Alberto Passerone

List of Publications by Year
in descending order

115 papers	3,186 citations	136950 32 h-index	182427 51 g-index
125 all docs	125 docs citations	125 times ranked	1603 citing authors

#	Article	IF	Citations
1	Diamondâ€“metal interfaces in cutting tools: a review. Journal of Materials Science, 2012, 47, 3252-3264.	3.7	167
2	Measurement of contact angle and work of adhesion at high temperature. Journal of Materials Science, 2005, 40, 2271-2280.	3.7	162
3	Survey on wetting of SiC by molten metals. Ceramics International, 2010, 36, 1177-1188.	4.8	161
4	A diffusion-based approach to mixed adsorption kinetics. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1996, 114, 351-359.	4.7	120
5	An automatic technique for measuring the surface tension of liquid metals. High Temperature Technology, 1989, 7, 82-86.	0.3	102
6	Wettability of zirconium diboride ceramics by Ag, Cu and their alloys with Zr. Scripta Materialia, 2003, 48, 191-196.	5.2	82
7	Adsorption Kinetics of Alkylphosphine Oxides at Water/Hexane Interface. Journal of Colloid and Interface Science, 1997, 186, 46-52.	9.4	79
8	Surface and transport properties of Agâ€“Cu liquid alloys. Surface Science, 2005, 576, 175-187.	1.9	73
9	Measurement of the Partition Coefficient of Surfactants in Water/Oil Systems. Langmuir, 1997, 13, 4817-4820.	3.5	72
10	Wetting and interactions of Ni- and Co-based superalloys with different ceramic materials. Journal of Materials Science, 2010, 45, 2071-2079.	3.7	67
11	A new experimental method for the measurement of the interfacial tension between immiscible fluids at zero bond number. Journal of Colloid and Interface Science, 1991, 146, 152-162.	9.4	66
12	Dynamic Interfacial Tension Measurements by a Capillary Pressure Method. Journal of Colloid and Interface Science, 1995, 169, 226-237.	9.4	66
13	Oxygen tensioactivity on liquid-metal drops. Advances in Colloid and Interface Science, 2005, 117, 15-32.	14.7	64
14	Wetting, spreading and joining in the aluminaâ€“zirconiaâ€“Inconel 738 system. Scripta Materialia, 2004, 50, 325-330.	5.2	59
15	Surface tension and adsorption in liquid silver-oxygen alloys. Acta Metallurgica, 1982, 30, 1597-1604.	2.1	57
16	Liquid metal/ceramic interactions in the (Cu, Ag, Au)/ZrB2 systems. Journal of the European Ceramic Society, 2007, 27, 3277-3285.	5.7	56
17	Interfacial tensions in Zn, Zn-Sn and Zn-Sn-Pb systems. Journal of the Less Common Metals, 1977, 52, 37-49.	0.8	48
18	Wetting and interfacial phenomena in Niâ€“HfB2 systems. Acta Materialia, 2009, 57, 356-364.	7.9	47

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19	SiC/SiC and SiC/Kovar joining by Niâ€“Si and Mo interlayers. Journal of Materials Science, 2010, 45, 4299-4307.	3.7	47
20	Influence of oxygen contamination on the surface tension of liquid tin. Journal of Materials Science, 1990, 25, 4266-4272.	3.7	45
21	Corrosion behaviour of steels in leadâ€“bismuth at 823 K. Journal of Nuclear Materials, 2004, 335, 185-188.	2.7	45
22	Wetting of Group IV diborides by liquid metals. Journal of Materials Science, 2006, 41, 5088-5098.	3.7	45
23	Thermodynamic study of adsorption in liquid metal-oxygen systems. Surface Science, 1988, 206, 533-553.	1.9	44
24	Equilibrium structural transitions of solid-liquid interfaces in zinc based alloys. Acta Metallurgica, 1982, 30, 1349-1356.	2.1	43
25	Bulk and surface properties of liquid Xâ€“Zr (X=Ag, Cu) compound forming alloys. Surface Science, 2004, 549, 281-293.	1.9	42
26	Solid-liquid interfacial tensions by the dihedral angle method. A mathematical approach. Acta Metallurgica, 1985, 33, 771-776.	2.1	39
27	Equilibrium Interfacial Tension of Hexane/Water plus Triton X-100. Journal of Colloid and Interface Science, 1995, 169, 238-240.	9.4	38
28	On the application of modelling to study the surface and interfacial phenomena in liquid alloyâ€“ceramic substrate systems. Intermetallics, 2003, 11, 1301-1311.	3.9	38
29	Wetting and spreading of liquid metals on ZrB2-based ceramics. Journal of Materials Science, 2005, 40, 2295-2300.	3.7	37
30	Oxygen influence on ceramics wettability by liquid metals: Ag/Î±-Al2O3â€”Experiments and modelling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 495, 153-158.	5.6	36
31	The surface tension of liquid lead. Journal of Chemical Thermodynamics, 1983, 15, 971-983.	2.0	35
32	Review: Surface tension and its relations with adsorption, vapourization and surface reactivity of liquid metals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1993, 161, 31-40.	5.6	34
33	Factors limiting the accuracy of measurements of surface tension by the sessile drop method. Journal of Materials Science, 1982, 17, 2895-2901.	3.7	32
34	Sorption Kinetics at Liquid-Liquid Interfaces with the Surface-Active Component Soluble in Both Phases. Journal of Colloid and Interface Science, 1994, 163, 309-314.	9.4	32
35	Wetting and interfacial behavior of Niâ€“Si alloy on different substrates. Journal of Materials Science, 2009, 44, 5990-5997.	3.7	32
36	ZrB2â€“SiC/Ti6Al4V joints: wettability studies using Ag- and Cu-based braze alloys. Journal of Materials Science, 2012, 47, 8439-8449.	3.7	31

