Patrice Berthod

List of Publications by Year
in descending order

80 papers	448 citations	840776 11 h-index	940533 16 g-index
80 all docs	80 docs citations	80 times ranked	221 citing authors

#	Article	IF	Citations
1	High temperature properties of several chromium-containing Co-based alloys reinforced by different types of MC carbides (M=Ta, Nb, Hf and/or Zr). Journal of Alloys and Compounds, 2009, 481, 746-754.	5.5	41
2	Creep and oxidation kinetics at 1100Â°C of nickel-base alloys reinforced by hafnium carbides. Materials and Design, 2016, 104, 27-36.	7.0	31
3	Influence of Water Vapour on the Rate of Oxidation of a Niâ€“25wt.%Cr Alloy at High Temperature. Oxidation of Metals, 2013, 79, 517-527.	2.1	21
4	As-cast microstructures and behavior at high temperature of chromium-rich cobalt-based alloys containing hafnium carbides. Materials Chemistry and Physics, 2014, 143, 1139-1148.	4.0	19
5	Electrochemical Study of Chromium Corrosion in Na[sub 2]Oâ€“xSiO[sub 2] Melts. Journal of the Electrochemical Society, 2007, 154, C500.	2.9	15
6	Influence of Chromium Carbides on the High Temperature Oxidation Behavior and on Chromium Diffusion in Nickel-Base Alloys. Oxidation of Metals, 2007, 68, 77-96.	2.1	14
7	Microstructure evolution in bulk and surface states of chromium rich nickel based cast alloys reinforced by hafnium carbides after exposure to high temperature air. Materials at High Temperatures, 2014, 31, 266-273.	1.0	13
8	Thermogravimetric Study of Oxide Spallation for Chromium-Rich Cast Cobalt-Based and Iron-Based Alloys Oxidized at High Temperature. The Open Corrosion Journal, 2009, 2, 61-70.	3.0	13
9	Influence of carbides and of the dendritic orientation on the thermal expansion of Ni-base, Co-base and Fe-base simple cast alloys. International Journal of Materials Research, 2008, 99, 265-272.	0.3	12
10	High-temperature microstructures of ternary Co-30wt.% Cr-based alloys over the [0â€“2.0wt.%] carbon range. Journal of Alloys and Compounds, 2009, 467, 227-234.	5.5	12
11	Influence of the morphologic evolution of the eutectic carbides at high temperature on the thermal expansion behavior of refractory cast alloys. Journal of Alloys and Compounds, 2010, 504, 243-250.	5.5	12
12	Kinetics of High Temperature Oxidation and Chromia Volatilization for HfC-Containing Nickel-Based Alloys. Oxidation of Metals, 2014, 81, 393-405.	2.1	12
13	Looking for New Polycrystalline MC-Reinforced Cobalt-Based Superalloys Candidate to Applications at 1200Â°C. Advances in Materials Science and Engineering, 2017, 2017, 1-9.	1.8	11
14	Thermal Expansion Behaviour of Ternary Nickel-Based, Cobalt-Based, and Iron-Based Alloys Containing Very High Fractions of Carbides. ISRN Metallurgy, 2012, 2012, 1-9.	0.7	10
15	Protection of cobalt-based refractory alloys by chromium deposition on surface. Surface and Coatings Technology, 2011, 205, 3708-3715.	4.8	8
16	Kinetics of high temperature oxidation of chromium rich HfC reinforced cobalt based alloys. Corrosion Engineering Science and Technology, 2014, 49, 45-54.	1.4	8
17	Influences of the Co content and of the level of high temperature on the microstructure and oxidation of cast {Ni, Co}-based Cr-rich TaC-containing cast alloys. Journal of Alloys and Compounds, 2018, 739, 447-456.	5.5	8
18	Study of the Behavior in Oxidation at High Temperature of Ni, Co and Fe-Base Alloys Containing Very High Fractions of Carbides. Materials Science Forum, 0, 595-598, 871-880.	0.3	7

