

Lei Tan

List of Publications by Year in descending order

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Version: 2024-02-01

109
papers

10,896
citations

19657

61
h-index

30922

102
g-index

110
all docs

110
docs citations

110
times ranked

8740
citing authors

#	ARTICLE	IF	CITATIONS
1	Photo-Inspired Antibacterial Activity and Wound Healing Acceleration by Hydrogel Embedded with Ag/Ag@AgCl/ZnO Nanostructures. <i>ACS Nano</i> , 2017, 11, 9010-9021.	14.6	591
2	Rapid Biofilm Eradication on Bone Implants Using Red Phosphorus and Near-Infrared Light. <i>Advanced Materials</i> , 2018, 30, e1801808.	21.0	364
3	Design of magnesium alloys with controllable degradation for biomedical implants: From bulk to surface. <i>Acta Biomaterialia</i> , 2016, 45, 2-30.	8.3	306
4	Zinc-doped Prussian blue enhances photothermal clearance of <i>Staphylococcus aureus</i> and promotes tissue repair in infected wounds. <i>Nature Communications</i> , 2019, 10, 4490.	12.8	306
5	Repeatable Photodynamic Therapy with Triggered Signaling Pathways of Fibroblast Cell Proliferation and Differentiation To Promote Bacteria-Accompanied Wound Healing. <i>ACS Nano</i> , 2018, 12, 1747-1759.	14.6	303
6	Interfacial engineering of Bi ₂ S ₃ /Ti ₃ C ₂ T _x MXene based on work function for rapid photo-excited bacteria-killing. <i>Nature Communications</i> , 2021, 12, 1224.	12.8	283
7	The recent progress on metal-organic frameworks for phototherapy. <i>Chemical Society Reviews</i> , 2021, 50, 5086-5125.	38.1	262
8	Rapid Sterilization and Accelerated Wound Healing Using Zn ²⁺ and Graphene Oxide Modified g-C ₃ N ₄ under Dual Light Irradiation. <i>Advanced Functional Materials</i> , 2018, 28, 1800299.	14.9	246
9	Balancing Bacteria-Osteoblast Competition through Selective Physical Puncture and Biofunctionalization of ZnO/Polydopamine/Arginine-Glycine-Aspartic Acid-Cysteine Nanorods. <i>ACS Nano</i> , 2017, 11, 11250-11263.	14.6	230
10	Tuning the Bandgap of Photo-Sensitive Polydopamine/Ag ₃ PO ₄ /Graphene Oxide Coating for Rapid, Noninvasive Disinfection of Implants. <i>ACS Central Science</i> , 2018, 4, 724-738.	11.3	227
11	Synergistic Bacteria Killing through Photodynamic and Physical Actions of Graphene Oxide/Ag/Collagen Coating. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 26417-26428.	8.0	223
12	Highly Effective and Noninvasive Near-Infrared Eradication of a <i>Staphylococcus aureus</i> Biofilm on Implants by a Photoresponsive Coating within 20 Min. <i>Advanced Science</i> , 2019, 6, 1900599.	11.2	212
13	Functionalized TiO ₂ Based Nanomaterials for Biomedical Applications. <i>Advanced Functional Materials</i> , 2014, 24, 5464-5481.	14.9	208
14	Rapid Photo-Sonotherapy for Clinical Treatment of Bacterial Infected Bone Implants by Creating Oxygen Deficiency Using Sulfur Doping. <i>ACS Nano</i> , 2020, 14, 2077-2089.	14.6	182
15	Controlled-temperature photothermal and oxidative bacteria killing and acceleration of wound healing by polydopamine-assisted Au-hydroxyapatite nanorods. <i>Acta Biomaterialia</i> , 2018, 77, 352-364.	8.3	180
16	Rapid and Superior Bacteria Killing of Carbon Quantum Dots/ZnO Decorated Injectable Folic Acid-Conjugated PDA Hydrogel through Dual-Light Triggered ROS and Membrane Permeability. <i>Small</i> , 2019, 15, e1900322.	10.0	180
17	Regulation of macrophage polarization through surface topography design to facilitate implant-to-bone osteointegration. <i>Science Advances</i> , 2021, 7, .	10.3	176
18	Electrophoretic Deposited Stable Chitosan@MoS ₂ Coating with Rapid In Situ Bacteria-Killing Ability under Dual-Light Irradiation. <i>Small</i> , 2018, 14, e1704347.	10.0	171

