

Kirill I Rybakov

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

52
papers

1,402
citations

14
h-index

37
g-index

54
ext. papers

1,566
ext. citations

2.3
avg, IF

4.37
L-index

#	Paper	IF	Citations
52	High-temperature microwave processing of materials. <i>Journal Physics D: Applied Physics</i> , 2001 , 34, R55-R75		367
51	Microwave Sintering: Fundamentals and Modeling. <i>Journal of the American Ceramic Society</i> , 2013 , 96, 1003-1020	3.8	197
50	Microwave heating of conductive powder materials. <i>Journal of Applied Physics</i> , 2006 , 99, 023506	2.5	124
49	Possibility of plastic deformation of an ionic crystal due to the nonthermal influence of a high-frequency electric field. <i>Physical Review B</i> , 1994 , 49, 64-68	3.3	102
48	Microwave ponderomotive forces in solid-state ionic plasmas. <i>Physics of Plasmas</i> , 1998 , 5, 1664-1670	2.1	85
47	Mass transport in ionic crystals induced by the ponderomotive action of a high-frequency electric field. <i>Physical Review B</i> , 1995 , 52, 3030-3033	3.3	77
46	The microwave ponderomotive effect on ceramic sintering. <i>Scripta Materialia</i> , 2012 , 66, 1049-1052	5.6	51
45	On the Mechanism of Microwave Flash Sintering of Ceramics. <i>Materials</i> , 2016 , 9,	3.5	50
44	Dynamics of microwave-induced currents in ionic crystals. <i>Physical Review B</i> , 1997 , 55, 3559-3567	3.3	46
43	Evidence for microwave enhanced mass transport in the annealing of nanoporous alumina membranes. <i>Journal of Materials Science</i> , 2001 , 36, 131-136	4.3	37
42	Flash Microwave Sintering of Transparent Yb:(LaY)2O3 Ceramics. <i>Journal of the American Ceramic Society</i> , 2015 , 98, 3518-3524	3.8	33
41	Preferred orientation of pores in ceramics under heating by a linearly polarized microwave field. <i>Journal of Applied Physics</i> , 2007 , 101, 084915	2.5	28
40	Effect of microwave heating on phase transformations in nanostructured alumina. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 102008	3	23
39	Temperature profile optimization for microwave sintering of bulk NiAl2O3 functionally graded materials. <i>Journal of Materials Processing Technology</i> , 2014 , 214, 210-216	5.3	16
38	Microwave resonant sintering of powder metals. <i>Scripta Materialia</i> , 2018 , 149, 108-111	5.6	14
37	Fabrication of metal-ceramic functionally graded materials by microwave sintering. <i>Inorganic Materials: Applied Research</i> , 2012 , 3, 261-269	0.6	13
36	Stability of microwave heating of ceramic materials in a cylindrical cavity. <i>Journal Physics D: Applied Physics</i> , 2007 , 40, 6809-6817	3	12

