

Andrey Gusarov

List of Publications by Year in descending order

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Version: 2024-02-01

112
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3,826
citations

172457

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128289

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114
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114
times ranked

2527
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimizing the Process Parameters for Additive Manufacturing of Glass Components by Selective Laser Melting: Soda-Lime Glass Versus Quartz Glass. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2022, 144, .	2.2	4
2	Beam Shaping in Laser Powder Bed Fusion: Péclet Number and Dynamic Simulation. Metals, 2022, 12, 722.	2.3	15
3	Influence of internal heat transfer on reactive force applied to powder particles in laser cladding. Optics and Laser Technology, 2022, 156, 108457.	4.6	2
4	Physics and modeling. , 2021, , 79-117.		1
5	Broadband, highly reflective thermal protection systems, exploiting photonic additives. International Journal of Thermal Sciences, 2021, 170, 107146.	4.9	2
6	Modelling of Selective Laser Melting Process of Quartz Glass at Elevated Temperatures. EPJ Web of Conferences, 2021, 248, 01001.	0.3	0
7	Radiative transfer, absorption, and reflection by metal powder beds in laser powder-bed processing. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 257, 107366.	2.3	17
8	Metallographic study of denudation in laser powder-bed fusion. Procedia CIRP, 2020, 94, 194-199.	1.9	5
9	Morphology of random packing of micro-particles and its effect on the absorption of laser radiation during selective melting of powders. International Journal of Engineering Science, 2020, 157, 103378.	5.0	21
10	Entrainment flow of a jet emerging into a half-space with the no-slip boundary condition. Physics of Fluids, 2020, 32, 083107.	4.0	7
11	Investigation of processes occurring above laser exposed area during powder bed fusion by optical diagnostics. IOP Conference Series: Materials Science and Engineering, 2020, 971, 022007.	0.6	0
12	Experimental study and modeling of melt pool in laser powder-bed fusion of thin walls. Procedia CIRP, 2020, 94, 372-377.	1.9	2
13	Analytic similarity solutions of the Navier–Stokes equations for a jet in a half space with the no-slip boundary condition. Physics of Fluids, 2020, 32, 053104.	4.0	5
14	Interferometry of Gas-Phase Flows during Selective Laser Melting. Applied Sciences (Switzerland), 2020, 10, 231.	2.5	3
15	10.1063/5.0015040.1. , 2020, , .		0
16	Analysis of Practices for Assessing the Effectiveness of Civil servants in the Russian Federation. Humanities and Social Sciences Bulletin of the Financial University, 2020, 10, 104-108.	0.3	0
17	Radiative transfer in porous carbon-fiber materials for thermal protection systems. International Journal of Heat and Mass Transfer, 2019, 144, 118582.	4.8	17
18	Sequences of Sub-Microsecond Laser Pulses for Material Processing: Modeling of Coupled Gas Dynamics and Heat Transfer. Applied Sciences (Switzerland), 2019, 9, 4785.	2.5	1

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19	Possibilities of Manufacturing Products from Cermet Compositions Using Nanoscale Powders by Additive Manufacturing Methods. <i>Materials</i> , 2019, 12, 3425.	2.9	27
20	Statistical Approach to Radiative Transfer in the Heterogeneous Media of Thin-Wall Morphology: Applications. <i>Journal of Heat Transfer</i> , 2019, 141, .	2.1	10
21	Evaporation-induced gas-phase flows at selective laser melting. <i>Applied Physics A: Materials Science and Processing</i> , 2018, 124, 1.	2.3	24
22	Influence of the conditions of selective laser melting on evaporation. <i>MATEC Web of Conferences</i> , 2018, 224, 01060.	0.2	2
23	On productivity of laser additive manufacturing. <i>Journal of Materials Processing Technology</i> , 2018, 261, 213-232.	6.3	96
24	Statistical Approach to Radiative Transfer in the Heterogeneous Media of Thin-Wall Morphology: Theory. <i>Journal of Heat Transfer</i> , 2018, 140, .	2.1	12
25	New Approach of True Temperature Restoration in Optical Diagnostics Using IR-Camera. <i>Journal of Thermal Spray Technology</i> , 2017, 26, 648-660.	3.1	13
26	Modeling of granular packed beds, their statistical analyses and evaluation of effective thermal conductivity. <i>International Journal of Thermal Sciences</i> , 2017, 114, 327-341.	4.9	29
27	Distortions and Residual Stresses at Layer-by-Layer Additive Manufacturing by Fusion. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2017, 139, .	2.2	36
28	Synthesis of Nanostructured WC-Co Hardmetal by Selective Laser Melting. <i>Procedia IUTAM</i> , 2017, 23, 114-119.	1.2	33
29	Modeling the Effect of Beam Shaping at Selective Laser Melting. <i>Procedia IUTAM</i> , 2017, 23, 147-154.	1.2	8
30	Development of Laser Beam Modulation Assets for the Process Productivity Improvement of Selective Laser Melting. <i>Procedia IUTAM</i> , 2017, 23, 177-186.	1.2	10
31	Selective laser melting of fused silica: Interdependent heat transfer and powder consolidation. <i>International Journal of Heat and Mass Transfer</i> , 2017, 104, 665-674.	4.8	38
32	Optical diagnostics of selective laser melting and monitoring of single-track formation. <i>MATEC Web of Conferences</i> , 2017, 129, 01037.	0.2	2
33	Phase composition and microstructure of WC-Co alloys obtained by selective laser melting. <i>Mechanics and Industry</i> , 2017, 18, 714.	1.3	23
34	Effect of Thermal Fields on the Structure of Corrosion-Resistant Steels Under Different Modes of Laser Treatment. <i>Metal Science and Heat Treatment</i> , 2017, 59, 433-440.	0.6	6
35	Analysis of the structure of random packings of powder particles in laser additive technologies. <i>MATEC Web of Conferences</i> , 2017, 129, 01066.	0.2	1
36	Numerical study of the random packings structure of solid metal powder particles. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	1

