

Matthias Zehnder

List of Publications by Year in descending order

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125
papers

8,466
citations

46918

47
h-index

48187

88
g-index

127
all docs

127
docs citations

127
times ranked

5009
citing authors

#	ARTICLE	IF	CITATIONS
1	Root Canal Irrigants. <i>Journal of Endodontics</i> , 2006, 32, 389-398.	1.4	1,377
2	Remineralization of human dentin using ultrafine bioactive glass particles. <i>Acta Biomaterialia</i> , 2007, 3, 936-943.	4.1	276
3	European Society of Endodontology position statement: Management of deep caries and the exposed pulp. <i>International Endodontic Journal</i> , 2019, 52, 923-934.	2.3	268
4	The impact of root dentine conditioning on sealing ability and push-out bond strength of an epoxy resin root canal sealer. <i>International Endodontic Journal</i> , 2011, 44, 491-498.	2.3	266
5	Chelation in Root Canal Therapy Reconsidered. <i>Journal of Endodontics</i> , 2005, 31, 817-820.	1.4	240
6	Soft Tissue Dissolution Capacity of Currently Used and Potential Endodontic Irrigants. <i>Journal of Endodontics</i> , 2004, 30, 785-787.	1.4	234
7	The Effects of Temperature on Sodium Hypochlorite Short-Term Stability, Pulp Dissolution Capacity, and Antimicrobial Efficacy. <i>Journal of Endodontics</i> , 2005, 31, 669-671.	1.4	228
8	Effects of ethylenediaminetetraacetic, etidronic and peracetic acid irrigation on human root dentine and the smear layer. <i>International Endodontic Journal</i> , 2009, 42, 335-343.	2.3	208
9	Hard-Tissue Debris Accumulation Analysis by High-Resolution Computed Tomography Scans. <i>Journal of Endodontics</i> , 2009, 35, 1044-1047.	1.4	205
10	Antimicrobial Effect of Nanometric Bioactive Glass 45S5. <i>Journal of Dental Research</i> , 2007, 86, 754-757.	2.5	203
11	Effect of sodium hypochlorite on human root dentine " mechanical, chemical and structural evaluation. <i>International Endodontic Journal</i> , 2007, 40, 786-793.	2.3	166
12	Interactions of ethylenediamine tetraacetic acid with sodium hypochlorite in aqueous solutions. <i>International Endodontic Journal</i> , 2003, 36, 411-415.	2.3	161
13	Tissue-dissolving capacity and antibacterial effect of buffered and unbuffered hypochlorite solutions. <i>Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics</i> , 2002, 94, 756-762.	1.6	148
14	Tubular sclerosis rather than the smear layer impedes dye penetration into the dentine of endodontically instrumented root canals. <i>International Endodontic Journal</i> , 2006, 39, 18-25.	2.3	148
15	Accumulated hard tissue debris levels in mesial roots of mandibular molars after sequential irrigation steps. <i>International Endodontic Journal</i> , 2011, 44, 148-153.	2.3	135
16	Factors affecting the outcome of orthograde root canal therapy in a general dentistry hospital practice. <i>Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics</i> , 2005, 99, 119-124.	1.6	117
17	Microtomography-based Comparison of Reciprocating Single-File F2 ProTaper Technique versus Rotary Full Sequence. <i>Journal of Endodontics</i> , 2011, 37, 1394-1397.	1.4	116
18	Pathologic interactions in pulpal and periodontal tissues. <i>Journal of Clinical Periodontology</i> , 2002, 29, 663-671.	2.3	112

