Takahiro Miki

List of Publications by Year
in descending order

91 papers	2,134 citations	218677 26 h-index	265206 42 g-index
93 all docs	93 docs citations	93 times ranked	1148 citing authors

#	Article	IF	Citations
1	Thermodynamic Analysis of Contamination by Alloying Elements in Aluminum Recycling. Environmental Science & Technology, 2010, 44, 5594-5600.	10.0	125
2	Green synthesis of zeolite 4A using fly ash fused with synergism of NaOH and Na2CO3. Journal of Cleaner Production, 2019, 212, 250-260.	9.3	105
3	Thermodynamic Analysis for the Controllability of Elements in the Recycling Process of Metals. Environmental Science & Technology, 2011, 45, 4929-4936.	10.0	94
4	Thermodynamics of phosphorus in molten silicon. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1996, 27, 937-941.	2.1	88
5	Simultaneous Material Flow Analysis of Nickel, Chromium, and Molybdenum Used in Alloy Steel by Means of Inputâ€"Output Analysis. Environmental Science & Technology, 2013, 47, 4653-4660.	10.0	79
6	The selective alkaline leaching of zinc oxide from Electric Arc Furnace dust pre-treated with calcium oxide. Hydrometallurgy, 2016, 159, 120-125.	4.3	76
7	Dissolution Behavior of Nutrition Elements from Steelmaking Slag into Seawater. ISIJ International, 2004, 44, 753-761.	1.4	74
8	Hydrometallurgical extraction of zinc from CaO treated EAF dust in ammonium chloride solution. Journal of Hazardous Materials, 2016, 302, 90-96.	12.4	61
9	Equilibrium between Titanium and Oxygen in Liquid Fe-Ti Alloy Coexisted with Titanium Oxides at 1873 K. ISIJ International, 2006, 46, 996-1005.	1.4	57
10	Temperature Dependence of Ti Deoxidation Equilibria of Liquid Iron in Coexistence with â€˜Ti3O5â€™ and Ti2O3. ISIJ International, 2008, 48, 729-738.	1.4	54
11	The stability of the compounds formed in the process of removal Pb(II), Cu(II) and Cd(II) by steelmaking slag in an acidic aqueous solution. Journal of Environmental Management, 2019, 231, 41-48.	7.8	49
12	Identification of Titanium Oxide Phases Equilibrated with Liquid Fe-Ti Alloy Based on EBSD Analysis. ISIJ International, 2006, 46, 987-995.	1.4	48
13	Immobilization persistence of Cu, Cr, Pb, Zn ions by the addition of steel slag in acidic contaminated mine soil. Journal of Hazardous Materials, 2021, 412, 125176.	12.4	42
14	Thermodynamic properties of aluminum, magnesium, and calcium in molten silicon. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1998, 29, 1043-1049.	2.1	41
15	Evaluation Method of Metal Resource Recyclability Based on Thermodynamic Analysis. Materials Transactions, 2009, 50, 453-460.	1.2	41
16	Activity Measurement of CaO-SiO2-AlO1.5-MgO Slags Equilibrated with Molten Silicon Alloys.. ISIJ International, 2000, 40, 561-566.	1.4	40
17	Sustainable phosphorus supply by phosphorus recovery from steelmaking slag: a critical review. Resources, Conservation and Recycling, 2022, 180, 106203.	10.8	40
18	Kinetic Analysis of Iron Carburizaiton during Smelting Reduciton. ISIJ International, 2004, 44, 2033-2039.	1.4	38

