Kirill L Muratikov

List of Publications by Year
in descending order

92	473	840776 11	888059 17
papers	citations	h-index	g-index

93	93	93	107
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Relaxation effects in thermoelastically generated ultrasound in stressed dielectric and conductive materials. Physical Review B, 2022, 105, .	3.2	3
2	Laser ultrasound imaging of mechanical stresses near holes and indented areas: Experimental results and theoretical model. Journal of Applied Physics, 2022, 131, .	2.5	4
3	Electrocaloric studies of bulk materials and multilayer structures by dynamic infrared radiometry. Ferroelectrics, 2022, 591, 157-165.	0.6	0
4	Pyroelectric studies of bulk and film materials by dynamic infrared radiometry. Ferroelectrics, 2022, 591, 166-177.	0.6	0
5	The Influence of Mechanical Stresses on the Characteristics of Laser-Ultrasonic Signals in the Vicinity of a Hole in Silicon Nitride Ceramics. Technical Physics Letters, 2021, 47, 605-608.	0.7	1
6	Dynamic Thermoelastic Effect in Materials with a Defect Structure. Physics of the Solid State, 2021, 63, 702-705.	0.6	0
7	Radiometric Studies of Leakage Currents in Dielectrics. Physics of the Solid State, 2021, 63, 932-936.	0.6	0
8	The Influence of Relaxation Processes on the Thermoacoustics of Materials. Doklady Physics, 2021, 66, 269-272.	0.7	1
9	Generalized thermoelastic effect in real metals and its application for describing photoacoustic experiments with Al membranes. Journal of Applied Physics, 2020, 128, 095106.	2.5	9
10	Theoretical and Experimental Investigation of a Laser-Induced Photoacoustic Effect near a Hole in Internally Stressed Metal Plates. Physical Mesomechanics, 2020, 23, 213-222.	1.9	4
11	Specific Features of the Pyroelectric Effect in Epitaxial Aluminum Nitride Layers Obtained on Si Substrates. Technical Physics Letters, 2020, 46, 16-18.	0.7	1
12	Nonlinear Photoacoustic Response on Mechanical Stresses in the Vicinity of a Hole in a D16 Aluminum-Alloy Plate. Technical Physics Letters, 2020, 46, 171-174.	0.7	2
13	Acoustic Oscillations of Aluminum Membranes Laser-Excited by a Thermoelastic Mechanism. Technical Physics Letters, 2020, 46, 477-479.	0.7	8
14	Mid-infrared radiation technique for direct pyroelectric and electrocaloric measurements. Review of Scientific Instruments, 2020, 91, 015119.	1.3	14
15	Diagnostics of Residual Stresses in Bimetallic Aluminumâ€“Steel Plates by Means of Laser Ultrasound and a Test Hole. Technical Physics Letters, 2020, 46, 1188-1191.	0.7	0
16	An experimental demonstration of the effect of mechanical stresses on the laser generation of acoustic vibrations in various materials. Journal of Physics: Conference Series, 2020, 1697, 012186.	0.4	2
17	The Influence of Mechanical Stresses in a D16 Aluminum-Alloy Plate on the Generation of Acoustic Waves under Laser Irradiation. Technical Physics Letters, 2019, 45, 902-905.	0.7	8
18	Thermoacoustics of Conductive Materials under Laser Action. Doklady Physics, 2019, 64, 169-172.	0.7	5