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19	Do bioactive glasses convey a disinfecting mechanism beyond a mere increase in pH?. <i>International Endodontic Journal</i> , 2008, 41, 670-678.	2.3	106
20	Compositional analysis of human acquired enamel pellicle by mass spectrometry. <i>Archives of Oral Biology</i> , 2001, 46, 293-303.	0.8	102
21	Necrotic pulp tissue dissolution by passive ultrasonic irrigation in simulated accessory canals: impact of canal location and angulation. <i>International Endodontic Journal</i> , 2009, 42, 59-65.	2.3	94
22	The mysterious appearance of enterococci in filled root canals. <i>International Endodontic Journal</i> , 2009, 42, 277-287.	2.3	93
23	Increased fluoride uptake and acid resistance by CO2 laser-irradiation through topically applied fluoride on human enamel in vitro. <i>Journal of Dentistry</i> , 2004, 32, 635-641.	1.7	90
24	Continuous chelation irrigation improves the adhesion of epoxy resin-based root canal sealer to root dentine. <i>International Endodontic Journal</i> , 2012, 45, 1097-1102.	2.3	90
25	Impact of Irrigant Sequence on Mechanical Properties of Human Root Dentin. <i>Journal of Endodontics</i> , 2007, 33, 1325-1328.	1.4	89
26	Preliminary Evaluation of Bioactive Glass S53P4 as an Endodontic Medication In Vitro. <i>Journal of Endodontics</i> , 2004, 30, 220-224.	1.4	84
27	Dentin enhances the effectiveness of bioactive glass S53P4 against a strain of <i>Enterococcus faecalis</i> . <i>Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics</i> , 2006, 101, 530-535.	1.6	82
28	Cytokine gene expression—part of host defence in pulpitis. <i>Cytokine</i> , 2003, 22, 84-88.	1.4	79
29	Matrix metalloproteinase levels and gelatinolytic activity in clinically healthy and inflamed human dental pulps. <i>European Journal of Oral Sciences</i> , 2002, 110, 353-357.	0.7	78
30	Use of NIR light and upconversion phosphors in light-curable polymers. <i>Dental Materials</i> , 2012, 28, 304-311.	1.6	76
31	Chemical and antimicrobial properties of calcium hydroxide mixed with irrigating solutions. <i>International Endodontic Journal</i> , 2003, 36, 100-105.	2.3	75
32	Reduction of Hard-tissue Debris Accumulation during Rotary Root Canal Instrumentation by Etidronic Acid in a Sodium Hypochlorite Irrigant. <i>Journal of Endodontics</i> , 2012, 38, 692-695.	1.4	75
33	Soft Chelating Irrigation Protocol Optimizes Bonding Quality of Resilon/Epiphany Root Fillings. <i>Journal of Endodontics</i> , 2008, 34, 703-705.	1.4	74
34	Reducing Surface Tension in Endodontic Chelator Solutions Has No Effect on Their Ability to Remove Calcium from Instrumented Root Canals. <i>Journal of Endodontics</i> , 2005, 31, 590-592.	1.4	73
35	Radiopaque nanosized bioactive glass for potential root canal application: evaluation of radiopacity, bioactivity and alkaline capacity. <i>International Endodontic Journal</i> , 2010, 43, 210-217.	2.3	73
36	Fine-tuning of Bioactive Glass for Root Canal Disinfection. <i>Journal of Dental Research</i> , 2009, 88, 235-238.	2.5	72

