Lesley Cornish

List of Publications by Year
in descending order

108 papers	1,475 citations	304368 22 h-index	414034 32 g-index
108 all docs	108 docs citations	108 times ranked	916 citing authors

#	Article	IF	Citations
1	Platinum-Based Superalloys: Combating High Temperatures and Aggressive Environments. Minerals, Metals and Materials Series, 2022, , 1527-1538.	0.3	2
2	Sliding wear characteristics of WC-VC-Co alloys with various Ru additions. International Journal of Refractory Metals and Hard Materials, 2021, 95, 105429.	1.7	12
3	Hardness characteristics of as-cast Ni-Ru-Zr alloys. Journal of Mining and Metallurgy, Section B: Metallurgy, 2021, 57, 261-270.	0.3	0
4	Experimental Liquidus Surface Projection and Isothermal Section at 1000ÂÂ°C of the V-Ni-C System. Journal of Phase Equilibria and Diffusion, 2021, 42, 42-62.	0.5	1
5	A MÃ¶ssbauer spectroscopy study of Fe based cemented carbides. International Journal of Refractory Metals and Hard Materials, 2020, 87, 105127.	1.7	3
6	Effects of Mo2C, Ni binder and laser surface modification on WC inserts for turning Ti-6Al-4V. International Journal of Refractory Metals and Hard Materials, 2020, 87, 105145.	1.7	3
7	High-temperature sliding wear, elastic modulus and transverse rupture strength of Ni bonded NbC and WC cermets. International Journal of Refractory Metals and Hard Materials, 2020, 87, 105143.	1.7	17
8	Roughing, semi-finishing and finishing of laser surface modified nickel bonded NbC and WC inserts for grey cast iron (GCI) face-milling. International Journal of Refractory Metals and Hard Materials, 2020, 86, 105128.	1.7	5
9	Study of Pt-Al-Nb Alloys Above 45Âat.% Pt. Journal of Phase Equilibria and Diffusion, 2020, 41, 391-417.	0.5	1
10	Studies of Co-Fe-Pd Alloys in the As-Cast Condition, and After Annealing at 1000 and 650ÂÂ°C. Journal of Phase Equilibria and Diffusion, 2020, 41, 567-585.	0.5	0
11	Effect of nitric acid contamination on mild steel corrosion in hydrofluoric acid at 25Â°C. Corrosion Engineering Science and Technology, 2020, 55, 349-359.	0.7	1
12	Partial Isothermal Sections of the Cu-Rich Corner of the Al-Cu-Zn System at 200 and 240ÂÂ°C. Journal of Phase Equilibria and Diffusion, 2019, 40, 588-599.	0.5	1
13	Corrosion map of South Africaâ€™s macro atmosphere. South African Journal of Science, 2019, 115, .	0.3	0
14	Microstructure and mechanical properties of selective laser melted Ti-3Al-8V-6Cr-4Zr-4Mo compared to Ti-6Al-4V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 747, 225-231.	2.6	26
15	Microstructure, mechanical and machining properties of LPS and SPS NbC cemented carbides for face-milling of grey cast iron. International Journal of Refractory Metals and Hard Materials, 2018, 73, 111-120.	1.7	16
16	Study of as-cast Nb-Ru samples. MRS Advances, 2018, 3, 1949-1953.	0.5	1
17	Phase analyses of the Co-Fe-Pd ternary alloys. IOP Conference Series: Materials Science and Engineering, 2018, 430, 012023.	0.3	0
18	Phase proportions, carbon equivalent, mechanical properties and their effect on material cost of railway axle steels. MRS Advances, 2018, 3, 2169-2181.	0.5	5

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19	Magnetic and microstructural aspects of WC-VC-Co-Ru alloys. International Journal of Refractory Metals and Hard Materials, 2018, 76, 49-56.	1.7	6