#	Article	IF	Citations
19	Microstructures of binary Crâ€“xNi alloys (0 â‰¤ Ni â‰¤ 50 wt.%) in their as-cast state and after high temperature exposure. Materials at High Temperatures, 2016, 33, 189-197.	1.0	7
20	Experimental and thermodynamic study of the role of titanium in the microstructural and thermal properties of cast Niâ€“Crâ€“Câ€“Ti alloys. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2017, 56, 41-48.	1.6	7
21	State of the Sub-Surface Microstructure of Carbides Strengthened Cast Superalloys after High Temperature Oxidation â€“ Use of Thermodynamic Modelling for a Better Understanding. Materials Science Forum, 2004, 461-464, 1117-1124.	0.3	6
22	Influence of Tantalum on the Rates of High Temperature Oxidation and Chromia Volatilization for Cast (Fe and/or Ni)-30Cr-0.4C Alloys. Materials Science Forum, 0, 595-598, 861-870.	0.3	6
23	Microstructure evolution at high temperature of chromium-rich iron-based alloys containing hafnium carbides. International Journal of Materials Research, 2014, 105, 717-724.	0.3	6
24	Effects of Ni Additions on the High Temperature Expansion, Melting and Oxidation Behaviors of Cobalt-Based Superalloys. Crystals, 2021, 11, 173.	2.2	6
25	New polycrystalline MC-reinforced nickel-based superalloys for use at elevated temperatures (T >) Tj ETQq1 1 0.784314 rgBT /Over	0.6	6
26	Influence of the Microstructural Texture of Cast Superalloys on their High-Temperature Oxidation Behaviour. Materials Science Forum, 2004, 461-464, 1173-1180.	0.3	5
27	Oxidation and creep properties at 1200 Â°C of cast quaternary Ni-Cr-C-Ti alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 699, 145-155.	5.6	5
28	Effect of NbC Addition on the High-Temperature Oxidation Resistance of Co- and Ni-Based Chromium-Rich Alloys. Oxidation of Metals, 2018, 89, 339-355.	2.1	5
29	Thermodynamic and experimental study of cobalt-based alloys designed to contain TiC carbides. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2019, 65, 34-41.	1.6	5
30	Consequences of partial {Hf by Ta}â€“Substitution on the high temperature properties of a HfCâ€“Reinforced Ni-based superalloy. Materials Chemistry and Physics, 2021, 271, 124949.	4.0	5
31	Oxide Spallation During Post-isothermal High Temperature Oxidation Cooling of Cr-rich Cast Alloys Highly Alloyed with Hf. Open Materials Science Journal, 2016, 10, 89-100.	0.2	5
32	Kinetic and Metallography Study of the Oxidation at 1250 Â°C of {Co+Ni}-Based Superalloys Containing Ti to Form MC Carbides. Metals, 2022, 12, 10.	2.3	5
33	As-Cast Microstructures of High Entropy Alloys Designed to Be TaC-Strengthened. Journal of Metallic Material Research, 2022, 5, .	0.6	5
34	Protection of cobalt-based refractory alloys by chromium deposition on surface. Surface and Coatings Technology, 2011, 205, 5241-5247.	4.8	4
35	High Temperature Oxidation of HfC-Containing Chromium-Rich Iron-Based Alloys. Oxidation of Metals, 2014, 82, 33-48.	2.1	4
36	Oxidation behaviour at 1100Â°C in air of 25â€…wt-% Cr-containing cobalt-based alloys containing high quantities of hafnium carbides. Canadian Metallurgical Quarterly, 2016, 55, 409-419.	1.2	4