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19	Treatment of MRSA-infected osteomyelitis using bacterial capturing, magnetically targeted composites with microwave-assisted bacterial killing. <i>Nature Communications</i> , 2020, 11, 4446.	12.8	165
20	2D MOF Periodontitis Photodynamic Ion Therapy. <i>Journal of the American Chemical Society</i> , 2021, 143, 15427-15439.	13.7	161
21	Photo-responsive chitosan/Ag/MoS ₂ for rapid bacteria-killing. <i>Journal of Hazardous Materials</i> , 2020, 383, 121122.	12.4	153
22	Local Photothermal/Photodynamic Synergistic Therapy by Disrupting Bacterial Membrane To Accelerate Reactive Oxygen Species Permeation and Protein Leakage. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 17902-17914.	8.0	149
23	Graphitic carbon nitride-based materials for photocatalytic antibacterial application. <i>Materials Science and Engineering Reports</i> , 2021, 145, 100610.	31.8	145
24	Single-Atom Catalysis for Efficient Sonodynamic Therapy of Methicillin-Resistant <i>Staphylococcus aureus</i> -Infected Osteomyelitis. <i>ACS Nano</i> , 2021, 15, 10628-10639.	14.6	144
25	Rapid bacteria trapping and killing of metal-organic frameworks strengthened photo-responsive hydrogel for rapid tissue repair of bacterial infected wounds. <i>Chemical Engineering Journal</i> , 2020, 396, 125194.	12.7	142
26	Dopamine Modified Organic-Inorganic Hybrid Coating for Antimicrobial and Osteogenesis. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 33972-33981.	8.0	141
27	Biomedical Applications of Functionalized ZnO Nanomaterials: from Biosensors to Bioimaging. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500494.	3.7	138
28	Eradicating Multidrug-Resistant Bacteria Rapidly Using a Multi Functional C ₃ N ₄ @ Bi ₂ S ₃ Nanorod Heterojunction with or without Antibiotics. <i>Advanced Functional Materials</i> , 2019, 29, 1900946.	14.9	136
29	Near-Infrared Light Triggered Phototherapy and Immunotherapy for Elimination of Methicillin-Resistant <i>Staphylococcus aureus</i> Biofilm Infection on Bone Implant. <i>ACS Nano</i> , 2020, 14, 8157-8170.	14.6	133
30	In Situ Disinfection through Photoinspired Radical Oxygen Species Storage and Thermal-Triggered Release from Black Phosphorous with Strengthened Chemical Stability. <i>Small</i> , 2018, 14, 1703197.	10.0	127
31	Nano Ag/ZnO-Incorporated Hydroxyapatite Composite Coatings: Highly Effective Infection Prevention and Excellent Osteointegration. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 1266-1277.	8.0	127
32	Porous Iron-Carboxylate Metal-Organic Framework: A Novel Bioplatfrom with Sustained Antibacterial Efficacy and Nontoxicity. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 19248-19257.	8.0	123
33	The enhanced photocatalytic properties of MnO ₂ /g-C ₃ N ₄ heterostructure for rapid sterilization under visible light. <i>Journal of Hazardous Materials</i> , 2019, 377, 227-236.	12.4	122
34	Visible light responsive CuS/ protonated g-C ₃ N ₄ heterostructure for rapid sterilization. <i>Journal of Hazardous Materials</i> , 2020, 393, 122423.	12.4	116
35	Dual Metal-Organic Framework Heterointerface. <i>ACS Central Science</i> , 2019, 5, 1591-1601.	11.3	108
36	A facile fabrication of novel stuff with antibacterial property and osteogenic promotion utilizing red phosphorus and near-infrared light. <i>Bioactive Materials</i> , 2019, 4, 17-21.	15.6	108

