Stability evaluation of n-alkyl hyaluronic acid derivates by DSC and TG measurement. Journal of Thermal Analysis and Calorimetry, 2006, 83, 341-348.	3.6	26
13	New model for equilibrium sorption of metal ions on solid humic acids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2006, 286, 126-133.	4.7	23
14	Behaviour of partially soluble humic acids in aqueous suspension. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 318, 106-110.	4.7	22
15	Effect of new hydrophobic modification of hyaluronan on its solution properties: evaluation of self-aggregation. Carbohydrate Polymers, 2009, 76, 443-448.	10.2	22
16	New insights into aggregation and conformational behaviour of humic substances: Application of high resolution ultrasonic spectroscopy. Organic Geochemistry, 2007, 38, 2098-2110.	1.8	21
17	High-Resolution Ultrasonic Spectroscopy Study of Interactions between Hyaluronan and Cationic Surfactants. Langmuir, 2014, 30, 11866-11872.	3.5	21
18	Effect of CTAB and CTAB in the presence of hyaluronan on selected human cell types. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2014, 460, 204-208.	4.7	21

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19	Long-term degradation study of hyaluronic acid in aqueous solutions without protection against microorganisms. Carbohydrate Polymers, 2016, 137, 664-668.	10.2	21
20	Buccal adhesive films with moisturizer- the next level for dry mouth syndrome?. International Journal of Pharmaceutics, 2018, 550, 309-315.	5.2	20
21	Calcium carbonate particles: synthesis, temperature and time influence on the size, shape, phase, and their impact on cell hydroxyapatite formation. Journal of Materials Chemistry B, 2021, 9, 8308-8320.	5.8	20
22	Transport of copper(II) ions in humic gelâ€"New results from diffusion couple. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 349, 96-101.	4.7	19
23	Formation and Dissociation of the Acridine Orange Dimer as a Tool for Studying Polyelectrolyteâ€"Surfactant Interactions. Langmuir, 2014, 30, 8726-8734.	3.5	19
24	Compositional and Temperature Effects on the Rheological Properties of Polyelectrolyteâ€"Surfactant Hydrogels. Polymers, 2019, 11, 927.	4.5	19
25	Study of water-extractable fractions from South Moravian lignite. Environmental Earth Sciences, 2015, 73, 3873-3885.	2.7	18
26	Kinetics of long-term degradation of different molar mass hyaluronan solutions studied by SEC-MALLS. Polymer Degradation and Stability, 2015, 111, 257-262.	5.8	18
27	ATR-FTIR spectroscopy and thermogravimetry characterization of water in polyelectrolyte-surfactant hydrogels. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 575, 1-9.	4.7	17
28	Gradient Hydrogelsâ€"The State of the Art in Preparation Methods. Polymers, 2020, 12, 966.	4.5	17
29	Rheological properties of gels formed by physical interactions between hyaluronan and cationic surfactants. Carbohydrate Polymers, 2017, 170, 176-181.	10.2	15
30	Lignite humic acids aggregates studied by high resolution ultrasonic spectroscopy. Journal of Thermal Analysis and Calorimetry, 2009, 96, 637-643.	3.6	14
31	Hyaluronan-surfactant interactions in physiological solution studied by tensiometry and fluorescence probe techniques. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 391, 25-31.	4.7	14
32	Densitometry and ultrasound velocimetry of hyaluronan solutions in water and in sodium chloride solution. Carbohydrate Polymers, 2014, 106, 453-459.	10.2	14
33	Calorimetric and light scattering study of interactions and macromolecular properties of native and hydrophobically modified hyaluronan. Carbohydrate Polymers, 2010, 81, 855-863.	10.2	13
34	The formation of mixed micelles of sugar surfactants and phospholipids and their interactions with hyaluronan. Colloid and Polymer Science, 2016, 294, 823-831.	2.1	13
35	Hyaluronic acid in complexes with surfactants: The efficient tool for reduction of the cytotoxic effect of surfactants on human cell types. International Journal of Biological Macromolecules, 2017, 103, 1276-1284.	7.5	13
36	The spectrometric characterization of lipids extracted from lignite samples from various coal basins. Organic Geochemistry, 2016, 95, 34-40.	1.8	12