#	Article	IF	Citations
37	Influence of Titanium on the High Temperature Oxidation and Chromia Volatilization of Ternary Niâ€“Crâ€“C Alloys. Oxidation of Metals, 2016, 86, 581-595.	2.1	4
38	Dependence of titanium carbide stability at elevated temperatures on Co content in Co(Ni)-25Cr-1.6Ti-0.4C superalloys. Materials Chemistry and Physics, 2018, 212, 260-267.	4.0	4
39	A study of the dependence on the Co and Ni proportions of the oxidation at elevated temperature of TaC-strengthened {Ni and Co}-based cast superalloys. Materials Chemistry and Physics, 2020, 251, 123088.	4.0	4
40	Effect of a Preliminary Aging Treatment on the Oxidation Kinetic at High Temperature for a Cobalt - Based Alloy Strengthened by Tantalum Carbides. The Open Corrosion Journal, 2009, 2, 150-156.	3.0	4
41	Influence de l'Ã©lÃ©ment de base et de la densitÃ© des carbures sur l'oxydation Ã haute tempÃ©rature d'alliages M-30Cr-xC (M = Co, Ni, Fe). partie II : caractÃ©risation de la microstructure sub-corticale. Annales De Chimie: Science Des Materiaux, 2008, 33, 247-265.	0.4	4
42	Corrosion of some selected ceramic alloys used in fixed partial dentures and their postsolder joints in a synthetic neutral saliva. European Journal of Oral Sciences, 2009, 117, 76-85.	1.5	3
43	Kinetic and metallographic study of oxidation at high temperature of cast Ni 25Cr alloy in water vapour rich air. Materials at High Temperatures, 2015, 32, 530-538.	1.0	3
44	Influence of Co Content on the High-Temperature Oxidation Performance of (Ni,Co)â€“25Crâ€“0.4Câ€“6Ta Cast Alloys. Oxidation of Metals, 2018, 90, 187-202.	2.1	3
45	Dependence on the Chromium Content of the High-Temperature Oxidation Behavior of Ta-Rich Nickel-Based Cast Alloys. Oxidation of Metals, 2018, 90, 135-151.	2.1	3
46	Behavior in oxidation at elevated temperature of {25Cr, 0.4Câ€6Ta}â€containing Ni and Coâ€based cast alloys versus their proportion in nickel and cobalt. Materials and Corrosion - Werkstoffe Und Korrosion, 2018, 69, 703-713.	1.5	3
47	Experimental and thermodynamic investigations regarding the effect of chromium on the carbides population in cast {Ni(bal.)-0.4C-6Ta-xCr} alloys with x varying from 0 to 50â€¯wt%. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2018, 62, 30-41.	1.6	3
48	Improvement of the high temperature oxidation of TaC-strengthened Co(Cr)-based cast superalloys by the addition of nickel. Corrosion Engineering Science and Technology, 2020, 55, 118-126.	1.4	3
49	Oxide scale spallation behaviour of cast chromia-forming TaC-strengthened superalloys. Materials Science and Technology, 2020, 36, 1587-1602.	1.6	3
50	Oxidation Behavior and Structure Stability at 1250 Â°C of Chromium-Rich TaC-Containing Cast Alloys Based on Nickel and Cobalt. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 4168-4185.	2.2	3
51	Influence de l'Ã©lÃ©ment de base et de la densitÃ© des carbures sur l'oxydation Ã haute tempÃ©rature d'alliages M-30Cr-xC(M = Co, Ni, Fe). partie I : constantes cinÃ©tiques parabolique et de volatilisation de Cr₂O₃. Annales De Chimie: Science Des Materiaux, 2008, 33, 225-245.	0.4	3
52	MicrostructuresetduretÃ©s d'alliages ternaires de type m-30%cr-0 a 5%c contenant une quantitÃ© croissante de carbures de chrome. partie 1 : alliages Ã base de nickel. Annales De Chimie: Science Des Materiaux, 2010, 35, 291-301.	0.4	3
53	MicrostructuresetduretÃ©s dâ€™alliages ternaires de type M-30%CR-0 Ã 5%C contenant une quantitÃ© croissante de carbures de chrome. partie 2 : alliages Ã base de fer. Annales De Chimie: Science Des Materiaux, 2011, 36, 27-36.	0.4	3
54	Microstructures at high temperature of Fe-30 wt.% Cr-xC Alloys with x varying from 0 to 2 wt.%. International Journal of Materials Research, 2008, 99, 964-972.	0.3	2