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37	Bulk and surface properties of liquid Agâ€“X (X=Ti, Hf) compound forming alloys. Surface Science, 2005, 591, 56-69.	1.9	30
38	A review of transition metals diborides: from wettability studies to joining. Journal of Materials Science, 2012, 47, 8275-8289.	3.7	30
39	Interfacial tensions and adsorption in the Agî—¸Pb system. Scripta Metallurgica, 1982, 16, 547-550.	1.2	29
40	Interactions, joining and microstructure of Sn-Ti/ZrO2 system. Journal of the European Ceramic Society, 2019, 39, 1525-1531.	5.7	29
41	Oxygen mass transfer at liquid-metal-vapour interfaces under a low total pressure. Journal of Materials Science, 1994, 29, 6104-6114.	3.7	28
42	Density and surface tension of dioctylphthalate, silicone oil and their solutions. Surface and Coatings Technology, 1986, 28, 215-223.	4.8	27
43	Wettability of transparent YAG (Y3Al5O12) by molten Agâ€“Cuâ€“Ti alloys. Journal of the European Ceramic Society, 2015, 35, 2895-2906.	5.7	27
44	Surface reactivity of liquid metal with oxygen and its relationship with surface tension measurements: a kinetic-fluodynamic model. Journal of Materials Science, 1994, 29, 1833-1846.	3.7	26
45	Drop formation instabilities induced by entrapped gas bubbles. Journal of Colloid and Interface Science, 1990, 140, 436-443.	9.4	25
46	Control of Interfacial Reactivity Between ZrB2 and Ni-Based Brazing Alloys. Journal of Materials Engineering and Performance, 2012, 21, 660-666.	2.5	25
47	Surface tension and viscosity of industrial alloys from parabolic flight experiments â€" Results of theThermoLab project. Microgravity Science and Technology, 2005, 16, 11-14.	1.4	24
48	Brazing transparent YAG to Ti6Al4V: reactivity and characterization. Journal of the European Ceramic Society, 2016, 36, 4185-4196.	5.7	24
49	Wetting and interfacial behavior of Snâ€“Ti alloys on zirconia. Journal of Materials Science, 2019, 54, 812-822.	3.7	24
50	Joining Technology in Metal-Ceramic Systems. Materials and Manufacturing Processes, 2000, 15, 631-648.	4.7	21
51	Wettability of by molten Ni(B) alloys interpreted by CALPHAD methods, Part 2: Wetting and interfacial reactivity. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2010, 34, 6-14.	1.6	21
52	Joining of ZrB2 Ceramics to Ti6Al4V by Ni-Based Interlayers. Journal of Materials Engineering and Performance, 2014, 23, 1555-1560.	2.5	21
53	Microstructure and interfacial tensions in Zn-In and Zn-Bi alloys. Metal Science, 1979, 13, 359-365.	0.7	20
54	Wetting and interfacial phenomena in relation to joining of alumina via Co/Nb/Co interlayers. Journal of the European Ceramic Society, 2013, 33, 539-547.	5.7	20