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37	Hyaluronic acid as a modulator of the cytotoxic effects of cationic surfactants. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 483, 155-161.	4.7	11
38	The Thermodynamic Driving Force for Kinetics in General and Enzyme Kinetics in Particular. ChemPhysChem, 2015, 16, 884-885.	2.1	11
39	A simple technique for assessing the cuticular diffusion of humic acid biostimulants. Plant Methods, 2019, 15, 83.	4.3	11
40	Fluoride Anion Binding by Natural Lignite (South Moravian Deposit of Vienna Basin). Water, Air, and Soil Pollution, 2009, 197, 303-312.	2.4	10
41	Study of interactions between hyaluronan and cationic surfactants by means of calorimetry, turbidimetry, potentiometry and conductometry. Carbohydrate Polymers, 2017, 157, 1837-1843.	10.2	10
42	What can kinetics learn from rational thermodynamics. Chemical Engineering Science, 2004, 59, 4103-4112.	3.8	9
43	Evaluation of oxidation stability of lignite humic substances by DSC induction period measurement. Die Naturwissenschaften, 2005, 92, 336-340.	1.6	9
44	The role of various compounds in humic acids stability studied by TG and DTA. Journal of Thermal Analysis and Calorimetry, 2006, 84, 715-720.	3.6	9
45	Novel Hydrogel Material with Tailored Internal Architecture Modified by â€œBioâ€•Amphiphilic Componentsâ€"Design and Analysis by a Physico-Chemical Approach. Gels, 2022, 8, 115.	4.5	9
46	Rate-limiting step. Does it exist in the non-steady state?. Chemical Engineering Science, 1997, 52, 2291-2297.	3.8	8
47	The kinetics of thermo-oxidative humic acids degradation studied by isoconversional methods. Journal of Thermal Analysis and Calorimetry, 2007, 89, 957-964.	3.6	8
48	Antioxidant effect of lignite humic acids and its salts on the thermo-oxidative stability/degradation of polyvinyl alcohol blends. Environmental Chemistry Letters, 2008, 6, 241-245.	16.2	8
49	Aggregation behavior of novel hyaluronan derivativesâ€"a fluorescence probe study. Colloid and Polymer Science, 2008, 286, 1681-1685.	2.1	8
50	Comparison of Copper Sorption on Lignite and on Soils of Different Types and Their Humic Acids. Environmental Engineering Science, 2008, 25, 1123-1128.	1.6	8
51	Thermodynamic framework for design of reaction rate equations and schemes. Collection of Czechoslovak Chemical Communications, 2009, 74, 1375-1401.	1.0	8
52	Facile synthesis and rheological characterization of nanocomposite hyaluronan-organoclay hydrogels. International Journal of Biological Macromolecules, 2018, 111, 680-684.	7.5	8
53	Properties in aqueous solution of homo- and copolymers of vinylphosphonic acid derivatives obtained by UV-curing. Macromolecular Research, 2017, 25, 214-221.	2.4	7
54	Ultrasonic study of hyaluronan interactions with Septonexâ€"A pharmaceutical cationic surfactant. Carbohydrate Polymers, 2019, 204, 17-23.	10.2	7

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55	Hyaluronan-Arginine Interactionsâ€"An Ultrasound and ITC Study. Polymers, 2020, 12, 2069.	4.5	7
56	Polarity-Based Sequential Extraction as a Simple Tool to Reveal the Structural Complexity of Humic Acids. Agronomy, 2021, 11, 587.	3.0	7
57	Fluorescence study of freeze-drying as a method for support the interactions between hyaluronan and hydrophobic species. PLoS ONE, 2017, 12, e0184558.	2.5	7
58	Affinity and Reaction Rates: Reconsideration of Theoretical Background and Modelling Results. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2009, 64, 289-299.	1.5	6
59	Transport of a model diffusion probe in polyelectrolyte-surfactant hydrogels. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 573, 73-79.	4.7	6
60	Thermodynamic Driving Forces and Chemical Reaction Fluxes; Reflections on the Steady State. Molecules, 2020, 25, 699.	3.8	6
61	On the general principles of transient behaviour of heterogeneous catalytic reactions. Applied Catalysis A: General, 2000, 199, 221-226.	4.3	5
62	Inverse gas chromatography of liquid polybutadienes. Polymer, 2002, 43, 1013-1015.	3.8	5
63	Affinity and Reaction Rates: Reconsideration of Experimental Data. Helvetica Chimica Acta, 2007, 90, 1897-1916.	1.6	5
64	Detailed balance in reaction kinetics â€" Consequence of mass conservation?. Reaction Kinetics and Catalysis Letters, 2007, 90, 323-329.	0.6	5
65	Determination of Critical Parameters of Drug Substance Influencing Dissolution: A Case Study. BioMed Research International, 2014, 2014, 1-9.	1.9	5
66	Concentration forcing in the kinetic research in heterogeneous catalysis. Applied Catalysis A: General, 1999, 177, 69-77.	4.3	4
67	Thermodynamic Analysis of Chemically Reacting Mixtures and Their Kinetics: Example of a Mixture of Three Isomers. ChemPhysChem, 2016, 17, 3333-3341.	2.1	4
68	A practical comparison of photon correlation and cross-correlation spectroscopy in nanoparticle and microparticle size evaluation. Colloid and Polymer Science, 2017, 295, 67-74.	2.1	4
69	Interactions of hyaluronan with oppositely charged surfactants in very diluted solutions in water. International Journal of Biological Macromolecules, 2018, 112, 241-249.	7.5	4
70	DEAE-dextran hydrochloride behaviour in aqueous solutionâ€"The effect of ionic strength and concentration. Carbohydrate Polymers, 2019, 220, 163-169.	10.2	4
71	Study of cholesterolâ€™s effect on the properties of catanionic vesicular systems: Comparison of light-scattering results with ultrasonic and fluorescence spectroscopy. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 607, 125526.	4.7	4
72	Cholesterol Effect on Membrane Properties of Cationic Ion Pair Amphiphile Vesicles at Different Temperatures. Langmuir, 2021, 37, 2436-2444.	3.5	4

