Michal Rajnak

List of Publications by Year
in descending order

96	922	471509 17	552781 26
papers	citations	h-index	g-index

96	96	96	847
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Capacitance changes in ferronematic liquid crystals induced by low magnetic fields. Physical Review E, 2013, 87, 014501.	2.1	53
2	Dielectric response of transformer oil based ferrofluid in low frequency range. Journal of Applied Physics, 2013, 114, .	2.5	45
3	Hyperthermic Effect in Suspension of Magnetosomes Prepared by Various Methods. IEEE Transactions on Magnetics, 2013, 49, 250-254.	2.1	39
4	Dielectric-spectroscopy approach to ferrofluid nanoparticle clustering induced by an external electric field. Physical Review E, 2014, 90, 032310.	2.1	39
5	Direct observation of electric field induced pattern formation and particle aggregation in ferrofluids. Applied Physics Letters, 2015, 107, .	3.3	34
6	Structure and viscosity of a transformer oil-based ferrofluid under an external electric field. Journal of Magnetism and Magnetic Materials, 2017, 431, 99-102.	2.3	31
7	Magnetic Field Effect on Thermal, Dielectric, and Viscous Properties of a Transformer Oil-Based Magnetic Nanofluid. Energies, 2019, 12, 4532.	3.1	30
8	Transformer oil-based magnetic nanofluid with high dielectric losses tested for cooling of a model transformer. IEEE Transactions on Dielectrics and Electrical Insulation, 2019, 26, 1343-1349.	2.9	29
9	The influence of magnetic nanoparticle concentration with dextran polymers in agar gel on heating efficiency in magnetic hyperthermia. Journal of Molecular Liquids, 2020, 304, 112734.	4.9	29
10	Evaluation of Power Heat Losses in Multidomain Iron Particles Under the Influence of AC Magnetic Field in RF Range. International Journal of Thermophysics, 2013, 34, 655-666.	2.1	27
11	Dielectric Fluids for Power Transformers with Special Emphasis on Biodegradable Nanofluids. Nanomaterials, 2021, 11, 2885.	4.1	27
12	Electrode polarization and unusual magnetodielectric effect in a transformer oil-based magnetic nanofluid thin layer. Journal of Chemical Physics, 2017, 146, 014704.	3.0	26
13	Selective room-temperature leaching of copper from mechanically activated copper smelter slag. Journal of Materials Research and Technology, 2021, 12, 2011-2025.	5.8	25
14	Effect of magnetic nanoparticles on partial discharges in transformer oil. Journal of Magnetism and Magnetic Materials, 2020, 496, 165923.	2.3	24
15	Cotton Textile/Iron Oxide Nanozyme Composites with Peroxidase-like Activity: Preparation, Characterization, and Application. ACS Applied Materials & Interfaces, 2021, 13, 23627-23637.	8.0	24
16	Experimental study of AC breakdown strength in ferrofluid during thermal aging. Journal of Magnetism and Magnetic Materials, 2018, 465, 136-142.	2.3	23
17	Particle assembling induced by non-homogeneous magnetic field at transformer oil-based ferrofluid/silicon crystal interface by neutron reflectometry. Applied Surface Science, 2019, 473, 912-917.	6.1	18
18	Electric Field-Driven Assembly of Sulfonated Polystyrene Microspheres. Materials, 2017, 10, 329.	2.9	17