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19	Thermodynamic properties of titanium and iron in molten silicon. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1997, 28, 861-867.	2.1	37
20	Thermodynamic Analysis for the Refining Ability of Salt Flux for Aluminum Recycling. Materials, 2014, 7, 5543-5553.	2.9	37
21	Numerical Analysis on Si Deoxidation of Molten Fe, Ni, Fe-Ni, Fe-Cr, Fe-Cr-Ni, Ni-Cu and Ni-Co Alloys by Quadratic Formalism. ISIJ International, 2005, 45, 1848-1855.	1.4	36
22	Prevention of Chromium Elution from Stainless Steel Slag into Seawater. ISIJ International, 2011, 51, 728-732.	1.4	36
23	Prediction of Nonmetallic Inclusion Formation in Feâ€“40mass%Niâ€“5mass%Cr Alloy Production Process. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2009, 95, 827-836.	0.4	35
24	Competitive mechanism and influencing factors for the simultaneous removal of Cr(III) and Zn(II) in acidic aqueous solutions using steel slag: Batch and column experiments. Journal of Cleaner Production, 2019, 230, 69-79.	9.3	31
25	Numerical Analysis on Si Deoxidation of Molten Fe-Ni and Ni-Co Alloys by Quadratic Formalism. ISIJ International, 2004, 44, 1800-1809.	1.4	29
26	Separation of FeO and P₂O₅ from Steelmaking Slag Utilizing Capillary Action. ISIJ International, 2015, 55, 142-148.	1.4	29
27	A composite adsorbent of ZnS nanoclusters grown in zeolite NaA synthesized from fly ash with a high mercury ion removal efficiency in solution. Journal of Hazardous Materials, 2021, 411, 125044.	12.4	29
28	Dissolution Behavior of Environmentally Regulated Elements from Steelmaking Slag into Seawater. ISIJ International, 2004, 44, 762-769.	1.4	28
29	Behavior of Ironmaking Slag Permeation to Carbonaceous Material Layer. ISIJ International, 2006, 46, 1783-1790.	1.4	27
30	Thermodynamic Properties of Si–Al, –Ca, –Mg Binary and Si–Ca–Al, –Ti, –Fe Ternary Alloys. Materials Transactions, JIM, 1999, 40, 1108-1116.	0.9	25
31	Softening, Melting, and Permeation Phenomena of CaOâ€“FeOâ€“SiO₂ Oxide on a Coke Bed. ISIJ International, 2015, 55, 2098-2104.	1.4	25
32	Removal of Iron and Titanium in Poly-Crystalline Silicon by Acid Leaching. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2002, 66, 459-465.	0.4	24
33	Carburization Degree of Iron Nugget Produced by Rapid Heating of Powdery Iron, Iron Oxide in Slag and Carbon Mixture. ISIJ International, 2008, 48, 1368-1372.	1.4	24
34	Aluminum Deoxidation Equilibrium of Molten Feâ€“Ni Alloy Coexisting with Alumina or Hercynite. ISIJ International, 2008, 48, 1533-1541.	1.4	23
35	Agenda for Low Reducing Agent Operation of Blast Furnace-Reduction and Melting Phenomena of Iron Ore-. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2013, 99, 1-11.	0.4	23
36	Effects of Al2O3 and MgO on Softening, Melting, and Permeation Properties of CaO-FeO-SiO2 on a Coke Bed. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 2371-2377.	2.1	23

