SÃ©bastien Y P Allain

List of Publications by Year
in descending order

49 papers	3,113 citations	257357 24 h-index	214721 47 g-index
50 all docs	50 docs citations	50 times ranked	2009 citing authors

#	Article	IF	Citations
1	High manganese austenitic twinning induced plasticity steels: A review of the microstructure properties relationships. Current Opinion in Solid State and Materials Science, 2011, 15, 141-168.	5.6	1,134
2	Analysis of the tensile behavior of a TWIP steel based on the texture and microstructure evolutions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 500, 196-206.	2.6	404
3	Micromechanical behavior and thermal stability of a dual-phase Î±+Î±â€™ titanium alloy produced by additive manufacturing. Acta Materialia, 2019, 162, 149-162.	3.8	133
4	Effect of chemical composition on work hardening of Feâ€”Mnâ€”C TWIP steels. Materials Science and Technology, 2011, 27, 707-709.	0.8	132
5	On the mechanism of unstable plastic flow in an austenitic FeMnC TWIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 519, 147-154.	2.6	86
6	Microstructure based modeling for the mechanical behavior of ferriteâ€“pearlite steels suitable to capture isotropic and kinematic hardening. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 496, 329-336.	2.6	82
7	On measurement of retained austenite in multiphase TRIP steels â€” results of blind round robin test involving six different techniques. Materials Science and Technology, 2009, 25, 567-574.	0.8	75
8	The influence of plastic instabilities on the mechanical properties of a high-manganese austenitic FeMnC steel. International Journal of Materials Research, 2008, 99, 734-738.	0.1	71
9	Microstructure â€“ Properties Relationships in Carbide-free Bainitic Steels. ISIJ International, 2011, 51, 1724-1732.	0.6	68
10	Toward a New Interpretation of the Mechanical Behaviour of As-quenched Low Alloyed Martensitic Steels. ISIJ International, 2012, 52, 717-722.	0.6	58
11	Internal stresses and carbon enrichment in austenite of Quenching and Partitioning steels from high energy X-ray diffraction experiments. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 710, 245-250.	2.6	58
12	Quantitative assessment of carbon allocation anomalies in low temperature bainite. Acta Materialia, 2017, 133, 333-345.	3.8	56
13	In-situ investigation of quenching and partitioning by High Energy X-Ray Diffraction experiments. Scripta Materialia, 2017, 131, 15-18.	2.6	52
14	Modelling the effect of carbon on deformation behaviour of twinning induced plasticity steels. Journal of Materials Science, 2011, 46, 7410-7414.	1.7	48
15	Compression of crumpled aluminum thin foils and comparison with other cellular materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 570, 1-7.	2.6	46
16	Dislocation densities in a low-carbon steel during martensite transformation determined by in situ high energy X-Ray diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 800, 140249.	2.6	46
17	Characterization and Modeling of Manganese Effect on Strength and Strain Hardening of Martensitic Carbon Steels. ISIJ International, 2013, 53, 1076-1080.	0.6	44
18	Structure-properties relationship of ultra-fine grained V-microalloyed dual phase steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 703, 293-303.	2.6	42

