Philippe Bocher

List of Publications by Year
in descending order

54	1,118	430874 18	434195 31
papers	citations	h-index	g-index

55	55	55	1011
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Residual stress and microstructure in welds of 13%Crâ€“4%Ni martensitic stainless steel. Journal of Materials Processing Technology, 2009, 209, 2195-2202.	6.3	99
2	Residual stress characterization in low transformation temperature 13%Crâ€“4%Ni stainless steel weld by neutron diffraction and the contour method. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 6205-6210.	5.6	78
3	Predicting the effects of material properties gradient and residual stresses on the bending fatigue strength of induction hardened aeronautical gears. International Journal of Fatigue, 2016, 85, 70-84.	5.7	69
4	A sequential DEM-FEM coupling method for shot peening simulation. Surface and Coatings Technology, 2017, 319, 200-212.	4.8	66
5	Investigation into the dissimilar friction stir welding of AA7020-T651 and AA6060-T6. Journal of Materials Processing Technology, 2016, 235, 220-230.	6.3	58
6	Effect of tool geometry and welding speed on mechanical properties of dissimilar AA2198â€“AA2024 FSWed joint. Journal of Manufacturing Processes, 2018, 34, 86-95.	5.9	46
7	Measurement and correction of residual stress gradients in aeronautical gears after various induction surface hardening treatments. Journal of Materials Processing Technology, 2015, 220, 113-123.	6.3	44
8	Surface Finish and Residual Stresses Induced by Orthogonal Dry Machining of AA7075-T651. Materials, 2014, 7, 1603-1624.	2.9	41
9	Multiphysics Modeling of Induction Hardening of Ring Gears for the Aerospace Industry. IEEE Transactions on Magnetics, 2011, 47, 918-921.	2.1	39
10	Computational quantification and correction of the errors induced by layer removal for subsurface residual stress measurements. International Journal of Mechanical Sciences, 2012, 64, 184-195.	6.7	38
11	Microstructure Evolution, Mechanical Properties and Deformation Behavior of an Additively Manufactured Maraging Steel. Materials, 2020, 13, 2380.	2.9	38
12	Evaluation of Rolling Contact Fatigue of a Carburized Wind Turbine Gear Considering the Residual Stress and Hardness Gradient. Journal of Tribology, 2018, 140, .	1.9	33
13	Statistical analysis of high cycle fatigue life and inclusion size distribution in shot peened 300M steel. International Journal of Fatigue, 2019, 118, 126-138.	5.7	31
14	Reformed austenite transformation during fatigue crack propagation of 13%Crâ€“4%Ni stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 6519-6526.	5.6	30
15	Microstructure characterization and hardness distribution of 13Cr4Ni multipass weld metal. Materials Characterization, 2016, 111, 128-136.	4.4	30
16	Analysis of AA2XXX/AA7XXX friction stir welds. Journal of Materials Processing Technology, 2019, 271, 312-324.	6.3	30
17	Effects of SMAT at cryogenic and room temperatures on the kink band and martensite formations with associated fatigue resistance in a Î²-metastable titanium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 803, 140618.	5.6	26
18	Prediction of crack initiation sites in alpha Ti-alloys microstructures under dwell-fatigue using Cellular Automaton simulation method. International Journal of Fatigue, 2016, 85, 85-97.	5.7	21

#	Article	IF	Citations
19	How does surface integrity of nanostructured surfaces induced by severe plastic deformation influence fatigue behaviors of Al alloys with enhanced precipitation?. International Journal of Fatigue, 2020, 140, 105792.	5.7	18
20	Effect of heat treatments on microstructural and mechanical characteristics of dissimilar friction stir welded 2198/2024 aluminum alloys. Journal of Adhesion Science and Technology, 2022, 36, 221-239.	2.6	18
21	Discrete element-periodic cell coupling model and investigations on shot stream expansion, Almen intensities and target materials. International Journal of Mechanical Sciences, 2018, 145, 353-366.	6.7	16
22	Microstructure Characterization of Single and Multipass 13Cr4Ni Steel Welded Joints. Metallography, Microstructure, and Analysis, 2015, 4, 207-218.	1.0	14
23	Structural Performance of Inconel 625 Superalloy Brazed Joints. Journal of Materials Engineering and Performance, 2017, 26, 547-553.	2.5	14
24	Effect of inclusions on fracture behavior of cast and wrought 13% Cr-4% Ni martensitic stainless steels. Engineering Fracture Mechanics, 2017, 175, 262-278.	4.3	13
25	Endurance of Damping Properties of Foam-Filled Tubes. Materials, 2015, 8, 4061-4079.	2.9	12
26	Optimization study of dry peripheral milling process for improving aeronautical part integrity using Grey relational analysis. International Journal of Advanced Manufacturing Technology, 2017, 91, 931-942.	3.0	12
27	A Study of the Interlaminar Fracture Toughness of Unidirectional Flax/Epoxy Composites. Journal of Composites Science, 2020, 4, 66.	3.0	12
28	Macro-defects characterization in cast CA-6NM martensitic stainless steel. Materials Characterization, 2017, 124, 31-39.	4.4	10
29	Modeling of cementite coarsening during tempering of low-alloyed-medium carbon steel. Journal of Materials Science, 2018, 53, 6198-6218.	3.7	10
30	Finite Element Analysis Simulation of the Effect of Induction Hardening on Rolling Contact Fatigue. Journal of Tribology, 2018, 140, .	1.9	10
31	Diffracting-grain identification from electron backscatter diffraction maps during residual stress measurements: a comparison between the sin‹sup›2‹/sup›Ï^ and cosÎ± methods. Journal of Applied Crystallography, 2019, 52, 828-843.	4.5	10
32	Friction stir processing of austenitic stainless steel cold spray coating deposited on 304L stainless steel substrate: feasibility study. International Journal of Advanced Manufacturing Technology, 2021, 115, 2379-2393.	3.0	10
33	An Hybrid Approach Based on Machining and Dynamic Tests Data for the Identification of Material Constitutive Equations. Journal of Materials Engineering and Performance, 2016, 25, 1010-1027.	2.5	9
34	Inconel 718 Superalloy Controlled Surface Integrity for Fatigue Applications Produced by Precision Turning. International Journal of Precision Engineering and Manufacturing, 2019, 20, 1297-1310.	2.2	9
35	Effect of low temperature intercritical heat-treatment on stable crack growth behavior in 13% Cr-4% Ni martensitic stainless steel multipass weldments. Engineering Fracture Mechanics, 2020, 240, 107360.	4.3	9
36	Modeling the elastoplastic behaviors of alpha Ti-alloys microstructure using Cellular Automaton and finite element methods. Computational Materials Science, 2015, 99, 33-42.	3.0	8