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37	Experimental Study of Residual Stresses in Metal Parts Obtained by Selective Laser Melting. Physics Procedia, 2016, 83, 825-832.	1.2	12
38	Obtaining Crack-free WC-Co Alloys by Selective Laser Melting. Physics Procedia, 2016, 83, 874-881.	1.2	49
39	Time-resolved Visualization of Laser Beam Melting of Silica Glass Powder. Physics Procedia, 2016, 83, 1013-1020.	1.2	2
40	Manufacturing individual beads of quartz glass via the selective laser melting of its powder. Bulletin of the Russian Academy of Sciences: Physics, 2016, 80, 999-1002.	0.6	1
41	Dissociation energy of a Sc2 molecule. High Temperature, 2016, 54, 771-774.	1.0	2
42	Crack-free selective laser melting of silica glass: single beads and monolayers on the substrate of the same material. International Journal of Advanced Manufacturing Technology, 2016, 85, 1461-1469.	3.0	50
43	Study Of Laser Beam Modulation Influence On Structure Of Materials Produced By Additive Manufacturing. Advanced Materials Letters, 2016, 7, 111-115.	0.6	5
44	Modeling the Effect of Beam Shaping at Selective Laser Melting. Materials Science Forum, 2015, 834, 85-92.	0.3	2
45	Laser beam profiling: experimental study of its influence on single-track formation by selective laser melting. Mechanics and Industry, 2015, 16, 709.	1.3	24
46	Thermodynamic functions and formation enthalpies of scandium trihalides molecules. High Temperature, 2015, 53, 817-822.	1.0	14
47	Means of Optical Diagnostics of Selective Laser Melting with Non-Gaussian Beams. Measurement Techniques, 2015, 58, 872-877.	0.6	12
48	On the Possibility of Selective Laser Melting of Quartz Glass. Physics Procedia, 2014, 56, 345-356.	1.2	69
49	Experimental Approbation of Selective Laser Melting of Powders by the Use of Non-Gaussian Power Density Distributions. Physics Procedia, 2014, 56, 48-57.	1.2	50
50	Anisotropic layered media with microinclusions: Thermal properties of arc-evaporation multilayer metal nitrides. International Journal of Thermal Sciences, 2014, 77, 75-83.	4.9	11
51	Non-disturbing Boundary Conditions for Modeling of Laser Material Processing. Physics Procedia, 2014, 56, 421-428.	1.2	7
52	Accuracy of high-temperature mass spectrometry measurements of vapor pressure. High Temperature, 2013, 51, 284-286.	1.0	1
53	Thermoelastic Residual Stresses and Deformations at Laser Treatment. Physics Procedia, 2013, 41, 896-903.	1.2	18
54	The multiphase radiation transfer model for two-phase layered systems. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 116, 156-168.	2.3	11

