

Michael Gasik

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5163687/publications.pdf>

Version: 2024-02-01

121
papers

2,078
citations

218677

26
h-index

289244

40
g-index

125
all docs

125
docs citations

125
times ranked

2193
citing authors

#	ARTICLE	IF	CITATIONS
1	Viscoelastic behaviour of hydrogel-based composites for tissue engineering under mechanical load. <i>Biomedical Materials (Bristol)</i> , 2017, 12, 025004.	3.3	108
2	Micromechanical modelling of functionally graded materials. <i>Computational Materials Science</i> , 1998, 13, 42-55.	3.0	101
3	Smart Hydrogels for Advanced Drug Delivery Systems. <i>International Journal of Molecular Sciences</i> , 2022, 23, 3665.	4.1	99
4	Worldwide trends in functional gradient materials research and development. <i>Composites Part B: Engineering</i> , 1994, 4, 883-894.	0.6	95
5	Functionally Graded Materials: bulk processing techniques. <i>International Journal of Materials and Product Technology</i> , 2010, 39, 20.	0.2	84
6	Amorphous calcium phosphate materials: Formation, structure and thermal behaviour. <i>Journal of the European Ceramic Society</i> , 2019, 39, 1642-1649.	5.7	68
7	An electrochemical investigation of mechanical alloying of MgNi-based hydrogen storage alloys. <i>Journal of Power Sources</i> , 2000, 89, 117-124.	7.8	62
8	A constitutive model and FE simulation for the sintering process of powder compacts. <i>Computational Materials Science</i> , 2000, 18, 93-101.	3.0	61
9	Coupled thermal analysis of novel alumina nanofibers with ultrahigh aspect ratio. <i>Thermochimica Acta</i> , 2013, 574, 140-144.	2.7	55
10	Microwave synthesis of catalyst spinel MnCo ₂ O ₄ for alkaline fuel cell. <i>Journal of Power Sources</i> , 2002, 106, 109-115.	7.8	53
11	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
12	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
13	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
14	Reduction of Biofilm Infection Risks and Promotion of Osteointegration for Optimized Surfaces of Titanium Implants. <i>Advanced Healthcare Materials</i> , 2012, 1, 117-127.	7.6	43
15	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
16	Comparison of preparation routes of spinel catalyst for alkaline fuel cells. <i>Materials Research Bulletin</i> , 2004, 39, 1195-1208.	5.2	37
17	Decomposition of mixed Mn and Co nitrates supported on carbon. <i>Thermochimica Acta</i> , 2005, 427, 155-161.	2.7	37
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

#	ARTICLE	IF	CITATIONS
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	Thermal expansion of silicon at temperatures up to 1100°C. <i>Journal of Materials Processing Technology</i> , 2009, 209, 723-727.	6.3	33
21	MnCo ₂ O ₄ Preparation by Microwave-Assisted Route Synthesis (MARS) and the Effect of Carbon Admixture. <i>Chemistry of Materials</i> , 2003, 15, 4974-4979.	6.7	32
22	Mechanical properties of hot pressed CoCrMo alloy compacts for biomedical applications. <i>Materials and Design</i> , 2015, 83, 829-834.	7.0	31
23	Titanium implants with modified surfaces: Meta-analysis of in vivo osteointegration. <i>Materials Science and Engineering C</i> , 2015, 49, 152-158.	7.3	30
24	Development of ¹²⁵ I-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
25	Experimental evaluation of the bond strength between a CoCrMo dental alloy and porcelain through a composite metal-ceramic graded transition interlayer. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 13, 206-214.	3.1	29
26	Rapidly solidified Fe-TiC composites: Thermodynamics and the peculiarities of microstructure formation in situ. <i>Scripta Materialia</i> , 1996, 35, 629-634.	5.2	28
27	THERMAL-ELASTO-PLASTIC ANALYSIS OF W-CU FUNCTIONALLY GRADED MATERIALS SUBJECTED TO A UNIFORM HEAT FLOW BY MICROMECHANICAL MODEL. <i>Journal of Thermal Stresses</i> , 2000, 23, 395-409.	2.0	28
28	Evaluation of properties of W-Cu functional gradient materials by micromechanical model. <i>Computational Materials Science</i> , 1994, 3, 41-49.	3.0	26
29	Corrosion Resistance of Homogeneous and FGM Coatings. <i>Materials Science Forum</i> , 2005, 492-493, 305-310.	0.3	25
30	Development and optimisation of hydroxyapatite- ¹²⁵ I-TCP functionally graded biomaterial. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 30, 266-273.	3.1	25
31	High temperature damping behavior and dynamic Young's modulus of AlSi-CNT-SiCp hybrid composite. <i>Composite Structures</i> , 2016, 141, 155-162.	5.8	25
32	Silica-Gentamicin Nanohybrids: Synthesis and Antimicrobial Action. <i>Materials</i> , 2016, 9, 170.	2.9	24
33	Mechanical and thermal properties of hot pressed CoCrMo-porcelain composites developed for prosthetic dentistry. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 30, 103-110.	3.1	23
34	Finite element analysis of the residual thermal stresses on functionally graded dental restorations. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 50, 123-130.	3.1	22
35	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
36	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

