Gerhard Schmidmaier

List of Publications by Year
in descending order

81	2,075	201674 27	265206 42
papers	citations	h-index	g-index

84	84	84	2136
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The diamond concept â€“ open questions. Injury, 2008, 39, S5-S8.	1.7	242
2	Treatment of atrophic tibia non-unions according to â€˜diamond conceptâ€™: Results of one- and two-step treatment. Injury, 2015, 46, S39-S50.	1.7	104
3	Synergistic effect of IGF-I and TGF-ÃŸ1 on fracture healing in ratsSingle versus combined application of IGF-I and TGF-ÃŸ1. Acta Orthopaedica, 2003, 74, 604-610.	1.4	97
4	Carrier systems and application of growth factors in orthopaedics. Injury, 2008, 39, S37-S43.	1.7	88
5	Long-term effects of local growth factor (IGF-I and TGF-Î²1) treatment on fracture healing. A safety study for using growth factors. Journal of Orthopaedic Research, 2004, 22, 514-519.	2.3	76
6	Insulin-Like Growth Factor-1 as a Possible Alternative to Bone Morphogenetic Protein-7 to Induce Osteogenic Differentiation of Human Mesenchymal Stem Cells in Vitro. International Journal of Molecular Sciences, 2018, 19, 1674.	4.1	62
7	Clinical evaluation of medicinal products for acceleration of fracture healing in patients with osteoporosis. Bone, 2008, 43, 343-347.	2.9	57
8	Collective Review: Bioactive Implants Coated with Poly(D,L-lactide) and Growth Factors IGF-I, TGF-Î²1, or BMP-2 for Stimulation of Fracture Healing. Journal of Long-Term Effects of Medical Implants, 2006, 16, 61-69.	0.7	53
9	Three-dimensional polymer coated 45S5-type bioactive glass scaffolds seeded with human mesenchymal stem cells show bone formation in vivo. Journal of Materials Science: Materials in Medicine, 2016, 27, 119.	3.6	48
10	Osteogenic differentiation of mesenchymal stem cells is enhanced in a 45S5-supplemented Î²-TCP composite scaffold: an in-vitro comparison of Vitoss and Vitoss BA. PLoS ONE, 2019, 14, e0212799.	2.5	48
11	Evaluation of App-Based Serious Gaming as a Training Method in Teaching Chest Tube Insertion to Medical Students: Randomized Controlled Trial. Journal of Medical Internet Research, 2018, 20, e195.	4.3	48
12	A Pronounced Inflammatory Activity Characterizes the Early Fracture Healing Phase in Immunologically Restricted Patients. International Journal of Molecular Sciences, 2017, 18, 583.	4.1	45
13	RIA fractions contain mesenchymal stroma cells with high osteogenic potency. Injury, 2015, 46, S23-S32.	1.7	43
14	Continuous stimulation with differentiation factors is necessary to enhance osteogenic differentiation of human mesenchymal stem cells in-vitro. Growth Factors, 2017, 35, 179-188.	1.7	43
15	Comparison of the clinical effectiveness of Bone Morphogenic Protein (BMP) -2 and -7 in the adjunct treatment of lower limb nonunions. Orthopaedics and Traumatology: Surgery and Research, 2018, 104, 1241-1248.	2.0	42
16	Dynamic contrast-enhanced ultrasound and elastography assess deltoid muscle integrity after reverse shoulder arthroplasty. Journal of Shoulder and Elbow Surgery, 2017, 26, 108-117.	2.6	40
17	Quantification of TGF-ÃŸ1, PDGF and IGF-1 cytokine expression after fracture treatment vs. non-union therapy via masquelet. Injury, 2016, 47, 342-349.	1.7	39
18	Stimulation of Bone Healing by Sustained Bone Morphogenetic Protein 2 (BMP-2) Delivery. International Journal of Molecular Sciences, 2014, 15, 8539-8552.	4.1	38