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19	Influence of microcomposition of solder alloy on the distribution of local thermal conductivities in semiconductor-ceramic solder joints investigated by laser thermal wave and X-ray spectral methods. Journal of Alloys and Compounds, 2019, 800, 23-28.	5.5	3
20	A New Model of the Electron Gas Effect on the Thermoacoustics of Conductors under Laser Irradiation. Physical Mesomechanics, 2019, 22, 13-17.	1.9	3
21	Laser Photoacoustic Detection of Residual Stresses in Metal Plates with a Hole. Doklady Physics, 2019, 64, 20-23.	0.7	3
22	Development of the Theory of Multicomponent Media for Describing Dynamic Processes in Materials of Complex Rheology. Structural Integrity, 2019, , 412-414.	1.4	0
23	Laser photoacoustic evaluaion of residual stresses in metal plates with a hole. Proceedings of the Academy of Sciences, 2019, 484, 277-280.	0.1	0
24	On the problem of thermoacoustics of conductive materials under laser irradiation. Proceedings of the Academy of Sciences, 2019, 485, 438-441.	0.1	1
25	Heat transfer through soldered and bonded joints of multilayer semiconductor devices studied by laser photothermal beam-deflection method. International Journal of Heat and Mass Transfer, 2018, 120, 870-878.	4.8	11
26	Studying the Pyroelectric Effect in AlN Epilayers. Technical Physics Letters, 2018, 44, 709-712.	0.7	10
27	Laser Photoacoustic Microscopy of Vickers Indentations in Titanium. Doklady Physics, 2018, 63, 155-157.	0.7	2
28	Optoelectronic Methods of IR-Photometry in Solving Thermal and Physical Problems. KnE Energy, 2018, 3, 349.	0.3	0
29	Determining heat-transfer coefficients of solid objects by laser photothermal IR radiometry. Technical Physics Letters, 2017, 43, 684-686.	0.7	7
30	Photoacoustic Microscopy of Vickers Indentations in Metals with Piezoelectric Detection. International Journal of Thermophysics, 2017, 38, 1.	2.1	7
31	Photothermal Infrared Radiometry in Experimental Studies of the Pyroelectric Properties of Bulk Materials. Technical Physics Letters, 2017, 43, 1084-1087.	0.7	3
32	A study of the heat-removal process at the semiconductorâ€“ceramics interface in solar cells by the laser thermal-wave method. Technical Physics Letters, 2016, 42, 570-573.	0.7	7
33	Variations of photoacoustic signals within the Vickers indent in metals under external stresses by the examples of steel and nanocopper. Physics of the Solid State, 2016, 58, 1735-1743.	0.6	11
34	The effect of external stresses on the behavior of photoacoustic signals inside vickers indenter marks on a steel surface. Technical Physics Letters, 2016, 42, 67-70.	0.7	11
35	Estimation of thermoelastic deformations in the near-surface layers of condensed media upon absorption of time-modulated laser radiation. Technical Physics, 2015, 60, 1567-1569.	0.7	0
36	ANALYSIS OF HEAT PROPAGATION PROCESSES IN STRUCTERS OF PULSE POWERFUL DEVICES NEAR PLANES OF SOLDER OF SILICON PLATES IN HIGH VOLTAGE STACKS. Izvestiya Vysshikh Uchebnykh Zavedenii Materialy Elektronnoi Tekhniki = Materials of Electronics Engineering, 2015, , 65.	0.2	0

