IstvÃ¡n SzilÃ¡gyi

List of Publications by Year
in descending order

113 papers	3,286 citations	126858 33 h-index	182361 51 g-index
113 all docs	113 docs citations	113 times ranked	3270 citing authors

#	Article	IF	Citations
1	Development of polymer-based multifunctional composite particles of protease and peroxidase activities. Journal of Materials Chemistry B, 2022, 10, 2523-2533.	2.9	3
2	Self-assembly of delaminated layered double hydroxide nanosheets for the recovery of lamellar structure. Colloids and Interface Science Communications, 2022, 46, 100564.	2.0	6
3	Superoxide dismutase mimicking nanocomposites based on immobilization of metal complexes on nanotubular carriers. Journal of Molecular Structure, 2022, 1256, 132492.	1.8	3
4	Nanoclay-based sensor composites for the facile detection of molecular antioxidants. Analyst, The, 2022, 147, 1367-1374.	1.7	6
5	Effect of Water and Salt on the Colloidal Stability of Latex Particles in Ionic Liquid Solutions. Colloids and Interfaces, 2022, 6, 2.	0.9	6
6	Antioxidant colloids via heteroaggregation of cerium oxide nanoparticles and latex beads. Colloids and Surfaces B: Biointerfaces, 2022, 216, 112531.	2.5	6
7	A colloid chemistry route for the preparation of hierarchically ordered mesoporous layered double hydroxides using surfactants as sacrificial templates. Journal of Colloid and Interface Science, 2021, 581, 928-938.	5.0	26
8	Catalytic antioxidant nanocomposites based on sequential adsorption of redox active metal complexes and polyelectrolytes on nanoclay particles. Dalton Transactions, 2021, 50, 2426-2435.	1.6	7
9	Influence of adsorption of ionic liquid constituents on the stability of layered double hydroxide colloids. Soft Matter, 2021, 17, 9116-9124.	1.2	8
10	Nanocomposite-based dual enzyme system for broad-spectrum scavenging of reactive oxygen species. Scientific Reports, 2021, 11, 4321.	1.6	14
11	Specific Ion Effects on Aggregation and Charging Properties of Boron Nitride Nanospheres. Langmuir, 2021, 37, 2466-2475.	1.6	17
12	The effect of nanostructure dimensionality on the photoelectrochemical properties of derived TiO_2 films. Electrochimica Acta, 2021, 373, 137900.	2.6	9
13	Stability of Boron Nitride Nanosphere Dispersions in the Presence of Polyelectrolytes. Langmuir, 2021, 37, 5399-5407.	1.6	2
14	Co-immobilization of antioxidant enzymes on titania nanosheets for reduction of oxidative stress in colloid systems. Journal of Colloid and Interface Science, 2021, 590, 28-37.	5.0	19
15	Solvation of nonionic poly(ethylene oxide) surfactant Brij 35 in organic and aqueous-organic solvents. Journal of Colloid and Interface Science, 2021, 594, 150-159.	5.0	1
16	Composite materials based on heteroaggregated particles: Fundamentals and applications. Advances in Colloid and Interface Science, 2021, 294, 102456.	7.0	18
17	Yellow-emitting Au/Ag bimetallic nanoclusters with high photostability for detection of folic acid. Journal of Molecular Liquids, 2021, 338, 116695.	2.3	19
18	Design of hybrid biocatalysts by controlled heteroaggregation of manganese oxide and sulfate latex particles to combat reactive oxygen species. Journal of Materials Chemistry B, 2021, 9, 4929-4940.	2.9	8

