Chi-Wai Chan

List of Publications by Year
in descending order

31 papers	962 citations	516561 16 h-index	454834 30 g-index
31 all docs	31 docs citations	31 times ranked	917 citing authors

#	Article	IF	Citations
1	Titanium for Orthopedic Applications: An Overview of Surface Modification to Improve Biocompatibility and Prevent Bacterial Biofilm Formation. IScience, 2020, 23, 101745.	1.9	115
2	Enhancing the antibacterial performance of orthopaedic implant materials by fibre laser surface engineering. Applied Surface Science, 2017, 404, 67-81.	3.1	83
3	Enhancement of wear and corrosion resistance of beta titanium alloy by laser gas alloying with nitrogen. Applied Surface Science, 2016, 367, 80-90.	3.1	80
4	Fibre laser joining of highly dissimilar materials: Commercially pure Ti and PET hybrid joint for medical device applications. Materials and Design, 2016, 103, 278-292.	3.3	63
5	Twinning anisotropy of tantalum during nanoindentation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 627, 249-261.	2.6	62
6	Effects of Process Parameters upon the Shape Memory and Pseudo-Elastic Behaviors of Laser-Welded NiTi Thin Foil. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 2264-2270.	1.1	61
7	Laser welding of thin foil nickelâ€“titanium shape memory alloy. Optics and Lasers in Engineering, 2011, 49, 121-126.	2.0	60
8	Effect of post-weld heat-treatment on the oxide film and corrosion behaviour of laser-welded shape memory NiTi wires. Corrosion Science, 2012, 56, 158-167.	3.0	52
9	Fibre laser nitriding of titanium and its alloy in open atmosphere for orthopaedic implant applications: Investigations on surface quality, microstructure and tribological properties. Surface and Coatings Technology, 2017, 309, 628-640.	2.2	46
10	Fatigue behavior of laser-welded NiTi wires in small-strain cyclic bending. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 559, 407-415.	2.6	42
11	Effect of Postweld Heat Treatment on the Microstructure and Cyclic Deformation Behavior of Laser-Welded NiTi-Shape Memory Wires. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1956-1965.	1.1	41
12	Effect of laser treatment on the attachment and viability of mesenchymal stem cell responses on shape memory NiTi alloy. Materials Science and Engineering C, 2014, 42, 254-263.	3.8	33
13	Susceptibility to stress corrosion cracking of NiTi laser weldment in Hanksâ€™ solution. Corrosion Science, 2012, 57, 260-269.	3.0	25
14	A promising laser nitriding method for the design of next generation orthopaedic implants: Cytotoxicity and antibacterial performance of titanium nitride (TiN) wear nano-particles, and enhanced wear properties of laser-nitrided Ti6Al4V surfaces. Surface and Coatings Technology, 2021, 405, 126714.	2.2	24
15	NiTi shape memory alloy with enhanced wear performance by laser selective area nitriding for orthopaedic applications. Surface and Coatings Technology, 2017, 309, 1015-1022.	2.2	22
16	Creating an antibacterial surface on beta TNZT alloys for hip implant applications by laser nitriding. Optics and Laser Technology, 2020, 121, 105793.	2.2	22
17	Fibre Laser Treatment of Beta TNZT Titanium Alloys for Load-Bearing Implant Applications: Effects of Surface Physical and Chemical Features on Mesenchymal Stem Cell Response and Staphylococcus aureus Bacterial Attachment. Coatings, 2019, 9, 186.	1.2	15
18	Susceptibility to environmentally induced cracking of laser-welded NiTi wires in Hanksâ€™ solution at open-circuit potential. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 544, 38-47.	2.6	13

#	Article	IF	Citations
19	A study on the corrosion fatigue behaviour of laser-welded shape memory NiTi wires in a simulated body fluid. Surface and Coatings Technology, 2017, 320, 574-578.	2.2	13
20	Constitutive model for localized LÃ¼ders-like stress-induced martensitic transformation and super-elastic behaviors of laser-welded NiTi wires. Computational Materials Science, 2012, 63, 197-206.	1.4	11
21	Fibre laser treatment of martensitic NiTi alloys for load-bearing implant applications: Effects of surface chemistry on inhibiting Staphylococcus aureus biofilm formation. Surface and Coatings Technology, 2018, 349, 488-502.	2.2	11
22	Elastic-plastic properties of titanium and its alloys modified by fibre laser surface nitriding for orthopaedic implant applications. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 124, 104802.	1.5	11
23	In vitro mesenchymal stem cell responses on laser-welded NiTi alloy. Materials Science and Engineering C, 2013, 33, 1344-1354.	3.8	10
24	A single parameter approach to enhance the microstructural and mechanical properties of beta Ti-Nb alloy via open-air fiber laser nitriding. Surface and Coatings Technology, 2020, 383, 125269.	2.2	10
25	Optimization of anti-wear and anti-bacterial properties of beta TiNb alloy via controlling duty cycle in open-air laser nitriding. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 110, 103913.	1.5	9
26	Reduction of environmentally induced cracking of laser-welded shape memory NiTi wires via post-weld heat-treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 588, 388-394.	2.6	8
27	A Preliminary Study to Enhance the Tribological Performance of CoCrMo Alloy by Fibre Laser Remelting for Articular Joint Implant Applications. Lubricants, 2018, 6, 24.	1.2	7
28	Effect of post-weld-annealing on the tensile deformation characteristics of laser-welded NiTi thin foil. Metals and Materials International, 2012, 18, 691-697.	1.8	6
29	Modifications of surface properties of beta Ti by laser gas diffusion nitriding. Journal of Laser Applications, 2016, 28, 022505.	0.8	6
30	Control of laser-gas-material interactions to enhance the surface properties of NiTi for orthopaedic applications. Surface and Coatings Technology, 2021, 421, 127403.	2.2	1
31	Effect of Post-Weld Heat-Treatment on the Stress-Corrosion Cracking Behaviour of Laser-Welded Shape Memory NiTi Wires in Hanks' Solution. Nanoscience and Nanotechnology Letters, 2015, 7, 276-280.	0.4	0