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73	Hysteresis during heating and cooling of hyaluronan solutions in water observed by means of ultrasound velocimetry. International Journal of Biological Macromolecules, 2020, 165, 2419-2424.	7.5	4
74	Hyaluronan interactions with cationic surfactants â€" Insights from fluorescence resonance energy transfer and anisotropy techniques. International Journal of Biological Macromolecules, 2022, 211, 107-115.	7.5	4
75	Untypical rheological behaviour of the ligniteâ€"carboxymethylcelluloseâ€"water dispersion system. Colloid and Polymer Science, 2007, 285, 865-872.	2.1	3
76	Macroscopic derivation of the kinetic mass-action law. Reaction Kinetics, Mechanisms and Catalysis, 2010, 99, 29.	1.7	3
77	The effect of hyaluronan on the aggregation of hydrophobized amino acidsâ€"A fluorescence study. Carbohydrate Polymers, 2013, 97, 34-37.	10.2	3
78	A simple microviscometric approach based on Brownian motion tracking. Review of Scientific Instruments, 2015, 86, 023710.	1.3	3
79	Thermodynamic Analysis of Chemically Reacting Mixturesâ€"Comparison of First and Second Order Models. Frontiers in Chemistry, 2018, 6, 35.	3.6	3
80	Fluorescence Study of Aggregation Behaviour of Cationic Surfactant Carbethopendecinium Bromide and its Comparison with Cetyltrimethylammonium Bromide. Tenside, Surfactants, Detergents, 2019, 56, 300-305.	1.2	3
81	On the miscibility of liquid polybutadienes. Journal of Applied Polymer Science, 2000, 78, 1628-1635.	2.6	2
82	Modification of flow properties of concentrated lignite dispersions. Colloid and Polymer Science, 2005, 284, 112-116.	2.1	2
83	Correlation of humic substances chemical properties and their thermo-oxidative degradation kinetics. Journal of Thermal Analysis and Calorimetry, 2009, 98, 207-214.	3.6	2
84	Fluorescence Spectroscopy Study of Hyaluronanâ€"Phospholipid Interactions. Behavior Research Methods, 2011, , 235-255.	4.0	2
85	The change in excited-state proton transfer kinetics of 1-naphthol in micelles upon the binding of polymers: The influence of hyaluronan hydration. Carbohydrate Polymers, 2015, 129, 168-174.	10.2	2
86	Rates of Reactions as a Mathematical Consequence of the Permanence of Atoms and the Role of Independent Reactions in the Description of Reaction Kinetics. Frontiers in Chemistry, 2018, 6, 287.	3.6	2
87	Non-Equilibrium Thermodynamics View on Kinetics of Autocatalytic Reactionsâ€"Two Illustrative Examples. Molecules, 2021, 26, 585.	3.8	2
88	Modelling study of transient behaviour of elimination reactions of alcohols and amines on oxide catalysts. Journal of Molecular Catalysis A, 1997, 123, 131-139.	4.8	1
89	A note on an alternative DSC approach to study hydration of hyaluronan. Carbohydrate Polymers, 2012, 89, 1009-1011.	10.2	1
90	Poly(alkylene-H-phosphonate)s obtained by direct esterification and oxidation of hypophosphorous acid with ethylene glycol. Journal of Macromolecular Science - Pure and Applied Chemistry, 2016, 53, 49-54.	2.2	1

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91	Editorial: Biopolymer-Based Hydrogels â€“ Ubiquitous and Prospective Materials. Frontiers in Materials, 2020, 7, .	2.4	1
92	Interactions between Cationic Ion Pair Amphiphile Vesicles and Hyaluronanâ€"A Physicochemical Study. Langmuir, 2021, 37, 8525-8533.	3.5	1
93	Gradient Hydrogelsâ€"Overview of Techniques Demonstrating the Existence of a Gradient. Polymers, 2022, 14, 866.	4.5	1
94	Diffusion of dyes in polyelectrolyte-surfactant hydrogels. RSC Advances, 2022, 12, 13242-13250.	3.6	1
95	A study of zwitterionic/cationic vesicle formation and the influence of hyaluronan on this formation. Colloid and Polymer Science, 2017, 295, 1131-1140.	2.1	0
96	Study on viscoelastic properties of phase-separated hydrogels by time-temperature superposition principle. AIP Conference Proceedings, 2019, , .	0.4	0
97	Continuum Thermodynamics of Mixture of Linear Fluids. , 2014, , 143-277.		0
98	Thermodynamic Analysis of the Landolt-Type Autocatalytic System. Catalysts, 2021, 11, 1300.	3.5	0
99	The study of the hydrogel systems with micellar nanodomains and the effect of the ph changes on their properties. , 2020, , .		0
100	TAILORING THE INTERNAL MICROSTRUCTURE OF THE HYDROGELS BASED ON POLY-HEMA TARGETED FOR DRUG DELIVERY SYSTEMS. , 2021, , .		0