

# Lukasz Witek

## List of Publications by Year in descending order

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116  
papers

2,246  
citations

218592

26  
h-index

302012

39  
g-index

118  
all docs

118  
docs citations

118  
times ranked

2251  
citing authors

#	ARTICLE	IF	CITATIONS
1	Additive CAD/CAM Process for Dental Prostheses. Journal of Prosthodontics, 2011, 20, 93-96.	1.7	93
2	Argon-based atmospheric pressure plasma enhances early bone response to rough titanium surfaces. Journal of Biomedical Materials Research - Part A, 2012, 100A, 1901-1906.	2.1	88
3	Biomechanical and histologic basis of osseodensification drilling for endosteal implant placement in low density bone. An experimental study in sheep. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 63, 56-65.	1.5	81
4	Effect of Drilling Dimension on Implant Placement Torque and Early Osseointegration Stages: An Experimental Study in Dogs. Journal of Oral and Maxillofacial Surgery, 2012, 70, e43-e50.	0.5	80
5	Three dimensionally printed bioactive ceramic scaffold osseointegration across critical-sized mandibular defects. Journal of Surgical Research, 2018, 223, 115-122.	0.8	67
6	The technique for 3D printing patient-specific models for auricular reconstruction. Journal of Cranio-Maxillo-Facial Surgery, 2017, 45, 937-943.	0.7	58
7	Parenchymal and stromal tissue regeneration of tooth organ by pivotal signals reinstated in decellularized matrix. Nature Materials, 2019, 18, 627-637.	13.3	53
8	Obesity/Metabolic Syndrome and Diabetes Mellitus on Peri-implantitis. Trends in Endocrinology and Metabolism, 2020, 31, 596-610.	3.1	50
9	Ticagrelor regulates osteoblast and osteoclast function and promotes bone formation in vivo via an adenosine-dependent mechanism. FASEB Journal, 2016, 30, 3887-3900.	0.2	49
10	Form and functional repair of long bone using 3D-printed bioactive scaffolds. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 1986-1999.	1.3	49
11	Dipyridamole enhances osteogenesis of three-dimensionally printed bioactive ceramic scaffolds in calvarial defects. Journal of Cranio-Maxillo-Facial Surgery, 2018, 46, 237-244.	0.7	44
12	Osseointegration assessment of chairside argon-based nonthermal plasma-treated CaP coated dental implants. Journal of Biomedical Materials Research - Part A, 2013, 101A, 98-103.	2.1	42
13	Evaluation of bone response to various anorganic bovine bone xenografts: an experimental calvaria defect study. International Journal of Oral and Maxillofacial Surgery, 2014, 43, 251-260.	0.7	42
14	3D Printing of Microgel-Loaded Modular Microcages as Instructive Scaffolds for Tissue Engineering. Advanced Materials, 2020, 32, e2001736.	11.1	42
15	The role of 3D printing in treating craniomaxillofacial congenital anomalies. Birth Defects Research, 2018, 110, 1055-1064.	0.8	40
16	Biocompatibility and degradation properties of WE43 Mg alloys with and without heat treatment: In vivo evaluation and comparison in a cranial bone sheep model. Journal of Cranio-Maxillo-Facial Surgery, 2017, 45, 2075-2083.	0.7	37
17	Atemporal osseointegration: Early biomechanical stability through osseodensification. Journal of Orthopaedic Research, 2018, 36, 2516-2523.	1.2	34
18	Osseodensification for enhancement of spinal surgical hardware fixation. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 69, 275-281.	1.5	33