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55	A Fairly Common Error in Processing the Results of Knudsen Effusion Mass Spectrometry: Sublimation Enthalpy of Vanadium as an Example. ECS Transactions, 2013, 46, 223-227.	0.5	0
56	Features of micro-and nanostructures of Au – Ni alloys obtained on nickel due to different modes of pulse laser alloying. Metal Science and Heat Treatment, 2012, 54, 34-40.	0.6	8
57	Anharmonicity in the V ₂ O ₃ molecule and thermodynamic properties of V ₂ O ₃ in the gas phase. High Temperature, 2012, 50, 56-60.	1.0	4
58	Differential Approximations to the Radiation Transfer Equation by Chapman–Enskog Expansion. Journal of Heat Transfer, 2011, 133, .	2.1	9
59	Quantum chemical calculations of dissociation energies of a series of diatomic manganese compounds. High Temperature, 2011, 49, 620-622.	1.0	4
60	Residual Stresses at Laser Surface Remelting and Additive Manufacturing. Physics Procedia, 2011, 12, 248-254.	1.2	110
61	Modeling the interaction of laser radiation with powder bed at selective laser melting. Physics Procedia, 2010, 5, 381-394.	1.2	163
62	Radiation transfer in metallic powder beds used in laser processing. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 2517-2527.	2.3	30
63	Single track formation in selective laser melting of metal powders. Journal of Materials Processing Technology, 2010, 210, 1624-1631.	6.3	627
64	Model of radiative heat transfer in heterogeneous multiphase media. Physical Review B, 2010, 81, .	3.2	36
65	Radiation transfer in metallic-powder beds during laser forming. Quantum Electronics, 2010, 40, 451-459.	1.0	13
66	A model of averaged radiation transfer in two-phase heterogeneous medium. High Temperature, 2009, 47, 375-389.	1.0	11
67	Models of thermal conductivity of multilayer wear resistant coatings. Surface and Coatings Technology, 2009, 204, 629-634.	4.8	13
68	Two-dimensional numerical modelling of radiation transfer in powder beds at selective laser melting. Applied Surface Science, 2009, 255, 5595-5599.	6.1	39
69	Model of thermal conductivity in powder beds. Physical Review B, 2009, 80, .	3.2	89
70	Model of Radiation and Heat Transfer in Laser-Powder Interaction Zone at Selective Laser Melting. Journal of Heat Transfer, 2009, 131, .	2.1	264
71	Homogenization of radiation transfer in two-phase media with irregular phase boundaries. Physical Review B, 2008, 77, .	3.2	58
72	Pulsed laser deposition of antifriction thin-film MoSex coatings at the different vacuum conditions. Surface and Coatings Technology, 2007, 201, 7813-7821.	4.8	34

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73	Modelling chemical kinetics of small clusters after nanosecond laser ablation. Applied Surface Science, 2007, 253, 7672-7676.	6.1	4
74	Direct laser manufacturing with coaxial powder injection: Modelling of structure of deposited layers. Applied Surface Science, 2007, 253, 8316-8321.	6.1	7
75	Heat transfer modelling and stability analysis of selective laser melting. Applied Surface Science, 2007, 254, 975-979.	6.1	239
76	Normal-directional and normal-hemispherical reflectances of micron- and submicron-sized powder beds at 633 and 790nm. Journal of Applied Physics, 2006, 99, 113528.	2.5	19
77	Estimation of a priori errors in ab initio calculations of thermochemical values for the example of the dissociation energies of the ZnO and ZnS molecules. Russian Journal of Physical Chemistry A, 2006, 80, 1864-1867.	0.6	3
78	Modelling of radiation transfer in metallic powders at laser treatment. International Journal of Heat and Mass Transfer, 2005, 48, 3423-3434.	4.8	187
79	Transition Regime of Gas-Phase Heat Transfer in Powder Beds. AIP Conference Proceedings, 2005, , .	0.4	1
80	Discrete Velocity Numerical Approach to Strong Evaporation of Graphite. AIP Conference Proceedings, 2005, , .	0.4	0
81	Light extinction in metallic powder beds: Correlation with powder structure. Journal of Applied Physics, 2005, 98, 013533.	2.5	53
82	Gas-kinetic simulation of carbon vapour molecular composition at nanosecond laser ablation of graphite in vacuum. Journal Physics D: Applied Physics, 2005, 38, 2881-2889.	2.8	5
83	Thermal model of nanosecond pulsed laser ablation: Analysis of energy and mass transfer. Journal of Applied Physics, 2005, 97, 014307.	2.5	110
84	Photopyroelectric measurement of thermal conductivity of metallic powders. Journal of Applied Physics, 2005, 97, 024905.	2.5	118
85	Ionization degree for strong evaporation of metals. Physics of Plasmas, 2005, 12, 083503.	1.9	9
86	Contact thermal conductivity of a powder bed in selective laser sintering. International Journal of Heat and Mass Transfer, 2003, 46, 1103-1109.	4.8	164
87	Near-surface laser vapour coupling in nanosecond pulsed laser ablation. Journal Physics D: Applied Physics, 2003, 36, 2962-2971.	2.8	38
88	Mechanisms of selective laser sintering and heat transfer in Ti powder. Rapid Prototyping Journal, 2003, 9, 314-326.	3.2	168
89	Gas-dynamic boundary conditions of evaporation and condensation: Numerical analysis of the Knudsen layer. Physics of Fluids, 2002, 14, 4242-4255.	4.0	121
90	Target-vapour interaction and atomic collisions in pulsed laser ablation. Journal Physics D: Applied Physics, 2001, 34, 1147-1156.	2.8	29

