Alexey O Ivanov

List of Publications by Year
in descending order

115	2,612	186265	214800
papers	citations	28 h-index	47 g-index

116	116	116	992
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Magnetic properties of dense ferrofluids: An influence of interparticle correlations. Physical Review E, 2001, 64, 041405.	2.1	234
2	Equilibrium properties of ferrocolloids. Physica A: Statistical Mechanics and Its Applications, 1992, 190, 276-294.	2.6	183
3	Ferrofluid aggregation in chains under the influence of a magnetic field. Physical Review E, 2004, 70, 051502.	2.1	148
4	Magnetic properties of polydisperse ferrofluids: A critical comparison between experiment, theory, and computer simulation. Physical Review E, 2007, 75, 061405.	2.1	130
5	Chain aggregate structure and magnetic birefringence in polydisperse ferrofluids. Physical Review E, 2004, 70, 021401.	2.1	87
6	Nonmonotonic Magnetic Susceptibility of Dipolar Hard-Spheres at Low Temperature and Density. Physical Review Letters, 2013, 110, 148306.	7.8	75
7	Revealing the signature of dipolar interactions in dynamic spectra of polydisperse magnetic nanoparticles. Soft Matter, 2016, 12, 3507-3513.	2.7	70
8	Dynamic stability analysis of the solidification of binary melts in the presence of a mushy region: changeover of instability. Journal of Crystal Growth, 2000, 210, 797-810.	1.5	56
9	Influence of dipolar interactions on the magnetic susceptibility spectra of ferrofluids. Physical Review E, 2016, 93, 063117.	2.1	54
10	Applying the chain formation model to magnetic properties of aggregated ferrofluids. Physical Review E, 2004, 69, 031206.	2.1	52
11	Mesoscale structures at complex fluidâ€“fluid interfaces: a novel lattice Boltzmann/molecular dynamics coupling. Soft Matter, 2013, 9, 10092.	2.7	51
12	Non-linear evolution of a system of elongated droplike aggregates in a metastable magnetic fluid. Physica A: Statistical Mechanics and Its Applications, 1998, 251, 348-367.	2.6	47
13	Magnetophoresis, sedimentation, and diffusion of particles in concentrated magnetic fluids. Journal of Chemical Physics, 2011, 134, 184508.	3.0	45
14	Magnetogranulometric analysis of ferrocolloids: Second-order modified mean field theory. Colloid Journal, 2006, 68, 430-440.	1.3	44
15	Kinetics of a magnetic fluid phase separation induced by an external magnetic field. Physical Review E, 1997, 55, 7192-7202.	2.1	43
16	Ferrofluid aggregation in chains under the influence of a magnetic field. Journal of Magnetism and Magnetic Materials, 2006, 300, e206-e209.	2.3	43
17	Theory of the dynamic magnetic susceptibility of ferrofluids. Physical Review E, 2018, 98, .	2.1	43
18	Kinetics of phase separation in colloids II. Non-linear evolution of a metastable colloid. Physica A: Statistical Mechanics and Its Applications, 1993, 193, 221-240.	2.6	41

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19	Phase separation in bidisperse ferrocolloids. Journal of Magnetism and Magnetic Materials, 1996, 154, 66-70.	2.3	40
20	Equilibrium properties of a bidisperse ferrofluid with chain aggregates: theory and computer simulations. Journal of Physics Condensed Matter, 2006, 18, S2737-S2756.	1.8	40
21	Temperature-induced structural transitions in self-assembling magnetic nanocolloids. Physical Chemistry Chemical Physics, 2015, 17, 16601-16608.	2.8	38
22	Temperature-dependent dynamic correlations in suspensions of magnetic nanoparticles in a broad range of concentrations: a combined experimental and theoretical study. Physical Chemistry Chemical Physics, 2016, 18, 18342-18352.	2.8	35
23	Branching points in the low-temperature dipolar hard sphere fluid. Journal of Chemical Physics, 2013, 139, 134901.	3.0	33
24	Theory and simulation of anisotropic pair correlations in ferrofluids in magnetic fields. Journal of Chemical Physics, 2012, 136, 194502.	3.0	32
25	Static magnetization of immobilized, weakly interacting, superparamagnetic nanoparticles. Nanoscale, 2019, 11, 21834-21846.	5.6	32
26	Behavior of bulky ferrofluids in the diluted low-coupling regime: Theory and simulation. Physical Review E, 2010, 81, 011501.	2.1	30
27	How to analyse the structure factor in ferrofluids with strong magnetic interactions: a combined analytic and simulation approach. Molecular Physics, 2009, 107, 571-590.	1.7	29
28	Modified mean-field theory of the magnetic properties of concentrated, high-susceptibility, polydisperse ferrofluids. Physical Review E, 2017, 96, 052609.	2.1	29
29	Dynamic susceptibility of a concentrated ferrofluid: The role of interparticle interactions. Physical Review E, 2019, 100, 032605.	2.1	29
30	Thermodynamics of dipolar hard spheres with low-to-intermediate coupling constants. Physical Review E, 2012, 86, 021126.	2.1	27
31	Thermodynamics of ferrofluids in applied magnetic fields. Physical Review E, 2013, 88, 042310.	2.1	27
32	Chain Formation and Phase Separation in Ferrofluids: The Influence on Viscous Properties. Materials, 2020, 13, 3956.	2.9	26
33	Dynamic magnetic response of a ferrofluid in a static uniform magnetic field. Physical Review E, 2018, 98, .	2.1	25
34	Formation of chain aggregates in magnetic fluids: an influence of polydispersity. Journal of Magnetism and Magnetic Materials, 2002, 252, 244-246.	2.3	24
35	Structure of Chain Aggregates in Ferrocolloids. Colloid Journal, 2003, 65, 166-176.	1.3	24
36	Magnetic properties of ferrofluids: an influence of chain aggregates. Journal of Magnetism and Magnetic Materials, 2005, 289, 211-214.	2.3	23

