

Michael Gasik

List of Publications by Year in descending order

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121
papers

2,078
citations

218677

26
h-index

289244

40
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125
all docs

125
docs citations

125
times ranked

2193
citing authors

#	ARTICLE	IF	CITATIONS
1	Directional conductivity in layered alumina. <i>Current Applied Physics</i> , 2022, 40, 68-73.	2.4	3
2	Surface functionalization of anodized tantalum with Mn ₃ O ₄ nanoparticles for effective corrosion protection in simulated inflammatory condition. <i>Ceramics International</i> , 2022, 48, 3148-3156.	4.8	22
3	Smart Hydrogels for Advanced Drug Delivery Systems. <i>International Journal of Molecular Sciences</i> , 2022, 23, 3665.	4.1	99
4	Multi-material cellular structured orthopedic implants design: In vitro and bio-tribological performance. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 131, 105246.	3.1	1
5	Mechanical Properties of Ti6Al4V Fabricated by Laser Powder Bed Fusion: A Review Focused on the Processing and Microstructural Parameters Influence on the Final Properties. <i>Metals</i> , 2022, 12, 986.	2.3	20
6	Enhancement of Gingival Tissue Adherence of Zirconia Implant Posts: In Vitro Study. <i>Materials</i> , 2021, 14, 455.	2.9	5
7	Customized Root-Analogue Implants: A Review on Outcomes from Clinical Trials and Case Reports. <i>Materials</i> , 2021, 14, 2296.	2.9	14
8	Biomechanical Properties of Bone and Mucosa for Design and Application of Dental Implants. <i>Materials</i> , 2021, 14, 2845.	2.9	6
9	Biomechanical and functional comparison of moulded and 3D printed medical silicones. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 122, 104649.	3.1	7
10	Surface characterization of titanium-based substrates for orthopaedic applications. <i>Materials Characterization</i> , 2021, 177, 111161.	4.4	11
11	Biomechanical Features of Graphene-Augmented Inorganic Nanofibrous Scaffolds and Their Physical Interaction with Viruses. <i>Materials</i> , 2021, 14, 164.	2.9	3
12	Zirconia implants with improved attachment to the gingival tissue. <i>Journal of Periodontology</i> , 2020, 91, 1213-1224.	3.4	14
13	Reengineering Bone-Implant Interfaces for Improved Mechanotransduction and Clinical Outcomes. <i>Stem Cell Reviews and Reports</i> , 2020, 16, 1121-1138.	3.8	15
14	Biomechanical characterization of engineered tissues and implants for tissue/organ replacement applications. , 2020, , 599-627.		1
15	Predicting the output dimensions, porosity and elastic modulus of additive manufactured biomaterial structures targeting orthopedic implants. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 99, 104-117.	3.1	44
16	Metallurgical Gallium Additions to Titanium Alloys Demonstrate a Strong Time-Increasing Antibacterial Activity without any Cellular Toxicity. <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 2815-2820.	5.2	46
17	Novel laser surface texturing for improved primary stability of titanium implants. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 98, 26-39.	3.1	45
18	A study on the production of thin-walled Ti6Al4V parts by selective laser melting. <i>Journal of Manufacturing Processes</i> , 2019, 39, 346-355.	5.9	34