#	Article	IF	Citations
19	Statistical analysis of AC dielectric breakdown in transformer oil-based magnetic nanofluids. Journal of Molecular Liquids, 2020, 309, 113243.	4.9	17
20	Sono-magnetic heating in tumor phantom. Journal of Magnetism and Magnetic Materials, 2020, 500, 166396.	2.3	15
21	The effect of magnetic particles covering the droplets on the heating rate of Pickering emulsions in the AC magnetic field. Journal of Molecular Liquids, 2020, 320, 114388.	4.9	15
22	Rapid mechanochemical synthesis of nanostructured mohite Cu2SnS3 (CTS). Journal of Materials Science, 2018, 53, 13631-13642.	3.7	14
23	Effect of electrical polarity on dielectric breakdown in a soft magnetic fluid. Journal of Magnetism and Magnetic Materials, 2020, 497, 166007.	2.3	14
24	Relationship between local microstructure and superconducting properties of commercial YBa₂Cu₃O_{7â^'Î´} bulk. Superconductor Science and Technology, 2020, 33, 044004.	3.5	14
25	Dielectric response of a hybrid nanofluid containing fullerene C60 and iron oxide nanoparticles. Journal of Molecular Liquids, 2022, 359, 119338.	4.9	14
26	Electrical discharges in ferrofluids based on mineral oil and novel gas-to-liquid oil. Journal of Molecular Liquids, 2021, 325, 115244.	4.9	13
27	The effect of particle aggregate shape on ultrasonic anisotropy in concentrated magnetic fluids. Journal Physics D: Applied Physics, 2015, 48, 175303.	2.8	12
28	Electrical and acoustic investigation of partial discharges in two types of nanofluids. Journal of Molecular Liquids, 2021, 341, 117444.	4.9	12
29	Toward Apparent Negative Permittivity Measurement in a Magnetic Nanofluid with Electrically Induced Clusters. Physical Review Applied, 2019, 11, .	3.8	11
30	Scalable and environmentally friendly mechanochemical synthesis of nanocrystalline rhodostannite (Cu2FeSn3S8). Powder Technology, 2021, 388, 192-200.	4.2	11
31	Synthesis of copper nanoparticles from refractory sulfides using a semi-industrial mechanochemical approach. Advanced Powder Technology, 2020, 31, 782-791.	4.1	10
32	Nanofluid Based on New Generation Transformer Oil: Synthesis and Flow Properties. Acta Physica Polonica A, 2020, 137, 908-910.	0.5	10
33	Increasing the magnetic sensitivity of liquid crystals by rod-like magnetic nanoparticles. Magnetohydrodynamics, 2013, 49, 586-591.	0.3	10
34	Structural and magnetic properties of P25 TiO2 nanoparticles doped by Co. Journal of Magnetism and Magnetic Materials, 2020, 501, 166442.	2.3	9
35	Viscosity Dependence of a Magnetic Fluid Nanoparticles Concentration. Acta Physica Polonica A, 2014, 126, 278-279.	0.5	8
36	Magnetic fluid droplet deformation in electrostatic field. Journal of Electrostatics, 2017, 88, 55-59.	1.9	8

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37	Influence of Sm₂O₃ and La₂O₃ Additions on the Microstructure and Properties of YBCO Bulk Superconductors Prepared by TSIG Process. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	8
38	Non-uniform distribution of ferrofluids spherical particles under external electric field: Theoretical description. Journal of Molecular Liquids, 2019, 278, 491-495.	4.9	8
39	Effect of ferrofluid magnetization on transformer temperature rise. Journal Physics D: Applied Physics, 2022, 55, 345002.	2.8	8
40	Assembly of 1D Granular Structures from Sulfonated Polystyrene Microparticles. Materials, 2017, 10, 1212.	2.9	7
41	Electrical conduction in a transformer oil-based magnetic nanofluid under a DC electric field. Journal of Magnetism and Magnetic Materials, 2018, 459, 191-196.	2.3	7
42	Preparation and Characterization of Magnetic Nanoparticles. Acta Physica Polonica A, 2018, 133, 704-706.	0.5	7
43	Characterization of Magnetosomes After Exposure to the Effect of the Sonication and Ultracentrifugation. Acta Physica Polonica A, 2014, 126, 198-199.	0.5	6
44	Rheological and Thermal Transport Characteristics of a Transformer Oil Based Ferrofluid. Acta Physica Polonica A, 2018, 133, 564-566.	0.5	6
45	Modification of Diamagnetic Materials Using Magnetic Fluids. Ukrainian Journal of Physics, 2020, 65, 751.	0.2	6
46	The Response of a Magnetic Fluid to Radio Frequency Electromagnetic Field. Acta Physica Polonica A, 2017, 131, 946-948.	0.5	6
47	Dielectric breakdown study of a nanofluid based on goethite nanoparticles. IEEE Transactions on Dielectrics and Electrical Insulation, 2018, 25, 2206-2211.	2.9	5
48	Investigation of structural changes in oil-based magnetic fluids by surface acoustic waves. Journal of Magnetism and Magnetic Materials, 2020, 501, 166392.	2.3	5
49	Temperature Dependence of a Dielectric Relaxation in Weakly Polar Ferrofluids. Acta Physica Polonica A, 2017, 131, 943-945.	0.5	5
50	Dielectric properties of magnetic fluids based on transformer oil ITO 100 in a high frequency electric field. Magnetohydrodynamics, 2013, 49, 265-269.	0.3	5
51	Crystal-field potential and short-range order effects in inelastic neutron scattering, magnetization, and heat capacity of the cage-glass compound <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>HoB</mml:mi><mml:mn>12</mml:mn></ Physical Review B, 2021, 104, .	3.2	5
52	Characteristic properties of a magnetic nanofluid used as cooling and insulating medium in a power transformer. , 2013, , .		4
53	Microstructural Aspects of Infiltration Growth YBCO Bulks With Chemical Pinning. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.7	4
54	The influence of CeO2 addition on microstructure and superconducting properties of GdBCO-Ag single grain bulk superconductors. Journal of Alloys and Compounds, 2021, 889, 161697.	5.5	4