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37	Anomalous transport and nonlinear reactions in spiny dendrites. Physical Review E, 2010, 82, 041103.	2.1	22
38	Nonmonotonic field-dependent magnetic permeability of a paramagnetic ferrofluid emulsion. Physical Review E, 2012, 85, 041405.	2.1	22
39	Pair correlations in magnetic nanodispersed fluids. Journal of Experimental and Theoretical Physics, 2010, 111, 146-156.	0.9	21
40	The effect of links on the interparticle dipolar correlations in supramolecular magnetic filaments. Soft Matter, 2015, 11, 2963-2972.	2.7	21
41	The effects of polydispersity on the initial susceptibilities of ferrofluids. Journal of Physics Condensed Matter, 2014, 26, 456002.	1.8	20
42	Sedimentation equilibria in polydisperse ferrofluids: critical comparisons between experiment, theory, and computer simulation. Soft Matter, 2016, 12, 4103-4112.	2.7	19
43	The influence of interparticle correlations and self-assembly on the dynamic initial magnetic susceptibility spectra of ferrofluids. Journal of Magnetism and Magnetic Materials, 2017, 431, 141-144.	2.3	19
44	Magnetic measurements as a key for the particle size distribution in ferrofluids: experiment, theory, and computer simulations. Magnetohydrodynamics, 2007, 43, 393-400.	0.3	19
45	Magnetization behavior of ferrofluids with cryogenically imaged dipolar chains. Journal of Physics Condensed Matter, 2008, 20, 204113.	1.8	18
46	How chains and rings affect the dynamic magnetic susceptibility of a highly clustered ferrofluid. Physical Review E, 2021, 103, 062611.	2.1	18
47	Kinetics of phase separation in colloids. Physica A: Statistical Mechanics and Its Applications, 1993, 192, 375-390.	2.6	17
48	Phase separation of ferrocolloids: The role of van der Waals interaction. Colloid Journal, 2007, 69, 302-311.	1.3	16
49	Magnetic properties of dense ferrofluids. Journal of Magnetism and Magnetic Materials, 2002, 252, 135-137.	2.3	15
50	Non-homogeneous Random Walks, Subdiffusive Migration of Cells and Anomalous Chemotaxis. Mathematical Modelling of Natural Phenomena, 2013, 8, 28-43.	2.4	15
51	Low-temperature magnetic susceptibility of concentrated ferrofluids: The influence of polydispersity. Journal of Magnetism and Magnetic Materials, 2015, 374, 327-332.	2.3	15
52	Free energy calculations for rings and chains formed by dipolar hard spheres. Soft Matter, 2017, 13, 7870-7878.	2.7	15
53	Interparticle Correlations and Magnetic Properties of Concentrated Ferrocolloids. Colloid Journal, 2001, 63, 60-67.	1.3	14
54	Structure factor of model bidisperse ferrofluids with relatively weak interparticle interactions. Journal of Chemical Physics, 2013, 139, 224905.	3.0	14