#	ARTICLE	IF	CITATIONS
37	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
38	Novel process concept for the production of H ₂ and H ₂ SO ₄ by SO ₂ -depolarized electrolysis. <i>Environment, Development and Sustainability</i> , 2012, 14, 529-540.	5.0	18
39	Electrochemical evaluation of sintered metal hydride electrodes for electric vehicle applications. <i>Journal of Alloys and Compounds</i> , 2001, 322, 281-285.	5.5	17
40	Optimisation of functionally graded material thermoelectric cooler for the solar space power system. <i>Applied Thermal Engineering</i> , 2014, 66, 528-533.	6.0	17
41	Graphene-augmented nanofiber scaffolds demonstrate new features in cells behaviour. <i>Scientific Reports</i> , 2016, 6, 30150.	3.3	17
42	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
43	Stress evolution in graded materials during densification by sintering processes. <i>Computational Materials Science</i> , 2002, 25, 264-271.	3.0	15
44	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
45	Reengineering Bone-Implant Interfaces for Improved Mechanotransduction and Clinical Outcomes. <i>Stem Cell Reviews and Reports</i> , 2020, 16, 1121-1138.	3.8	15
46	Design and Fabrication of Symmetric FGM Plates. <i>Materials Science Forum</i> , 2003, 423-425, 23-28.	0.3	14
47	Performance of electrocatalytic gold coating on bipolar plates for SO ₂ depolarized electrolyser. <i>Journal of Power Sources</i> , 2016, 306, 1-7.	7.8	14
48	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
49	Zirconia implants with improved attachment to the gingival tissue. <i>Journal of Periodontology</i> , 2020, 91, 1213-1224.	3.4	14
50	Customized Root-Analogue Implants: A Review on Outcomes from Clinical Trials and Case Reports. <i>Materials</i> , 2021, 14, 2296.	2.9	14
51	Industrial Applications of FGM Solutions. <i>Materials Science Forum</i> , 2003, 423-425, 17-22.	0.3	13
52	Cobalt price hikes set search for alternates in train. <i>Metal Powder Report</i> , 2004, 59, 36-39.	0.1	13
53	Modeling and experimental assessment of Nafion membrane properties used in SO ₂ depolarized water electrolysis for hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 10-19.	7.1	11
54	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