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19	Repair of Critical-Sized Long Bone Defects Using Dipyridamole-Augmented 3D-Printed Bioactive Ceramic Scaffolds. <i>Journal of Orthopaedic Research</i> , 2019, 37, 2499-2507.	1.2	33
20	3D-printed resins for provisional dental restorations: Comparison of mechanical and biological properties. <i>Journal of Esthetic and Restorative Dentistry</i> , 2022, 34, 804-815.	1.8	32
21	Characterization of Five Different Implant Surfaces and Their Effect on Osseointegration: A Study in Dogs. <i>Journal of Periodontology</i> , 2011, 82, 742-750.	1.7	30
22	Characterization and <i>in vivo</i> evaluation of laser sintered dental endosseous implants in dogs. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2012, 100B, 1566-1573.	1.6	30
23	Zirconia-reinforced lithium silicate crowns: Effect of thickness on survival and failure mode. <i>Dental Materials</i> , 2019, 35, 1007-1016.	1.6	30
24	Bone Tissue Engineering in the Growing Calvaria Using Dipyridamole-Coated, Three-Dimensionally Printed Bioceramic Scaffolds: Construct Optimization and Effects on Cranial Suture Patency. <i>Plastic and Reconstructive Surgery</i> , 2020, 145, 337e-347e.	0.7	30
25	Dipyridamole-loaded 3D-printed bioceramic scaffolds stimulate pediatric bone regeneration <i>in vivo</i> without disruption of craniofacial growth through facial maturity. <i>Scientific Reports</i> , 2019, 9, 18439.	1.6	29
26	Three-Dimensional Printing for Craniofacial Bone Tissue Engineering. <i>Tissue Engineering - Part A</i> , 2020, 26, 1303-1311.	1.6	28
27	Assessment of a chair-side argon-based non-thermal plasma treatment on the surface characteristics and integration of dental implants with textured surfaces. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 9, 45-49.	1.5	27
28	Sintering effects on chemical and physical properties of bioactive ceramics. <i>Journal of Advanced Ceramics</i> , 2013, 2, 274-284.	8.9	27
29	Controlling calcium and phosphate ion release of 3D printed bioactive ceramic scaffolds: An <i>in vitro</i> study. <i>Journal of Advanced Ceramics</i> , 2017, 6, 157-164.	8.9	27
30	In-House Manufacture of Sterilizable, Scaled, Patient-Specific 3D-Printed Models for Rhinoplasty. <i>Aesthetic Surgery Journal</i> , 2019, 39, 254-263.	0.9	27
31	Biomaterial and biomechanical considerations to prevent risks in implant therapy. <i>Periodontology</i> 2000, 2019, 81, 139-151.	6.3	27
32	Assessment of Atmospheric Pressure Plasma Treatment for Implant Osseointegration. <i>BioMed Research International</i> , 2015, 2015, 1-8.	0.9	26
33	Effect of CAD/CAM Abutment Height and Cement Type on the Retention of Zirconia Crowns. <i>Implant Dentistry</i> , 2018, 27, 582-587.	1.7	26
34	Osseodensification outperforms conventional implant subtractive instrumentation: A study in sheep. <i>Materials Science and Engineering C</i> , 2018, 90, 300-307.	3.8	26
35	The Effect of CAD/CAM Crown Material and Cement Type on Retention to Implant Abutments. <i>Journal of Prosthodontics</i> , 2019, 28, e552-e556.	1.7	26
36	Local delivery of adenosine receptor agonists to promote bone regeneration and defect healing. <i>Advanced Drug Delivery Reviews</i> , 2019, 146, 240-247.	6.6	25