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19	Multi-material Ti6Al4V & PEEK cellular structures produced by Selective Laser Melting and Hot Pressing: A tribocorrosion study targeting orthopedic applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 89, 54-64.	3.1	34
20	Amorphous calcium phosphate materials: Formation, structure and thermal behaviour. <i>Journal of the European Ceramic Society</i> , 2019, 39, 1642-1649.	5.7	68
21	Development of β -TCP-Ti6Al4V structures: Driving cellular response by modulating physical and chemical properties. <i>Materials Science and Engineering C</i> , 2019, 98, 705-716.	7.3	30
22	Damping and mechanical behavior of metal-ceramic composites applied to novel dental restorative systems. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 90, 239-247.	3.1	9
23	Graphene-Augmented Nanofiber Scaffolds Trigger Gene Expression Switching of Four Cancer Cell Types. <i>ACS Biomaterials Science and Engineering</i> , 2018, 4, 1622-1629.	5.2	11
24	Hybrid graphene-ceramic nanofibre network for spontaneous neural differentiation of stem cells. <i>Interface Focus</i> , 2018, 8, 20170037.	3.0	11
25	Time-effective synthesis of rhombohedral CuAlO ₂ from mesoporous alumina substrate. <i>Materials and Design</i> , 2018, 147, 48-55.	7.0	3
26	Influence of specimens' geometry and materials on the thermal stresses in dental restorative materials during thermal cycling. <i>Journal of Dentistry</i> , 2018, 69, 41-48.	4.1	8
27	The Importance of Controlled Mismatch of Biomechanical Compliances of Implantable Scaffolds and Native Tissue for Articular Cartilage Regeneration. <i>Frontiers in Bioengineering and Biotechnology</i> , 2018, 6, 187.	4.1	14
28	45S5 BAG-Ti6Al4V structures: The influence of the design on some of the physical and chemical interactions that drive cellular response. <i>Materials and Design</i> , 2018, 160, 95-105.	7.0	22
29	Viscoelastic behaviour of hydrogel-based composites for tissue engineering under mechanical load. <i>Biomedical Materials (Bristol)</i> , 2017, 12, 025004.	3.3	108
30	Improved operation of SO ₂ depolarized electrolyser stack for H ₂ production at ambient conditions. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 13407-13414.	7.1	6
31	Understanding biomaterial-tissue interface quality: combined <i>in vitro</i> evaluation. <i>Science and Technology of Advanced Materials</i> , 2017, 18, 550-562.	6.1	38
32	First principles, thermal stability and thermodynamic assessment of the binary Ni-W system. <i>International Journal of Materials Research</i> , 2017, 108, 1025-1035.	0.3	17
33	New analytical methodology for analysing S(IV) species at low pH solutions by one stage titration method (bichromatometry) with a clear colour change. Could potentially replace the state-of-art-method iodometry at low pH analysis due higher accuracy. <i>PLoS ONE</i> , 2017, 12, e0188227.	2.5	2
34	Diffusion equations in inhomogeneous solid having arbitrary gradient concentration. <i>Condensed Matter Physics</i> , 2017, 20, 13201.	0.7	1
35	Silica-Gentamicin Nanohybrids: Synthesis and Antimicrobial Action. <i>Materials</i> , 2016, 9, 170.	2.9	24
36	SO ₂ carry-over and sulphur formation in a SO ₂ -depolarized electrolyser. <i>Journal of Solid State Electrochemistry</i> , 2016, 20, 1655-1663.	2.5	15

