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	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
2	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
3	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
4	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
5	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
6	Titanium for Orthopedic Applications: An Overview of Surface Modification to Improve Biocompatibility and Prevent Bacterial Biofilm Formation. IScience, 2020, 23, 101745.	1.9	115
7	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
8	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
9	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
10	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
11	Enhancing the antibacterial performance of orthopaedic implant materials by fibre laser surface engineering. Applied Surface Science, 2017, 404, 67-81.	3.1	83
12	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
13	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
14	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
15	Modifications of surface properties of beta Ti by laser gas diffusion nitriding. Journal of Laser Applications, 2016, 28, 022505.	0.8	6
16	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
17	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
18	Twinning anisotropy of tantalum during nanoindentation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 627, 249-261.	2.6	62

#	Article	IF	Citations
19	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
20	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
21	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
22	In vitro mesenchymal stem cell responses on laser-welded NiTi alloy. Materials Science and Engineering C, 2013, 33, 1344-1354.	3.8	10
23	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
24	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
25	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
26	Susceptibility to stress corrosion cracking of NiTi laser weldment in Hanksâ€™ solution. Corrosion Science, 2012, 57, 260-269.	3.0	25
27	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
28	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
29	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
30	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
31	Laser welding of thin foil nickelâ€“titanium shape memory alloy. Optics and Lasers in Engineering, 2011, 49, 121-126.	2.0	60