

M Akbar Rhamdhani

List of Publications by Year in descending order

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112
papers

2,435
citations

218381

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126
all docs

126
docs citations

126
times ranked

1704
citing authors

#	ARTICLE	IF	CITATIONS
1	Metal Extraction Processes for Electronic Waste and Existing Industrial Routes: A Review and Australian Perspective. Resources, 2014, 3, 152-179.	1.6	360
2	Review of High-Temperature Recovery of Rare Earth (Nd/Dy) from Magnet Waste. Journal of Sustainable Metallurgy, 2016, 2, 276-295.	1.1	86
3	Techno economic analysis of electronic waste processing through black copper smelting route. Journal of Cleaner Production, 2016, 126, 178-190.	4.6	84
4	Techno-economic analysis for biomass supply chain: A state-of-the-art review. Renewable and Sustainable Energy Reviews, 2021, 135, 110164.	8.2	80
5	Comprehensive Model of Oxygen Steelmaking Part 1: Model Development and Validation. ISIJ International, 2011, 51, 1086-1092.	0.6	73
6	Thermodynamics data of valuable elements relevant to e-waste processing through primary and secondary copper production: a review. Journal of Cleaner Production, 2016, 131, 795-809.	4.6	72
7	Kinetics of metal/slag reactions during spontaneous emulsification. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2005, 36, 219-227.	1.0	62
8	Comprehensive Model of Oxygen Steelmaking Part 2: Application of Bloated Droplet Theory for Decarburization in Emulsion Zone. ISIJ International, 2011, 51, 1093-1101.	0.6	55
9	Comprehensive Model of Oxygen Steelmaking Part 3: Decarburization in Impact Zone. ISIJ International, 2011, 51, 1102-1109.	0.6	48
10	Subsolidus Phase Equilibria of the Fe-Ni-O System. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2008, 39, 690-701.	1.0	47
11	Development of high flux solar simulators for solar thermal research. Solar Energy Materials and Solar Cells, 2015, 141, 436-446.	3.0	47
12	A thermodynamic-based life cycle assessment of precious metal recycling out of waste printed circuit board through secondary copper smelting. Environmental Development, 2017, 24, 36-49.	1.8	45
13	Mixing Phenomena in a Bottom Blown Copper Smelter: A Water Model Study. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 1218-1225.	1.0	44
14	Analysis of the source of dynamic interfacial phenomena during reaction between metal droplets and slag. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2005, 36, 591-604.	1.0	41
15	Electronic waste generation, economic values, distribution map, and possible recycling system in Indonesia. Journal of Cleaner Production, 2021, 293, 126096.	4.6	40
16	Metals Production and Metal Oxides Reduction Using Hydrogen: A Review. Journal of Sustainable Metallurgy, 2022, 8, 1-24.	1.1	40
17	Kinetics of Flux Dissolution in Oxygen Steelmaking. ISIJ International, 2009, 49, 1474-1482.	0.6	39
18	Modeling of Droplet Generation in a Top Blowing Steelmaking Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 3350-3361.	1.0	35