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91	<title>Gas dynamics of laser ablation: two-dimensional expansion of the vapor in an ambient atmosphere</title>. , 2001, , .		0
92	Two-dimensional gas-dynamic model of laser ablation in an ambient gas. Applied Surface Science, 2000, 154-155, 66-72.	6.1	33
93	Simulation of nanoscale particles elaboration in laser-produced erosive flow. Applied Surface Science, 2000, 154-155, 331-336.	6.1	14
94	Submicron particles synthesis by laser evaporation at low power density: a numerical analysis. Applied Surface Science, 2000, 154-155, 508-513.	6.1	11
95	Influence of atomic collisions in vapour phase on pulsed laser ablation. Applied Surface Science, 2000, 168, 96-99.	6.1	8
96	Gas dynamics of laser ablation: Influence of ambient atmosphere. Journal of Applied Physics, 2000, 88, 4352.	2.5	103
97	A model for nanoparticles synthesis by pulsed laser evaporation. Journal Physics D: Applied Physics, 1999, 32, 2162-2168.	2.8	37
98	Hydrodynamics of laser erosive jet generating nanoscale particles. Applied Surface Science, 1997, 109-110, 74-79.	6.1	9
99	Rarefied plasma?metallic particle heat and momentum transfer under hypersonic flow conditions. Plasma Chemistry and Plasma Processing, 1996, 16, 79-97.	2.4	0
100	Condensation in the laminar-free jet of vapor flowing into a cool gas. , 1996, , .		0
101	Kinetic model of the action of a rarefied cold-ion plasma flow on a spherical metal particle. Journal of Engineering Physics and Thermophysics, 1995, 67, 949-955.	0.6	0
102	Kinetics of heat transfer from a rarefied plasma to a spherical particle emitting thermoelectrons. Journal of Engineering Physics and Thermophysics, 1993, 64, 391-395.	0.6	0
103	Effect of Debye screening on heat transfer to a spherical particle from rarefied plasma. Plasma Chemistry and Plasma Processing, 1993, 13, 633-653.	2.4	4
104	Kinetics of heat transfer to a spherical particle from a rarefied plasma. 3. Maxwellian ion approximation. Journal of Engineering Physics and Thermophysics, 1992, 62, 187-192.	0.6	0
105	Kinetics of heat transfer between a spherical particle and a rarefied plasma. 1. Cold ion approximation. Journal of Engineering Physics and Thermophysics, 1992, 62, 31-35.	0.6	0
106	Kinetics of heat transfer between a spherical particle and a rarefied plasma. 2. Monoenergetic ion approximation. Journal of Engineering Physics and Thermophysics, 1992, 62, 36-39.	0.6	0
107	Mass-spectrometric study of ion-molecular equilibria in rubidium iodide vapor. Theoretical and Experimental Chemistry, 1980, 15, 465-469.	0.8	0
108	Selective Laser Melting of 3D Structures Produced from Heat-Resistant Cobalt Alloys. Materials Science Forum, 0, 834, 71-76.	0.3	0

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109	Synthesis of Nanostructured WC-Co Hardmetal by Selective Laser Melting. Materials Science Forum, 0, 834, 77-83.	0.3	3
110	Studying Gas-Phase Flows in the Laser Exposure Zone during Selective Laser Melting. Materials Science Forum, 0, 989, 806-810.	0.3	0
111	Influence of the Powder Particle Size on the Denudated Zone Width at Selective Laser Melting. Materials Science Forum, 0, 989, 816-820.	0.3	0
112	Amorphous-Crystalline Composite Microstructure Formation in $Zr_{46}Cu_{46}Al_{8}$ Alloy at the Conditions of Selective Laser Melting. Key Engineering Materials, 0, 910, 959-965.	0.4	2