Kirill I Rybakov

List of Publications by Year
in descending order

53 papers	1,731 citations	516561 16 h-index	276775 41 g-index
54 all docs	54 docs citations	54 times ranked	1032 citing authors

#	Article	IF	Citations
1	High-temperature microwave processing of materials. Journal Physics D: Applied Physics, 2001, 34, R55-R75.	1.3	434
2	Microwave Sintering: Fundamentals and Modeling. Journal of the American Ceramic Society, 2013, 96, 1003-1020.	1.9	251
3	Microwave heating of conductive powder materials. Journal of Applied Physics, 2006, 99, 023506.	1.1	142
4	Possibility of plastic deformation of an ionic crystal due to the nonthermal influence of a high-frequency electric field. Physical Review B, 1994, 49, 64-68.	1.1	115
5	Microwave ponderomotive forces in solid-state ionic plasmas. Physics of Plasmas, 1998, 5, 1664-1670.	0.7	95
6	Mass transport in ionic crystals induced by the ponderomotive action of a high-frequency electric field. Physical Review B, 1995, 52, 3030-3033.	1.1	94
7	The microwave ponderomotive effect on ceramic sintering. Scripta Materialia, 2012, 66, 1049-1052.	2.6	66
8	On the Mechanism of Microwave Flash Sintering of Ceramics. Materials, 2016, 9, 684.	1.3	63
9	Dynamics of microwave-induced currents in ionic crystals. Physical Review B, 1997, 55, 3559-3567.	1.1	50
10	Flash Microwave Sintering of Transparent Yb:(LaY)₂O₃ Ceramics. Journal of the American Ceramic Society, 2015, 98, 3518-3524.	1.9	46
11	Evidence for microwave enhanced mass transport in the annealing of nanoporous alumina membranes. Journal of Materials Science, 2001, 36, 131-136.	1.7	39
12	Preferred orientation of pores in ceramics under heating by a linearly polarized microwave field. Journal of Applied Physics, 2007, 101, 084915.	1.1	32
13	Effect of microwave heating on phase transformations in nanostructured alumina. Journal Physics D: Applied Physics, 2008, 41, 102008.	1.3	28
14	Microwave resonant sintering of powder metals. Scripta Materialia, 2018, 149, 108-111.	2.6	20
15	Temperature profile optimization for microwave sintering of bulk Niâ€"Al2O3 functionally graded materials. Journal of Materials Processing Technology, 2014, 214, 210-216.	3.1	19
16	Flash Sintering of Oxide Ceramics under Microwave Heating. Technical Physics, 2018, 63, 391-397.	0.2	17
17	Effects of anomalous permittivity on the microwave heating of zinc oxide. Journal of Applied Physics, 1998, 83, 432-437.	1.1	16
18	Fabrication of metal-ceramic functionally graded materials by microwave sintering. Inorganic Materials: Applied Research, 2012, 3, 261-269.	0.1	16