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55	Controllability of ferrofluidsâ€™ dielectric spectrum by means of external electric forces. Journal Physics D: Applied Physics, 2021, 54, 035303.	2.8	4
56	Magnetization as an Effective Tool for Kinetics Evaluation in Mechanochemical Synthesis of Chalcopyrite CuFeS₂. Acta Physica Polonica A, 2020, 137, 647-649.	0.5	4
57	Radio Frequency Response of Magnetic Nanoparticle-Doped Yarn. Acta Physica Polonica A, 2020, 137, 687-689.	0.5	4
58	Influence of Magnetic Field on Dielectric Breakdown in Transformer Oil Based Ferrofluids. Acta Physica Polonica A, 2014, 126, 248-249.	0.5	3
59	Magnetic Fluids and Their Complex Systems. Springer Proceedings in Physics, 2018, , 151-184.	0.2	3
60	Study of structural arrangement in ferrofluid at various temperatures by acoustic spectroscopy. AIP Conference Proceedings, 2018, , .	0.4	3
61	Growth, Microstructure, and Properties of GdBCOâ€“Ag Superconductor. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.7	3
62	Dispersion of magnetic susceptibility in a suspension of flexible ferromagnetic rods. Journal of Molecular Liquids, 2020, 305, 112823.	4.9	3
63	Scalable production of magnetic fluorescent cellulose microparticles. Cellulose, 2021, 28, 7675-7685.	4.9	3
64	Elastic properties of bacterial magnetite nanoparticles suspension. Magnetohydrodynamics, 2013, 49, 411-415.	0.3	3
65	Small Angle X-ray Scattering Study of Magnetic Nanofluid Exposed to an Electric Field. Acta Physica Polonica A, 2020, 137, 942-944.	0.5	3
66	Study of structural arrangement in ferrofluid by dielectric and acoustic spectroscopy. , 2018, , .		2
67	Change of Superconducting Properties of Single-Grain Smâ€“Baâ€“Cuâ€“O Bulk by Sm/Ba Substitution Effect. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	2
68	Inhomogeneity of SmBCO bulk superconductors grown in air. Superconductor Science and Technology, 2020, 33, 034003.	3.5	2
69	Dynamic magnetic response of ferrofluids under a static electric field. Physics of Fluids, 2021, 33, 082006.	4.0	2
70	Generation of Fe ₃O ₄ Nanoparticle Aggregates in a Ferrofluid Driven by External Electric Field. Acta Physica Polonica A, 2017, 131, 907-909.	0.5	2
71	Analysis of Thermal Field in Mineral Transformer Oil Based Magnetic Fluids. Acta Physica Polonica A, 2017, 131, 937-939.	0.5	2
72	Detection of Iron Wear in Mechanochemistry Using Magnetometry. Acta Physica Polonica A, 2020, 137, 684-686.	0.5	2