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19	Dynamic Model of Basic Oxygen Steelmaking Process Based on Multi-zone Reaction Kinetics: Model Derivation and Validation. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 537-557.	1.0	35
20	Nickel laterite Part 2 “ thermodynamic analysis of phase transformations occurring during reduction roasting. Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy, 2009, 118, 146-155.	0.6	33
21	Estimating flows and metal recovery values of waste printed circuit boards in Australian e-waste. Minerals Engineering, 2019, 137, 171-176.	1.8	32
22	High temperature oxidation of rare earth permanent magnets. Part 1 “ Microstructure evolution and general mechanism. Corrosion Science, 2018, 133, 374-385.	3.0	31
23	“Slowing”and “Narrowing”the Flow of Metals for Consumer Goods: Evaluating Opportunities and Barriers. Sustainability, 2018, 10, 1096.	1.6	29
24	Nickel laterite Part 1 “ microstructure and phase characterisations during reduction roasting and leaching. Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy, 2009, 118, 129-145.	0.6	28
25	Removal of Vanadium from Molten Aluminum-Part I. Analysis of VB ₂ Formation. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 752-768.	1.0	28
26	Removal of Vanadium from Molten Aluminum”Part III. Analysis of Industrial Boron Treatment Practice. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 784-794.	1.0	27
27	The Kinetics of Reduction of Dense Synthetic Nickel Oxide in H ₂ -N ₂ and H ₂ -H ₂ O Atmospheres. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2009, 40, 1-16.	1.0	26
28	Removal of Vanadium from Molten Aluminum”Part II. Kinetic Analysis and Mechanism of VB ₂ Formation. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 769-783.	1.0	26
29	Understanding of Bath Surface Wave in Bottom Blown Copper Smelting Furnace. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 135-144.	1.0	26
30	Dynamic Model of Basic Oxygen Steelmaking Process Based on Multizone Reaction Kinetics: Modeling of Decarburization. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 1022-1033.	1.0	25
31	Analysis of interfacial area changes during spontaneous emulsification of metal droplets in slag. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2006, 37, 1087-1091.	1.0	24
32	Basic Nickel Carbonate: Part I. Microstructure and Phase Changes during Oxidation and Reduction Processes. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2008, 39, 218-233.	1.0	24
33	Dynamic Wetting of CaO-Al ₂ O ₃ -SiO ₂ -MgO Liquid Oxide on MgAl ₂ O ₄ Spinel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 208-219.	1.0	24
34	On the Relationships between the Kinetics and Mechanisms of Gaseous Hydrogen Reduction of Solid Nickel Oxide. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2009, 40, 474-489.	1.0	23
35	Analysis of Droplet Generation in Oxygen Steelmaking. ISIJ International, 2009, 49, 24-28.	0.6	23
36	Thermodynamic analysis of metals recycling out of waste printed circuit board through secondary copper smelting. Journal of Material Cycles and Waste Management, 2018, 20, 386-401.	1.6	23

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37	Stochastic techno-economic evaluation model for biomass supply chain: A biomass gasification case study with supply chain uncertainties. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 152, 111644.	8.2	23
38	Transient Kinetics of Slag Metal Reactions. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2009, 40, 353-362.	1.0	22
39	Investigation of Nickel Product Structures Developed during the Gaseous Reduction of Solid Nickel Oxide. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2009, 40, 462-473.	1.0	22
40	Kinetic analysis of silicothermic process under flowing argon atmosphere. <i>Canadian Metallurgical Quarterly</i> , 2014, 53, 17-25.	0.4	22
41	Thermal analysis of molten ternary lithium-sodium-potassium nitrates. <i>Renewable Energy</i> , 2017, 104, 76-87.	4.3	22
42	Subsolidus Phase Equilibria of Fe-Ni-X-O (X=Al, Mg) Systems in Air. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2009, 40, 25-38.	1.0	21
43	Control and Removal of Impurities from Al Melts: A Review. <i>Materials Science Forum</i> , 0, 693, 149-160.	0.3	21
44	Thermodynamics of Palladium (Pd) and Tantalum (Ta) Relevant to Secondary Copper Smelting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017, 48, 317-327.	1.0	21
45	Effect of Slag Composition on Wettability of Oxide Inclusions. <i>ISIJ International</i> , 2015, 55, 1834-1840.	0.6	20
46	Wetting behaviour of Cu based alloys on spinel substrates in pyrometallurgical context. <i>Materials Science and Technology</i> , 2015, 31, 1925-1933.	0.8	18
47	Thermodynamics Behavior of Germanium During Equilibrium Reactions between FeOx-CaO-SiO2-MgO Slag and Molten Copper. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016, 47, 2889-2903.	1.0	18
48	Alternative Al production methods. <i>Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy</i> , 2013, 122, 87-104.	0.6	16
49	Electrically Enhanced Boron Removal from Silicon Using Slag. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014, 45, 1-5.	1.0	16
50	General heat balance for oxygen steelmaking. <i>Journal of Iron and Steel Research International</i> , 2021, 28, 538-551.	1.4	16
51	Premelting, Melting, and Degradation Properties of Molten Alkali Nitrates: LiNO ₃ , NaNO ₃ , KNO ₃ , and Binary NaNO ₃ -KNO ₃ . <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 1482-1498.	1.0	15
52	Mechanism and microstructure evolution of high temperature oxidation of end-of-life NdFeB rare earth permanent magnets. <i>Corrosion Science</i> , 2021, 182, 109290.	3.0	15
53	Solar processing of composite iron ore pellets: Preliminary assessments. <i>Journal of Cleaner Production</i> , 2018, 205, 1017-1028.	4.6	14
54	The characterization of nickel metal pore structures and the measurement of intrinsic reaction rate during the reduction of nickel oxide in H ₂ -N ₂ and H ₂ -H ₂ O atmospheres. <i>Minerals Engineering</i> , 2008, 21, 157-166.	1.8	13