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37	Activity measurement of the constituents in molten Feâ€“B and Feâ€“Bâ€“C alloys. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2006, 30, 449-454.	1.6	22
38	Effect of basic oxygen furnace slag on succession of the bacterial community and immobilization of various metal ions in acidic contaminated mine soil. Journal of Hazardous Materials, 2020, 388, 121784.	12.4	22
39	Dissolution Behavior of Elements in Steelmaking Slag into Artificial Seawater. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2003, 89, 382-387.	0.4	22
40	Innovations in steelmaking technology and hidden phosphorus flows. Science of the Total Environment, 2016, 542, 1162-1168.	8.0	21
41	Numerical Analysis on Si Deoxidation of Molten Ni and Ni-Cu Alloy by Quadratic Formalism. Materials Transactions, 2003, 44, 1817-1823.	1.2	20
42	Consideration of Dissolution Behavior of Elements in Steelmaking Slag Based on Their Stability Diagram in Seawater. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2003, 89, 388-392.	0.4	20
43	Investigation of Compositional Change of Inclusions in Martensitic Stainless Steel during Heat Treatment by Newly Developed Analysis Method. ISIJ International, 2011, 51, 1957-1966.	1.4	18
44	Activity Measurement of the Constituents in Molten Ag-In-Sn Ternary Alloy by Mass Spectrometry. Materials Transactions, 2001, 42, 732-738.	1.2	17
45	Equilibrium between Ti and O in Molten Feâ€“Ni, Feâ€“Cr and Feâ€“Crâ€“Ni Alloys Equilibrated with â€˜Ti3O5â€™ Solid Solution. ISIJ International, 2011, 51, 566-572.	1.4	16
46	Thermodynamic criteria of the end-of-life silicon wafers refining for closing the recycling loop of photovoltaic panels. Science and Technology of Advanced Materials, 2019, 20, 813-825.	6.1	15
47	Magnesium Deoxidation Equilibrium of Molten Feâ€“Ni Alloy Expressed by Quadratic Formalism and Redlichâ€“Kister Type Polynomial. ISIJ International, 2008, 48, 755-759.	1.4	14
48	Decomposition Behavior of Fe3C under Ar Atmosphere. ISIJ International, 2014, 54, 29-31.	1.4	14
49	Ti Deoxidation Equilibrium in Molten Feâ€“Cr and Feâ€“Crâ€“Ni Alloys at Temperatures between 1823 K and 1923 K. ISIJ International, 2009, 49, 1850-1859.	1.4	12
50	Magnesium Deoxidation Equilibrium of Molten Feâ€“Crâ€“Ni Alloy Expressed by Quadratic Formalism and Redlich-Kister Type Polynomial. ISIJ International, 2011, 51, 895-900.	1.4	12
51	Effect of Fe3C on Carburization and Smelting Behavior of Reduced Iron in Blast Furnace. ISIJ International, 2011, 51, 1269-1273.	1.4	11
52	Enrichment of Phosphorus Oxide in Steelmaking Slag by Utilizing Capillary Action. Journal of Sustainable Metallurgy, 2016, 2, 38-43.	2.3	11
53	Activity coefficients of NiO and CoO in CaOâ€“Al2O3â€“SiO2 slag and their application to the recycling of Niâ€“Coâ€“Fe-based end-of-life superalloys via remelting. International Journal of Minerals, Metallurgy and Materials, 2017, 24, 25-36.	4.9	11
54	Morphology and Composition of Inclusions in Siâ€“Mn Deoxidized Steel at the Solid-Liquid Equilibrium Temperature. ISIJ International, 2020, 60, 84-91.	1.4	11

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55	Elution Mechanism of Fluorine from Steelmaking Slag into Seawater. ISIJ International, 2004, 44, 935-939.	1.4	11
56	Recovery of Molybdenum from Copper Slags. ISIJ International, 2012, 52, 1211-1216.	1.4	10
57	Thermodynamic evaluation of elemental distribution in a ferronickel electric furnace for the prospect of recycling pathway of nickel. Resources, Conservation and Recycling, 2018, 133, 362-368.	10.8	10
58	Activity Measurement of the Constituents in Molten Sn-Mg-Zn Ternary Lead Free Solder Alloys by Mass Spectrometry. Materials Transactions, 2002, 43, 3227-3233.	1.2	9
59	Ti Deoxidation Equilibrium in Molten Feâ€“Ni Alloys at Temperatures between 1823 to 1923 K. ISIJ International, 2009, 49, 804-808.	1.4	9
60	Measurements of Thermodynamic Properties of Iron in Molten Silicon by Knudsen Effusion Method.. Journal of the Mass Spectrometry Society of Japan, 1999, 47, 72-75.	0.1	9
61	Crystallography of the High-Temperature Ca2SiO4-Ca3P2O8 Solid Solutions. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 3007-3015.	2.1	8
62	MnS Precipitation Behavior in MnOâ€“SiO₂ Inclusion in Feâ€“Mnâ€“Siâ€“Oâ€“S Alloy System at Solid-Liquid Coexistence Temperature. ISIJ International, 2020, 60, 1610-1616.	1.4	8
63	Effect of Temperature on Oxygen Activity during Ladle Treatment. ISIJ International, 2008, 48, 438-445.	1.4	7
64	Phase Equilibrium between CaOÂ·Al2O3 Saturated Molten CaOâ€“Al2O3â€“MnO and (Ca, Mn)S Solid Solution. ISIJ International, 2011, 51, 2007-2011.	1.4	7
65	Reaction between Iron Oxide and Gangue Minerals at 1373 K under Ar Atmosphere. ISIJ International, 2015, 55, 1206-1209.	1.4	7
66	Arsenic Removal from Contaminated Water Using the CaOâ€“SiO2â€“FeO Glassy Phase in Steelmaking Slag. Journal of Sustainable Metallurgy, 2017, 3, 470-485.	2.3	7
67	Phosphorous Recovery from Ca2SiO4â€“Ca3P2O8 Solid Solution By Carbothermic Reduction. Journal of Sustainable Metallurgy, 2021, 7, 459-469.	2.3	7
68	Influence of Atmosphere and Basicity on Softening and Melting Behaviors of the CaOâ€“FeOâ€“SiO₂â€“Al₂O₃â€“MgO System. ISIJ International, 2020, 60, 1380-1388.	1.4	7
69	Thermodynamics of Molten MnSâ€“FeS and CrSâ€“FeS System at 1843 K. ISIJ International, 2021, 61, 2345-2354.	1.4	6
70	Thermodynamic criteria of alloying elements elimination during recycling end-of-life zinc-based products by remelting. Resources, Conservation and Recycling, 2022, 176, 105913.	10.8	6
71	Recovery of Molybdenum from Spent Lubricant. ISIJ International, 2012, 52, 1217-1224.	1.4	5
72	Thermodynamics of Elements in Dilute Silicon Melts. Jom, 2019, 71, 1456-1470.	1.9	5