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37	Graphene-augmented nanofiber scaffolds demonstrate new features in cells behaviour. Scientific Reports, 2016, 6, 30150.	3.3	17
38	High temperature damping behavior and dynamic Young's modulus of AlSi-CNT-SiCp hybrid composite. Composite Structures, 2016, 141, 155-162.	5.8	25
39	Performance of electrocatalytic gold coating on bipolar plates for SO ₂ depolarized electrolyser. Journal of Power Sources, 2016, 306, 1-7.	7.8	14
40	A new approach for modelling lattice energy in finite crystal domains. Journal of Physics: Conference Series, 2015, 633, 012014.	0.4	1
41	Modelling of poro-visco-elastic biological systems. Journal of Physics: Conference Series, 2015, 633, 012134.	0.4	4
42	Titanium implants with modified surfaces: Meta-analysis of in vivo osteointegration. Materials Science and Engineering C, 2015, 49, 152-158.	7.3	30
43	Thermal and microstructural analysis of doped alumina nanofibers. Thermochemica Acta, 2015, 602, 43-48.	2.7	6
44	Finite element analysis of the residual thermal stresses on functionally graded dental restorations. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 50, 123-130.	3.1	22
45	Mechanical properties of hot pressed CoCrMo alloy compacts for biomedical applications. Materials and Design, 2015, 83, 829-834.	7.0	31
46	Improving the functional design of dental restorations by adding a composite interlayer in the multilayer system: multi-aspect analysis. Ciência & Tecnologia Dos Materiais, 2015, 27, 36-40.	0.5	5
47	Optimisation of functionally graded material thermoelectric cooler for the solar space power system. Applied Thermal Engineering, 2014, 66, 528-533.	6.0	17
48	Mechanical and thermal properties of hot pressed CoCrMo porcelain composites developed for prosthetic dentistry. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 30, 103-110.	3.1	23
49	Development and optimisation of hydroxyapatite-TCP functionally graded biomaterial. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 30, 266-273.	3.1	25
50	Fundamental relation between the main parameters of the thermally activated transport phenomena in complex oxide melts. Russian Metallurgy (Metally), 2014, 2014, 503-508.	0.5	1
51	Smelting ferrosilicomanganese from manganese magnesia sinter. Steel in Translation, 2014, 44, 50-53.	0.3	1
52	Coupled thermal analysis of novel alumina nanofibers with ultrahigh aspect ratio. Thermochemica Acta, 2013, 574, 140-144.	2.7	55
53	Theory of Ferroalloys Processing. , 2013, , 29-82.		5
54	Technology of Zirconium Ferroalloys. , 2013, , 435-447.		0

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55	Technology of Tungsten Ferroalloys. , 2013, , 377-385.		1
56	Technology of Molybdenum Ferroalloys. , 2013, , 387-396.		3
57	Technology of Vanadium Ferroalloys. , 2013, , 397-409.		2
58	Technology of Titanium Ferroalloys. , 2013, , 421-433.		1
59	Modeling and experimental assessment of Nafion membrane properties used in SO ₂ depolarized water electrolysis for hydrogen production. International Journal of Hydrogen Energy, 2013, 38, 10-19.	7.1	11
60	Ultra-High Photon Energy Absorption by Gold Nanoparticles Arrays. Applied Mechanics and Materials, 2013, 481, 14-20.	0.2	1
61	12th International Symposium on Multiscale, Multifunctional and Functionally Graded Materials (FGM) TJ ETQq1 1 0.784314 0.4 0.6 BT /Over	0.4	0
62	Thermodynamic assessment of the ternary Ni-Ti-Cr system. Journal of Alloys and Compounds, 2012, 543, 12-18.	5.5	5
63	Experimental evaluation of the bond strength between a CoCrMo dental alloy and porcelain through a composite metal-ceramic graded transition interlayer. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 13, 206-214.	3.1	29
64	Activities and Free Energy of Mixing of Sulfuric Acid Solutions by Gibbs-Duhem Equation Integration. Journal of Chemical & Engineering Data, 2012, 57, 1665-1671.	1.9	7
65	Reduction of Biofilm Infection Risks and Promotion of Osteointegration for Optimized Surfaces of Titanium Implants. Advanced Healthcare Materials, 2012, 1, 117-127.	7.6	43
66	Novel process concept for the production of H ₂ and H ₂ SO ₄ by SO ₂ -depolarized electrolysis. Environment, Development and Sustainability, 2012, 14, 529-540.	5.0	18
67	A multicriteria approach for evaluating high temperature hydrogen production processes. International Journal of Multicriteria Decision Making, 2011, 1, 177.	0.2	4
68	Thermoacoustic phenomena in metal nanoparticle systems generated by an ultrashort laser pulse. Journal of Physics: Conference Series, 2010, 214, 012050.	0.4	3
69	Thermodynamic analysis of the dominant phase equilibria in M(Si, Cr, Al)-O-C systems. Russian Metallurgy (Metally), 2010, 2010, 548-556.	0.5	2
70	Functionally Graded Materials: bulk processing techniques. International Journal of Materials and Product Technology, 2010, 39, 20.	0.2	84
71	Thermodynamics of FGM: New Approach for Free Energy and the Equilibrium State Calculations. Materials Science Forum, 2009, 631-632, 59-64.	0.3	0
72	Modelling of Processing of FGM Bioimplants. Materials Science Forum, 2009, 631-632, 217-222.	0.3	0