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37	Nanomechanical and microstructural characterization of a zirconia-toughened alumina composite after aging. <i>Ceramics International</i> , 2019, 45, 8840-8846.	2.3	25
38	Implant Biomechanical Stability Variation at Early Implantation Times in Vivo: An Experimental Study in Dogs. <i>International Journal of Oral and Maxillofacial Implants</i> , 2013, 28, e128-e134.	0.6	24
39	Influence of placement depth on bone remodeling around tapered internal connection implants: a histologic study in dogs. <i>Clinical Oral Implants Research</i> , 2015, 26, 942-949.	1.9	24
40	Fatigue Failure of Narrow Implants with Different Implant-Abutment Connection Designs. <i>Journal of Prosthodontics</i> , 2018, 27, 659-664.	1.7	24
41	Alveolar Ridge Expansion: Comparison of Osseodensification and Conventional Osteotome Techniques. <i>Journal of Craniofacial Surgery</i> , 2019, 30, 607-610.	0.3	24
42	The in vivo effect of P&#x2011;15 coating on early osseointegration. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2014, 102, 430-440.	1.6	22
43	The effect of osseodensification drilling for endosteal implants with different surface treatments: A study in sheep. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2019, 107, 615-623.	1.6	22
44	Dipyridamole Augments Three-Dimensionally Printed Bioactive Ceramic Scaffolds to Regenerate Craniofacial Bone. <i>Plastic and Reconstructive Surgery</i> , 2019, 143, 1408-1419.	0.7	22
45	Aging resistant ZTA composite for dental applications: Microstructural, optical and mechanical characterization. <i>Dental Materials</i> , 2020, 36, 1190-1200.	1.6	22
46	Histologic and Biomechanical Evaluation of Alumina-Blasted/Acid-Etched and Resorbable Blasting Media Surfaces. <i>Journal of Oral Implantology</i> , 2012, 38, 549-557.	0.4	21
47	Regeneration of a Pediatric Alveolar Cleft Model Using Three-Dimensionally Printed Bioceramic Scaffolds and Osteogenic Agents: Comparison of Dipyridamole and rhBMP-2. <i>Plastic and Reconstructive Surgery</i> , 2019, 144, 358-370.	0.7	21
48	Interval Cranioplasty: Comparison of Current Standards. <i>Plastic and Reconstructive Surgery</i> , 2011, 127, 1855-1864.	0.7	20
49	Absence of Healing Impairment in Osteotomies Prepared via Osseodensification Drilling. <i>International Journal of Periodontics and Restorative Dentistry</i> , 2019, 39, 65-71.	0.4	18
50	Development of a guided bone regeneration device using salicylic acid-poly(anhydride-ester) polymers and osteoconductive scaffolds. <i>Journal of Biomedical Materials Research - Part A</i> , 2014, 102, 655-664.	2.1	17
51	Geometrical versus Random $\beta$ -TCP Scaffolds: Exploring the Effects on Schwann Cell Growth and Behavior. <i>PLoS ONE</i> , 2015, 10, e0139820.	1.1	16
52	Surface Characterization, Biomechanical, and Histologic Evaluation of Alumina and Bioactive Resorbable Blasting Textured Surfaces in Titanium Implant Healing Chambers: An Experimental Study in Dogs. <i>International Journal of Oral and Maxillofacial Implants</i> , 2013, 28, 694-700.	0.6	15
53	Patient-specific 3D Models for Autogenous Ear Reconstruction. <i>Plastic and Reconstructive Surgery - Global Open</i> , 2016, 4, e1093.	0.3	15
54	Comparative barrier membrane degradation over time: Pericardium versus dermal membranes. <i>Clinical and Experimental Dental Research</i> , 2021, 7, 711-718.	0.8	15