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19	Dynamic Contrastâ€Enhanced Sonography and Dynamic Contrastâ€Enhanced Magnetic Resonance Imaging for Preoperative Diagnosis of Infected Nonunions. Journal of Ultrasound in Medicine, 2016, 35, 933-942.	1.7	38
20	Treatment of atrophic femoral non-unions according to the diamond concept: Results of one- and two-step surgical procedure. Journal of Orthopaedics, 2017, 14, 123-133.	1.3	37
21	Are atrophic long-bone nonunions associated with low-grade infections?. Therapeutics and Clinical Risk Management, 2015, 11, 1843.	2.0	34
22	Development and Characterization of a Standard Closed Tibial Fracture Model in the Rat. European Journal of Trauma and Emergency Surgery, 2004, 30, 35-42.	0.3	33
23	Biodegradable polylactide membranes for bone defect coverage: biocompatibility testing, radiological and histological evaluation in a sheep model. Clinical Oral Implants Research, 2006, 17, 439-444.	4.5	32
24	Dynamic contrast-enhanced ultrasound (CEUS) after open and minimally invasive locked plating of proximal humerus fractures. Injury, 2016, 47, 1725-1731.	1.7	30
25	Contrast-Enhanced Ultrasound Determines Supraspinatus Muscle Atrophy After Cuff Repair and Correlates to Functional Shoulder Outcome. American Journal of Sports Medicine, 2018, 46, 2735-2742.	4.2	30
26	Bisphosphonates incorporated in a poly(D,L-lactide) implant coating inhibit osteoclast like cellsin vitro. Journal of Biomedical Materials Research - Part A, 2007, 83A, 1184-1191.	4.0	29
27	Patients’ safety: is there a systemic release of gentamicin by gentamicin-coated tibia nails in clinical use?. Therapeutics and Clinical Risk Management, 2016, Volume 12, 1387-1393.	2.0	28
28	Complications and risk management in the use of the reaming-irrigator-aspirator (RIA) system: RIA is a safe and reliable method in harvesting autologous bone graft. PLoS ONE, 2018, 13, e0196051.	2.5	28
29	Reaming in treatment of non-unions in long bones: cytokine expression course as a tool for evaluation of non-union therapy. Archives of Orthopaedic and Trauma Surgery, 2015, 135, 1107-1116.	2.4	27
30	Contrast-Enhanced Ultrasound Quantifies the Perfusion Within Tibial Non-Unions and Predicts the Outcome of Revision Surgery. Ultrasound in Medicine and Biology, 2018, 44, 1853-1859.	1.5	24
31	The AMANDUS Projectâ€"Advanced Microperfusion Assessed Non-Union Diagnostics With Contrast-Enhanced Ultrasound (CEUS) for the Detection of Infected Lower Extremity Non-Unions. Ultrasound in Medicine and Biology, 2019, 45, 2281-2288.	1.5	23
32	Dynamic contrast-enhanced magnetic resonance imaging (DCE-MRI) for the prediction of non-union consolidation. Injury, 2017, 48, 357-363.	1.7	20
33	Preoperative deltoid assessment by contrast-enhanced ultrasound (CEUS) as predictor for shoulder function after reverse shoulder arthroplasty: a prospective pilot study. Archives of Orthopaedic and Trauma Surgery, 2020, 140, 1001-1012.	2.4	20
34	The rationale behind implant coatings to promote osteointegration, bone healing or regeneration. Injury, 2021, 52, S106-S111.	1.7	20
35	Antibiotic-loaded amphora-shaped pores on a titanium implant surface enhance osteointegration and prevent infections. Bioactive Materials, 2021, 6, 2331-2345.	15.6	20
36	Bone formation of human mesenchymal stem cells harvested from reaming debris is stimulated by low-dose bone morphogenetic protein-7 application in vivo. Journal of Orthopaedics, 2016, 13, 404-408.	1.3	19