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55	Comment on â€œEquilibrium polymerization and gas-liquid critical behavior in the Stockmayer fluidâ€• Physical Review E, 2008, 77, 013501; discussion 013502.	2.1	13
56	The initial magnetic susceptibility of polydisperse ferrofluids: A comparison between experiment and theory over a wide range of concentration. Journal of Chemical Physics, 2016, 145, 084909.	3.0	13
57	Spontaneous ferromagnetic ordering in magnetic fluids. Physical Review E, 2003, 68, 011503.	2.1	11
58	Effects of interactions on magnetization relaxation dynamics in ferrofluids. Physical Review E, 2020, 102, 032610.	2.1	11
59	Nucleation stage of ferrocolloid phase separation induced by an external magnetic field. Physica A: Statistical Mechanics and Its Applications, 1998, 251, 332-347.	2.6	10
60	Ostwald ripening kinetics in a magnetic fluid made metastable by a strengthening of an external magnetic field. Physical Review E, 1998, 58, 7517-7522.	2.1	10
61	Memory effects in a turbulent dynamo: Generation and propagation of a large-scale magnetic field. Physical Review E, 2002, 65, 036313.	2.1	10
62	New lithium gas sorbents. Journal of Alloys and Compounds, 2009, 471, 211-216.	5.5	10
63	Theoretical study of the dynamic magnetic response of ferrofluid to static and alternating magnetic fields. Journal of Magnetism and Magnetic Materials, 2017, 431, 180-183.	2.3	10
64	Getters for vacuum insulated glazing. Vacuum, 2018, 155, 300-306.	3.5	10
65	Weakening of magnetic response experimentally observed for ferrofluids with strongly interacting magnetic nanoparticles. Journal of Molecular Liquids, 2019, 277, 762-768.	4.9	10
66	Static magnetic response of multicore particles. Physical Review E, 2020, 102, 032603.	2.1	10
67	New lithium gas sorbents. Journal of Alloys and Compounds, 2008, 456, 187-193.	5.5	9
68	New lithium gas sorbent. Journal of Alloys and Compounds, 2008, 460, 357-362.	5.5	9
69	Pair correlations in a bidisperse ferrofluid in an external magnetic field: theory and computer simulations. Journal of Experimental and Theoretical Physics, 2014, 118, 442-456.	0.9	8
70	Transverse magneto-optical anisotropy in bidisperse ferrofluids with long range particle correlations. Journal of Magnetism and Magnetic Materials, 2017, 431, 54-58.	2.3	8
71	Concentration-dependent zero-field magnetic dynamic response of polydisperse ferrofluids. Journal of Magnetism and Magnetic Materials, 2018, 459, 252-255.	2.3	8
72	Dynamics of Magnetic Fluids in Crossed DC and AC Magnetic Fields. Nanomaterials, 2019, 9, 1711.	4.1	8

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73	Temperature dependence of initial magnetic susceptibility of polydisperse ferrofluids: A critical comparison between experiment and theory. Magnetohydrodynamics, 2016, 52, 35-42.	0.3	8
74	Effects of interactions, structure formation, and polydispersity on the dynamic magnetic susceptibility and magnetic relaxation of ferrofluids. Journal of Molecular Liquids, 2022, 356, 119034.	4.9	8
75	Statistical thermodynamics of ferrocolloids. Journal of Magnetism and Magnetic Materials, 1990, 85, 33-36.	2.3	7
76	Thermodynamics of the Stockmayer fluid in an applied field. Molecular Physics, 2015, 113, 3717-3728.	1.7	7
77	The role of van der Waals forces in ferrofluid phase separation. Physics Procedia, 2010, 9, 49-53.	1.2	6
78	Dynamic magnetogranulometry of ferrofluids. Journal of Magnetism and Magnetic Materials, 2020, 498, 166153.	2.3	6
79	Phase separation in magnetic colloids. Journal of Magnetism and Magnetic Materials, 1999, 201, 234-237.	2.3	5
80	Internal structure of colloidal aggregates. Physical Review E, 2001, 64, 041403.	2.1	5
81	Evolution of the fractal-like aggregate system in colloids. Physical Review E, 2006, 74, 021408.	2.1	5
82	Low temperature structural transitions in dipolar hard spheres: The influence on magnetic properties. Journal of Magnetism and Magnetic Materials, 2015, 383, 272-276.	2.3	5
83	Magnetic properties of textured ferrocomposite consisting of immobilized superparamagnetic nanoparticles. Physical Review E, 2021, 104, 064616.	2.1	5
84	The effect of an electrolyte on phase separation in colloids. Physica A: Statistical Mechanics and Its Applications, 1994, 202, 175-195.	2.6	4
85	Scaling properties of a two-phase zone in directed crystallization. Doklady Physics, 2002, 47, 499-503.	0.7	4
86	Non-Local Mean Field Dynamo Theory and Magnetic Fronts in Galaxies. Geophysical and Astrophysical Fluid Dynamics, 2003, 97, 135-148.	1.2	4
87	Evolution of an ensemble of fractal aggregates in a colloidal system. Journal of Experimental and Theoretical Physics, 2006, 103, 917-925.	0.9	4
88	Study of the structure factor anisotropy and long range correlations of ferrofluids in the dilute low-coupling regime. Journal of Magnetism and Magnetic Materials, 2011, 323, 1246-1253.	2.3	4
89	The thermodynamic properties of soft magnetic materials containing superparamagnetic nanoparticles frozen in the nodes of the regular cubic lattice. Journal of Nanoparticle Research, 2021, 23, 1.	1.9	4
90	Superdiffusion in self-reinforcing run-and-tumble model with rests. Physical Review E, 2022, 105, 014126.	2.1	4