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55	Oxygen transport and dynamic surface tension of liquid metals. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1998, 356, 857-870.	3.4	19
56	Wetting and interfacial behavior of molten Cu on Coâ€“Si(â€“Mo) coated SiC. Ceramics International, 2015, 41, 13493-13501.	4.8	18
57	Secondary ion mass spectrometry in the characterisation of boron-based ceramics. Rapid Communications in Mass Spectrometry, 2001, 15, 1-7.	1.5	17
58	Overview on Wetting and Joining in Transition Metals Diborides. Advances in Science and Technology, 2010, 64, 98-107.	0.2	16
59	Experimental study of the solid-liquid equilibrium roughening transition in Zn-In alloys. Journal of Crystal Growth, 1980, 49, 757-760.	1.5	15
60	Isothermal faceted to non-faceted equilibrium transition of solid-liquid interfaces in Znî—¸Bîî—¸In alloys. Scripta Metallurgica, 1980, 14, 1089-1092.	1.2	15
61	High temperature tensiometry. Studies in Interface Science, 1998, 6, 475-524.	0.0	15
62	Isothermal solidâ€“liquid transitions in the (Ni,B)/ZrB2 system as revealed by sessile drop experiments. Journal of Materials Science, 2013, 48, 5029-5035.	3.7	15
63	Surface characterization of Mo-implanted 6Hâ€“SiC by high temperature non-reactive wetting tests with the Niâ€“56Si alloy. Ceramics International, 2014, 40, 7227-7234.	4.8	15
64	A theoretical approach for the interpretation of liquid metal surface tension measurements in the presence of oxygen. ISIJ International, 2000, 40, S139-S143.	1.4	14
65	Ab initio simulations of the Ag(111)/Al2O3 interface at intermediate oxygen partial pressures. Journal of Materials Science, 2010, 45, 4265-4270.	3.7	14
66	Wettability of HfB2 by molten Ni(B) alloys interpreted by CALPHAD methods, Part 1: Definition of the Bâ€“Hfâ€“Ni system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2010, 34, 2-5.	1.6	14
67	Wetting and spreading behavior of Snâ€“Ti alloys on SiC. Materialia, 2018, 3, 57-63.	2.7	13
68	Surface tension and density of molten glasses in the system La2O3î—¸Na2Si2O5. Ceramurgia International, 1979, 5, 18-22.	0.3	12
69	Metal-ceramic interfaces: wetting and joining processes. International Journal of Materials and Product Technology, 2004, 20, 420.	0.2	11
70	Twenty Years of Surface Tension Measurements in Space. Microgravity Science and Technology, 2011, 23, 101-111.	1.4	11
71	Experimental investigations and thermodynamic modeling in the ZrB2Ni section of the BNiZr system. Journal of Alloys and Compounds, 2014, 592, 115-120.	5.5	11
72	High-temperature-reactivity of Alâ€“Ti alloys in contact with SiC. Journal of Alloys and Compounds, 2020, 817, 152715.	5.5	11

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73	Thermophysical Properties of IN738LC, MM247LC and CMSX-4 in the Liquid and High Temperature Solid Phase. , 2005, , .		11
74	Thermodynamic approach to competition between surface and volume reactions. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1990, 12, 353-376.	0.4	10
75	Thermodynamics and surface properties of liquid Cuâ€“B alloys. Surface Science, 2009, 603, 2725-2733.	1.9	10
76	Critical Issues for Producing UHTC-Brazed Joints: Wetting and Reactivity. Journal of Materials Engineering and Performance, 2016, 25, 3330-3347.	2.5	10
77	Wettability of SiC and graphite by Coâ€“Ta alloys: evaluation of the reactivity supported by thermodynamic calculations. Journal of Materials Science, 2017, 52, 13414-13426.	3.7	10
78	On the measurement of the surface tension of DNA solutions. Journal of Colloid and Interface Science, 1984, 102, 295-297.	9.4	9
79	Liquid metal surface tension measurements: a kinetic-fluodynamic model of surface oxygen availability. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1994, 178, 99-104.	5.6	9
80	Wettability of TiB2 Ceramics by Liquid Cu and Ag-Cu Eutectic Alloys. , 1998, , 87-94.		8
81	Surface tension measurements of Al-Ni based alloys from ground-based and parabolic flight experiments: Results from the thermolab project. Microgravity Science and Technology, 2006, 18, 73-76.	1.4	8
82	Equilibrium atomic roughness at solid-liquid interfaces of pure metals. Materials Chemistry, 1976, 1, 45-58.	0.3	7
83	Measurement of thermophysical properties of liquid metallic alloys in a ground- and microgravity based research programme â€" theThermoLab project. Microgravity Science and Technology, 2005, 16, 7-10.	1.4	7
84	High Temperature Solid-Liquid Interactions in Metal-Ceramic Brazing: A Critical Review. Materials Science Forum, 2017, 884, 132-165.	0.3	7
85	Surface engineering of SiC_f/SiC composites by selective thermal removal. International Journal of Applied Ceramic Technology, 2017, 14, 287-294.	2.1	7
86	Wetting and interfacial phenomena of Niâ€Ta alloys on <scp>CVD</scp>â€SiC. International Journal of Applied Ceramic Technology, 2017, 14, 295-304.	2.1	7
87	Zirconia-high entropy alloys joints for biomedical applications: The role of Ag-based fillers on interfacial reactivity. Journal of Alloys and Compounds, 2022, 909, 164764.	5.5	7
88	Interfacial phenomena in metal-ceramic systems. Materials Chemistry and Physics, 1986, 15, 263-279.	4.0	6
89	Results of the Facility for Adsorption and Surface Tension (FAST) experiments onboard STS-107, in the framework of the project FASES. Microgravity Science and Technology, 2005, 16, 196-200.	1.4	6
90	Adsorption properties of C10E8 at water/ hexane interface investigated onboard STS-107, by the FAST facility. Microgravity Science and Technology, 2005, 16, 201-204.	1.4	6