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37	Nanostructured TiO ₂ for energy conversion and storage. RSC Advances, 2013, 3, 24758.	3.6	105
38	Antibacterial Hybrid Hydrogels. Macromolecular Bioscience, 2021, 21, e2000252.	4.1	105
39	Enhanced photocatalytic and photothermal properties of ecofriendly metal-organic framework heterojunction for rapid sterilization. Chemical Engineering Journal, 2021, 405, 126730.	12.7	104
40	Relationship between osseointegration and superelastic biomechanics in porous NiTi scaffolds. Biomaterials, 2011, 32, 330-338.	11.4	103
41	Antibacterial Activity of Silver Doped Titanate Nanowires on Ti Implants. ACS Applied Materials & Interfaces, 2016, 8, 16584-16594.	8.0	102
42	Photoresponsive Materials for Antibacterial Applications. Cell Reports Physical Science, 2020, 1, 100245.	5.6	102
43	Recent Progress in Photocatalytic Antibacterial. ACS Applied Bio Materials, 2021, 4, 3909-3936.	4.6	100
44	Ultrasonic Interfacial Engineering of Red Phosphorousâ€Metal for Eradicating MRSA Infection Effectively. Advanced Materials, 2021, 33, e2006047.	21.0	93
45	Rapid and Highly Effective Noninvasive Disinfection by Hybrid Ag/CS@MnO ₂ Nanosheets Using Near-Infrared Light. ACS Applied Materials & Interfaces, 2019, 11, 15014-15027.	8.0	86
46	Superimposed surface plasma resonance effect enhanced the near-infrared photocatalytic activity of Au@Bi ₂ WO ₆ coating for rapid bacterial killing. Journal of Hazardous Materials, 2019, 380, 120818.	12.4	85
47	Ag ₃ PO ₄ decorated black urchin-like defective TiO ₂ for rapid and long-term bacteria-killing under visible light. Bioactive Materials, 2021, 6, 1575-1587.	15.6	85
48	Construction of poly(lactic-co-glycolic acid)/ZnO nanorods/Ag nanoparticles hybrid coating on Ti implants for enhanced antibacterial activity and biocompatibility. Materials Science and Engineering C, 2017, 79, 629-637.	7.3	82
49	Engineered probiotics biofilm enhances osseointegration via immunoregulation and anti-infection. Science Advances, 2020, 6, .	10.3	82
50	Atomic layer deposited ZrO ₂ nanofilm on Mg-Sr alloy for enhanced corrosion resistance and biocompatibility. Acta Biomaterialia, 2017, 58, 515-526.	8.3	80
51	Na ⁺ inserted metal-organic framework for rapid therapy of bacteria-infected osteomyelitis through microwave strengthened Fenton reaction and thermal effects. Nano Today, 2021, 37, 101090.	11.9	77
52	Self-activating anti-infection implant. Nature Communications, 2021, 12, 6907.	12.8	77
53	Tannic Acid/Fe ³⁺ /Ag Nanofilm Exhibiting Superior Photodynamic and Physical Antibacterial Activity. ACS Applied Materials & Interfaces, 2017, 9, 39657-39671.	8.0	76
54	Metal Ion Coordination Polymer-Capped pH-Triggered Drug Release System on Titania Nanotubes for Enhancing Self-antibacterial Capability of Ti Implants. ACS Biomaterials Science and Engineering, 2017, 3, 816-825.	5.2	74