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19	Aggregation of Halloysite Nanotubes in the Presence of Multivalent Ions and Ionic Liquids. Langmuir, 2021, 37, 11869-11879.	1.6	10
20	Size-dependent aggregation of graphene oxide. Carbon, 2020, 160, 145-155.	5.4	86
21	Self-Assembly of Protamine Biomacromolecule on Halloysite Nanotubes for Immobilization of Superoxide Dismutase Enzyme. ACS Applied Bio Materials, 2020, 3, 522-530.	2.3	24
22	Physicochemical Investigations of a Binary Mixture Containing Ionic Liquid 1-Butyl-1-methylpyrrolidinium Bis(trifluoromethylsulfonyl)imide and Diethyl Carbonate. Journal of Chemical & Engineering Data, 2020, 65, 68-80.	1.0	9
23	Layered double hydroxide-based antioxidant dispersions with high colloidal and functional stability. Soft Matter, 2020, 16, 10518-10527.	1.2	13
24	Ion Specific Effects on the Stability of Halloysite Nanotube Colloidsâ€"Inorganic Salts versus Ionic Liquids. Journal of Physical Chemistry B, 2020, 124, 9757-9765.	1.2	24
25	A Simple Method to Determine Critical Coagulation Concentration from Electrophoretic Mobility. Colloids and Interfaces, 2020, 4, 20.	0.9	23
26	Schulze-Hardy rule revisited. Colloid and Polymer Science, 2020, 298, 961-967.	1.0	29
27	Antioxidant Materials Based on 2D Nanostructures: A Review on Recent Progresses. Crystals, 2020, 10, 148.	1.0	24
28	Layered Double Hydroxide Nanoparticles to Overcome the Hydrophobicity of Ellagic Acid: An Antioxidant Hybrid Material. Antioxidants, 2020, 9, 153.	2.2	21
29	Biomimetic Synthesis of Sub-20 nm Covalent Organic Frameworks in Water. Journal of the American Chemical Society, 2020, 142, 3540-3547.	6.6	68
30	A colloid approach to decorate latex particles with Prussian blue nanozymes. Journal of Molecular Liquids, 2020, 309, 113066.	2.3	19
31	Masking specific effects of ionic liquid constituents at the solidâ€"liquid interface by surface functionalization. Physical Chemistry Chemical Physics, 2020, 22, 24764-24770.	1.3	10
32	Electrochemical study of anatase TiO2 nanotube array electrode in electrolyte based on 1,3-diethylimidazolium bis(trifluoromethylsulfonyl)imide ionic liquid. Ionics, 2019, 25, 5501-5513.	1.2	4
33	Papain Adsorption on Latex Particles: Charging, Aggregation, and Enzymatic Activity. Journal of Physical Chemistry B, 2019, 123, 9984-9991.	1.2	17
34	Understanding the High Longitudinal Relaxivity of Gd(DTPA)-Intercalated (Zn,Al)-Layered Double Hydroxide Nanoparticles. Inorganic Chemistry, 2019, 58, 12112-12121.	1.9	9
35	Layered Double Hydroxide-Based Nanomaterials-From Fundamentals to Applications. Nanomaterials, 2019, 9, 1174.	1.9	4
36	Stability of Titania Nanomaterials Dispersed in Aqueous Solutions of Ionic Liquids of Different Alkyl Chain Lengths. Journal of Physical Chemistry C, 2019, 123, 12966-12974.	1.5	13

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37	Influencing the texture and morphological properties of layered double hydroxides with the most diluted solvent mixtures â€“ The effect of 6â€“8 carbon alcohols and temperature. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 574, 146-153.	2.3	4
38	Regulation of the Stability of Titania Nanosheet Dispersions with Oppositely and Like-Charged Polyelectrolytes. Langmuir, 2019, 35, 4986-4994.	1.6	26
39	Highly stable enzyme-mimicking nanocomposite of antioxidant activity. Journal of Colloid and Interface Science, 2019, 543, 174-182.	5.0	22
40	Radical scavenging activity of plant extracts from improved processing. Heliyon, 2019, 5, e02763.	1.4	19
41	Contaminant removal by efficient separation of <i>in situ</i> formed layered double hydroxide compounds from mine wastewaters. Environmental Science: Water Research and Technology, 2019, 5, 2251-2259.	1.2	11
42	Aggregation and charging of sulfate and amidine latex particles in the presence of oxyanions. Journal of Colloid and Interface Science, 2018, 524, 456-464.	5.0	17
43	Horseradish peroxidase-nanoclay hybrid particles of high functional and colloidal stability. Journal of Colloid and Interface Science, 2018, 524, 114-121.	5.0	23
44	Interactions between similar and dissimilar charged interfaces in the presence of multivalent anions. Physical Chemistry Chemical Physics, 2018, 20, 9436-9448.	1.3	12
45	Immobilization of Superoxide Dismutase on Polyelectrolyteâ€Functionalized Titania Nanosheets. ChemBioChem, 2018, 19, 404-410.	1.3	10
46	Effect of Ionic Compounds of Different Valences on the Stability of Titanium Oxide Colloids. Colloids and Interfaces, 2018, 2, 32.	0.9	32
47	Effect of Polyelectrolyte Mono- and Bilayer Formation on the Colloidal Stability of Layered Double Hydroxide Nanoparticles. Nanomaterials, 2018, 8, 986.	1.9	17
48	Controlling the Morphology of Film-Forming, Nanocomposite Latexes Containing Layered Double Hydroxide by RAFT-Mediated Emulsion Polymerization. Macromolecules, 2018, 51, 3953-3966.	2.2	23
49	Functionalized Titania Nanosheet Dispersions of Peroxidase Activity. Journal of Physical Chemistry C, 2018, 122, 11455-11463.	1.5	16
50	Design of latex-layered double hydroxide composites by tuning the aggregation in suspensions. Soft Matter, 2017, 13, 842-851.	1.2	25
51	Colloidal Stability in Asymmetric Electrolytes: Modifications of the Schulzeâ€“Hardy Rule. Langmuir, 2017, 33, 1695-1704.	1.6	63
52	Heteroaggregation of oppositely charged particles in the presence of multivalent ions. Physical Chemistry Chemical Physics, 2017, 19, 15160-15171.	1.3	36
53	Synthesis and formulation of functional bionanomaterials with superoxide dismutase activity. Nanoscale, 2017, 9, 369-379.	2.8	42
54	Destabilization of Titania Nanosheet Suspensions by Inorganic Salts: Hofmeister Series and Schulze-Hardy Rule. Journal of Physical Chemistry B, 2017, 121, 6749-6758.	1.2	54

