Peter C Collins

List of Publications by Year
in descending order

69 papers	2,656 citations	201674 27 h-index	189892 50 g-index
75 all docs	75 docs citations	75 times ranked	2198 citing authors

#	Article	IF	Citations
1	A Perspective of The Needs and Opportunities for Coupling Materials Science and Nondestructive Evaluation for Metals-Based Additive Manufacturing. Materials Evaluation, 2022, 80, 45-63.	0.2	1
2	On the Prediction of Uniaxial Tensile Behavior Beyond the Yield Point of Wrought and Additively Manufactured Ti-6Al-4V. Integrating Materials and Manufacturing Innovation, 2022, 11, 327-338.	2.6	4
3	Spherical pores as â€˜microstructural informantsâ€™: Understanding compositional, thermal, and mechanical gyrations in additively manufactured Ti-6Al-4V. Scripta Materialia, 2021, 198, 113827.	5.2	8
4	Probability and Statistical Modeling: Ti-6Al-4V Produced via Directed Energy Deposition. Journal of Materials Engineering and Performance, 2021, 30, 6905-6912.	2.5	6
5	3D electron backscatter diffraction characterization of fine Î± titanium microstructures: collection, reconstruction, and analysis methods. Ultramicroscopy, 2021, 230, 113394.	1.9	7
6	Texture Analysis of Additively Manufactured Ti-6Al-4V Deposited Using Different Scanning Strategies. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 6574-6583.	2.2	10
7	3D electron backscatter diffraction study of Î± lath morphology in additively manufactured Ti-6Al-4V. Ultramicroscopy, 2020, 218, 113073.	1.9	25
8	Evaluation of Tiâ€“Mn Alloys for Additive Manufacturing Using High-Throughput Experimental Assays and Gaussian Process Regression. Materials, 2020, 13, 4641.	2.9	12
9	Microstructure Characterization and Mechanical Properties in Individual Zones of Linear Friction Welded Ti-6Al-4V Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 6294-6306.	2.2	1
10	Ti-6Al-4V microstructural orientation at different length scales as a function of scanning strategies in Electron Beam Melting in additive manufacturing. MATEC Web of Conferences, 2020, 321, 03031.	0.2	1
11	Predicting the tensile properties of additively manufactured Ti-6Al-4V via electron beam deposition. MATEC Web of Conferences, 2020, 321, 11083.	0.2	1
12	Developing and applying ICME + modeling tools to predict performance of additively manufactured aerospace parts. , 2019, , 375-400.		3
13	Nondestructive evaluation of additively manufactured metallic parts. , 2019, , 401-417.		9
14	On the role of composition and processing parameters on the microstructure evolution of Ti-xMo alloys. BMC Chemistry, 2019, 13, 5.	3.8	5
15	Microscale phase field modeling of the martensitic transformation during cyclic loading of NiTi single crystal. International Journal of Solids and Structures, 2018, 146, 80-96.	2.7	33
16	Understanding the Interdependencies Between Composition, Microstructure, and Continuum Variables and Their Influence on the Fracture Toughness of Î±/Î²-Processed Ti-6Al-4V. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 848-863.	2.2	11
17	Sensitization and remediation effects on environmentally assisted cracking of Al-Mg naval alloys. Corrosion Science, 2018, 138, 219-241.	6.6	28
18	Crystallisation behaviour during tensile loading of laser treated Feâ€“Siâ€“B metallic glass. Philosophical Magazine, 2017, 97, 497-514.	1.6	8