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55	The presence of 3D printing in orthopedics: A clinical and material review. <i>Journal of Orthopaedic Research</i> , 2023, 41, 601-613.	1.2	15
56	The Role of Adenosine Receptor Activation in Attenuating Cartilaginous Inflammation. <i>Inflammation</i> , 2018, 41, 1135-1141.	1.7	14
57	The effect of DLC-coating deposition method on the reliability and mechanical properties of abutmentâ€™s screws. <i>Dental Materials</i> , 2018, 34, e128-e137.	1.6	14
58	Osteointegrative and microgeometric comparison between micro-blasted and alumina blasting/acid etching on grade II and V titanium alloys (Ti-6Al-4V). <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 97, 288-295.	1.5	14
59	Microstructural, mechanical, and optical characterization of an experimental aging-resistant zirconia-toughened alumina (ZTA) composite. <i>Dental Materials</i> , 2020, 36, e365-e374.	1.6	14
60	Selfâ€™assembling human skeletal organoids for disease modeling and drug testing. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2022, 110, 871-884.	1.6	14
61	<i>In vivo</i> evaluation of resorbable supercritical CO <sub>2</sub> -treated collagen membranes for class III furcationâ€™guided tissue regeneration. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2019, 107, 1320-1328.	1.6	13
62	Influence of Abutment Fabrication Method on 3D Fit at the Implant-Abutment Connection. <i>International Journal of Prosthodontics</i> , 2020, 33, 641-647.	0.7	13
63	The effect of plateletâ€™rich fibrin exudate addition to porous poly(lacticâ€™glycolic acid) scaffold in bone healing: An <i>in vivo</i> study. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2020, 108, 1304-1310.	1.6	12
64	Transforming the Degradation Rate of Î²-tricalcium Phosphate Bone Replacement Using 3-Dimensional Printing. <i>Annals of Plastic Surgery</i> , 2021, 87, e153-e162.	0.5	12
65	Physicochemical Characterization and <i>In Vivo</i> Evaluation of Amorphous and Partially Crystalline Calcium Phosphate Coatings Fabricated on Ti-6Al-4V Implants by the Plasma Spray Method. <i>International Journal of Biomaterials</i> , 2012, 2012, 1-8.	1.1	11
66	The physicochemical characterization and <i>in vivo</i> response of micro/nanoporous bioactive ceramic particulate bone graft materials. <i>Materials Science and Engineering C</i> , 2014, 43, 472-480.	3.8	10
67	Effect of Si addition on Caâ€™and Pâ€™impregnated implant surfaces with nanometerâ€™scale roughness: an experimental study in dogs. <i>Clinical Oral Implants Research</i> , 2012, 23, 373-378.	1.9	9
68	<i>In Vivo</i> Evaluation of Dual Acid-Etched and Grit-Blasted/Acid-Etched Implants With Identical Macrogeometry in High-Density Bone. <i>Implant Dentistry</i> , 2017, 26, 815-819.	1.7	9
69	Histo-morphologic characteristics of intra-osseous implants of WE43 Mg alloys with and without heat treatment in an <i>in vivo</i> cranial bone sheep model. <i>Journal of Cranio-Maxillo-Facial Surgery</i> , 2018, 46, 473-478.	0.7	9
70	Implant-abutment fit influences the mechanical performance of single-crown prostheses. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 102, 103506.	1.5	9
71	Physiochemical and bactericidal activity evaluation: Silverâ€™augmented <i>3D</i> -printed scaffoldsâ€™ An <i>in vitro</i> study. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2022, 110, 195-209.	1.6	9
72	Locally Secreted Semaphorin 4D Is Engaged in Both Pathogenic Bone Resorption and Retarded Bone Regeneration in a Ligature-Induced Mouse Model of Periodontitis. <i>International Journal of Molecular Sciences</i> , 2022, 23, 5630.	1.8	9