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73	Simultaneous Reduction of P2O5 and FeO from CaOâ€“SiO2â€“FeOâ€“P2O5 Synthesized Slag by Carbothermic Reduction. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2022, 53, 1806-1815.	2.1	5
74	Bottlenecks in material cycle of nickel. Materiaux Et Techniques, 2016, 104, 604.	0.9	4
75	Effect of Al2O3 Refractories on Oxygen Content of Molten Fe^|^ndash;Cr Alloy. ISIJ International, 2012, 52, 2007-2012.	1.4	4
76	Carburization Degree of Iron Nugget Produced by Rapid Heating of Powderly Iron, Iron Oxide in Slag and Carbon Mixture. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2009, 95, 821-826.	0.4	3
77	Determination of Interaction Parameters between Elements in Molten Iron by Evaporation and Chemical Equilibration Techniques. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2019, 105, 344-352.	0.4	3
78	Thermodynamics of Molten MnSâ€“CrSâ€“FeS System at 1843 K. ISIJ International, 2021, 61, 2355-2359.	1.4	3
79	Experimental Measurements and Numerical Analysis of Al Deoxidation Equilibrium of Molten Feâ€“Crâ€“Ni Alloy. ISIJ International, 2021, 61, 2331-2339.	1.4	2
80	Effect of modified basic oxygen furnace slag on the controlled release of nitrate nitrogen and the functional microbial community in soil. Journal of Environmental Management, 2020, 261, 110191.	7.8	2
81	Prevention of Fluorine Elution from Electric Arc Furnace Reducing Slag into Water. ISIJ International, 2011, 51, 508-512.	1.4	2
82	Dissolution Behavior of SiO₂ into Molten CaOâ€“FeO Phase. ISIJ International, 2020, 60, 1434-1437.	1.4	2
83	Activity Measurement of FeOâ€¢Cr2O3 in â€˜FeOâ€¢(Cr, Al)2O3â€™ Solid Solution. ISIJ International, 2013, 53, 1161-1164.	1.4	1
84	Thermodynamics of Solid and Liquid MnSâ€“CrSâ€“FeS Phase in Equilibrium with Molten Feâ€“Crâ€“Mnâ€“S Alloy. ISIJ International, 2021, 61, 2360-2369.	1.4	1
85	Phosphorus Separation and Recovery from Steelmaking Slag. , 2019, , 329-337.		1
86	Composition and Morphological Analysis of MnOâ€“SiO ₂ â€“Al ₂ O ₃ Inclusions during Solidification of Steel. Steel Research International, 0, , 2200285.	1.8	1
87	Recovery of Molybdenum from Spent Lubricant. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2012, 98, 39-47.	0.4	0
88	Hydrogen solubility and removal by vacuum treatment for molten AC2B aluminum alloy. Keikinzoku/Journal of Japan Institute of Light Metals, 2021, 71, 44-50.	0.4	0
89	Stability of Cementite under COâ€“CO₂â€“H₂ Gas Mixture at 1200 K. ISIJ International, 2015, 55, 409-412.	1.4	0
90	Refractory Metals Recovery from Industrial Wastes. , 2016, , 29-40.		0

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91	Aluminum Deoxidation Equilibrium in Molten Feâ€“Co Alloys. ISIJ International, 2022, 62, 12-19.	1.4	0