M Akbar Rhamdhani

List of Publications by Citations

123 papers	1,694 citations	20 h-index	36 g-index
126 ext. papers	2,016 ext. citations	3 avg, IF	5.19 L-index

#	Paper	IF	Citations
123	Metal Extraction Processes for Electronic Waste and Existing Industrial Routes: A Review and Australian Perspective. *Resources*, **2014**, 3, 152-179	3.7	282
122	Techno economic analysis of electronic waste processing through black copper smelting route. *Journal of Cleaner Production*, **2016**, 126, 178-190	10.3	65
121	Review of High-Temperature Recovery of Rare Earth (Nd/Dy) from Magnet Waste. *Journal of Sustainable Metallurgy*, **2016**, 2, 276-295	2.7	59
120	Comprehensive Model of Oxygen Steelmaking Part 1: Model Development and Validation. *ISIJ International*, **2011**, 51, 1086-1092	1.7	58
119	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	10.3	55
118	Kinetics of metal/slag reactions during spontaneous emulsification. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2005**, 36, 219-227	2.5	54
117	Comprehensive Model of Oxygen Steelmaking Part 2: Application of Bloated Droplet Theory for Decarburization in Emulsion Zone. *ISIJ International*, **2011**, 51, 1093-1101	1.7	45
116	Subsolidus Phase Equilibria of the Fe-Ni-O System. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2008**, 39, 690-701	2.5	43
115	Comprehensive Model of Oxygen Steelmaking Part 3: Decarburization in Impact Zone. *ISIJ International*, **2011**, 51, 1102-1109	1.7	36
114	Development of high flux solar simulators for solar thermal research. *Solar Energy Materials and Solar Cells*, **2015**, 141, 436-446	6.4	35
113	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	2.5	35
112	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	2.5	35
111	Techno-economic analysis for biomass supply chain: A state-of-the-art review. *Renewable and Sustainable Energy Reviews*, **2021**, 135, 110164	16.2	34
110	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	4.1	29
109	Kinetics of Flux Dissolution in Oxygen Steelmaking. *ISIJ International*, **2009**, 49, 1474-1482	1.7	29
108	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	2.5	28
107	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		27

106	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	2.5	25
105	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		24
104	Dynamic Wetting of CaO-Al2O3-SiO2-MgO Liquid Oxide on MgAl2O4 Spinel. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2015**, 46, 208-219	2.5	21
103	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	2.5	20
102	Removal of Vanadium from Molten Aluminum Part II. Kinetic Analysis and Mechanism of VB2 Formation. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2014**, 45, 769-783	2.5	20
101	Removal of Vanadium from Molten Aluminum-Part I. Analysis of VB2 Formation. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2014**, 45, 752-768	2.5	20
100	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	2.5	20
99	Slowing and Narrowing the Flow of Metals for Consumer Goods: Evaluating Opportunities and Barriers. *Sustainability*, **2018**, 10, 1096	3.6	20
98	Estimating flows and metal recovery values of waste printed circuit boards in Australian e-waste. *Minerals Engineering*, **2019**, 137, 171-176	4.9	19
97	The Kinetics of Reduction of Dense Synthetic Nickel Oxide in H2-N2 and H2-H2O Atmospheres. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2009**, 40, 1-16	2.5	19
96	Analysis of Droplet Generation in Oxygen Steelmaking. *ISIJ International*, **2009**, 49, 24-28	1.7	19
95	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	2.5	19
94	High temperature oxidation of rare earth permanent magnets. Part 1 Microstructure evolution and general mechanism. *Corrosion Science*, **2018**, 133, 374-385	6.8	18
93	Subsolidus Phase Equilibria of Fe-Ni-X-O (X = Mg, Al) Systems in Air. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2009**, 40, 25-38	2.5	18
92	Thermal analysis of molten ternary lithium-sodium-potassium nitrates. *Renewable Energy*, **2017**, 104, 76-87	8.1	17
91	Wetting behaviour of Cu based alloys on spinel substrates in pyrometallurgical context. *Materials Science and Technology*, **2015**, 31, 1925-1933	1.5	17
90	Transient Kinetics of Slag Metal Reactions. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2009**, 40, 353-362	2.5	17
89	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	2.5	17