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55	Design of nucleic acid-layered double hydroxide nanohybrids. Colloid and Polymer Science, 2017, 295, 1463-1473.	1.0	7
56	Influence of Protamine Functionalization on the Colloidal Stability of 1D and 2D Titanium Oxide Nanostructures. Langmuir, 2017, 33, 9750-9758.	1.6	12
57	Tuning Colloidal Stability of Layered Double Hydroxides: From Monovalent Ions to Polyelectrolytes. ChemPlusChem, 2017, 82, 121-131.	1.3	57
58	Improving the stability of titania nanosheets by functionalization with polyelectrolytes. RSC Advances, 2016, 6, 97322-97330.	1.7	21
59	Ion specific effects on the stability of layered double hydroxide colloids. Soft Matter, 2016, 12, 4024-4033.	1.2	85
60	Charging and aggregation of latex particles in aqueous solutions of ionic liquids: towards an extended Hofmeister series. Physical Chemistry Chemical Physics, 2016, 18, 7511-7520.	1.3	34
61	Aggregation of layered double hydroxide nanoparticles in the presence of heparin: towards highly stable delivery systems. RSC Advances, 2016, 6, 16159-16167.	1.7	34
62	Nanometer-ranged attraction induced by multivalent ions between similar and dissimilar surfaces probed using an atomic force microscope (AFM). Physical Chemistry Chemical Physics, 2016, 18, 8739-8751.	1.3	15
63	Ion-Selective Optical Nanosensors Based on Solvatochromic Dyes of Different Lipophilicity: From Bulk Partitioning to Interfacial Accumulation. ACS Sensors, 2016, 1, 516-520.	4.0	46
64	Interaction Forces and Aggregation Rates of Colloidal Latex Particles in the Presence of Monovalent Counterions. Journal of Physical Chemistry B, 2015, 119, 8184-8193.	1.2	34
65	Potassium Sensitive Optical Nanosensors Containing Voltage Sensitive Dyes. Chimia, 2015, 69, 196.	0.3	5
66	Effect of MacroRAFT Copolymer Adsorption on the Colloidal Stability of Layered Double Hydroxide Nanoparticles. Langmuir, 2015, 31, 12609-12617.	1.6	35
67	Tuning the Aggregation of Titanate Nanowires in Aqueous Dispersions. Langmuir, 2015, 31, 42-49.	1.6	25
68	Forces between Negatively Charged Interfaces in the Presence of Cationic Multivalent Oligoamines Measured with the Atomic Force Microscope. Journal of Physical Chemistry C, 2015, 119, 15482-15490.	1.5	37
69	Aggregation of Colloidal Particles in the Presence of Multivalent Co-Ions: The Inverse Schulzeâ€"Hardy Rule. Langmuir, 2015, 31, 6610-6614.	1.6	50
70	Specific Ion Effects on Particle Aggregation Induced by Monovalent Salts within the Hofmeister Series. Langmuir, 2015, 31, 3799-3807.	1.6	167
71	Charged Solvatochromic Dyes as Signal Transducers in pH Independent Fluorescent and Colorimetric Ion Selective Nanosensors. Analytical Chemistry, 2015, 87, 9954-9959.	3.2	62
72	Dendrimer-Stabilized Titanate Nanowire Dispersions as Potential Nanocarriers. Journal of Physical Chemistry C, 2015, 119, 24919-24926.	1.5	17