20	Influence of Ru on the hardness and fracture toughness of WC-VC-Co alloys. International Journal of Refractory Metals and Hard Materials, 2018, 77, 54-60.	1.7	18
21	Preliminary study of spark plasma sintered VC-Ni alloys. MRS Advances, 2018, 3, 2003-2008.	0.5	2
22	PGMs: A cornucopia of possible applications. Journal of the South African Institute of Mining and Metallurgy, 2017, 117, 969-974.	0.5	3
23	Kinetics of grain growth in Ti-2.7Al-5.7Fe-6Mo-6V alloy. Journal of Mining and Metallurgy, Section B: Metallurgy, 2017, 53, 263-270.	0.3	1
24	Experimental Liquidus Surface Projection of the Ni-Ru-Zr System. Journal of Phase Equilibria and Diffusion, 2016, 37, 702-717.	0.5	0
25	Predicting yield strengths of Al-Zn-Mg-Cu-(Zr) aluminium alloys based on alloy composition or hardness. Materials and Design, 2016, 99, 211-218.	3.3	26
26	Microstructure of In situ Alloyed Ti-6Al-4V and 10Mo as a Function of Process Parameters. , 2016, , .		1
27	Liquidus Projection Surface and Isothermal Section at 1200ÂÂ°C of Ni-Ru-Y. Journal of Phase Equilibria and Diffusion, 2015, 36, 149-168.	0.5	1
28	Abrasion wear, thermal shock and impact resistance of WC-cemented carbides produced by PECS and LPS. International Journal of Refractory Metals and Hard Materials, 2015, 49, 133-142.	1.7	14
29	The dislocation core misfit potential. Computational Materials Science, 2015, 100, 195-202.	1.4	1
30	Microstructure and material properties of PECS manufactured WC-NbC-CO and WC-TiC-Ni cemented carbides. International Journal of Refractory Metals and Hard Materials, 2015, 49, 240-248.	1.7	21
31	Effect of Processing Route on the Microstructure and Properties of an Fe-al Alloy with Additions of Precious Metal. Materials Today: Proceedings, 2015, 2, 3932-3942.	0.9	5
32	Application of a Thermodynamic Database to Predict the Phases and Microstructure of Pt-Al-Cr-Ru Alloys. Materials Today: Proceedings, 2015, 2, 4090-4099.	0.9	1
33	Mechanical behaviour of pack carburized AISI 316L austenitic stainless steel. Journal of the South African Institute of Mining and Metallurgy, 2015, 115, 1183-1191.	0.5	10
34	High-order additions to platinum-based alloys for high-temperature applications. Journal of the South African Institute of Mining and Metallurgy, 2015, 115, 241-250.	0.5	4
35	Theoretical investigations of Pt$_{3}$X (X = Al, Sc, Hf, Zr) ground state. Turkish Journal of Physics, 2014, 38, 10-16.	0.5	5
36	Measurement of the Stress in Oxide Scales Developed Upon Oxidation of a Ptâ€Based Alloy in Air at 1250Â°C. International Journal of Applied Ceramic Technology, 2014, 11, 602-610.	1.1	1

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37	Effect of platinum group metal addition on microstructure and corrosion behaviour of Tiâ€“47Â·5 at-%Al. Corrosion Engineering Science and Technology, 2014, 49, 180-188.	0.7	2
38	Development of VC-Ni Eutectic Alloys for Wear Resistance. Advanced Materials Research, 2014, 1019, 347-354.	0.3	3
39	Experimental Solidification Projection, Liquidus Surface Projection and Isothermal Section at 1000ÂÂ°C for the Pt-Cr-V System. Journal of Phase Equilibria and Diffusion, 2014, 35, 476-489.	0.5	3
40	Correlation between residual stress and abrasive wear of WCâ€“17Co coatings. International Journal of Refractory Metals and Hard Materials, 2014, 44, 68-76.	1.7	37