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73	Residual stress of porcelain-fused to zirconia 3-unit fixed dental prostheses measured by nanoindentation. <i>Dental Materials</i> , 2018, 34, 260-271.	1.6	8
74	Histological and Nanomechanical Properties of a New Nanometric Hydroxiapatite Implant Surface. An In Vivo Study in Diabetic Rats. <i>Materials</i> , 2020, 13, 5693.	1.3	8
75	Synergistic Effects of Implant Macrogeometry and Surface Physicochemical Modifications on Osseointegration: An In Vivo Experimental Study in Sheep. <i>Journal of Long-Term Effects of Medical Implants</i> , 2019, 29, 295-302.	0.2	8
76	Osteogenic parameters surrounding trabecular tantalum metal implants in osteotomies prepared via osseodensification drilling. <i>Medicina Oral, Patologia Oral Y Cirugia Bucal</i> , 2019, 24, 0-0.	0.7	8
77	Osseodensification Versus Subtractive Drilling Techniques in Bone Healing and Implant Osseointegration: Ex Vivo Histomorphologic/Histomorphometric Analysis in a Low-Density Bone Ovine Model. <i>International Journal of Oral and Maxillofacial Implants</i> , 2021, 36, 903-909.	0.6	8
78	Three-Dimensionally-Printed Bioactive Ceramic Scaffolds: Construct Effects on Bone Regeneration. <i>Journal of Craniofacial Surgery</i> , 2021, 32, 1177-1181.	0.3	8
79	MicroCT Analysis of a Retrieved Root Restored with a Bonded Fiber-Reinforced Composite Dowel: A Pilot Study. <i>Journal of Prosthodontics</i> , 2013, 22, 478-483.	1.7	7
80	Clinical, histological, and nanomechanical parameters of implants placed in healthy and metabolically compromised patients. <i>Journal of Dentistry</i> , 2020, 100, 103436.	1.7	7
81	Microtomographic reconstruction of mandibular defects treated with xenografts and collagen-based membranes: A pre-clinical minipig model. <i>Medicina Oral, Patologia Oral Y Cirugia Bucal</i> , 2021, 26, e825-e833.	0.7	7
82	Bone-Forming Capabilities of a Newly Developed NanoHA Composite Alloplast Infused with Collagen: A Pilot Study in the Sheep Mandible. <i>International Journal of Dentistry</i> , 2013, 2013, 1-7.	0.5	6
83	Periodontal Tissue Regeneration Using Brain-Derived Neurotrophic Factor Delivered by Collagen Sponge. <i>Tissue Engineering - Part A</i> , 2019, 25, 1072-1083.	1.6	6
84	Effects of relative centrifugation force on PRF: An in vivo submandibular boney defect regeneration study. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2021, 109, 2237-2245.	1.6	6
85	Assessing osseointegration of metallic implants with boronized surface treatment. <i>Medicina Oral, Patologia Oral Y Cirugia Bucal</i> , 2020, 25, e311-e317.	0.7	6
86	Bone Morphometric Evaluation around Immediately Placed Implants Covered with Porcine-Derived Pericardium Membrane: An Experimental Study in Dogs. <i>International Journal of Biomaterials</i> , 2012, 1-7.	1.1	5
87	Abutment Design for Implant-Supported Indirect Composite Molar Crowns: Reliability and Fractography. <i>Journal of Prosthodontics</i> , 2012, 21, 596-603.	1.7	5
88	Amoxicillin Administrations and Its Influence on Bone Repair Around Osseointegrated Implants. <i>Journal of Oral and Maxillofacial Surgery</i> , 2014, 72, 305.e1-305.e5.	0.5	5
89	Ridge Architecture Preservation Following Minimally Traumatic Exodontia Techniques and Guided Tissue Regeneration. <i>Implant Dentistry</i> , 2019, 28, 319-328.	1.7	5
90	Effect of Surgical Instrumentation Variables on the Osseointegration of Narrow- and Wide-Diameter Short Implants. <i>Journal of Oral and Maxillofacial Surgery</i> , 2021, 79, 346-355.	0.5	5