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37	Acoustic Hypochlorite Activation in Simulated Curved Canals. <i>Journal of Endodontics</i> , 2009, 35, 1408-1411.	1.4	72
38	Longitudinal Co-site Optical Microscopy Study on the Chelating Ability of Etidronate and EDTA Using a Comparative Single-tooth Model. <i>Journal of Endodontics</i> , 2008, 34, 71-75.	1.4	69
39	A First Study on the Usefulness of Matrix Metalloproteinase 9 from Dentinal Fluid to Indicate Pulp Inflammation. <i>Journal of Endodontics</i> , 2011, 37, 17-20.	1.4	69
40	Functionalizing a dentin bonding resin to become bioactive. <i>Dental Materials</i> , 2014, 30, 868-875.	1.6	69
41	<i>Enterococcus faecalis</i> Type Strain Leakage through Root Canals Filled with Gutta-Percha/AH Plus or Resilon/Epiphany. <i>Journal of Endodontics</i> , 2007, 33, 45-47.	1.4	64
42	Impact of Growth Conditions on Susceptibility of Five Microbial Species to Alkaline Stress. <i>Journal of Endodontics</i> , 2008, 34, 579-582.	1.4	57
43	Stabilizing Sodium Hypochlorite at High pH: Effects on Soft Tissue and Dentin. <i>Journal of Endodontics</i> , 2011, 37, 693-696.	1.4	53
44	On the dynamics of root canal infections – what we understand and what we don't. <i>Virulence</i> , 2015, 6, 216-222.	1.8	53
45	In vitro microleakage of adhesive-sealed dentin with lactic acid and saliva exposure: a radio-isotope analysis. <i>Journal of Dentistry</i> , 2004, 32, 235-240.	1.7	50
46	Assessment of a gel-type chelating preparation containing 1-hydroxyethylidene-1, 1-bisphosphonate. <i>International Endodontic Journal</i> , 2005, 38, 810-816.	2.3	50
47	Effect of liquid and paste-type lubricants on torque values during simulated rotary root canal instrumentation. <i>International Endodontic Journal</i> , 2005, 38, 223-229.	2.3	49
48	A comparative study on the disinfection potentials of bioactive glass S53P4 and calcium hydroxide in contra-lateral human premolars ex vivo. <i>International Endodontic Journal</i> , 2006, 39, 952-958.	2.3	49
49	Impact of Lubricant Parameters on Rotary Instrument Torque and Force. <i>Journal of Endodontics</i> , 2007, 33, 280-283.	1.4	48
50	Tissue-dissolution capacity and dentin-disinfecting potential of calcium hydroxide mixed with irrigating solutions. <i>Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics</i> , 2003, 96, 608-613.	1.6	47
51	Children at high altitude have less nocturnal periodic breathing than adults. <i>European Respiratory Journal</i> , 2008, 32, 189-197.	3.1	46
52	Smear layer dissolution by peracetic acid of low concentration. <i>International Endodontic Journal</i> , 2011, 44, 485-490.	2.3	46
53	Advances in endodontics: Potential applications in clinical practice. <i>Journal of Conservative Dentistry</i> , 2016, 19, 199.	0.3	45
54	Composites made of flame-sprayed bioactive glass 45S5 and polymers: bioactivity and immediate sealing properties. <i>International Endodontic Journal</i> , 2010, 43, 1037-1046.	2.3	43