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37	Intra-observer and Device-Dependent Inter-observer Reliability of Contrast-Enhanced Ultrasound for Muscle Perfusion Quantification. Ultrasound in Medicine and Biology, 2020, 46, 275-285.	1.5	19
38	Validity of subjective smoking status in orthopedic patients. Therapeutics and Clinical Risk Management, 2015, 11, 1297.	2.0	18
39	The treatment of nonunions with application of BMP-7 increases the expression pattern for angiogenic and inflammable cytokines: a matched pair analysis. Journal of Inflammation Research, 2016, Volume 9, 155-165.	3.5	18
40	A pilot study investigating the histology and growth factor content of human non-union tissue. International Orthopaedics, 2014, 38, 2623-2629.	1.9	17
41	Bioactive-Coated Implants in Trauma Surgery. European Journal of Trauma and Emergency Surgery, 2008, 34, 60-68.	1.7	16
42	Initial peri- and postoperative antibiotic treatment of infected nonunions: results from 212 consecutive patients after mean follow-up of 34 months. Therapeutics and Clinical Risk Management, 2018, Volume 14, 59-67.	2.0	14
43	Impact of intraoperative femoral fractures in primary hip arthroplasty: a comparative study with a mid-term follow-up. HIP International, 2020, 30, 544-551.	1.7	14
44	Contrast-Enhanced Ultrasound (CEUS) Identifies Perfusion Differences Between Tibial Fracture Unions and Non-Unions. Ultraschall in Der Medizin, 2020, 41, 44-51.	1.5	14
45	Contrastâ€Enhanced Ultrasound (CEUS) as Predictor for Early Retear and Functional Outcome After Supraspinatus Tendon Repair. Journal of Orthopaedic Research, 2020, 38, 1150-1158.	2.3	14
46	Evaluation of the clinical use of the ETN PROtectÂ® in non-union therapy. Injury, 2019, 50, 32-39.	1.7	13
47	Supplementation with 45S5 Bioactive Glass Reduces In Vivo Resorption of the Î²-Tricalcium-Phosphate-Based Bone Substitute Material Vitoss. International Journal of Molecular Sciences, 2019, 20, 4253.	4.1	13
48	Evaluation of the clinical effectiveness of bioactive glass (S53P4) in the treatment of non-unions of the tibia and femur: study protocol of a randomized controlled non-inferiority trial. Trials, 2018, 19, 299.	1.6	12
49	Heidelberg-mCT-Analyzer: a novel method for standardized microcomputed-tomography-guided evaluation of scaffold properties in bone and tissue research. Royal Society Open Science, 2015, 2, 150496.	2.4	11
50	Micro-Computed-Tomography-Guided Analysis of In Vitro Structural Modifications in Two Types of 45S5 Bioactive Glass Based Scaffolds. Materials, 2017, 10, 1341.	2.9	11
51	A new animal model for delayed osseous union secondary to osteitis. BMC Musculoskeletal Disorders, 2015, 16, 362.	1.9	10
52	Non-Union Treatment Based on the â€œDiamond Conceptâ€•Is a Clinically Effective and Safe Treatment Option in Older Adults . Clinical Interventions in Aging, 2020, Volume 15, 1221-1230.	2.9	10
53	Bone morphogenetic proteinsâ€‰â^'â€‰7 andâ€‰â^'â€‰2 in the treatment of delayed osseous union secondary to bacterial osteitis in a rat model. BMC Musculoskeletal Disorders, 2018, 19, 261.	1.9	9
54	Does Age Influence the Outcome of Lower Limb Non-Union Treatment? A Matched Pair Analysis. Journal of Clinical Medicine, 2019, 8, 1276.	2.4	9