#	Article	IF	Citations
55	Use of thermogravimetry and thermodynamic calculations for specifying chromium diffusion occurring in alloys containing chromium carbides during high temperature oxidation. Materials Chemistry and Physics, 2015, 165, 79-86.	4.0	2
56	Thermodynamic and experimental study of 30â€...wt-%Cr-containing {Co, Fe or Ni}-based alloys with very high contents in Ta and C. Canadian Metallurgical Quarterly, 2017, 56, 113-122.	1.2	2
57	Experimental and thermodynamic study of the influence of the base elements on the carbides natures in {Ni,Co}-based {25Cr, 0.4C, 6Ta}-containing alloys. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2018, 60, 156-162.	1.6	2
58	Oxidation Behavior of the Skutterudite Material Yb0.2Co4Sb12. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 3996-4002.	2.2	2
59	Microstructures et duretÃ©s dâ€™alliages ternaires de type M-30% Cr-0 and#224; 5%C contenant une quantitÃ© croissante de carbures de chrome. partie 3 : alliages and#224; base de cobalt. Annales De Chimie: Science Des Materiaux, 2011, 36, 193-204.	0.4	2
60	Carbides and Carbon Control in MC â€“ Reinforced Superalloys. Asian Journal of Chemical Sciences, 0, , 64-74.	0.4	2
61	Determination of Diffusion Coefficients Using Thermogravimetric Measurements during High Temperature Oxidation. Defect and Diffusion Forum, 0, 323-325, 289-294.	0.4	1
62	Experimental and thermodynamic study of nickel (30 wt.%Cr) â€“ based alloys containing between 2.5 and 5.0 wt.% carbon. International Journal of Materials Research, 2012, 103, 1302-1311.	0.3	1
63	Experimental and Thermodynamic Exploration of the High-Temperature Microstructures of Co-30Âwt.% Cr- (2.5-5.0Âwt.%) C Alloys. Journal of Phase Equilibria and Diffusion, 2012, 33, 29-39.	1.4	1
64	Oxidation behavior of chromium-rich Fe-based alloys containing HfC carbides at 1100â€‰Â°C. Materials and Corrosion - Werkstoffe Und Korrosion, 2015, 66, 1101-1110.	1.5	1
65	Microstructure and oxidation behaviour at 1100Â°C of HfC containing Cr rich iron based cast alloys. Materials Science and Technology, 2015, 31, 1764-1772.	1.6	1
66	Surface degradation of three Cr-containing cobalt-based alloys exposed to pure water vapour at 900Â°C. Corrosion Engineering Science and Technology, 2020, 55, 441-452.	1.4	1
67	Oxidation and Microstructural Behaviors of Ni-Based Alloys Strengthened by (Ta, Hf)C Carbides at 1250 Â°C in Air. Crystals, 2021, 11, 159.	2.2	1
68	High-Temperature Extreme Alloys. , 2022, , 311-322.		1
69	Influence de l'orientation dendritique sur la cinÃ©tique d'oxydation Ã haute tempÃ©rature d'alliages de nickel contenant des carbures. Annales De Chimie: Science Des Materiaux, 2008, 33, 59-80.	0.4	1
70	Influence des carbures de chrome sur le comportement thermodilatomÃ©trique dâ€™alliages ternaires base nickel, base cobalt et base fer Ã haute teneur en carbone. Annales De Chimie: Science Des Materiaux, 2009, 34, 61-76.	0.4	1
71	Oxydation Ã haute temperature dâ€™alliages base cobalt de fonderie renforcÃ©s par differents types de carbures MC (M = Ta, Nb, Hf ou Zr). Annales De Chimie: Science Des Materiaux, 2009, 34, 275-287.	0.4	1
72	Avoiding or Promoting Graphite in Carbon-Rich Chromium-Containing CoNiFe Cast Alloysâ€”Part 1: Preliminary Thermodynamic Exploration. ISRN Thermodynamics, 2012, 2012, 1-7.	0.6	1

#	Article	IF	Citations
73	Influence of Ti and Co/Ni Ratio on the Oxidation at 1200ÂÂ°C of Chromium-Containing {Ni, Co}-Based Cast Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 277.	2.2	1
74	Behaviour in oxidation at 1200Â°C of two nickel-based alloys reinforced by (Ta, Hf)C carbides. Canadian Metallurgical Quarterly, 0, , 1-13.	1.2	1
75	Oxidation and Microstructural Behaviors at 1200 Â°C of 32.5 wt.% Crâ€“Containing Coâ€“Based Alloys Strengthened by HfC Carbides. Crystals, 2022, 12, 361.	2.2	1
76	Microstructures and Surface Stabilities of {Ni-0.4C-6Ta-xCr, 0Ââ‰ÂxÂâ‰Â50ÂWtÂPct} Cast Alloys at High Temperature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 2311-2323.	2.2	0
77	Effect of the Ni/Co Ratio on the High-Temperature Oxidation Behavior of {Ni&Co}-Based {25Crâ€“0.4Câ€“1.6Ti, wt%}-Containing Cast Alloys. Oxidation of Metals, 2018, 89, 551-563.	2.1	0
78	Addition of Co in Ni(Cr)-based cast superalloys for tantalum carbide stabilisation: consequences on the behaviour in oxidation at elevated temperatures. Canadian Metallurgical Quarterly, 2021, 60, 172-182.	1.2	0
79	Oxidation at 1250Â°C of {Cr, Ta}â€rich carbidesâ€strengthened {Ni, Co}â€based alloys. Materials and Corrosion - Werkstoffe Und Korrosion, 0, , .	1.5	0
80	Creep and Oxidation Behaviors of 25 wt.% Crâ€“Containing Nickel-Based Alloys Reinforced by ZrC Carbides. Crystals, 2022, 12, 416.	2.2	0