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55	Kinetics of high temperature oxidation of end-of-life Ni/Cu/Ni coated NdFeB rare earth permanent magnets. <i>Corrosion Science</i> , 2021, 189, 109560.	3.0	13
56	Monitoring of less-common residual elements in scrap feeds for EAF steelmaking. <i>Ironmaking and Steelmaking</i> , 2019, 46, 598-608.	1.1	12
57	Mineral Processing and Metal Extraction on the Lunar Surface - Challenges and Opportunities. <i>Mineral Processing and Extractive Metallurgy Review</i> , 2022, 43, 865-891.	2.6	12
58	Basic Nickel Carbonate: Part II. Microstructure Evolution during Industrial Nickel Production from Basic Nickel Carbonate. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2008, 39, 234-245.	1.0	11
59	Kinetics Analysis of Boron Removal from Silicon through Reactions with CaO-SiO ₂ and CaO-SiO ₂ -Al ₂ O ₃ Slags. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 3171-3185.	1.0	11
60	Thermodynamic modelling of ultra-high vacuum thermal decomposition for lunar resource processing. <i>Planetary and Space Science</i> , 2021, 204, 105272.	0.9	11
61	High temperature oxidation of rare earth permanent magnets. Part 2â€“Kinetics. <i>Corrosion Science</i> , 2018, 133, 318-326.	3.0	10
62	Dynamic Model of Basic Oxygen Steelmaking Process Based on Multizone Reaction Kinetics: Modeling of Manganese Removal. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 2191-2208.	1.0	10
63	Alternative Al production methods. <i>Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy</i> , 2013, 122, 113-121.	0.6	8
64	Thermodynamic assessment and experimental study of sulphidation of ilmenite and chromite. <i>Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy</i> , 2014, 123, 165-177.	0.6	8
65	Selective sulfidising roasting for the removal of chrome spinel impurities from weathered ilmenite ore. <i>International Journal of Mineral Processing</i> , 2016, 146, 29-37.	2.6	8
66	Study of the Structure of FeO _x -CaO-SiO ₂ -MgO and FeO _x -CaO-SiO ₂ -MgO-Cu ₂ O-PdO Slags Relevant to Urban Ores Processing through Cu Smelting. <i>Metals</i> , 2020, 10, 78.	1.0	8
67	General mass balance for oxygen steelmaking. <i>Ironmaking and Steelmaking</i> , 2021, 48, 40-54.	1.1	8
68	Evaluation of concentrated solar thermal energy for iron ore agglomeration. <i>Journal of Cleaner Production</i> , 2021, 317, 128313.	4.6	8
69	Sulfidation Kinetics of Natural Chromite Ore Using H ₂ S Gas. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2015, 46, 557-567.	1.0	7
70	Thermodynamic-Based Exergy Analysis of Precious Metal Recovery out of Waste Printed Circuit Board through Black Copper Smelting Process. <i>Energies</i> , 2019, 12, 1313.	1.6	7
71	Solar Carbothermic Reduction of Ilmenite Using Palm Kernel Shell Biomass. <i>Jom</i> , 2020, 72, 3410-3421.	0.9	7
72	The Binary Alkali Nitrate and Chloride Phase Diagrams: NaNO ₃ -KNO ₃ , LiNO ₃ -NaNO ₃ , LiNO ₃ -KNO ₃ , and NaCl-KCl. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 3580-3593.	1.0	6