#	Article	IF	Citations
55	A new sequential animal model for infection-related non-unions with segmental bone defect. BMC Musculoskeletal Disorders, 2020, 21, 329.	1.9	9
56	Tissue loss and bone repair: Time to develop an international strategy?. Injury, 2015, 46, S1-S2.	1.7	8
57	A Preliminary Study of Contrast-Enhanced Ultrasound (CEUS) and Cytokine Expression Analysis (CEA) as Early Predictors for the Outcome of Tibial Non-Union Therapy. Diagnostics, 2018, 8, 55.	2.6	8
58	Gelatinâ€coating increases inâ€vivo bone formation capacity of threeâ€dimensional 45S5â€bioactive glassâ€based crystalline scaffolds. Journal of Tissue Engineering and Regenerative Medicine, 2018, 13, 179-190.	2.7	7
59	Tibial plateau fracture: does fracture classification influence the choice of surgical approach? A retrospective multicenter analysis. European Journal of Trauma and Emergency Surgery, 2020, , 1.	1.7	7
60	The Influence of an Occult Infection on the Outcome of Autologous Bone Grafting During Surgical Bone Reconstruction: A Large Single-Center Case-Control Study. Journal of Inflammation Research, 2021, Volume 14, 995-1005.	3.5	7
61	Treatment with recombinant human bone morphogenetic protein 7 leads to a transient induction of neutralizing autoantibodies in a subset of patients. BBA Clinical, 2016, 6, 100-107.	4.1	6
62	Safety study: is there a pathologic IGF-1, PDGF and TGF-ß cytokine expression caused by adjunct BMP-7 in tibial and femoral non-union therapy?. Therapeutics and Clinical Risk Management, 2018, Volume 14, 691-697.	2.0	6
63	Differences in gait analysis and clinical outcome after TightRopeÂ® or screw fixation in acute syndesmosis rupture: study protocol for a prospective randomized pilot study. Trials, 2020, 21, 606.	1.6	6
64	The AMANDUS Project PART IIâ€"Advanced Microperfusion Assessed Non-Union Diagnostics with Contrast-Enhanced Ultrasound (CEUS): A Reliable Diagnostic Tool for the Management and Pre-operative Detection of Infected Upper-Limb Non-unions. Ultrasound in Medicine and Biology, 2021, 47, 478-487.	1.5	6
65	Evidence-based uncertainty: do implant-related properties of titanium reduce the susceptibility to perioperative infections in clinical fracture management? A systematic review. Infection, 2021, 49, 813-821.	4.7	6
66	Systemic Administration of PTH Supports Vascularization in Segmental Bone Defects Filled with Ceramic-Based Bone Graft Substitute. Cells, 2021, 10, 2058.	4.1	6
67	Development and validation of an objective assessment scale for chest tube insertion under â€˜directâ€™ and â€˜indirectâ€™ rating. BMC Medical Education, 2018, 18, 320.	2.4	5
68	Posttraumatic Perfusion Analysis of Quadriceps, Patellar, and Achilles Tendon Regeneration With Dynamic Contrastâ€Enhanced Ultrasound and Dynamic Contrastâ€Enhanced Magnetic Resonance Imaging. Journal of Ultrasound in Medicine, 2021, 40, 491-501.	1.7	5
69	Contrast-Enhanced Ultrasound: A Viable Diagnostic Tool in Predicting Treatment Failure after Non-union Revision Surgery for Upper- and Lower-Limb Non-unions. Ultrasound in Medicine and Biology, 2021, 47, 3147-3158.	1.5	5
70	99mTc-polyphosphonate labelling â€“ Enhancement of a novel method for the quantification of osteogenic differentiation of MSCs in vitro. Injury, 2022, 53, S34-S39.	1.7	5
71	Treatment of Infection-Related Non-Unions with Bioactive Glassâ€"A Promising Approach or Just Another Method of Dead Space Management?. Materials, 2022, 15, 1697.	2.9	4
72	Functional outcome and CEUSâ€assessed deltoid muscle vitality after fractureâ€specific versusÂstandard prosthetic design in reverse shoulder arthroplasty for trauma. Journal of Orthopaedic Research, 2023, 41, 489-499.	2.3	4

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73	Contrast-enhanced ultrasound for determining muscular perfusion after oral intake of L-citrulline, L-arginine, and galloylated epicatechines. Medicine (United States), 2020, 99, e22318.	1.0	3
74	Impact of High-Dose Anti-Infective Agents on the Osteogenic Response of Mesenchymal Stem Cells. Antibiotics, 2021, 10, 1257.	3.7	3
75	Progenitor cells and tissue repair: more to come?. Injury, 2016, 47, S1-S2.	1.7	2
76	Chemokine analysis as a novel diagnostic modality in the early prediction of the outcome of non-union therapy: a matched pair analysis. Journal of Orthopaedic Surgery and Research, 2018, 13, 249.	2.3	2
77	Evaluation of two different types of radial head prosthesis in practical use. Using either EvolveÂ® or MoPyCÂ® radial head prosthesis in the treatment of comminuted radial head fractures. Orthopedic Reviews, 2020, 12, 8386.	1.3	2
78	Preoperative contrast-enhanced ultrasound (CEUS) of long bone nonunions reliably predicts microbiology of tissue culture samples but not of implant-sonication. Orthopaedics and Traumatology: Surgery and Research, 2021, , 102862.	2.0	2
79	Use of the suprapatellar approach in intramedullary nailing of a multi-fragmentary dislocated tibia fracture with a hypermobile intermediate fragment in a young patient. Orthopedic Reviews, 2016, 8, 6738.	1.3	0
80	LIPUS vs. reaming in non-union treatment: Cytokine expression course as a tool for evaluation and differentiation of non-union therapy. Journal of Orthopaedics, 2020, 17, 208-214.	1.3	0
81	Expression of VEGF in Peripheral Serum Is a Possible Prognostic Factor in Bone-Regeneration via Masquelet-Techniqueâ€"A Pilot Study. Journal of Clinical Medicine, 2021, 10, 776.	2.4	0