#	ARTICLE	IF	CITATIONS
19	Relationship between Microstructure, Mechanical Properties and Damage Mechanisms in High Martensite Fraction Dual Phase Steels. ISIJ International, 2015, 55, 2237-2246.	0.6	41
20	Towards the microstructure design of DP steels: A generic size-sensitive mean-field mechanical model. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 637, 222-234.	2.6	38
21	EBSD study of the substructure development with cold deformation of dual phase steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 947-953.	2.6	36
22	New insights into martensite strength and the damage behaviour of dual phase steels. Acta Materialia, 2018, 159, 112-122.	3.8	36
23	Effects of Q&P Processing Conditions on Austenite Carbon Enrichment Studied by In Situ High-Energy X-ray Diffraction Experiments. Metals, 2017, 7, 232.	1.0	32
24	In Situ Investigation of the Iron Carbide Precipitation Process in a Fe-C-Mn-Si Q&P Steel. Materials, 2018, 11, 1087.	1.3	31
25	Intercritical annealing of cold-rolled ferrite-pearlite steel: Microstructure evolutions and phase transformation kinetics. Acta Materialia, 2021, 212, 116920.	3.8	24
26	Static and dynamical ageing processes at room temperature in a Fe25Ni0.4C virgin martensite: effect of C redistribution at the nanoscale. Philosophical Magazine Letters, 2013, 93, 68-76.	0.5	23
27	Alloying-element interactions with austenite/martensite interface during quenching and partitioning of a model Fe-C-Mn-Si alloy. Scripta Materialia, 2019, 162, 181-184.	2.6	23
28	The Bauschinger effect in drawn and annealed nanocomposite Cuâ€“Nb wires. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 10-19.	2.6	20
29	Effect of Grain Refinement on the Mechanical Behaviour of Ferritic Steels: Evolution of Isotropic Hardening and Kinematic Hardening. Materials Science Forum, 0, 584-586, 605-609.	0.3	17
30	Quantitative Assessment of the Time to End Bainitic Transformation. Metals, 2019, 9, 925.	1.0	14
31	Microstructure Evolution and Competitive Reactions during Quenching and Partitioning of a Model Feâ€“Câ€“Mnâ€“Si Alloy. Metals, 2020, 10, 137.	1.0	14
32	The Influence of Vanadium Additions on Isothermally Formed Bainite Microstructures in Medium Carbon Steels Containing Retained Austenite. Metals, 2020, 10, 392.	1.0	13
33	Carbide-Free Bainite Transformations Above and Below Martensite Start Temperature Investigated by In-Situ High-Energy X-Ray Diffraction. Jom, 2021, 73, 3181-3194.	0.9	12
34	Exploring Carbide-Free Bainitic Structures for Hot Dip Galvanizing Products. ISIJ International, 2013, 53, 1253-1259.	0.6	11
35	In Situ Determination of Phase Stress States in an Unstable Medium Manganese Duplex Steel Studied by High-Energy X-ray Diffraction. Metals, 2020, 10, 1335.	1.0	11
36	Kinetics of bainite transformation in heterogeneous microstructures. Materials Letters, 2012, 67, 187-189.	1.3	9

#	ARTICLE	IF	CITATIONS
37	Microstructure-based behavior law for globular pearlitic steels. Journal of Materials Research and Technology, 2019, 8, 3373-3376.	2.6	9
38	Carbon heterogeneities in austenite during Quenching & Partitioning (Q&P) process revealed by in situ High Energy X-Ray Diffraction (HEXRD) experiments. Scripta Materialia, 2020, 181, 108-114.	2.6	9
39	Real-Time Investigation of Recovery, Recrystallization and Austenite Transformation during Annealing of a Cold-Rolled Steel Using High Energy X-ray Diffraction (HEXRD). Metals, 2019, 9, 8.	1.0	8
40	Evolution of cementite composition along the processing of cold-rolled and annealed Dual-Phase steels. Materialia, 2019, 6, 100179.	1.3	8
41	Hot Forming of Ultra-Fine-Grained Multiphase Steel Products Using Press Hardening Combined with Quenching and Partitioning Process. Metals, 2019, 9, 357.	1.0	7
42	Fast Granularization of Lath-Like Bainite in FeNiC Alloys During Isothermal Holding at Ms+ 20ÂK (+20ÂÂ°C). Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 15-18.	1.1	6
43	An improved physically based behaviour law for ferritic steels and its application to crash modelling. International Journal of Material Forming, 2009, 2, 527-530.	0.9	5
44	A Physics-Based Mean-Field Model for Ferrite Recovery and Recrystallization. Metals, 2020, 10, 622.	1.0	5
45	Martensite and nanobainite transformations in a low alloyed steel studied by in situ high energy synchrotron diffraction. Materials Characterization, 2022, 185, 111740.	1.9	5
46	Key Parameters to Promote Granularization of Lath-Like Bainite/Martensite in FeNiC Alloys during Isothermal Holding. Materials, 2018, 11, 1808.	1.3	3
47	Recovery of severely deformed ferrite studied by in situ high energy X-ray diffraction. Materials Characterization, 2021, 179, 111378.	1.9	3
48	Dual-Phase Steels: The First Family of Advanced High Strength Steels. , 2022, , 37-62.		3
49	Numerical Investigations of the Effects of Substitutional Elements on the Interface Conditions During Partitioning in Quenching and Partitioning Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 2568-2572.	1.1	2