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37	Effects of Various Post-Weld Heat Treatments on Austenite and Carbide Formation in a 13Cr4Ni Steel Multipass Weld. Metallography, Microstructure, and Analysis, 2016, 5, 50-61.	1.0	8
38	Optimization of the edge effect of 4340 steel specimen heated by induction process with flux concentrators using finite element axis-symmetric simulation and experimental validation. International Journal of Advanced Manufacturing Technology, 2019, 104, 4549-4557.	3.0	8
39	Realistic Cold Expansion Finite Element Model and Experimental Validations for Aluminium Alloys. Experimental Mechanics, 2014, 54, 841-855.	2.0	7
40	Assessment of cold cracking tests for low transformation temperature martensitic stainless steel multipass welds. Welding in the World, Le Soudage Dans Le Monde, 2015, 59, 521-532.	2.5	7
41	Predictive analytical modeling of cutting forces generated by high-speed machining of ductile and hard metals. Machining Science and Technology, 2017, 21, 335-361.	2.5	7
42	Experimental Investigation on High-Cycle Fatigue of Inconel 625 Superalloy Brazed Joints. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1244-1253.	2.2	7
43	Reduction of edge effect using response surface methodology and artificial neural network modeling of a spur gear treated by induction with flux concentrators. International Journal of Advanced Manufacturing Technology, 2019, 104, 103-117.	3.0	7
44	Macroregion Size Measurements in Bimodal Titanium Forgings Using Two-Dimensional Autocorrelation Method. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 744-750.	2.2	6
45	IMPROVING THE FORMABILITY OF STAINLESS STEEL 321 THROUGH MULTISTEP DEFORMATION FOR HYDROFORMING APPLICATIONS. Transactions of the Canadian Society for Mechanical Engineering, 2013, 37, 39-52.	0.8	5
46	Microstructure and Texture Development in Alâ€“3%Brass Composite Produced through ARB. Advanced Engineering Materials, 2018, 20, 1700463.	3.5	5
47	Sensitivity study of hardness profile of 4340 steel disc hardened by induction according to machine parameters and geometrical factors. International Journal of Advanced Manufacturing Technology, 2019, 101, 209-221.	3.0	5
48	Ni and Mn enrichment effects on reformed austenite: thermodynamical and low cycle fatigue stability of 13%Crâ€“4%Ni and 13%Crâ€“6%Ni stainless steels. SN Applied Sciences, 2020, 2, 1.	2.9	5
49	On the ductile rupture of 13% Cr-4% Ni martensitic stainless steels. International Journal of Fracture, 2020, 224, 67-82.	2.2	3
50	Method for Accurate Surface Temperature Measurements During Fast Induction Heating. Journal of Materials Engineering and Performance, 2013, 22, 1907-1913.	2.5	2
51	An investigation on fracture toughness of the heatâ€affected zone in the welded joints of 13% Crâ€4% Ni martensitic stainless steels. Fatigue and Fracture of Engineering Materials and Structures, 2021, 44, 3416-3430.	3.4	2
52	Detecting Defects in Materials Using Deep Convolutional Neural Networks. Lecture Notes in Computer Science, 2020, , 293-306.	1.3	2
53	Multiphysics modeling of induction hardening of ring gears for the aerospace industry. , 2010, , .		1
54	Microstructural Alteration of Alloyed Steel in Direct Metal Laser Melting by Powder Bed Deposition System. Steel Research International, 2020, 91, 1900667.	1.8	0