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55	Physicochemical and Pulp Tissue Dissolution Properties of Some Household Bleach Brands Compared with a Dental Sodium Hypochlorite Solution. <i>Journal of Endodontics</i> , 2012, 38, 372-375.	1.4	43
56	Fibrin Gel Improves Tissue Ingrowth and Cell Differentiation in Human Immature Premolars Implanted in Rats. <i>Journal of Endodontics</i> , 2014, 40, 246-250.	1.4	43
57	Effect of endodontic irrigants on biofilm matrix polysaccharides. <i>International Endodontic Journal</i> , 2017, 50, 153-160.	2.3	43
58	Clinical aspects related to endodontic yeast infections. <i>Endodontic Topics</i> , 2004, 9, 66-78.	0.5	41
59	Short-term storage stability of NaOCl solutions when combined with Dual Rinse HEDP. <i>International Endodontic Journal</i> , 2018, 51, 691-696.	2.3	41
60	Electrochemical Disinfection of Dental Implants – a Proof of Concept. <i>PLoS ONE</i> , 2011, 6, e16157.	1.1	40
61	The receptor activator of NF- κ B ligand-osteoprotegerin system in pulpal and periapical disease. <i>International Endodontic Journal</i> , 2013, 46, 99-111.	2.3	40
62	Recovery of <i>Enterococcus faecalis</i> from cheese in the oral cavity of healthy subjects. <i>Oral Microbiology and Immunology</i> , 2007, 22, 248-251.	2.8	38
63	Potential systematic error in laboratory experiments on microbial leakage through filled root canals: review of published articles. <i>International Endodontic Journal</i> , 2011, 44, 183-194.	2.3	38
64	Comparative assessment of time-related bioactive glass and calcium hydroxide effects on mechanical properties of human root dentin. <i>Dental Traumatology</i> , 2009, 25, 126-129.	0.8	37
65	Interactions between the Tetrasodium Salts of EDTA and 1-Hydroxyethane 1,1-Diphosphonic Acid with Sodium Hypochlorite Irrigants. <i>Journal of Endodontics</i> , 2017, 43, 657-661.	1.4	36
66	SADMFR Guidelines for the Use of Cone-Beam Computed Tomography/Digital Volume Tomography. <i>Swiss Dental Journal</i> , 2015, 125, 945-53.	0.4	35
67	Effects of Stem Cell Factor on Cell Homing During Functional Pulp Regeneration in Human Immature Teeth. <i>Tissue Engineering - Part A</i> , 2017, 23, 115-123.	1.6	34
68	Periapical fluid RANKL and IL-8 are differentially regulated in pulpitis and apical periodontitis. <i>Cytokine</i> , 2014, 69, 116-119.	1.4	30
69	Pulp-Derived Exosomes in a Fibrin-Based Regenerative Root Filling Material. <i>Journal of Clinical Medicine</i> , 2020, 9, 491.	1.0	29
70	Sodium Hypochlorite with Reduced Surface Tension Does Not Improve In Situ Pulp Tissue Dissolution. <i>Journal of Endodontics</i> , 2013, 39, 1039-1043.	1.4	27
71	Disinfection of the root canal system during root canal re-treatment. <i>Endodontic Topics</i> , 2008, 19, 58-73.	0.5	26
72	Potential systematic error in laboratory experiments on microbial leakage through filled root canals: an experimental study. <i>International Endodontic Journal</i> , 2011, 44, 827-835.	2.3	26

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73	Sodium Hypochlorite Reduces Postoperative Discomfort and Painful Early Failure after Carious Exposure and Direct Pulp Capping—Initial Findings of a Randomized Controlled Trial. <i>Journal of Clinical Medicine</i> , 2020, 9, 2408.	1.0	26
74	Apical fit of initial Kå€files in maxillary molars assessed by microå€computed tomography. <i>International Endodontic Journal</i> , 2010, 43, 328-335.	2.3	25
75	Shrinkage of Backfill Gutta-percha upon Cooling. <i>Journal of Endodontics</i> , 2014, 40, 721-724.	1.4	24
76	MMP-9 in Dentinal Fluid Correlates with Caries Lesion Depth. <i>Caries Research</i> , 2017, 51, 460-465.	0.9	24
77	Safety assessment of an etidronate in a sodium hypochlorite solution: randomized doubleå€blind trial. <i>International Endodontic Journal</i> , 2019, 52, 1274-1282.	2.3	24
78	Biomimetic Conditioning of Human Dentin Using Citric Acid. <i>Journal of Endodontics</i> , 2019, 45, 45-50.	1.4	24
79	MMP-9 Levels and NaOCl Lavage in Randomized Trial on Direct Pulp Capping. <i>Journal of Dental Research</i> , 2022, 101, 414-419.	2.5	24
80	Wound Lavage in Studies on Vital Pulp Therapy of Permanent Teeth with Carious Exposures: A Qualitative Systematic Review. <i>Journal of Clinical Medicine</i> , 2020, 9, 984.	1.0	22
81	Sealing smooth enamel surfaces with a newly devised adhesive patch: a radiochemical in vitro analysis. <i>Dental Materials</i> , 2005, 21, 545-550.	1.6	21
82	Endodontic infection caused by localized aggressive periodontitis: A case report and bacteriologic evaluation. <i>Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics</i> , 2001, 92, 440-445.	1.6	20
83	Chemical, cytotoxic and genotoxic analysis of etidronate in sodium hypochlorite solution. <i>International Endodontic Journal</i> , 2019, 52, 1228-1234.	2.3	20
84	Leakage of food-borne <i>Enterococcus faecalis</i> through temporary fillings in a simulated oral environment. <i>International Endodontic Journal</i> , 2007, 40, 471-477.	2.3	19
85	Identification of <i>Synergistetes</i> in endodontic infections. <i>Microbial Pathogenesis</i> , 2014, 73, 1-6.	1.3	18
86	Effect of Low Direct Current on Anaerobic Multispecies Biofilm Adhering to a Titanium Implant Surface. <i>Clinical Implant Dentistry and Related Research</i> , 2014, 16, 552-556.	1.6	18
87	FISH-ing for guttaå€perchaå€adhered biofilms in purulent postå€treatment apical periodontitis. <i>Molecular Oral Microbiology</i> , 2017, 32, 226-235.	1.3	18
88	Interface evaluation after manual and ultrasonic insertion of standardized class I inlays using composite resin materials of different viscosity. <i>Acta Odontologica Scandinavica</i> , 2005, 63, 205-212.	0.9	17
89	Direct Resin Composite Restorations in Vital Versus Root-filled Posterior Teeth: A Controlled Comparative Long-term Follow-up. <i>Operative Dentistry</i> , 2007, 32, 437-442.	0.6	17
90	Prevention of bacterial leakage through instrumented root canals by bioactive glass S53P4 and calcium hydroxide suspensions in vitro. <i>Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics</i> , 2007, 103, 423-428.	1.6	17