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73	Metal loading of lanthanidopolymers driven by positive cooperativity. Dalton Transactions, 2015, 44, 13250-13260.	1.6	13
74	Dispersion Characteristics and Aggregation in Titanate Nanowire Colloids. ChemPlusChem, 2014, 79, 592-600.	1.3	15
75	Dendrimer induced interaction forces between colloidal particles revealed by direct force and aggregation measurements. Journal of Colloid and Interface Science, 2014, 417, 346-355.	5.0	5
76	Probing titanate nanowire surface acidity through methylene blue adsorption in colloidal suspension and on thin films. Journal of Colloid and Interface Science, 2014, 416, 190-197.	5.0	27
77	Polyelectrolyte adsorption, interparticle forces, and colloidal aggregation. Soft Matter, 2014, 10, 2479.	1.2	284
78	Particle aggregation mechanisms in ionic liquids. Physical Chemistry Chemical Physics, 2014, 16, 9515-9524.	1.3	55
79	Potassium-selective optical microsensors based on surface modified polystyrene microspheres. Chemical Communications, 2014, 50, 4592-4595.	2.2	32
80	Aggregation of Negatively Charged Colloidal Particles in the Presence of Multivalent Cations. Langmuir, 2014, 30, 733-741.	1.6	88
81	Formulation of Multifunctional Material Dispersions. Chimia, 2014, 68, 454.	0.3	3
82	Poissonâ€“Boltzmann description of interaction forces and aggregation rates involving charged colloidal particles in asymmetric electrolytes. Journal of Colloid and Interface Science, 2013, 406, 111-120.	5.0	87
83	Attractive Forces between Charged Colloidal Particles Induced by Multivalent Ions Revealed by Confronting Aggregation and Direct Force Measurements. Journal of Physical Chemistry Letters, 2013, 4, 648-652.	2.1	89
84	Charging and aggregation of negatively charged colloidal latex particles in the presence of multivalent oligoamine cations. Journal of Colloid and Interface Science, 2013, 392, 34-41.	5.0	35
85	Predicting Aggregation Rates of Colloidal Particles from Direct Force Measurements. Journal of Physical Chemistry B, 2013, 117, 11853-11862.	1.2	54
86	Probing Colloidal Particle Aggregation by Light Scattering. Chimia, 2013, 67, 772.	0.3	26
87	Charging and Aggregation of Positively Charged Colloidal Latex Particles in Presence of Multivalent Polycarboxylate Anions. Zeitschrift Fur Physikalische Chemie, 2012, 226, 597-612.	1.4	15
88	Exploring Forces between Individual Colloidal Particles with the Atomic Force Microscope. Chimia, 2012, 66, 214.	0.3	2
89	Destabilization of Colloidal Suspensions by Multivalent Ions and Polyelectrolytes: From Screening to Overcharging. Langmuir, 2012, 28, 6211-6215.	1.6	52
90	Investigating forces between charged particles in the presence of oppositely charged polyelectrolytes with the multi-particle colloidal probe technique. Advances in Colloid and Interface Science, 2012, 179-182, 85-98.	7.0	79