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19	Characterization of the near-surface nanocrystalline microstructure of ultrasonically treated Ti-6Al-4V using ASTARâ„¢/precession electron diffraction technique. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 688, 524-531.	5.6	11
20	On the eutectoid transformation behavior of the Ti-Zn system and its metastable phases. Journal of Alloys and Compounds, 2017, 718, 22-27.	5.5	18
21	Predicting tensile properties of Ti-6Al-4V produced via directed energy deposition. Acta Materialia, 2017, 133, 120-133.	7.9	161
22	Investigation of Tin (Sn) Film Using an Aerosol Jet Additive Manufacturing Deposition Process. Journal of Electronic Materials, 2017, 46, 5174-5182.	2.2	0
23	New Nomenclatures for Heat Treatments of Additively Manufactured Titanium Alloys. Jom, 2017, 69, 1221-1227.	1.9	12
24	Microstructures and Grain Refinement of Additive-Manufactured Ti-xW Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 3594-3605.	2.2	61
25	Determination of the five parameter grain boundary character distribution of nanocrystalline alpha-zirconium thin films using transmission electron microscopy. Acta Materialia, 2017, 130, 164-176.	7.9	19
26	The effect of boron on the grain size and texture in additively manufactured Î²-Ti alloys. Journal of Materials Science, 2017, 52, 12455-12466.	3.7	52
27	Modeling of Ti-W Solidification Microstructures Under Additive Manufacturing Conditions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 3606-3622.	2.2	32
28	Engineered, Spatially Varying Isothermal Holds: Enabling Combinatorial Studies of Temperature Effects, as Applied to Metastable Titanium Alloy Î²-21S. Metallography, Microstructure, and Analysis, 2017, 6, 216-220.	1.0	2
29	Powder-based additive manufacturing - a review of types of defects, generation mechanisms, detection, property evaluation and metrology. International Journal of Additive and Subtractive Materials Manufacturing, 2017, 1, 172.	0.2	51
30	Characterizing the nano-structure and defect structure of nano-scaled non-ferrous structural alloys. Materials Characterization, 2016, 113, 222-231.	4.4	6
31	Oxidation behavior of binary Ti-xW (0 â‰ x â‰ 30, wt%) alloys at 650 Â°C as a function of W concentration. Corrosion Science, 2016, 111, 531-540.	6.6	2
32	Oxidation behavior and microstructural decomposition of Ti-6Al-4V and Ti-6Al-4V-1B sheet. Corrosion Science, 2016, 112, 338-346.	6.6	52
33	Microstructural Control of Additively Manufactured Metallic Materials. Annual Review of Materials Research, 2016, 46, 63-91.	9.3	309
34	Developing a phenomenological equation to predict yield strength from composition and microstructure in Î² processed Ti-6Al-4V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 660, 172-180.	5.6	48
35	On the influence of alloy composition on the oxidation performance and oxygen-induced phase transformations in Tiâ€“(0â€“8) wt%Al alloys. Journal of Materials Science, 2016, 51, 3684-3692.	3.7	2
36	Systematic Assessment of the InfluenceÂof Mo Concentration on the Oxygen Ingress in Tiâ€“Mo System During High Temperature Oxidation. Oxidation of Metals, 2016, 85, 357-368.	2.1	3

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37	Tensile behavior of laser treated Fe-Si-B metallic glass. Journal of Applied Physics, 2015, 118, .	2.5	12
38	Revisiting (Some of) the Lasting Impacts of the Liberty Ships via a Metallurgical Analysis of Rivets from the SS â€œJohn W. Brownâ€. Jom, 2015, 67, 2965-2975.	1.9	9
39	Grain orientation effects on delamination during fatigue of a sensitized Alâ€"Mg alloy. Philosophical Magazine Letters, 2015, 95, 526-533.	1.2	8
40	Discovery via Integration of Experimentation and Modeling: Three Examples for Titanium Alloys. Jom, 2015, 67, 164-178.	1.9	12
41	A new combinatorial approach to assess the influence of alloy composition on the oxidation behavior and concurrent oxygen-induced phase transformations for binary Tiâ€"xCr alloys at 650Â°C. Corrosion Science, 2015, 97, 150-160.	6.6	14
42	Yield Strength Prediction of Titanium Alloys. Jom, 2015, 67, 1357-1361.	1.9	24
43	A Constitutive Equation Relating Composition and Microstructure to Properties in Ti-6Al-4V: As Derived Using a Novel Integrated Computational Approach. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 5021-5037.	2.2	28
44	New observations of a nanoscaled pseudomorphic bcc Co phase in bulk Coâ€"Alâ€"(W,Ta) superalloys. Acta Materialia, 2014, 69, 92-104.	7.9	7
45	Development and application of a novel precession electron diffraction technique to quantify and map deformation structures in highly deformed materialsâ€"as applied to ultrafine-grained titanium. Acta Materialia, 2014, 79, 203-215.	7.9	58
46	A novel tool to assess the influence of alloy composition on the oxidation behavior and concurrent oxygen-induced phase transformations for binary Tiâ€"xMo alloys at 650Â°C. Corrosion Science, 2014, 89, 295-306.	6.6	17
47	Progress Toward an Integration of Processâ€"Structureâ€"Propertyâ€"Performance Models for â€œThree-Dimensional (3-D) Printingâ€ of Titanium Alloys. Jom, 2014, 66, 1299-1309.	1.9	54
48	Application of Precession Electron Diffraction in Deformation Studies of Advanced Non-Ferrous Structural Alloys. Microscopy and Microanalysis, 2014, 20, 1454-1455.	0.4	0
49	Neural Networks Relating Alloy Composition, Microstructure, and Tensile Properties of Î±/Î²-Processed TIMETAL 6-4. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 1441-1453.	2.2	43
50	Nanocrystalline orientation and phase mapping of textured coatings revealed by precession electron diffraction. Nanomaterials and Energy, 2012, 1, 318-323.	0.2	5
51	In situ nitridation of titaniumâ€"molybdenum alloys during laser deposition. Journal of Materials Science, 2012, 47, 7157-7166.	3.7	24
52	Non-classical homogeneous precipitation mediated by compositional fluctuations in titanium alloys. Acta Materialia, 2012, 60, 6247-6256.	7.9	129
53	Formation of Grain Boundary Î± in Î² Ti Alloys: Its Role in Deformation and Fracture Behavior of These Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 645-650.	2.2	96
54	Comparison of the Detection Limits of EDS and EELS in S/TEM. Microscopy and Microanalysis, 2010, 16, 1312-1313.	0.4	28