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55	Lysozyme-Assisted Photothermal Eradication of Methicillin-Resistant <i>Staphylococcus aureus</i> Infection and Accelerated Tissue Repair with Natural Melanosome Nanostructures. <i>ACS Nano</i> , 2019, 13, 11153-11167.	14.6	74
56	Construction of poly (vinyl alcohol)/poly (lactide-glycolide acid)/vancomycin nanoparticles on titanium for enhancing the surface self-antibacterial activity and cytocompatibility. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017, 151, 165-177.	5.0	73
57	Accelerated Bone Regeneration by Gold-Nanoparticle-Loaded Mesoporous Silica through Stimulating Immunomodulation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41758-41769.	8.0	73
58	In-situ sulfuration of Cu-based metal-organic framework for rapid near-infrared light sterilization. <i>Journal of Hazardous Materials</i> , 2020, 390, 122126.	12.4	72
59	Rapid Biofilm Elimination on Bone Implants Using Near-Infrared-Activated Inorganic Semiconductor Heterostructures. <i>Advanced Healthcare Materials</i> , 2019, 8, e1900835.	7.6	71
60	Infection-prevention on Ti implants by controlled drug release from folic acid/ZnO quantum dots sealed titania nanotubes. <i>Materials Science and Engineering C</i> , 2018, 85, 214-224.	7.3	68
61	Ag ₂ S@WS ₂ Heterostructure for Rapid Bacteria-Killing Using Near-Infrared Light. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 14982-14990.	6.7	67
62	Light-Activated Rapid Disinfection by Accelerated Charge Transfer in Red Phosphorus/ZnO Heterointerface. <i>Small Methods</i> , 2019, 3, 1900048.	8.6	64
63	Ce and Er Co-doped TiO ₂ for rapid bacteria-killing using visible light. <i>Bioactive Materials</i> , 2020, 5, 201-209.	15.6	61
64	Photo-Sono Interfacial Engineering Exciting the Intrinsic Property of Herbal Nanomedicine for Rapid Broad-Spectrum Bacteria Killing. <i>ACS Nano</i> , 2021, 15, 18505-18519.	14.6	61
65	AgBr Nanoparticles in Situ Growth on 2D MoS ₂ Nanosheets for Rapid Bacteria-Killing and Photodisinfection. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 34364-34375.	8.0	58
66	The rapid photoresponsive bacteria-killing of Cu-doped MoS ₂ . <i>Biomaterials Science</i> , 2020, 8, 4216-4224.	5.4	57
67	Piezo-Augmented Sonosensitizer with Strong Ultrasound-Propelling Ability for Efficient Treatment of Osteomyelitis. <i>ACS Nano</i> , 2022, 16, 2546-2557.	14.6	56
68	Controlled release and biocompatibility of polymer/titania nanotube array system on titanium implants. <i>Bioactive Materials</i> , 2017, 2, 44-50.	15.6	54
69	Long-Term Prevention of Bacterial Infection and Enhanced Osteoinductivity of a Hybrid Coating with Selective Silver Toxicity. <i>Advanced Healthcare Materials</i> , 2019, 8, e1801465.	7.6	53
70	Eco-friendly Hybrids of Carbon Quantum Dots Modified MoS ₂ for Rapid Microbial Inactivation by Strengthened Photocatalysis. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 534-542.	6.7	53
71	Rapid Sterilization by Photocatalytic Ag ₃ PO ₄ /Fe ₂ O ₃ Composites Using Visible Light. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 2577-2585.	6.7	53
72	Photoelectric-Responsive Extracellular Matrix for Bone Engineering. <i>ACS Nano</i> , 2019, 13, 13581-13594.	14.6	51