#	ARTICLE	IF	CITATIONS
55	Hybrid graphene-ceramic nanofibre network for spontaneous neural differentiation of stem cells. <i>Interface Focus</i> , 2018, 8, 20170037.	3.0	11
56	Surface characterization of titanium-based substrates for orthopaedic applications. <i>Materials Characterization</i> , 2021, 177, 111161.	4.4	11
57	Hydrogen reduction of MoO ₃ -Fe mixes studied by stepwise differential isothermal analysis. <i>Journal of Thermal Analysis</i> , 1993, 40, 313-319.	0.6	9
58	Optimisation of FGM TBC and Their Thermal Cycling Stability. <i>Materials Science Forum</i> , 2005, 492-493, 9-14.	0.3	9
59	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
60	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
61	Activities and Free Energy of Mixing of Sulfuric Acid Solutions by Gibbs-Duhem Equation Integration. <i>Journal of Chemical & Engineering Data</i> , 2012, 57, 1665-1671.	1.9	7
62	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
63	Materials for Fuel Cells. , 2008, , .		7
64	Computer-Integrated Safe Design of FGM Component for Hip Replacement Prosthesis. <i>Materials Science Forum</i> , 2005, 492-493, 483-488.	0.3	6
65	Thermal and microstructural analysis of doped alumina nanofibers. <i>Thermochimica Acta</i> , 2015, 602, 43-48.	2.7	6
66	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
67	Biomechanical Properties of Bone and Mucosa for Design and Application of Dental Implants. <i>Materials</i> , 2021, 14, 2845.	2.9	6
68	Micromechanical Modelling of Functionally Graded W-Cu Materials for Divertor Plate Components in a Fusion Reactor. <i>Materials Science Forum</i> , 1999, 308-311, 603-607.	0.3	5
69	Thermal analysis of eutectic reactions of white cast irons. <i>Scandinavian Journal of Metallurgy</i> , 2005, 34, 245-249.	0.3	5
70	Introduction: materials challenges in fuel cells. , 2008, , 1-5.		5
71	Elastic properties of lamellar Ti-Al alloys. <i>Computational Materials Science</i> , 2009, 47, 206-212.	3.0	5
72	Thermodynamic assessment of the ternary Ni-Ti-Cr system. <i>Journal of Alloys and Compounds</i> , 2012, 543, 12-18.	5.5	5

#	ARTICLE	IF	CITATIONS
73	Theory of Ferroalloys Processing. , 2013, , 29-82.		5
74	Improving the functional design of dental restorations by adding a composite interlayer in the multilayer system: multi-aspect analysis. Ci�ncia & Tecnologia Dos Materiais, 2015, 27, 36-40.	0.5	5
75	Enhancement of Gingival Tissue Adherence of Zirconia Implant Posts: In Vitro Study. Materials, 2021, 14, 455.	2.9	5
76	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
77	A multicriteria approach for evaluating high temperature hydrogen production processes. International Journal of Multicriteria Decision Making, 2011, 1, 177.	0.2	4
78	Modelling of poro-visco-elastic biological systems. Journal of Physics: Conference Series, 2015, 633, 012134.	0.4	4
79	Gauge field theory for functional graded materials and components. Composites Part B: Engineering, 1997, 28, 121-125.	12.0	3
80	Neutron Diffraction Studies of Functionally Graded Alumina/Zirconia Ceramics. Materials Science Forum, 2005, 492-493, 201-206.	0.3	3
81	Thermoacoustic phenomena in metal nanoparticle systems generated by an ultrashort laser pulse. Journal of Physics: Conference Series, 2010, 214, 012050.	0.4	3
82	Technology of Molybdenum Ferroalloys. , 2013, , 387-396.		3
83	Time-effective synthesis of rhombohedral CuAlO ₂ from mesoporous alumina substrate. Materials and Design, 2018, 147, 48-55.	7.0	3
84	Directional conductivity in layered alumina. Current Applied Physics, 2022, 40, 68-73.	2.4	3
85	Biomechanical Features of Graphene-Augmented Inorganic Nanofibrous Scaffolds and Their Physical Interaction with Viruses. Materials, 2021, 14, 164.	2.9	3
86	Studies of infiltration by apparent thermogravimetry. Journal of Thermal Analysis, 1993, 40, 915-922.	0.6	2
87	The New Mechanism of Abnormally High Energy Transferring in Functionally Graded Materials. Materials Science Forum, 1999, 308-311, 669-674.	0.3	2
88	Machining FGM: Residual Stresses Redistribution. Materials Science Forum, 2005, 492-493, 415-420.	0.3	2
89	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
90	Technology of Vanadium Ferroalloys. , 2013, , 397-409.		2