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91	Molecular mass dependence of adsorbed amount and hydrodynamic thickness of polyelectrolyte layers. Physical Chemistry Chemical Physics, 2011, 13, 12716.	1.3	59
92	Influence of the Degree of Ionization and Molecular Mass of Weak Polyelectrolytes on Charging and Stability Behavior of Oppositely Charged Colloidal Particles. Langmuir, 2011, 27, 9270-9276.	1.6	31
93	Charge Reversal of Sulfate Latex Particles by Adsorbed Linear Poly(ethylene imine) Probed by Multiparticle Colloidal Probe Technique. Journal of Physical Chemistry B, 2011, 115, 9098-9105.	1.2	37
94	Towards Ã…ngstrÃ¶m Resolution with Dynamic Light Scattering. Chimia, 2011, 65, 439-439.	0.3	0
95	Charging and stability of anionic latex particles in the presence of linear poly(ethylene imine). Journal of Colloid and Interface Science, 2011, 360, 580-585.	5.0	34
96	Electrostatic Stabilization of Charged Colloidal Particles with Adsorbed Polyelectrolytes of Opposite Charge. Langmuir, 2010, 26, 15109-15111.	1.6	109
97	Probing Nanometer-Thick Polyelectrolyte Layers Adsorbed on Oppositely Charged Particles by Dynamic Light Scattering. Macromolecules, 2010, 43, 9108-9116.	2.2	37
98	Thermal stabilities of nanocomposites: Mono- or binuclear Cu complexes intercalated or immobilised in/on siliceous materials. Nanopages, 2009, 4, 1-12.	0.2	3
99	Preparation, Characterization and Catalytic Activities of Immobilized Enzyme Mimics. Catalysis Letters, 2009, 127, 239-247.	1.4	15
100	Mimicking a Superoxide Dismutase (SOD) Enzyme by copper(II) and zinc(II)-complexes. Reaction Kinetics and Catalysis Letters, 2009, 96, 327-333.	0.6	10
101	Measurement and Prediction of Physicochemical Properties of Liquors Relevant to the Sulfate Process for Titania Production. 1. Densities in the TiOSO4 + FeSO4 + H2SO4 + H2O System. Journal of Chemical & Engineering Data, 2009, 54, 520-525.	1.0	9
102	Characterization of Chemical Speciation of Titanyl Sulfate Solutions for Production of Titanium Dioxide Precipitates. Inorganic Chemistry, 2009, 48, 2200-2204.	1.9	46
103	Spectroscopic characterisation of weak interactions in acidic titanyl sulfateâ€“iron(ii) sulfate solutions. Dalton Transactions, 2009, , 7717.	1.6	18
104	Zn²⁺ Complexes of Diâ€•and Triâ€nucleating Azacrown Ligands as Baseâ€Moietyâ€Selective Cleaving Agents of RNA 3â€²,5â€²â€Phosphodiester Bonds: Binding to Guanine Base. ChemBioChem, 2008, 9, 1739-1748.	1.3	20
105	Cu²⁺TerPy Complexes as Catalysts of the Cleavage of the 5â€²-<i>cap</i>Structure of mRNA. Nucleosides, Nucleotides and Nucleic Acids, 2007, 26, 1423-1426.	0.4	5
106	Hydrolysis of dinucleoside phosphates â€“ mRNA 5â€² cap analogues â€“ promoted by a binuclear copper(II)â€“zinc(II) complex. Journal of Inorganic Biochemistry, 2007, 101, 1400-1403.	1.5	6
107	Mimicking catalase and catecholase enzymes by copper(II)-containing complexes. Open Chemistry, 2006, 4, 118-134.	1.0	6
108	Synthesis and IR spectroscopic characterisation of immobilised superoxide dismutase (SOD) mimicking complexes. Journal of Molecular Structure, 2005, 744-747, 495-500.	1.8	6

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109	Speciation study of an imidazolate-bridged copper(II)â€“zinc(II) complex in aqueous solution. Journal of Inorganic Biochemistry, 2005, 99, 1619-1629.	1.5	37
110	Electrospray ionization and matrix-assisted laser desorption/ionization mass spectrometric investigation of an imidazolato-bridged Cu-Zn complex that mimics superoxide dismutase. Rapid Communications in Mass Spectrometry, 2005, 19, 2878-2882.	0.7	2
111	Superoxide dismutase activity of a Cuâ€“Zn complexâ€”bare and immobilised. New Journal of Chemistry, 2005, 29, 740.	1.4	31
112	Modeling copper-containing enzyme mimics. Computational and Theoretical Chemistry, 2003, 666-667, 451-453.	1.5	3
113	Lanthanide complexes of ethylenediaminotetramethylene-phosphonic acid. Magyar AprÃ³vad KÃ¶zlemÃ©nyek, 2002, 69, 427-439.	1.4	21