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73	Thermal expansion of silicon at temperatures up to 1100°C. Journal of Materials Processing Technology, 2009, 209, 723-727.	6.3	33
74	Elastic properties of lamellar Ti-Al alloys. Computational Materials Science, 2009, 47, 206-212.	3.0	5
75	Introduction: materials challenges in fuel cells. , 2008, , 1-5.		5
76	Materials for Fuel Cells. , 2008, , .		7
77	Materials for fuel cells. , 2008, , .		0
78	Effect of Nozzle Location and Nozzle Capacity on Spray Cooling of Hot Gas in a Horizontal Duct. Canadian Metallurgical Quarterly, 2007, 46, 407-414.	1.2	1
79	Design and Powder Metallurgy Processing of Functionally Graded Materials. , 2006, , 258-264.		0
80	Decomposition of mixed Mn and Co nitrates supported on carbon. Thermochemica Acta, 2005, 427, 155-161.	2.7	37
81	Thermal analysis of eutectic reactions of white cast irons. Scandinavian Journal of Metallurgy, 2005, 34, 245-249.	0.3	5
82	Optimisation of FGM TBC and Their Thermal Cycling Stability. Materials Science Forum, 2005, 492-493, 9-14.	0.3	9
83	Computer-Integrated Safe Design of FGM Component for Hip Replacement Prosthesis. Materials Science Forum, 2005, 492-493, 483-488.	0.3	6
84	Machining FGM: Residual Stresses Redistribution. Materials Science Forum, 2005, 492-493, 415-420.	0.3	2
85	Corrosion Resistance of Homogeneous and FGM Coatings. Materials Science Forum, 2005, 492-493, 305-310.	0.3	25
86	Neutron Diffraction Studies of Functionally Graded Alumina/Zirconia Ceramics. Materials Science Forum, 2005, 492-493, 201-206.	0.3	3
87	Microstructure formation in Ti-Si composite subjected to high temperature gradients. International Journal of Materials Research, 2005, 96, 377-379.	0.8	1
88	Comparison of preparation routes of spinel catalyst for alkaline fuel cells. Materials Research Bulletin, 2004, 39, 1195-1208.	5.2	37
89	Cobalt price hikes set search for alternates in train. Metal Powder Report, 2004, 59, 36-39.	0.1	13
90	MnCo ₂ O ₄ Preparation by Microwave-Assisted Route Synthesis (MARS) and the Effect of Carbon Admixture.. ChemInform, 2004, 35, no.	0.0	0