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91	Effect of supplemental acid-etching on the early stages of osseointegration: A preclinical model. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 122, 104682.	1.5	5
92	Nanoscale physico-mechanical properties of an aging resistant ZTA composite. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 123, 104690.	1.5	5
93	Effect of leukocyte-platelet-rich fibrin in bone healing around dental implants placed in conventional and wide osteotomy sites: A preclinical study. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 2705-2713.	1.6	5
94	Bone Regeneration Around Implants Placed in Fresh Extraction Sockets Covered with a Dual-Layer PTFE/Collagen Membrane: An Experimental Study in Dogs. International Journal of Periodontics and Restorative Dentistry, 2014, 34, 849-855.	0.4	4
95	Bone Regenerative Potential of Modified Biphasic Graft Materials. Implant Dentistry, 2015, Publish Ahead of Print, 149-54.	1.7	4
96	Effect of implant placement depth on the peri-implant bone defect configurations in ligature-induced peri-implantitis: An experimental study in dogs. Medicina Oral, Patologia Oral Y Cirugia Bucal, 2017, 23, 0-0.	0.7	4
97	Osseodensification drilling vs conventional manual instrumentation technique for posterior lumbar fixation: Ex vivo mechanical and histomorphological analysis in an ovine model. Journal of Orthopaedic Research, 2020, 39, 1463-1469.	1.2	4
98	Hydrothermal aging affects the three-dimensional fit and fatigue lifetime of zirconia abutments. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 124, 104832.	1.5	4
99	Modification of Xenogeneic Graft Materials for Improved Release of P-15 Peptides in a Calvarium Defect Model. Journal of Craniofacial Surgery, 2014, 25, 70-76.	0.3	3
100	Tissue-engineered alloplastic scaffolds for reconstruction of alveolar defects. , 2019, , 505-520.		3
101	3D Printing and Adenosine Receptor Activation for Craniomaxillofacial Regeneration. , 2019, , 255-267.		2
102	WE43 and WE43-T5 Mg alloys screws tested in-vitro cellular adhesion and differentiation assay and in-vivo histomorphologic analysis in an ovine model. Journal of Biomaterials Applications, 2021, 35, 901-911.	1.2	2
103	Histomorphometric analysis of implant osseointegration using hydrophilic implants in diabetic rats. Clinical Oral Investigations, 2021, 25, 5867-5878.	1.4	2
104	Physical and chemical characterization of synthetic bone mineral ink - For additive manufacturing applications. Annals of 3D Printed Medicine, 2021, 3, 100024.	1.6	2
105	Salicylic Acid Polymers in Periodontal Tissue Healing. , 2020, , 43-53.		2
106	Tissue Engineering Strategies for Craniomaxillofacial Surgery: Current Trends in 3D-Printed Bioactive Ceramic Scaffolds. Springer Series in Biomaterials Science and Engineering, 2022, , 55-74.	0.7	2
107	Effects of local single dose administration of parathormone on the early stages of osseointegration: A preclinical study. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, , .	1.6	2
108	Residual stress estimated by nanoindentation in pontics and abutments of veneered zirconia fixed dental prostheses. Journal of Applied Oral Science, 2022, 30, e20210475.	0.7	1

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109	Bone Tissue Engineering Strategies for Alveolar Cleft: Review of Preclinical Results and Guidelines for Future Studies. Cleft Palate-Craniofacial Journal, 0, , 105566562211049.	0.5	1
110	Is lacunocanalicular flow the transducer of mechanical tension stress to osteogenesis in distraction?. Journal of the American College of Surgeons, 2010, 211, S84-S85.	0.2	0
111	Comparison of Surface Treatments of Endosteal Implants in Ovariectomized Rabbits. International Journal of Oral and Maxillofacial Implants, 2021, 36, 38-46.	0.6	0
112	Trends in the 3D-Printing Parts for Medical and Dental Implant Technologies. , 2021, , .		0
113	Osteoradionecrosis After Radiation to Reconstructed Mandible With Titanium Plate and Osseointegrated Dental Implants. Practical Radiation Oncology, 2022, 12, 90-94.	1.1	0
114	Clinical application of a FOXO1 inhibitor improves connective tissue healing in a diabetic minipig model. American Journal of Translational Research (discontinued), 2021, 13, 781-791.	0.0	0
115	Early-onset osteoradionecrosis following adjuvant volumetric-modulated arc therapy to an osteocutaneous free fibula flap with customized titanium plate. Journal of Stomatology, Oral and Maxillofacial Surgery, 2021, , .	0.5	0
116	Drug-Eluting Rubber Bands for Tissue Ligation. ACS Applied Materials & Interfaces, 2022, 14, 27675-27685.	4.0	0