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73	Hall Effect in ZnO Extrinsic Structure. Acta Physica Polonica A, 2014, 126, 76-77.	0.5	1
74	Dielectric Spectroscopy of Ferronematics Based on 6CHBT Liquid Crystal. Molecular Crystals and Liquid Crystals, 2015, 611, 40-48.	0.9	1
75	Structural Stability of Amorphous Alloy of Modified Finemet Type. Acta Physica Polonica A, 2015, 127, 564-566.	0.5	1
76	Influence of Sm Doping on YBCO Bulks in YBa2Cu3O7-Î´/Y2 BaCuO5 System. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	1
77	The Shielding Effectiveness of a Magnetic Fluid in Radio Frequency Range. Acta Physica Polonica A, 2018, 133, 585-587.	0.5	1
78	Effect of DC Voltage Ramp Rate on Breakdown in Ferrofluid Based on Transformer Oil. Acta Physica Polonica A, 2020, 137, 970-972.	0.5	1
79	SAW Investigation of Structural Changes in Oil-Based Magnetic Fluids. Acta Physica Polonica A, 2020, 137, 964-966.	0.5	1
80	Small-Angle Neutron Scattering Study of Transformer Oil-Based Ferrofluids. Ukrainian Journal of Physics, 2020, 65, 729.	0.2	1
81	Electric field-induced assembly of magnetic nanoparticles from dielectric ferrofluids on planar interface. Journal of Molecular Liquids, 2022, 362, 119773.	4.9	1
82	The Investigation on the E-J Characteristics and the Role of Nanoparticle Concentration in Weakly Polar Magnetic Fluids. Acta Physica Polonica A, 2014, 126, 246-247.	0.5	0
83	Dielectric Properties of Lyotropic Magnetic Liquid Crystal. Acta Physica Polonica A, 2015, 127, 632-634.	0.5	0
84	Synthesis, crystal structure, electric and magnetic properties of new UNiSi2splat. Low Temperature Physics, 2017, 43, 986-989.	0.6	0
85	Ce-Doped Manganites of Lanthanum-Strontium as Promising Inducers of Magnetic Hyperthermia. , 2019, , .		0
86	Mechanochemical Reduction of Synthetic Sulphidic Copper-Bearing Minerals in an Industrial Scale. Inzynieria Mineralna, 2021, 1, .	0.2	0
87	Electro-Rheological Properties of Transformer Oil-Based Magnetic Fluids. Acta Physica Polonica A, 2017, 131, 1141-1143.	0.5	0
88	Ultrasound Frequency Analysis of a Magnetic Fluid in Low-Intensity External Magnetic Field. Acta Physica Polonica A, 2017, 131, 910-912.	0.5	0
89	AC Magnetic Susceptibility of Ferrofluids Exposed to an External Electric Field. Acta Physica Polonica A, 2017, 131, 887-889.	0.5	0
90	Lysozyme Amyloid Fibrils Doped by Carbon Nanotubes. Acta Physica Polonica A, 2018, 133, 588-590.	0.5	0

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91	Influence of Electric Field on AC Magnetic Susceptibility of a Mineral Oil Based Ferrofluid. Acta Physica Polonica A, 2018, 133, 567-579.	0.5	0
92	Variation of Magnetic Fluid Deformation Related to Nanoparticle Concentration in Steady Electric Field. Acta Physica Polonica A, 2018, 133, 570-573.	0.5	0
93	Spin Relaxation Effects in Oil-Nanomagnetite Ferrofluids - MÃ¶ssbauer Spectrometry Studies. Acta Physica Polonica A, 2018, 134, 1007-1014.	0.5	0
94	Effect of TiO₂ Fibers on Properties of Single-Grain Bulk GdBCO Superconductors. Acta Physica Polonica A, 2020, 137, 800-802.	0.5	0
95	Synthesis and Magnetic Properties of Hydrophilic and Hydrophobic Hybrid Nanocomposite. Acta Physica Polonica A, 2020, 137, 973-975.	0.5	0
96	Breakdown Driven by Magnetic Field in Gradually Aged Ferrofluid. Acta Physica Polonica A, 2020, 137, 939-941.	0.5	0