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73	Sulfides Formation in Carbothermic Reduction of Saprolitic Nickel Laterite Ore Using Low-Rank Coals and Additives: A Thermodynamic Simulation Analysis. Minerals (Basel, Switzerland), 2019, 9, 631.	0.8	6
74	Application of mass and energy balance in oxygen steelmaking. Ironmaking and Steelmaking, 2021, 48, 995-1000.	1.1	6
75	Small scale recycling process for spent alkaline batteries: Technoeconomic analysis and potential use of solar energy. Resources, Conservation and Recycling, 2021, 166, 105367.	5.3	6
76	Contribution of CO ₂ Emissions from Basic Oxygen Steelmaking Process. Metals, 2022, 12, 797.	1.0	6
77	Alternative route for magnetite processing for lower carbon footprint iron-making through lime-magnetite pellets containing CaFe ₃ O ₅ . Ironmaking and Steelmaking, 2020, 47, 674-685.	1.1	5
78	Computational Modeling in Pyrometallurgy: Part I. Jom, 2021, 73, 2658-2659.	0.9	5
79	Droplet Heat Transfer in Oxygen Steelmaking. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 4141-4156.	1.0	5
80	Kinetics and Mechanisms of Carbothermic Reduction of Weathered Ilmenite Using Palm Kernel Shell Biomass. Journal of Sustainable Metallurgy, 2021, 7, 1819-1837.	1.1	5
81	Thermodynamics and kinetics analyses of ZrB ₂ formation in molten aluminium alloys. Canadian Metallurgical Quarterly, 2016, 55, 161-172.	0.4	4
82	Oxidation of Commercial Purity Aluminum Melts: An Experimental Study. Minerals, Metals and Materials Series, 2016, , 993-997.	0.3	4
83	Mechanism of ZrB ₂ Formation in Molten Al-V-Zr Alloy During Boron Treatment. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 595-607.	1.0	4
84	Analysis for Optimum Conditions for Recovery of Valuable Metals from E-waste Through Black Copper Smelting. Minerals, Metals and Materials Series, 2017, , 419-427.	0.3	4
85	A Comparative Life Cycle Assessment of Recycling the Platinum Group Metals from Automobile Catalytic Converter: An Australian Perspective. Metallurgical and Materials Transactions E, 2017, 4, 77-88.	0.5	4
86	Interfacial Tension in the CaO-Al ₂ O ₃ -SiO ₂ -(MgO) Liquid Slag-Solid Oxide Systems. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1970-1980.	1.0	4
87	Selective sulphidation of impurities in weathered ilmenite. Part 1 - Applicability to different ilmenite deposits and simulated Becher kiln conditions. Minerals Engineering, 2018, 121, 55-65.	1.8	4
88	Dissolution of Sapphire and Alumina-Magnesia Particles in CaO-SiO ₂ -Al ₂ O ₃ Liquid Slags. Minerals, Metals and Materials Series, 2019, , 61-73.	0.3	4
89	Slag Basicity: What Does It Mean?. Minerals, Metals and Materials Series, 2019, , 297-308.	0.3	4
90	Analyses of CWF (CaFe ₃ O ₅) phase formation in lime-magnetite pellets. Ironmaking and Steelmaking, 2020, 47, 852-864.	1.1	4