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73	Modulation of the mechanosensing of mesenchymal stem cells by laser-induced patterning for the acceleration of tissue reconstruction through the Wnt/ β -catenin signaling pathway activation. <i>Acta Biomaterialia</i> , 2020, 101, 152-167.	8.3	51
74	Photoelectrons Mediating Angiogenesis and Immunotherapy through Heterojunction Film for Noninvasive Disinfection. <i>Advanced Science</i> , 2020, 7, 2000023.	11.2	51
75	Overcoming Multidrug-Resistant MRSA Using Conventional Aminoglycoside Antibiotics. <i>Advanced Science</i> , 2020, 7, 1902070.	11.2	49
76	Microwave assisted antibacterial action of Garcinia nanoparticles on Gram-negative bacteria. <i>Nature Communications</i> , 2022, 13, 2461.	12.8	49
77	Ultrafast Low-Temperature Photothermal Therapy Activates Autophagy and Recovers Immunity for Efficient Antitumor Treatment. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 4265-4275.	8.0	48
78	Controllable biodegradation and enhanced osseointegration of ZrO ₂ -nanofilm coated Zn-Li alloy: In vitro and in vivo studies. <i>Acta Biomaterialia</i> , 2020, 105, 290-303.	8.3	47
79	The enhanced photocatalytic sterilization of MOF-Based nanohybrid for rapid and portable therapy of bacteria-infected open wounds. <i>Bioactive Materials</i> , 2022, 13, 200-211.	15.6	47
80	The controlled drug release by pH-sensitive molecularly imprinted nanospheres for enhanced antibacterial activity. <i>Materials Science and Engineering C</i> , 2017, 77, 84-91.	7.3	45
81	Gold nanoparticles-loaded hydroxyapatite composites guide osteogenic differentiation of human mesenchymal stem cells through Wnt/ β -catenin signaling pathway. <i>International Journal of Nanomedicine</i> , 2019, Volume 14, 6151-6163.	6.7	44
82	Ultrasonic Interfacial Engineering of MoS ₂ -Modified Zn Single-Atom Catalysts for Efficient Osteomyelitis Sonodynamic Ion Therapy. <i>Small</i> , 2022, 18, e2105775.	10.0	43
83	Simultaneously enhancing the photocatalytic and photothermal effect of NH ₂ -MIL-125-GO-Pt ternary heterojunction for rapid therapy of bacteria-infected wounds. <i>Bioactive Materials</i> , 2022, 18, 421-432.	15.6	42
84	Zn ²⁺ -assisted photothermal therapy for rapid bacteria-killing using biodegradable humic acid encapsulated MOFs. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 188, 110781.	5.0	41
85	Rapid bacterial elimination achieved by sonodynamic Au@Cu ₂ O hybrid nanocubes. <i>Nanoscale</i> , 2021, 13, 15699-15710.	5.6	38
86	Construction of N-halamine labeled silica/zinc oxide hybrid nanoparticles for enhancing antibacterial ability of Ti implants. <i>Materials Science and Engineering C</i> , 2017, 76, 50-58.	7.3	37
87	Enhanced osteogenesis and therapy of osteoporosis using simvastatin loaded hybrid system. <i>Bioactive Materials</i> , 2020, 5, 348-357.	15.6	33
88	Enhanced Near-Infrared Photocatalytic Eradication of MRSA Biofilms and Osseointegration Using Oxide Perovskite-Based P-N Heterojunction. <i>Advanced Science</i> , 2021, 8, e2002211.	11.2	33
89	Controlled chondrogenesis from adipose-derived stem cells by recombinant transforming growth factor- β 3 fusion protein in peptide scaffolds. <i>Acta Biomaterialia</i> , 2015, 11, 191-203.	8.3	31
90	Theory-screened MOF-based single-atom catalysts for facile and effective therapy of biofilm-induced periodontitis. <i>Chemical Engineering Journal</i> , 2022, 431, 133279.	12.7	31