41	Assessment of the Oxidation Behavior of a Pt-Based Alloy for High Temperature Applications. Journal of Materials Engineering and Performance, 2013, 22, 3466-3475.	1.2	6
42	Effect of Mo2C additions on the properties of SPS manufactured WCâ€“TiCâ€“Ni cemented carbides. International Journal of Refractory Metals and Hard Materials, 2013, 41, 12-21.	1.7	46
43	Determination of residual stress in alumina scale by photostimulated Cr3+ luminescence piezospectroscopy. Corrosion Science, 2013, 70, 276-284.	3.0	12
44	Characterisation of the Residual Stresses in HVOF WC-Co Coatings and Substrates. Materials Science Forum, 2013, 768-769, 280-285.	0.3	2
45	Microstructural Study of Pt-based Superalloys in the Heat Treated Condition. Microscopy and Microanalysis, 2012, 18, 1686-1687.	0.2	0
46	Derivation of the liquidus surface of the Ni-Ru-V system using SEM and EDX. Microscopy and Microanalysis, 2012, 18, 1688-1689.	0.2	0
47	Effect of substrate on the 3 body abrasion wear of HVOF WC-17wt.% Co coatings. International Journal of Refractory Metals and Hard Materials, 2012, 35, 288-294.	1.7	15
48	High Temperature Oxidation of Ptâ€“Alâ€“Crâ€“Ru Alloy: Scale Morphology and Adherence. Metallography, Microstructure, and Analysis, 2012, 1, 142-149.	0.5	6
49	X-ray diffraction measurement of residual stress in WC-Co thermally sprayed coatings onto metal substrates. Surface and Coatings Technology, 2012, 206, 4725-4729.	2.2	57
50	Oxidation kinetics and mechanisms of growth of alumina scale on precipitation-hardened Ptâ€“Alâ€“Crâ€“Ru alloys. Corrosion Science, 2012, 63, 119-128.	3.0	12
51	Isothermal Oxidation Behaviour of a Two-Phase Î³/Î³â€² Precipitation-Hardened Quaternary Pt-Based Alloys in Air at 1,350ÂÂ°C. Oxidation of Metals, 2012, 78, 123-143.	1.0	8
52	Effects of tungsten and aluminium on the oxidation and phase formation in mechanically alloyed Ti(C,N)â€“Wâ€“Al systems. Journal of the European Ceramic Society, 2012, 32, 3583-3592.	2.8	3
53	Polycrystalline cubic boron nitride sintered with Ti(C,N)-W-Al mechanically alloyed binders. Journal of the European Ceramic Society, 2012, 32, 3593-3601.	2.8	11
54	Investigation of the isothermal section at 1000Â°C in the Pt-Al-Cr system. Journal of Mining and Metallurgy, Section B: Metallurgy, 2012, 48, 367-374.	0.3	2

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55	Transformation and alloying mechanisms in sub-stoichiometric titanium carbonitrides - tungsten high energy ball milled powders. International Journal of Refractory Metals and Hard Materials, 2011, 29, 312-319.	1.7	8
56	Annealing behaviour of sub-stoichiometric Ti(C,N)â€“W mechanical alloy powders. International Journal of Refractory Metals and Hard Materials, 2011, 29, 445-451.	1.7	4
57	Formation mechanism of nanocrystalline tungstenâ€“titanium aluminides by ball milling of Ti(C,N)â€“W powders at subzero temperature. Powder Technology, 2011, 211, 221-225.	2.1	3
58	The Platinum Development Initiative: Platinum-Based Alloys for High Temperature and Special Applications: Part IV. Platinum Metals Review, 2010, 54, 112-119.	1.5	18
59	Investigation of as-cast alloys in the Ptâ€“Alâ€“Cr system. Journal of Alloys and Compounds, 2010, 490, 124-144.	2.8	8
60	Corrosion behaviour of superferritic stainless steels cathodically modified with minor additions of ruthenium in sulphuric and hydrochloric acids. Materials & Design, 2009, 30, 1451-1457.	5.1	33