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91	Results of microgravity investigation on adsorption and interfacial rheology of soluble surfactants from the experiment FAST onboard STS-107. Microgravity Science and Technology, 2006, 18, 112-116.	1.4	6
92	Wetting and interfacial reactivity of Niâ€“Al alloys with Al2O3 and ZrO2 ceramics. Journal of Materials Science, 2021, 56, 7849-7861.	3.7	6
93	M.I.T.E. maser-4 results: Interfacial tension measurement in microgravity and drop growth instabilities. Advances in Space Research, 1991, 11, 59-68.	2.6	5
94	The capillary pressure method: A new tool for interfacial tension measurements. , 1996, , 175-185.		5
95	Wettability of glass substrates by molten nylon-6. Polymer, 1981, 22, 534-538.	3.8	4
96	Wetting and interfacial phenomena in Ni-Cr-Hf/sapphire systems. Journal of the European Ceramic Society, 2020, 40, 521-528.	5.7	4
97	Wetting of barium hexaferrite by molten metals. Ceramurgia International, 1975, 1, 23-27.	0.3	3
98	Surface Properties of Ag-Cu-Zr Liquid Alloys in Relation to the Wettability of Boride Ceramics. Materials Science Forum, 2006, 512, 211-216.	0.3	3
99	Interactions between Superalloys and Mould Materials for Investment Casting of Turbine Blades. Advances in Science and Technology, 2010, 70, 130-135.	0.2	3
100	Dip-coating of aluminium by lead. Journal of Materials Science, 1974, 9, 1050-1056.	3.7	2
101	On the calculation of solid-liquid interfacial tension in metallic systems from contact angle data. Journal of Materials Science Letters, 1983, 2, 197-200.	0.5	2
102	General relationships between dihedral angles in systems with an intermetallic compound. Scripta Metallurgica, 1987, 21, 937-942.	1.2	2
103	Assessment of advanced joint Hfb2/Nib/Hfb2 by nanoindentation. AIP Conference Proceedings, 2021, , .	0.4	2
104	Growth of interfacial phases in liquid silver-silica systems. Ultramicroscopy, 1983, 12, 119-120.	1.9	1
105	A non linear regression analysis of adsorption isotherms of oxygen on liquid metals. Scripta Metallurgica, 1988, 22, 1835-1840.	1.2	1
106	An auger investigation of oxygen-enhanced tin segregation on a liquid Pbâ^'Sn alloy. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1995, 17, 365-380.	0.4	1
107	Facility for adsorption and surface tension studies (FAST) on board of shuttle STS-107 mission: Determination of the surface dilational modulus as a function of concentration and temperature for aqueous solutions of dodecyl-dimethyl-phosphine-oxide, in the 0.01â€“0.32 Hz frequency range. Microgravity Science and Technology, 2006, 18, 100-103.	1.4	1
108	Guest Editorsâ€™ Editorial: HTC-2009. Journal of Materials Science, 2010, 45, 1977-1978.	3.7	1

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109	Angle of wetting of aluminum oxide with a high-carbon iron melt. Russian Metallurgy (Metally), 2017, 2017, 477-482.	0.5	1
110	Adsorption of alkylamines on iron. Energetics of adsorption by the contact angle method. The Journal of Physical Chemistry, 1977, 81, 1851-1854.	2.9	0
111	Grain boundary penetration of liquid sulphides in nickel, cobalt, and iron. Materials Science and Technology, 1986, 2, 42-46.	1.6	0
112	An improved regression analysis for automatic surface tension measurements. Mathematics and Computers in Simulation, 1986, 28, 331-335.	4.4	0
113	Capillary properties and chemical reactivity: A thermodynamic study. Surface Science, 1989, 219, L521-L526.	1.9	0
114	Arguments in favour of the space station. Nature, 1998, 392, 432-432.	27.8	0
115	Preface to the special issue â€œhigh-temperature joiningâ€• Journal of Materials Science, 2010, 45, 4255-4255.	3.7	0