35	Effects of anomalous permittivity on the microwave heating of zinc oxide. <i>Journal of Applied Physics</i> , 1998 , 83, 432-437	2.5	12
34	Flash Sintering of Oxide Ceramics under Microwave Heating. <i>Technical Physics</i> , 2018 , 63, 391-397	0.5	10
33	Effects of microwave heating in nanostructured ceramic materials. <i>Powder Metallurgy and Metal Ceramics</i> , 2010 , 49, 31-41	0.8	10
32	Role of convective heat removal and electromagnetic field structure in the microwave heating of materials. <i>Journal of Materials Science</i> , 2007 , 42, 2097-2104	4.3	10
31	Microwave sintering of nanostructured ceramic materials. <i>Nanotechnologies in Russia</i> , 2011 , 6, 647-661	0.6	9
30	Absorption of microwaves in metal-ceramic powder materials. <i>Radiophysics and Quantum Electronics</i> , 2010 , 53, 354-362	0.7	9
29	Effective Microwave Dielectric Properties of Ensembles of Spherical Metal Particles. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2017 , 65, 1479-1487	4.1	8
28	Ultra-rapid microwave sintering employing thermal instability and resonant absorption. <i>Journal of Materials Research</i> , 2019 , 34, 2620-2634	2.5	7
27	Densification of powder materials in non-uniform temperature fields. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1996 , 73, 295-307		6
26	Terahertz Dielectric Properties of Polycrystalline MgAl ₂ O ₄ Spinel Obtained by Microwave Sintering and Hot Pressing. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2019 , 40, 447-455	2.2	5
25	Diffusion Processes in Semiconductor Structures During Microwave Annealing. <i>Radiophysics and Quantum Electronics</i> , 2003 , 46, 749-755	0.7	5
24	Enhanced Mass and Charge Transfer in Solids Exposed to Microwave Fields 2006 , 472-481		5
23	Effect of specific absorbed power on microwave sintering of 3YSZ ceramics. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 218, 012001	0.4	4
22	Microwave heating of electrically conductive materials. <i>Radiophysics and Quantum Electronics</i> , 2005 , 48, 888-895	0.7	4
21	Microwave Joining of ZrO ₂ and Al ₂ O ₃ Ceramics Via Nanostructured Interlayers 2003 , 413-426		4
20	Millimeter-Wave Gyrotron System for Research and Application Development. Part 2. High-Temperature Processes in Polycrystalline Dielectric Materials. <i>Radiophysics and Quantum Electronics</i> , 2019 , 61, 787-796	0.7	3
19	Effective High-Frequency Permeability of Compacted Metal Powders. <i>Radiophysics and Quantum Electronics</i> , 2018 , 60, 797-807	0.7	3
18	Microwave Ultra-Rapid Sintering of Oxide Ceramics. <i>Ceramic Transactions</i> , 57-65	0.1	3

17	Microstructure of the microwave fast-sintered MgAl ₂ O ₄ ceramics. <i>EPJ Web of Conferences</i> , 2017 , 149, 02021	0.3	2
16	at]Mass Transport and DC Electromotive Force Induced in Ionic Crystals by High-Frequency Electric Field. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 369, 263		2
15	Apparent viscosity reduction during microwave sintering of amorphous silica. <i>Ceramics International</i> , 2018 , 44, 1797-1801	5.1	1
14	Possibility of Microwave-Controlled Surface Modification. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 430, 435		1
13	Observation of an Electromagnetically Driven Temperature Wave in Porous Zinc Oxide During Microwave Heating. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 430, 507		1
12	A Non-Thermal Vacancy-Drift Mechanism of Plastic Deformation of Grains in Ceramics During Microwave Sintering. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 347, 661		1
11	Sintering of Oxide Ceramics under Rapid Microwave Heating 2016 , 233-242		1
10	Ultra-rapid microwave sintering of pure and Y ₂ O ₃ -doped MgAl ₂ O ₄ . <i>Journal of the American Ceramic Society</i> , 2018 , 102, 559	3.8	1
9	Microwave Heating of Metal Power Clusters. <i>Technical Physics</i> , 2018 , 63, 45-50	0.5	0
8	Application of Millimeter-Wave Radiation for Manufacture of Ceramic Items Using Additive Methods. <i>Radiophysics and Quantum Electronics</i> , 2020 , 63, 522	0.7	0
7	Ultra-rapid microwave sintering. <i>Journal of Physics: Conference Series</i> , 2018 , 1115, 042005	0.3	0
6	Effective magnetic permeability of compacted metal powders at microwave frequencies. <i>EPJ Web of Conferences</i> , 2017 , 149, 02008	0.3	
5	Stability of pores in solid membrane films. <i>Journal of Materials Science Letters</i> , 2000 , 19, 1851-1854		
4	Study of Microwave-Driven Currents in Ionic Crystals. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 430, 459		
3	Microwave Heating of Ensembles of Spherical Metal Particles Surrounded by Insulating Layers223-231		
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1	Absorption of Millimeter Waves in Composite Metal-Ceramic Materials591-597		