61	Development of a database for the prediction of phases in Ptâ€“Alâ€“Crâ€“Ru alloys for high-temperature and corrosive environments: Alâ€“Crâ€“Ru. Journal of Alloys and Compounds, 2009, 476, 176-186.	2.8	2
62	The Platinum Development Initiative: Platinum-Based Alloys for High Temperature and Special Applications: Part III. Platinum Metals Review, 2009, 53, 155-163.	1.5	11
63	The Platinum Development Initiative: Platinum-Based Alloys for High Temperature and Special Applications: Part II. Platinum Metals Review, 2009, 53, 69-77.	1.5	12
64	The Platinum Development Initiative: Platinum-Based Alloys for High Temperature and Special Applications: Part I. Platinum Metals Review, 2009, 53, 2-10.	1.5	19
65	Investigation of hot ductility in Al-killed boron steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 494, 263-275.	2.6	37
66	Investigation of isothermal sections at 1000 and 600Â°C in the Ptâ€“Crâ€“Ru system. Journal of Alloys and Compounds, 2008, 457, 310-322.	2.8	4
67	A Study of the Ni-Ru-Y system at 1200Â°C using SEM and EDX. Microscopy and Microanalysis, 2008, 14, 578-579.	0.2	1
68	Building a Thermodynamic Database for Platinum-Based Superalloys: Part I. Platinum Metals Review, 2007, 51, 104-115.	1.5	21
69	Building a Thermodynamic Database for Platinum-Based Superalloys: Part II. Platinum Metals Review, 2007, 51, 189-198.	1.5	9
70	Unexpected ordering behaviour of Pt3Al intermetallic precipitates. Journal of Alloys and Compounds, 2007, 432, 96-102.	2.8	18
71	Investigation of as-cast alloys in the Ptâ€“Crâ€“Ru system. Journal of Alloys and Compounds, 2006, 416, 80-92.	2.8	5
72	On the development and investigation of quaternary Pt-based superalloys with Ni additions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 567-575.	1.1	28

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73	Derivation of the liquidus surface projection for the Alâ€“Ptâ€“Ru system from as-cast samples. Journal of Alloys and Compounds, 2005, 403, 245-257.	2.8	10
74	Revised Phase Diagram for the Ptâ€”Ti System from 30 to 60 at.% Platinum.. ChemInform, 2004, 35, no.	0.1	1
75	Revised phase diagram for the Ptâ€“Ti system from 30 to 60 at.% platinum. Journal of Alloys and Compounds, 2004, 375, 120-127.	2.8	32
76	The third order nonlinear optical properties of gold nanoparticles in glasses, part II. Gold Bulletin, 2003, 36, 51-58.	3.2	20
77	Thermodynamic assessment of the Alî—¸Ru system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2003, 27, 79-90.	0.7	29
78	Determination of the 76 wt.% Au section of the Alâ€“Auâ€“Cu phase diagram. Journal of Alloys and Compounds, 2003, 354, 171-180.	2.8	18
79	Mechanical properties and microstructure of platinum enhanced radiopaque stainless steel (PERSS) alloys. Journal of Alloys and Compounds, 2003, 361, 187-199.	2.8	16
80	Development of Platinum-Group-Metal Superalloys for High-Temperature Use. MRS Bulletin, 2003, 28, 632-638.	1.7	57
81	Hardness and colour trends along the 76 wt.% Au (18.2 carat) line of the Auâ€“Cuâ€“Al system. Scripta Materialia, 2002, 47, 95-100.	2.6	25
82	A 500 Â°C isothermal section for the Al-Au-Cu system. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 987-993.	1.1	24
83	The development of platinum-based alloys and their thermodynamic database. Journal of Mining and Metallurgy, Section B: Metallurgy, 2002, 38, 197-204.	0.3	16
