Mary Taylor

List of Publications by Year
in descending order

32 papers	1,029 citations	567281 15 h-index	434195 31 g-index
33 all docs	33 docs citations	33 times ranked	673 citing authors

#	Article	IF	Citations
1	Diffusion Cells and Chemical Failure of MCrAlY Bond Coats in Thermal-Barrier Coating Systems. Oxidation of Metals, 2001, 55, 17-34.	2.1	160
2	Chromia layer growth on a Ni-based superalloy: Sub-parabolic kinetics and the role of titanium. Corrosion Science, 2013, 75, 58-66.	6.6	146
3	The influence of bondcoat and topcoat mechanical properties on stress development in thermal barrier coating systems. Acta Materialia, 2009, 57, 2349-2361.	7.9	131
4	Effects of breakaway oxidation on local stresses in thermal barrier coatings. Acta Materialia, 2010, 58, 1242-1251.	7.9	129
5	The oxidation characteristics of the nickel-based superalloy, RR1000, at temperatures of 700â€“900Â°C. Materials at High Temperatures, 2012, 29, 145-150.	1.0	51
6	Creep relaxation and the spallation of oxide layers. Surface and Coatings Technology, 1997, 94-95, 27-33.	4.8	44
7	Oxidation Study of an EB-PVD MCrAlY Thermal Barrier Coating System. Oxidation of Metals, 2011, 76, 259-271.	2.1	43
8	An overview of the oxidation of Ni-based superalloys for turbine disc applications: surface condition, applied load and mechanical performance. Materials at High Temperatures, 2016, 33, 465-475.	1.0	41
9	The influence of bond coat surface roughness on chemical failure and delamination in TBC systems. Materials and Corrosion - Werkstoffe Und Korrosion, 2008, 59, 508-513.	1.5	31
10	Comparison of Chromia Growth Kinetics in a Ni-based Superalloy, with and without Shot-peening. Corrosion Science, 2015, 100, 242-252.	6.6	30
11	Characterisation of subsurface oxidation damage in Ni based superalloy, RR1000. Materials Science and Technology, 2014, 30, 1884-1889.	1.6	27
12	The influence of stress on the oxidation of a Ni-based superalloy. Corrosion Science, 2019, 154, 277-285.	6.6	27
13	Oxidation of high-temperature coatings. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2006, 220, 1-10.	1.3	20
14	Identifying heating rate dependent oxidation reactions on a nickel-based superalloy using synchrotron diffraction. Acta Materialia, 2019, 181, 570-583.	7.9	19
15	Effect of convective heat transfer and phase change on the stability of aluminium smelting cells. AICHE Journal, 1986, 32, 1459-1465.	3.6	17
16	A method for evaluating the creep properties of overlay coatings. Surface and Coatings Technology, 2000, 124, 13-18.	4.8	15
17	A chromia forming thermal barrier coating system. Materials and Corrosion - Werkstoffe Und Korrosion, 2011, 62, 668-673.	1.5	12
18	Predicting the microstructural evolution in a multi-layered corrosion resistant coating on a Ni-base superalloy. Materials at High Temperatures, 2018, 35, 78-88.	1.0	11

#	Article	IF	Citations
19	The effect of bond coat oxidation on the microstructure and endurance of a thermal barrier coating system. Materials at High Temperatures, 2009, 26, 317-323.	1.0	10
20	The Oxidation and Interdiffusion of a Chromia Forming Multilayered TBC System. Oxidation of Metals, 2014, 81, 47-55.	2.1	8
21	Effect of prior oxidation on high cycle fatigue performance of RR1000 and role of oxidation in fatigue crack initiation. Materials at High Temperatures, 2015, 32, 68-73.	1.0	8
22	The effect of elevated air pressure on the oxidation properties of the nickel-based superalloy, RR1000, at 650Â°C with different surface modifications. Materials at High Temperatures, 2018, 35, 130-140.	1.0	8
23	Formation of diffusion cells in LPPS MCrAlY coatings. Materials at High Temperatures, 2003, 20, 461-465.	1.0	7
24	Cautionary note on use of focused ion beam sectioning as technique for characterising oxidation damage in Ni based superalloys. Materials at High Temperatures, 2014, 31, 27-33.	1.0	7
25	The Effect of Temperature and Carbonyl Sulphide on Carbon Deposition on 20Cr25Ni Stainless Steel. Oxidation of Metals, 2017, 87, 667-678.	2.1	6
26	Oxidation behaviour of a developmental nickel-based alloy and the role of minor elements. Corrosion Science, 2022, 196, 110002.	6.6	5
27	Modelling of the interdiffusion and oxidation of a multilayered chromia forming thermal barrier coating. Materials and Corrosion - Werkstoffe Und Korrosion, 2017, 68, 215-219.	1.5	3
28	Electron microscopy study of the formation mechanism of catalytic nickel-rich particles and the role of carbonyl sulphide in the suppression of carbon deposition on 20Cr-25Ni steel. Materials Characterization, 2018, 144, 505-515.	4.4	2
29	Influence of Pre-oxidation on Filamentary Carbon Deposition on 20Cr25Ni Stainless Steel. Oxidation of Metals, 2019, 91, 589-607.	2.1	2
30	The effect of thermal cycling on steam oxidation behaviour of TP347H FG at 650ÂÂ°C. Materials at High Temperatures, 2018, 35, 291-298.	1.0	1
31	Influence of low CO concentration on catalysed carbon deposition on 20Cr25Ni steel in CO2 environments containing ethene. Corrosion Science, 2018, 143, 56-64.	6.6	1
32	The effect of bond coat oxidation on the microstructure and endurance of a thermal barrier coating system. Materials at High Temperatures, 2009, 26, 317-323.	1.0	1