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91	Oxygen Vacancies-Rich Heterojunction of Ti ₃ C ₂ /BiOBr for Photo-Excited Antibacterial Textiles. <i>Small</i> , 2022, 18, e2104448.	10.0	31
92	Photo-controlled degradation of PLGA/Ti ₃ C ₂ hybrid coating on Mg-Sr alloy using near infrared light. <i>Bioactive Materials</i> , 2021, 6, 568-578.	15.6	30
93	The highly effective therapy of ovarian cancer by Bismuth-doped oxygen-deficient BaTiO ₃ with enhanced sono-piezocatalytic effects. <i>Chemical Engineering Journal</i> , 2022, 442, 136380.	12.7	27
94	Interface Polarization Strengthened Microwave Catalysis of MoS ₂ /FeS/Rhein for the Therapy of Bacteria-Infected Osteomyelitis. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	26
95	The modulation of stem cell behaviors by functionalized nanoceramic coatings on Ti-based implants. <i>Bioactive Materials</i> , 2016, 1, 65-76.	15.6	25
96	2D Molybdenum Sulfide-Based Materials for Photo-Excited Antibacterial Application. <i>Advanced Healthcare Materials</i> , 2022, 11, e2200360.	7.6	24
97	Atomic-layer Fe ₂ O ₃ -modified 2D porphyrinic metal-organic framework for enhanced photocatalytic disinfection through electron-withdrawing effect. <i>Applied Catalysis B: Environmental</i> , 2022, 317, 121701.	20.2	22
98	Nanotopography Sequentially Mediates Human Mesenchymal Stem Cell-Derived Small Extracellular Vesicles for Enhancing Osteogenesis. <i>ACS Nano</i> , 2022, 16, 415-430.	14.6	18
99	Click chemistry to form a sticking xerogel for the portable therapy of bacteria-infected wounds. <i>Biomaterials Science</i> , 2019, 7, 5383-5387.	5.4	17
100	Micro- and Nanohemispherical 3D Imprints Modulate the Osteogenic Differentiation and Mineralization Tendency of Bone Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 35513-35524.	8.0	16
101	Photothermal-controlled sustainable degradation of protective coating modified Mg alloy using near-infrared light. <i>Rare Metals</i> , 2021, 40, 2538-2551.	7.1	14
102	Rapid and highly effective bacteria-killing by polydopamine/IR780@MnO ₂ @Ti using near-infrared light. <i>Progress in Natural Science: Materials International</i> , 2020, 30, 677-685.	4.4	12
103	Wear Properties of Porous NiTi Orthopedic Shape Memory Alloy. <i>Journal of Materials Engineering and Performance</i> , 2012, 21, 2622-2627.	2.5	10
104	Surface photodynamic ion sterilization of ITO-Cu ₂ O/ZnO preventing touch infection. <i>Journal of Materials Science and Technology</i> , 2022, 122, 10-19.	10.7	10
105	Superelastic Porous NiTi with Adjustable Porosities Synthesized by Powder Metallurgical Method. <i>Journal of Materials Engineering and Performance</i> , 2012, 21, 2553-2558.	2.5	8
106	Reversing Multidrug-Resistant <i>Escherichia coli</i> by Compromising Its BAM Biogenesis and Enzymatic Catalysis through Microwave Hyperthermia Therapy. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	7
107	Osseointegration: Long-Term Prevention of Bacterial Infection and Enhanced Osteoinductivity of a Hybrid Coating with Selective Silver Toxicity (<i>Adv. Healthcare Mater.</i> 5/2019). <i>Advanced Healthcare Materials</i> , 2019, 8, 1970020.	7.6	4
108	Photocatalysis: Light-Activated Rapid Disinfection by Accelerated Charge Transfer in Red Phosphorus/ZnO Heterointerface (<i>Small Methods</i> 3/2019). <i>Small Methods</i> , 2019, 3, 1970008.	8.6	4

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109	Nanomaterials: Functionalized TiO ₂ Based Nanomaterials for Biomedical Applications (Adv. Funct. Tj ETQq1 1 0.784314 rgBT ₂ /Overlook	14.9	