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37	Investigation of heat transfer through interface germanium - AlN ceramics in heterostructure solar cells by laser thermal wave method. , 2014, , .		0
38	Estimation of elastic stress in the near-surface layers of solid objects caused by thermoelastic deformations under absorption of nonstationary laser radiation. Technical Physics, 2013, 58, 1859-1862.	0.7	1
39	Laser micro-scale thermal wave characterization of heat transport processes in modern semiconductor structures and devices. , 2012, , .		0
40	Diagnostics of heat removal from semiconductor solar cells by laser thermowave methods. Technical Physics Letters, 2011, 37, 674-677.	0.7	8
41	Laser thermowave diagnostics of heat transfer through bonded interfaces in multielement semiconductor opening switches. Technical Physics Letters, 2011, 37, 1149-1153.	0.7	7
42	Calculation of nonsteady thermoelastic deformations in solid bodies in the quasi-static approximation. Technical Physics, 2011, 56, 214-220.	0.7	8
43	On the calculation of nonstationary mechanical stresses formed in solid objects upon laser energy absorption by the thermoelastic mechanism. Technical Physics, 2011, 56, 899-901.	0.7	2
44	Solving nonstationary thermoelasticity problems for solids in quasi-static approximation. Technical Physics Letters, 2010, 36, 531-534.	0.7	6
45	Photoacoustic microscopy of the effect of mechanical processing on the martensite structure of near-surface layers in Cu-Al-Ni alloy single crystals. Technical Physics Letters, 2010, 36, 699-702.	0.7	2
46	On the possibility of detecting near-surface technological stresses in ceramics by photoacoustic microscopy. Technical Physics, 2009, 54, 431-434.	0.7	3
47	Modern Thermoelastic Stress Analysis and Photoacoustic Approaches to the Problem of Residual Stress Detection. Journal of Thermal Stresses, 2009, 32, 322-340.	2.0	5
48	The influence of annealing and external uni-axial stress on photoacoustic images of indentations in metals. Optical Memory and Neural Networks (Information Optics), 2008, 17, 289-294.	1.0	0
49	<title>Comparison of application of photoacoustics and thermoelastic stress analysis methods for detection of mechanical stresses</title>. , 2008, , .		0
50	S120 Detection of Surface Residual Stresses in Materials by Photoacoustic Images of Microindented Areas. Powder Diffraction, 2008, 23, 187-187.	0.2	0
51	<title>Influence of external and technological stresses on photoacoustic images of Vickers indented ceramics and metals</title>. , 2007, , .		1
52	Device for characterization of thermal effusivity of liquids using photothermal beam deflection. Review of Scientific Instruments, 2007, 78, 104901.	1.3	10
53	Modern Situation in Photoacoustic and Thermoelastic Stress Analysis in Application to the Problem of Mechanical Stress Measurements. , 2007, , 373-374.		0
54	Laser photoacoustic microscopy of mechanical stresses in modern materials. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2006, 73, 653.	0.4	0

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55	Martensitic transformation in single-crystal Cu-Al-Ni shape-memory alloy under load: Visualization by photoacoustic microscopy. Technical Physics, 2006, 51, 809-811.	0.7	0
56	Laser Photoacoustic Microscopy of Mechanical Stresses in Modern Ceramics and Metals. Materials Science Forum, 2006, 524-525, 471-476.	0.3	1
57	Photoacoustic microscopy of Vickers indented ceramics with various mutual orientations of radial cracks and external loading. , 2005, , .		1
58	Photoacoustic Thermoelastic Effect Near Vickers Indentations in Nanocrystalline Nickel. Technical Physics Letters, 2005, 31, 685.	0.7	5
59	Imaging Inhomogeneous Objects with Free Boundaries by Laser Photoacoustic Method. Technical Physics Letters, 2005, 31, 839.	0.7	2
60	Laser photoacoustic imaging of inhomogeneous objects. Technical Physics Letters, 2004, 30, 956-958.	0.7	6
61	Theoretical and experimental investigation of the photoacoustic effect in solids with residual stresses. Open Physics, 2003, 1, .	1.7	5
62	Effect of an external mechanical load on elastic stresses near radial cracks in Al2O3-SiC-TiC ceramics: Photoacoustic study. Technical Physics, 2003, 48, 1028-1034.	0.7	9
63	Photoacoustics of the stressed state in solids. Review of Scientific Instruments, 2003, 74, 3531-3535.	1.3	15
64	Theory of stress influence on the photoacoustic thermoelastic signal near the vertical crack tips. Review of Scientific Instruments, 2003, 74, 722-724.	1.3	12
65	Laser photoacoustic microscopy of solids with residual stresses. , 2003, , .		3
66	Application of lasers in photoacoustic and photothermal microscopy of solids with residual stresses. , 2002, , .		2
67	The effect of mechanical loading on the photoacoustic response from radial cracks in Vickers-indented Al2O3-SiC-TiC ceramics. Technical Physics Letters, 2002, 28, 377-381.	0.7	7
68	Thermoelastic photoacoustic effect near tips of radial cracks in ceramics under external loading. High Temperatures - High Pressures, 2002, 34, 585-590.	0.3	11
69	Determination of the thermal physical properties of ceramics and parameters of cracks by a laser optical-beam deflection Method. Technical Physics, 2001, 46, 749-754.	0.7	5
70	The effect of annealing on the photoacoustic and photothermal response of Al2O3-SiC-TiC ceramics with internal stresses. Technical Physics Letters, 2001, 27, 500-503.	0.7	7
71	Photothermal and photoacoustic measurement of thermal and thermoelastic properties of ceramics with residual stresses. High Temperatures - High Pressures, 2001, 33, 285-292.	0.3	10
72	Theoretical and experimental study of photoacoustic and electron-acoustic effects in solids with internal stresses. Technical Physics, 2000, 45, 1025-1031.	0.7	10