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91	Development of High Flux Solar Simulators for Solar Thermal Research. , 2015, , 149-159.		4
92	Reduction of Lead-Rich Slags with Coke in the Lead Blast Furnace. Minerals, Metals and Materials Series, 2020, , 173-185.	0.3	4
93	The use of secondary ion mass spectrometry for investigating oxygen in pyrometallurgical reactions. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2003, 34, 355-358.	1.0	3
94	Thermodynamic Analysis of Ti, Zr, V and Cr Impurities in Aluminum Melt. , 2011, , 751-756.		3
95	Analysis of Boron Treatment for V Removal Using AlB 2 and AlB 12 Based Master Alloys. , 2014, , 963-968.		3
96	Metals extraction on Mars through carbothermic reduction. Acta Astronautica, 2022, 198, 564-576.	1.7	3
97	Thermophysical property evolution during molten regolith electrolysis. Planetary and Space Science, 2022, 219, 105527.	0.9	3
98	Electrically Enhanced Metal Purification Using Slag. , 2014, , 587-595.		2
99	Novel multi-stage aluminium production: part 2 “ experimental investigation on carbo-sulphidation of Al_2O_3 using H_2S and sodiothermic reduction of Al_2S_3 . Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy. 2017, 126, 245-258.	0.6	2
100	High Temperature Properties of Molten Nitrate Salt for Solar Thermal Energy Storage Application. Minerals, Metals and Materials Series, 2017, , 531-539.	0.3	2
101	Tensile Properties of Vacuum Heat-treated Ti6Al4V Alloy Processed by Selective Laser Melting. IOP Conference Series: Materials Science and Engineering, 2018, 377, 012138.	0.3	2
102	Mass and energy analysis of composite pellet process. Ironmaking and Steelmaking, 2018, 45, 978-983.	1.1	1
103	Novel multi-stage aluminium production: part 1 “ thermodynamic assessment of carbo-sulphidation of Al_2O_3 /bauxite using H_2S and sodiothermic reduction of Al_2S_3 . Mineral Processing and Extractive Metallurgy: Transactions of the Institute of Mining and Metallurgy. 2018, 127, 91-102.	0.1	1
104	Effect of impurity oxides on CWF ($CaFe_3O_5$) formation in lime magnetite pellets “ part I: thermodynamic assessments and experimental investigations. Ironmaking and Steelmaking, 2021, 48, 299-312.	1.1	1
105	Effect of impurity oxides on CWF ($CaFe_3O_5$) formation in lime magnetite pellets “ part II: microstructural analysis and physical and mechanical testing. Ironmaking and Steelmaking, 2021, 48, 313-323.	1.1	1
106	Management of Impurities in Cast House with Particular Reference to Ni and V. Minerals, Metals and Materials Series, 2016, , 33-38.	0.3	1
107	Production of Aluminum Sulfide through Carbo-sulfidation Utilising H_2S . Minerals, Metals and Materials Series, 2016, , 1299-1304.	0.3	1
108	Structural Analysis of Germanium (Ge)-Containing Ferrous Calcium Silicate Magnesia Slag for Applications of Black Copper Smelting. Minerals, Metals and Materials Series, 2018, , 295-304.	0.3	1

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109	Global Droplet Heat Transfer in Oxygen Steelmaking Process. <i>Metals</i> , 2022, 12, 992.	1.0	1
110	Electrically Enhanced Metal Purification Using Slag. , 0, , 587-595.		0
111	Exploring Possibility of the Chromium (Cr) Removal from Molten Aluminum by adding Boron Bearing Additive (Aluminum-Boron Master Alloy). <i>Microscopy and Microanalysis</i> , 2018, 24, 2272-2273.	0.2	0
112	Study of Ni-Impurity Removal from Al Melt. , 2012, , 1091-1097.		0