#	ARTICLE	IF	CITATIONS
19	Diffusion Processes in Semiconductor Structures During Microwave Annealing. Radiophysics and Quantum Electronics, 2003, 46, 749-755.	0.1	15
20	Ultra-rapid microwave sintering employing thermal instability and resonant absorption. Journal of Materials Research, 2019, 34, 2620-2634.	1.2	15
21	Ultraâ€rapid microwave sintering of pure and Y₂O₃â€doped MgAl₂O₄. Journal of the American Ceramic Society, 2019, 102, 559-568.	1.9	14
22	Role of convective heat removal and electromagnetic field structure in the microwave heating of materials. Journal of Materials Science, 2007, 42, 2097-2104.	1.7	13
23	Stability of microwave heating of ceramic materials in a cylindrical cavity. Journal Physics D: Applied Physics, 2007, 40, 6809-6817.	1.3	12
24	Effects of microwave heating in nanostructured ceramic materials. Powder Metallurgy and Metal Ceramics, 2010, 49, 31-41.	0.4	11
25	Absorption of microwaves in metal-ceramic powder materials. Radiophysics and Quantum Electronics, 2010, 53, 354-362.	0.1	11
26	Microwave sintering of nanostructured ceramic materials. Nanotechnologies in Russia, 2011, 6, 647-661.	0.7	10
27	Effective Microwave Dielectric Properties of Ensembles of Spherical Metal Particles. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 1479-1487.	2.9	9
28	Terahertz Dielectric Properties of Polycrystalline MgAl2O4 Spinel Obtained by Microwave Sintering and Hot Pressing. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 447-455.	1.2	9
29	Enhanced Mass and Charge Transfer in Solids Exposed to Microwave Fields. , 2006, , 472-481.		9
30	Densification of powder materials in non-uniform temperature fields. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1996, 73, 295-307.	0.7	7
31	Millimeter-Wave Gyrotron System for Research and Application Development. Part 2. High-Temperature Processes in Polycrystalline Dielectric Materials. Radiophysics and Quantum Electronics, 2019, 61, 787-796.	0.1	6
32	A Non-Thermal Vacancy-Drift Mechanism of Plastic Deformation of Grains in Ceramics During Microwave Sintering. Materials Research Society Symposia Proceedings, 1994, 347, 661.	0.1	5
33	Microwave heating of electrically conductive materials. Radiophysics and Quantum Electronics, 2005, 48, 888-895.	0.1	5
34	Effective High-Frequency Permeability of Compacted Metal Powders. Radiophysics and Quantum Electronics, 2018, 60, 797-807.	0.1	5
35	Implementation of rapid microwave sintering using a 24ÂGHz gyrotron system. Review of Scientific Instruments, 2022, 93, .	0.6	5
36	Effect of specific absorbed power on microwave sintering of 3YSZ ceramics. IOP Conference Series: Materials Science and Engineering, 2017, 218, 012001.	0.3	4

#	Article	IF	Citations
37	Microwave Joining of ZrO2 and Al2O3 Ceramics Via Nanostructured Interlayers. , 2003, , 413-426.		4
38	Possibility of Microwave-Controlled Surface Modification. Materials Research Society Symposia Proceedings, 1996, 430, 435.	0.1	3
39	Mass Transport and DC Electromotive Force Induced in Ionic Crystals by High-Frequency Electric Field. Materials Research Society Symposia Proceedings, 1994, 369, 263.	0.1	2
40	Microstructure of the microwave fast-sintered MgAl2O4 ceramics. EPJ Web of Conferences, 2017, 149, 02021.	0.1	2
41	Apparent viscosity reduction during microwave sintering of amorphous silica. Ceramics International, 2018, 44, 1797-1801.	2.3	2
42	Ultra-rapid microwave sintering. Journal of Physics: Conference Series, 2018, 1115, 042005.	0.3	2
43	Observation of an Electromagnetically Driven Temperature Wave in Porous Zinc Oxide During Microwave Heating. Materials Research Society Symposia Proceedings, 1996, 430, 507.	0.1	1
44	High temperature processing of materials using millimeter-wave radiation. , 0, , .		1
45	Sintering of Oxide Ceramics under Rapid Microwave Heating. , 0, , 233-242.		1
46	Microwave Heating of Metal Power Clusters. Technical Physics, 2018, 63, 45-50.	0.2	1
47	Application of Millimeter-Wave Radiation for Manufacture of Ceramic Items Using Additive Methods. Radiophysics and Quantum Electronics, 2020, 63, 522-529.	0.1	1
48	Study Of Microwave-Driven Currents In Ionic Crystals. Materials Research Society Symposia Proceedings, 1996, 430, 459.	0.1	0
49	Stability of pores in solid membrane films. Journal of Materials Science Letters, 2000, 19, 1851-1854.	0.5	0
50	Effective magnetic permeability of compacted metal powders at microwave frequencies. EPJ Web of Conferences, 2017, 149, 02008.	0.1	0
51	Microwave Heating of Ensembles of Spherical Metal Particles Surrounded by Insulating Layers. , 0, , 223-231.		0
52	Enhanced Mass and Charge Transfer in Solids Exposed to Microwave Fields. , 0, , 472-481.		0
53	Absorption of Millimeter Waves in Composite Metal-Ceramic Materials. , 0, , 591-597.		0