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73	Photoacoustic effect in stressed elastic solids. Journal of Applied Physics, 2000, 88, 2948-2955.	2.5	51
74	Theory of the generation of mechanical vibrations by laser radiation in solids containing internal stresses on the basis of the thermoelastic effect. Technical Physics, 1999, 44, 792-796.	0.7	16
75	Photothermal and photoacoustic measurement and imaging of cracks and residual stresses in opaque ceramics. , 1999, , .		0
76	Theory of thermoelastic laser induced deformations in solids with residual stresses. , 1999, , .		0
77	Photothermal measurement of the thermal parameters of volume materials and thin films by the photodeflection method. High Temperatures - High Pressures, 1999, 31, 69-73.	0.3	5
78	Theory of the thermoelastic generation of mechanical vibrations in internally stressed solids by laser radiation. Technical Physics Letters, 1998, 24, 536-538.	0.7	7
79	Investigation of the influence of residual stresses on the thermophysical and thermoelastic properties of silicon nitride ceramic by photothermal and photoacoustic methods. Technical Physics Letters, 1998, 24, 846-848.	0.7	14
80	Photothermal reflectance investigation of ion implanted 6Hâ€“SiC. Applied Physics Letters, 1997, 71, 3001-3003.	3.3	3
81	Measurement of thermal parameters of solids by a modified photodeflection method. Optical Engineering, 1997, 36, 358.	1.0	13
82	Investigation of implanted layers in silicon carbide by a modulation photoreflection method. Technical Physics Letters, 1997, 23, 500-503.	0.7	0
83	Photodeflection and photoacoustic microscopy of cracks and residual stresses induced by Vickers indentation in silicon nitride ceramic. Technical Physics Letters, 1997, 23, 188-190.	0.7	17
84	Simulations of photodeflection measurements of thermal diffusivity of solids: Wave optics approach. Journal of Applied Physics, 1994, 76, 3279-3284.	2.5	9
85	The influence of ion implantation and high energy proton irradiation of semiconductors on a photothermal signal. European Physical Journal Special Topics, 1994, 04, C7-163-C7-166.	0.2	0
86	Transverse photodeflection signal formation in the framework of wave optics theory. European Physical Journal Special Topics, 1994, 04, C7-71-C7-74.	0.2	0
87	Thermal diffusivity determination by the photodeflection method. The influence of wave optical effects. European Physical Journal Special Topics, 1994, 04, C7-291-C7-294.	0.2	0
88	Wave optics version of photoreflectance signal formation in thermal wave experiments with solids. European Physical Journal Special Topics, 1994, 04, C7-777-C7-780.	0.2	0
89	Thermal wave measurement of ion implanted semiconductors in the mirage effect geometry. Applied Physics Letters, 1992, 61, 569-571.	3.3	0
90	Photodeflection Signal Formation from Solids Within the Framework of Wave Optics. Springer Series in Optical Sciences, 1992, , 528-530.	0.7	0

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91	Photodeflection signal formation in thermal wave spectroscopy and microscopy of solids within the framework of wave optics. â€œMirageâ€•effect geometry. Optics Communications, 1991, 84, 283-289.	2.1	17
92	New phase interference technique applied for sensitive photothermal microscopy. Applied Physics Letters, 1990, 57, 1600-1601.	3.3	16