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91	Molecular diagnostics in endodontics. <i>Endodontic Topics</i> , 2014, 30, 51-65.	0.5	17
92	Incorporation of particulate bioactive glasses into a dental root canal sealer. <i>Biomedical Glasses</i> , 2016, 2, .	2.4	17
93	Light Transmittance and Polymerization of Bulk-Fill Composite Materials Doped with Bioactive Micro-Fillers. <i>Materials</i> , 2019, 12, 4087.	1.3	17
94	Dentine decalcification and smear layer removal by different ethylenediaminetetraacetic acid and 1-hydroxyethane-1,1-diphosphonic acid species. <i>International Endodontic Journal</i> , 2019, 52, 237-243.	2.3	16
95	Occurrence of Cervical Invasive Root Resorption in First and Second Molar Teeth of Orthodontic Patients Eight Years after Bracket Removal. <i>Journal of Endodontics</i> , 2013, 39, 27-30.	1.4	15
96	Regenerative Dentistry: Animal Model for Regenerative Endodontology. <i>Transfusion Medicine and Hemotherapy</i> , 2016, 43, 359-364.	0.7	15
97	Incorporation of reactive silver-tricalcium phosphate nanoparticles into polyamide 6 allows preparation of self-disinfecting fibers. <i>Polymer Engineering and Science</i> , 2011, 51, 71-77.	1.5	14
98	Call for a review of diagnostic nomenclature and terminology used in Endodontics. <i>International Endodontic Journal</i> , 2020, 53, 1315-1317.	2.3	13
99	Contrast-enhanced micro-CT to assess dental pulp tissue debridement in root canals of extracted teeth: a series of cascading experiments towards method validation. <i>International Endodontic Journal</i> , 2021, 54, 279-293.	2.3	13
100	Comparison of vehicles to collect dentinal fluid for molecular analysis. <i>Journal of Dentistry</i> , 2014, 42, 1027-1032.	1.7	12
101	Comparison of two contemporary rotary systems in a pre-clinical student course setting. <i>International Endodontic Journal</i> , 2016, 49, 591-598.	2.3	12
102	Glutaraldehyde in bonding systems disinfects dentin in vitro. <i>Journal of Adhesive Dentistry</i> , 2004, 6, 61-4.	0.3	12
103	Wear Resistance and Surface Roughness of a Newly Devised Adhesive Patch for Sealing Smooth Enamel Surfaces. <i>Operative Dentistry</i> , 2006, 31, 115-121.	0.6	11
104	Effect of Direct Current on Surface Structure and Cytocompatibility of Titanium Dental Implants. <i>International Journal of Oral and Maxillofacial Implants</i> , 2014, 29, 735-742.	0.6	11
105	A critical analysis of research methods to study clinical molecular biomarkers in Endodontic research. <i>International Endodontic Journal</i> , 2022, 55, 37-45.	2.3	11
106	Iodixanol as a Contrast Agent in a Fibrin Hydrogel for Endodontic Applications. <i>Frontiers in Physiology</i> , 2017, 8, 152.	1.3	10
107	Correlation between the clinically diagnosed inflammatory process and periapical index scores in severely painful endodontically involved teeth. <i>International Endodontic Journal</i> , 2021, 54, 172-180.	2.3	9
108	Available chlorine consumption from NaOCl solutions passively placed in instrumented human root canals. <i>International Endodontic Journal</i> , 2015, 48, 435-440.	2.3	8