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91	Kinetics of a ferrofluid phase separation induced by an external magnetic field. Journal of Magnetism and Magnetic Materials, 1999, 201, 222-225.	2.3	3
92	Getter films with a reactive component. Vacuum, 2011, 85, 755-760.	3.5	3
93	Computer Simulations of Dynamic Response of Ferrofluids on an Alternating Magnetic Field with High Amplitude. Mathematics, 2021, 9, 2581.	2.2	3
94	Spontaneous orientational ordering in magnetic fluids. Journal of Magnetism and Magnetic Materials, 2005, 289, 226-229.	2.3	2
95	Polydispersity Influence upon Magnetic Properties of Aggregated Ferrofluids. Zeitschrift Fur Physikalische Chemie, 2006, 220, 105-115.	2.8	2
96	Free energy of dipolar hard spheres: The virial expansion under the presence of an external magnetic field. Physica A: Statistical Mechanics and Its Applications, 2014, 415, 210-219.	2.6	2
97	Dynamic Susceptibility of Ferrofluids: The Numerical Algorithm for the Inverse Problem of Magnetic Granulometry. Mathematics, 2021, 9, 2450.	2.2	2
98	Weak field magnetic susceptibility of ferrofluid emultions: the influence of droplet polydispersity. Magnetohydrodynamics, 2016, 52, 269-276.	0.3	2
99	Mechanochemical Methods in the Production of High Purity Gases. Materials Sciences and Applications, 2018, 09, 489-501.	0.4	2
100	On the theory of physical properties and phase transitions in ferrosmectics. Physica A: Statistical Mechanics and Its Applications, 2001, 291, 362-374.	2.6	1
101	Fractal structure of a colloidal aggregate. Doklady Physics, 2002, 47, 261-266.	0.7	1
102	Initial magnetic susceptibility of ferrocolloids: The influence of chain aggregates. Colloid Journal, 2004, 66, 679-687.	1.3	1
103	Modeling of the generation of a vacuum using getter materials. Theoretical Foundations of Chemical Engineering, 2009, 43, 936-943.	0.7	1
104	Structure Properties of Polydisperse Magnetic Fluids. Solid State Phenomena, 2012, 190, 641-644.	0.3	1
105	Evaporators of Reactive Metals and Droplet Casting. Recent Patents on Materials Science, 2013, 6, 214-228.	0.5	1
106	Tribochemical Purification of Gases. I. The Process Model. Journal of Materials Science and Chemical Engineering, 2020, 08, 37-54.	0.4	1
107	Reactive Alloys of IIA Metals: Gas Sorption and Corrosion as One Process. Journal of Materials Science and Chemical Engineering, 2021, 09, 39-69.	0.4	1
108	Evolution of a system of nuclei growing in the diffusion regime with fluctuating rates. Journal of Applied Mechanics and Technical Physics, 1993, 34, 247-253.	0.5	0

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109	Separation kinetics of ferrocolloids in the absence of a magnetic field. Journal of Engineering Physics and Thermophysics, 1993, 64, 14-22.	0.6	0
110	Mean field theories and ferromagnetic ordering in ferrofluids. Journal of Magnetism and Magnetic Materials, 2002, 252, 126-128.	2.3	0
111	To the theory of phase transitions in layered ferrofluids. Journal of Magnetism and Magnetic Materials, 2002, 252, 120-122.	2.3	0
112	The aggregation of ferrocolloids in a magnetic field. Colloid Journal, 2004, 66, 688-695.	1.3	0
113	The influence of chain aggregates on the magnetic properties of ferrocolloids. Colloid Journal, 2007, 69, 294-301.	1.3	0
114	The influence of the concentration on the initial dynamic susceptibility of weakly interacting dipolar fluids: an analysis using theory and computer simulations. Magnetohydrodynamics, 2018, 54, 27-32.	0.3	0
115	Modified Mean-Field Theory of One-Dimensional Spin Models with Anisotropy and Long-Range Dipolar Interactions. Ukrainian Journal of Physics, 2020, 65, 691.	0.2	0