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55	On the use of a sub-scale thermomechanical simulator to obtain accurate tensile properties of (Î±+Î²)-and Î²-processed Tiâ€“6Alâ€“4V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 513-514, 357-365.	5.6	7
56	Development of methods for the quantification of microstructural features in Î±+Î²-processed Î±/Î² titanium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 508, 174-182.	5.6	91
57	Direct Three-Dimensional Microstructural Characterization and Reconstruction Across Varying Length Scales in Î±/Î² Titanium Alloys by Serial Sectioning Using a FEI DualBeamâ„¢ (FIB/SEM) and Robo-Met.3D. Microscopy and Microanalysis, 2008, 14, 974-975.	0.4	0
58	Nanoscale TiB precipitates in laser deposited Ti-matrix composites. Scripta Materialia, 2005, 53, 1433-1437.	5.2	96
59	Microstructures of LENSâ„¢ Deposited Nb-Si Alloys. Materials Research Society Symposia Proceedings, 2004, 842, 108.	0.1	0
60	Comparison of microstructural evolution in laser-deposited and arc-melted In-Situ Ti-TiB composites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 2143-2152.	2.2	38
61	Precipitation of grain boundary Î± in a laser deposited compositionally graded Tiâ€“8Alâ€“xV alloy â€“ an orientation microscopy study. Acta Materialia, 2004, 52, 377-385.	7.9	80
62	The influence of the enthalpy of mixing during the laser deposition of complex titanium alloys using elemental blends. Scripta Materialia, 2003, 48, 1445-1450.	5.2	40
63	Laser deposition of compositionally graded titaniumâ€“vanadium and titaniumâ€“molybdenum alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 352, 118-128.	5.6	162
64	Direct laser deposition of in situ Tiâ€“6Alâ€“4Vâ€“TiB composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 358, 343-349.	5.6	138
65	Microstructural evolution in laser deposited compositionally graded Î±/Î² titanium-vanadium alloys. Acta Materialia, 2003, 51, 3277-3292.	7.9	146
66	Microstructural Evaluation of LENSâ„¢ Deposited Nb-Ti-Si-Cr Alloys. Materials Research Society Symposia Proceedings, 2002, 753, 1.	0.1	1
67	Laser Deposition of In Situ Ti â€“ TiB Composites. Advanced Engineering Materials, 2002, 4, 847-851.	3.5	52
68	Phase evolution in laser-deposited titanium-chromium alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 2129-2138.	2.2	33
69	Direct laser deposition of alloys from elemental powder blends. Scripta Materialia, 2001, 45, 1123-1129.	5.2	165