84	The effect of microstructure on hardness measurements in the aluminium-rich corner of the Alâ€“Niâ€“Cr system. Journal of Alloys and Compounds, 2001, 317-318, 372-378.	2.8	22
85	The effects of Ti and Cr additions on the phase equilibria and properties of (Pt)/Pt3Al alloys. Journal of Alloys and Compounds, 2001, 322, 166-175.	2.8	36
86	An Investigation of Al-Rich Alloys in the Al-Cr-Ru System. Microscopy and Microanalysis, 2001, 7, 1248-1249.	0.2	5
87	New developments in high-temperature platinum alloys. Jom, 2001, 53, 19-20.	0.9	16
88	Martensitic transformations, microstructure, and mechanical workability of TiPt. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 1881-1886.	1.1	34
89	Hydrogen in metals. Engineering Failure Analysis, 2001, 8, 113-121.	1.8	100
90	An investigation of the Pt-Al-Ru diagram to facilitate alloy development. Journal of Phase Equilibria and Diffusion, 2001, 22, 214-218.	0.3	11

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91	Displacive transformations in Au-18 wt pct Cu-6 wt pct Al. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 1917-1923.	1.1	28
92	A Microstructural Study of the Al-Cr-Ru System. Microscopy and Microanalysis, 2000, 6, 370-371.	0.2	5
93	Solidification phases and liquidus surface of the Alâ€“Niâ€“Ru system above 50 at.% aluminium. Journal of Alloys and Compounds, 2000, 308, 205-215.	2.8	13
94	Data Collection for the Calculation of Phase Equilibria. Molecular Simulation, 1999, 22, 57-80.	0.9	2
95	A metallographic study of the Alâ€“Niâ€“Re phase diagram. Journal of Alloys and Compounds, 1999, 291, 145-166.	2.8	17
96	An investigation of the Alâ€“Re phase diagram. Journal of Alloys and Compounds, 1999, 291, 117-129.	2.8	20
97	Constitution of the Alâ€“Irâ€“Ru system. Journal of Alloys and Compounds, 1999, 291, 130-144.	2.8	14
98	MÃ¶ssbauer Spectroscopy and SEM Characterisation of Commercial Ferrosilicon Powders. Hyperfine Interactions, 1998, 112, 261-269.	0.2	5
99	An investigation of the B2 phase between AlRu and AlNi in the Alâ€“Niâ€“Ru ternary system. Journal of Alloys and Compounds, 1998, 264, 173-179.	2.8	36
100	Constitution and hardnesses of the Alâ€“Ir system. Journal of Alloys and Compounds, 1998, 280, 240-250.	2.8	46
101	Constitution of the Alî—¸Niî—¸Ru ternary system above 50 at. % aluminium. Journal of Alloys and Compounds, 1997, 256, 221-227.	2.8	14
102	A study of the Alî—¸Niî—¸Ru ternary system below 50 at.% aluminium. Journal of Alloys and Compounds, 1997, 256, 213-220.	2.8	13
103	The thinning of SpangoldTM for transmission electron microscopy studies. Journal of Materials Science Letters, 1997, 16, 674-677.	0.5	5
104	Investigation of the aluminium-ruthenium phase diagram above 25 at.% ruthenium. Journal of Alloys and Compounds, 1996, 234, 275-279.	2.8	37
105	Investigation of the high aluminium end of the aluminium-ruthenium phase diagram. Journal of Alloys and Compounds, 1996, 233, 241-245.	2.8	20
106	Fine Grained WCâ€“VCâ€“Co Hardmetal. Powder Metallurgy, 1996, 39, 210-212.	0.9	41
107	Study of Interactive Stresses in Thin WC-Co Coating of Thick Mild Steel Substrate Using High-Precision Neutron Diffraction. Materials Science Forum, 0, 772, 161-165.	0.3	3
108	Investigating the High Temperature Oxidation Behavior of TiAl-Based Alloys with Nickel and Ruthenium Additions. Advanced Materials Research, 0, 1019, 294-301.	0.3	4