#	ARTICLE	IF	CITATIONS
91	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. PLoS ONE, 2017, 12, e0188227.	2.5	2
92	Smelting of Aluminum. , 2003, , .		2
93	Neutron Diffraction Studies of Functionally Graded Alumina/Zirconia Ceramics. Materials Science Forum, 0, , 201-206.	0.3	2
94	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
95	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
96	Technology of Tungsten Ferroalloys. , 2013, , 377-385.		1
97	Technology of Titanium Ferroalloys. , 2013, , 421-433.		1
98	Ultra-High Photon Energy Absorption by Gold Nanoparticles Arrays. Applied Mechanics and Materials, 2013, 481, 14-20.	0.2	1
99	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
100	Smelting ferrosilicomanganese from manganese magnesia sinter. Steel in Translation, 2014, 44, 50-53.	0.3	1
101	A new approach for modelling lattice energy in finite crystal domains. Journal of Physics: Conference Series, 2015, 633, 012014.	0.4	1
102	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 ETQq0 0 0 rgBT /Overlck 10 Tf 5		
103	Microstructure formation in TiSi composite subjected to high temperature gradients. International Journal of Materials Research, 2005, 96, 377-379.	0.8	1
104	Corrosion Resistance of Homogeneous and FGM Coatings. Materials Science Forum, 0, , 305-310.	0.3	1
105	Diffusion equations in inhomogeneous solid having arbitrary gradient concentration. Condensed Matter Physics, 2017, 20, 13201.	0.7	1
106	Biomechanical characterization of engineered tissues and implants for tissue/organ replacement applications. , 2020, , 599-627.		1
107	Multi-material cellular structured orthopedic implants design: In vitro and bio-tribological performance. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 131, 105246.	3.1	1
108	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

#	ARTICLE	IF	CITATIONS
109	Self-strengthening and high temperature sintering in binder-free silicon nitride. Journal of Thermal Analysis, 1993, 40, 201-208.	0.6	0
110	Nickel P/M superalloys with isotropic carbide reinforcement in situ. Scripta Metallurgica Et Materialia, 1995, 32, 49-55.	1.0	0
111	Optimization Sintering of Zirconia/Alumina Functionally Graded Material. Materials Science Forum, 2003, 423-425, 183-186.	0.3	0
112	MnCo ₂ O ₄ Preparation by Microwave-Assisted Route Synthesis (MARS) and the Effect of Carbon Admixture.. ChemInform, 2004, 35, no.	0.0	0
113	Design and Powder Metallurgy Processing of Functionally Graded Materials. , 2006, , 258-264.		0
114	Thermodynamics of FGM: New Approach for Free Energy and the Equilibrium State Calculations. Materials Science Forum, 2009, 631-632, 59-64.	0.3	0
115	Modelling of Processing of FGM Bioimplants. Materials Science Forum, 2009, 631-632, 217-222.	0.3	0
116	Analysis and Simulation of FGM Thermal Barrier Coatings Hot Burner Testing. Materials Science Forum, 0, 631-632, 79-84.	0.3	0
117	Technology of Zirconium Ferroalloys. , 2013, , 435-447.		0
118	Materials for fuel cells. , 2008, , .		0
119	12th International Symposium on Multiscale, Multifunctional and Functionally Graded Materials (FGM) Tj ETQq1 1 0,784314 ggBT /Over 0,4		0
120	Al ₂ O ₃ 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
121	Modelling of the Cooling of a Hot Gas Using a Water Spray in a Duct. , 0, , .		0