Oleg Kovalev

List of Publications by Year
in descending order

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38 papers	375 citations	840776 11 h-index	794594 19 g-index
38 all docs	38 docs citations	38 times ranked	237 citing authors

#	Article	IF	Citations
1	Theoretical and Experimental Investigation of Gas Flows, Powder Transport and Heating in Coaxial Laser Direct Metal Deposition (DMD) Process. Journal of Thermal Spray Technology, 2011, 20, 465-478.	3.1	67
2	Modeling of flow separation of assist gas as applied to laser cutting of thick sheet metal. Applied Mathematical Modelling, 2009, 33, 3730-3745.	4.2	36
3	Visualization of events inside kerfs during laser cutting of fusible metal. Journal of Laser Applications, 2009, 21, 39-45.	1.7	34
4	Technique of Formation of an Axisymmetric Heterogeneous Flow During Thermal Spraying of Powder Materials. Journal of Thermal Spray Technology, 2012, 21, 159-168.	3.1	34
5	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
6	Modelling of heat and mass transfer in the laser cladding during direct metal deposition. Thermophysics and Aeromechanics, 2013, 20, 251-261.	0.5	18
7	Modeling of the free-surface shape in laser cutting of metals. 2. M odel of multiple reflection and absorption of radiation. Journal of Applied Mechanics and Technical Physics, 2005, 46, 9-13.	0.5	17
8	Metallochemical Analysis of the Reaction in a Mixture of Nickel and Aluminum Powders. Combustion, Explosion and Shock Waves, 2004, 40, 172-179.	0.8	16
9	An Experimental Study of the Synthesis of Ultrafine Titania Powder in Plasmachemical Flow-Type Reactor. International Journal of Chemical Reactor Engineering, 2014, 12, 377-396.	1.1	16
10	Mathematical modeling of metallochemical reactions in a two-species reacting disperse mixture. Combustion, Explosion and Shock Waves, 2013, 49, 563-574.	0.8	15
11	Adjoint problems of mechanics of continuous media in gasâ€laser cutting of metals. Journal of Applied Mechanics and Technical Physics, 2001, 42, 1014-1022.	0.5	12
12	New possibilities of plasma spraying of wear-resistant coatings. Journal of Friction and Wear, 2013, 34, 161-165.	0.5	11
13	Modeling of the random packing of a loose layer of polydisperse spherical particles. Journal of Applied Mechanics and Technical Physics, 2014, 55, 709-717.	0.5	11
14	Modeling of the Free-Surface Shape in Laser Cutting of Metals. 1. Effect of Polarization of the Gaussian Beam on the Shape of the Surface Formed. Journal of Applied Mechanics and Technical Physics, 2004, 45, 915-922.	0.5	10
15	Prediction of the Size of Aluminum-Oxide Particles in Exhaust Plumes of Solid Rocket Motors. Combustion, Explosion and Shock Waves, 2002, 38, 535-546.	0.8	6
16	Effect of the recoil pressure induced by evaporation on motion of powder particles in the light field during laser cladding. Journal of Applied Mechanics and Technical Physics, 2012, 53, 56-66.	0.5	6
17	A model of structural transformations in a reactive dispersed medium under conditions of nongasifying combustion. Journal of Applied Mechanics and Technical Physics, 1997, 38, 52-57.	0.5	5
18	Modeling of the Front of Melting and Destruction of a Melt Film During Gas-Laser Cutting of Metals. Journal of Applied Mechanics and Technical Physics, 2004, 45, 133-141.	0.5	5

#	Article	IF	Citations
19	Highly hydrophobic ceramic coatings produced by plasma spraying of powder materials. Thermophysics and Aeromechanics, 2020, 27, 585-594.	0.5	5
20	On the Theory of Interphase Interaction in a Mixture of Reacting Metal Particles. Combustion, Explosion and Shock Waves, 2002, 38, 655-664.	0.8	4
21	Modelling of multi-vortex convection of fine alloying components in the molten pool under the laser radiation. Thermophysics and Aeromechanics, 2013, 20, 227-236.	0.5	4
22	Modeling of processes in technologies of laser additive manufacturing of metal parts. Bulletin of the Russian Academy of Sciences: Physics, 2016, 80, 367-372.	0.6	4
23	Theory of metal surface destruction under the action of laser radiation. Doklady Physics, 2004, 49, 175-178.	0.7	3
24	Analysis of the influence of radiation polarization type on the absorptive capacity and propulsive motion of microparticles in the light field of Đ¡Đž2 laser. Thermophysics and Aeromechanics, 2018, 25, 555-563.	0.5	3
25	The effect of vortex gas flow on the surface quality for the oxygen-laser cutting of mild steel. Doklady Physics, 2009, 54, 72-76.	0.7	2
26	Ray tracing method for simulation of laser beam interaction with random packings of powders. AIP Conference Proceedings, 2018, , .	0.4	2
27	Comparative analysis of performance characteristics of nozzle heads for powder transportation in a laser cladding and direct material deposition. MATEC Web of Conferences, 2018, 224, 01041.	0.2	2
28	Simulation of surface profile formation in oxygen laser cutting of mild steel. , 2008, , .		1
29	Numerical simulation and experimental investigation of three-dimensional gas-jet transportation of powder particles in direct material deposition. , 2013, , .		1
30	Analysis of the structure of random packings of powder particles in laser additive technologies. MATEC Web of Conferences, 2017, 129, 01066.	0.2	1
31	Instability of thermo-concentration convection of a melt in laser surface treatment of metals. AIP Conference Proceedings, 2018, , .	0.4	1
32	Simulation of evaporation and propulsion of small particles in a laser beam. Acta Mechanica, 2020, 231, 2273-2285.	2.1	1
33	Numerical study of the random packings structure of solid metal powder particles. AIP Conference Proceedings, 2017, , .	0.4	1
34	Formation of a two-phase vortex structure in paraffin melt subjected to an air jet in a narrow channel. Doklady Physics, 2007, 52, 346-350.	0.7	0
35	Principles of supersonic oxygen jet forming for Lasox cutting process. , 2008, , .		0
36	Modeling of laser-induced combustion of iron in oxygen during gas-laser cutting. Combustion, Explosion and Shock Waves, 2010, 46, 293-300.	0.8	0

#	Article	IF	Citations
37	Simulation of the physicochemical interaction of reacting components in a molten pool during laser cladding. Journal of Physics: Conference Series, 2018, 1115, 032017.	0.4	0
38	Numerical Simulation of Neutralization of Nitrogen Oxides in the Exhaust Gases of Electric Arc Installation. Advances in Intelligent Systems and Computing, 2019, , 653-660.	0.6	0