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109	Effect of dentine cutting efficiency on the lateral force created by torque-controlled rotary instruments. <i>International Endodontic Journal</i> , 2020, 53, 1153-1161.	2.3	8
110	Transforming Growth Factor Beta 1 Distribution and Content in the Root Dentin of Young Mature and Immature Human Premolars. <i>Journal of Endodontics</i> , 2020, 46, 641-647.	1.4	8
111	Effectiveness of dentine bonding agents against cariogenic bacteria in vitro : a comparison of two methods. <i>Oral Microbiology and Immunology</i> , 2003, 18, 140-143.	2.8	7
112	Effect of Sodium Hypochlorite Concentration in Continuous Chelation on Dislodgement Resistance of an Epoxy Resin and Hydraulic Calcium Silicate Sealer. <i>Polymers</i> , 2021, 13, 3482.	2.0	7
113	Treatment options for permanent teeth with deep caries. <i>Swiss Dental Journal</i> , 2016, 126, 1007-1027.	0.4	7
114	A New Method to Assess Available Chlorine in Small Volumes of Liquid. <i>Journal of Endodontics</i> , 2014, 40, 534-537.	1.4	6
115	Influence of 1-Hydroxyethylidene-1,1-Diphosphonic Acid on the Soft Tissue-Dissolving and Gelatinolytic Effect of Ultrasonically Activated Sodium Hypochlorite in Simulated Endodontic Environments. <i>Materials</i> , 2021, 14, 2531.	1.3	6
116	Patients with persistent idiopathic dentoalveolar pain in dental practice. <i>International Endodontic Journal</i> , 2022, 55, 231-239.	2.3	6
117	Bone powder enhances the effectiveness of bioactive glass S53P4 against strains of <i>Porphyromonas gingivalis</i> and <i>Actinobacillus actinomycetemcomitans</i> in suspension. <i>Acta Odontologica Scandinavica</i> , 2006, 64, 183-186.	0.9	5
118	Effects of endodontic irrigants on blood and blood-stained dentin. <i>Heliyon</i> , 2019, 5, e01794.	1.4	5
119	Comparative assessment of hardening of demineralized dentin under lining materials using an ultramicroindentation system. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2007, 83B, 199-205.	1.6	4
120	Hydrogen Peroxide Versus Sodium Hypochlorite: All a Matter of pH?. <i>Journal of Endodontics</i> , 2021, 47, 297-302.	1.4	4
121	Whisky, microwave or hairdryer? Exploring the most efficient way to reduce bacterial colonisation on contaminated toothbrushes. <i>British Dental Journal</i> , 2018, 225, 1007-1010.	0.3	3
122	Shaping for Cleaning: Reconsidering Root Canal Debridement. , 2022, , 11-72.		1
123	Matthias Zehnder, DR MED DENT, PHD, PD, University of Zürich, Zürich, Switzerland. <i>Endodontic Topics</i> , 2014, 30, 109-109.	0.5	0
124	New Ways to Disinfect and Fill Dental Hard Tissues. <i>Journal of Clinical Medicine</i> , 2020, 9, 1524.	1.0	0
125	What happened to our former students five to six years after graduation? An endodontic teacher's perspective. <i>Swiss Dental Journal</i> , 2020, , 584-591.	0.4	0