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91	Study of Ti-Si in situ composite processing by multi-stage eutectic solidification. International Journal of Materials Research, 2004, 95, 377-380.	0.8	5
92	MnCo2O4 Preparation by Microwave-Assisted Route Synthesis (MARS) and the Effect of Carbon Admixture. Chemistry of Materials, 2003, 15, 4974-4979.	6.7	32
93	Design and Fabrication of Symmetric FGM Plates. Materials Science Forum, 2003, 423-425, 23-28.	0.3	14
94	Industrial Applications of FGM Solutions. Materials Science Forum, 2003, 423-425, 17-22.	0.3	13
95	Optimization Sintering of Zirconia/Alumina Functionally Graded Material. Materials Science Forum, 2003, 423-425, 183-186.	0.3	0
96	Smelting of Aluminum. , 2003, , .		2
97	Stress evolution in graded materials during densification by sintering processes. Computational Materials Science, 2002, 25, 264-271.	3.0	15
98	Microwave synthesis of catalyst spinel MnCo2O4 for alkaline fuel cell. Journal of Power Sources, 2002, 106, 109-115.	7.8	53
99	Electrochemical evaluation of sintered metal hydride electrodes for electric vehicle applications. Journal of Alloys and Compounds, 2001, 322, 281-285.	5.5	17
100	An electrochemical investigation of mechanical alloying of MgNi-based hydrogen storage alloys. Journal of Power Sources, 2000, 89, 117-124.	7.8	62
101	A constitutive model and FE simulation for the sintering process of powder compacts. Computational Materials Science, 2000, 18, 93-101.	3.0	61
102	THERMAL-ELASTO-PLASTIC ANALYSIS OF W-CU FUNCTIONALLY GRADED MATERIALS SUBJECTED TO A UNIFORM HEAT FLOW BY MICROMECHANICAL MODEL. Journal of Thermal Stresses, 2000, 23, 395-409.	2.0	28
103	Micromechanical Modelling of Functionally Graded W-Cu Materials for Divertor Plate Components in a Fusion Reactor. Materials Science Forum, 1999, 308-311, 603-607.	0.3	5
104	The New Mechanism of Abnormally High Energy Transferring in Functionally Graded Materials. Materials Science Forum, 1999, 308-311, 669-674.	0.3	2
105	Micromechanical modelling of functionally graded materials. Computational Materials Science, 1998, 13, 42-55.	3.0	101
106	Gauge field theory for functional graded materials and components. Composites Part B: Engineering, 1997, 28, 121-125.	12.0	3
107	Local fields in functionally graded materials**This work was partially supported by Technology Development Centre of Finland (TEKES) and the Commission of European Communities (COST-503) Tj ETQq1 1 0.784314 rgBT /Over bo		
108	Al2O3 to Ni-superalloy diffusion bonded FG-joints for high temperature applications**This study has been supported by the European Commission through the project BE-7249 under the contract BRE2-CT94-0928.. , 1997, , 313-318.		0

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109	Rapidly solidified Fe-TiC composites: Thermodynamics and the peculiarities of microstructure formation in situ. Scripta Materialia, 1996, 35, 629-634.	5.2	28
110	Nickel P/M superalloys with isotropic carbide reinforcement in situ. Scripta Metallurgica Et Materialia, 1995, 32, 49-55.	1.0	0
111	Worldwide trends in functional gradient materials research and development. Composites Part B: Engineering, 1994, 4, 883-894.	0.6	95
112	Evaluation of properties of W _i -Cu functional gradient materials by micromechanical model. Computational Materials Science, 1994, 3, 41-49.	3.0	26
113	Self-strengthening and high temperature sintering in binder-free silicon nitride. Journal of Thermal Analysis, 1993, 40, 201-208.	0.6	0
114	Hydrogen reduction of MoO ₃ -Fe mixes studied by stepwise differential isothermal analysis. Journal of Thermal Analysis, 1993, 40, 313-319.	0.6	9
115	Studies of infiltration by apparent thermogravimetry. Journal of Thermal Analysis, 1993, 40, 915-922.	0.6	2
116	Phase and grain-size compositions of boron carbide powder made by an improved technique. Soviet Powder Metallurgy and Metal Ceramics (English Translation of Poroshkovaya Metallurgiya), 1992, 31, 716-720.	0.1	0
117	Analysis and Simulation of FGM Thermal Barrier Coatings Hot Burner Testing. Materials Science Forum, 0, 631-632, 79-84.	0.3	0
118	Neutron Diffraction Studies of Functionally Graded Alumina/Zirconia Ceramics. Materials Science Forum, 0, , 201-206.	0.3	2
119	Corrosion Resistance of Homogeneous and FGM Coatings. Materials Science Forum, 0, , 305-310.	0.3	1
120	Modelling of the Cooling of a Hot Gas Using a Water Spray in a Duct. , 0, , .		0
121	Influence of temperature processing on the microstructure and hardness of the 420 stainless steel produced by hot pressing. Materials and Manufacturing Processes, 0, , 1-8.	4.7	2