88	Control and Removal of Impurities from Al Melts: A Review. *Materials Science Forum*, **2011**, 693, 149-160	0.4	17
87	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	2.5	17
86	Effect of Slag Composition on Wettability of Oxide Inclusions. *ISIJ International*, **2015**, 55, 1834-1840	1.7	16
85	Investigation of Nickel Product Structures Developed during the Gaseous Reduction of Solid Nickel Oxide. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2009**, 40, 462-473	2.5	16
84	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	3.4	15
83	Thermodynamics Behavior of Germanium During Equilibrium Reactions between FeOx-CaO-SiO2-MgO Slag and Molten Copper. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2016**, 47, 2889-2903	2.5	15
82	Electronic waste generation, economic values, distribution map, and possible recycling system in Indonesia. *Journal of Cleaner Production*, **2021**, 293, 126096	10.3	15
81	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	2.5	14
80	Electrically Enhanced Boron Removal from Silicon Using Slag. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2014**, 45, 1-5	2.5	13
79	Kinetic analysis of silicothermic process under flowing argon atmosphere. *Canadian Metallurgical Quarterly*, **2014**, 53, 17-25	0.9	13
78	Alternative Al production methods. *Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy*, **2013**, 122, 87-104		13
77	Thermodynamics of Palladium (Pd) and Tantalum (Ta) Relevant to Secondary Copper Smelting. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2017**, 48, 317-327	2.5	11
76	The characterization of nickel metal pore structures and the measurement of intrinsic reaction rate during the reduction of nickel oxide in H2N2 and H2H2O atmospheres. *Minerals Engineering*, **2008**, 21, 157-166	4.9	11
75	Premelting, Melting, and Degradation Properties of Molten Alkali Nitrates: LiNO3, NaNO3, KNO3, and Binary NaNO3-KNO3. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2018**, 49, 1482-1498	2.5	10
74	Thermodynamic Analysis of Ti, Zr, V and Cr Impurities in Aluminium Melt **2011**, 751-756		10
73	Monitoring of less-common residual elements in scrap feeds for EAF steelmaking. *Ironmaking and Steelmaking*, **2019**, 46, 598-608	1.3	8
72	Mechanism and microstructure evolution of high temperature oxidation of end-of-life NdFeB rare earth permanent magnets. *Corrosion Science*, **2021**, 182, 109290	6.8	8
71	High temperature oxidation of rare earth permanent magnets. Part 2Kinetics. *Corrosion Science*, **2018**, 133, 318-326	6.8	7

70	Selective sulfidising roasting for the removal of chrome spinel impurities from weathered ilmenite ore. *International Journal of Mineral Processing*, **2016**, 146, 29-37		7
69	Dynamic Model of Basic Oxygen Steelmaking Process Based on Multizone Reaction Kinetics: Modeling of Manganese Removal. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2018**, 49, 2191-2208	2.5	7
68	Basic Nickel Carbonate: Part II. Microstructure Evolution during Industrial Nickel Production from Basic Nickel Carbonate. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2008**, 39, 234-245	2.5	7
67	Solar processing of composite iron ore pellets: Preliminary assessments. *Journal of Cleaner Production*, **2018**, 205, 1017-1028	10.3	7
66	Sulfidation Kinetics of Natural Chromite Ore Using H2S Gas. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2015**, 46, 557-567	2.5	6
65	Alternative Al production methods. *Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy*, **2013**, 122, 113-121		6
64	Kinetics Analysis of Boron Removal from Silicon through Reactions with CaO-SiO2 and CaO-SiO2-Al2O3 Slags. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2018**, 49, 3171-3185	2.5	6
63	Thermodynamic assessment and experimental study of sulphidation of ilmenite and chromite. *Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy*, **2014**, 123, 165-177		5
62	Study of the Structure of FeOx-CaO-SiO2-MgO and FeOx-CaO-SiO2-MgO-Cu2O-PdO Slags Relevant to Urban Ores Processing through Cu Smelting. *Metals*, **2020**, 10, 78	2.3	5
61	The Binary Alkali Nitrate and Chloride Phase Diagrams: NaNO3-KNO3, LiNO3-NaNO3, LiNO3-KNO3, and NaCl-KCl. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2018**, 49, 3580-3593	2.5	5
60	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
59	Thermodynamic-Based Exergy Analysis of Precious Metal Recovery out of Waste Printed Circuit Board through Black Copper Smelting Process. *Energies*, **2019**, 12, 1313	3.1	4
58	General mass balance for oxygen steelmaking. *Ironmaking and Steelmaking*, **2020**, 1-15	1.3	4
57	Mechanism of ZrB2 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	2.5	4
56	A Review: Solar Thermal Reactors for Materials Production **2014**, 1-14		4
55	Aluminate Spinels as Sidewall Linings for Aluminum Smelters **2011**, 1085-1090		4
54	Thermodynamics and kinetics analyses of ZrB2 formation in molten aluminium alloys. *Canadian Metallurgical Quarterly*, **2016**, 55, 161-172	0.9	4
53	Slag Basicity: What Does It Mean?. *Minerals, Metals and Materials Series*, **2019**, 297-308	0.3	4

52	Alternative route for magnetite processing for lower carbon footprint iron-making through lime-magnetite pellets containing CaFe3O5. *Ironmaking and Steelmaking*, **2020**, 47, 674-685	1.3	4
51	Analyses of CWF (CaFe3O5) phase formation in lime-magnetite pellets. *Ironmaking and Steelmaking*, **2020**, 47, 852-864	1.3	4
50	Kinetics of high temperature oxidation of end-of-life Ni/Cu/Ni coated NdFeB rare earth permanent magnets. *Corrosion Science*, **2021**, 189, 109560	6.8	4
49	Evaluation of concentrated solar thermal energy for iron ore agglomeration. *Journal of Cleaner Production*, **2021**, 317, 128313	10.3	4
48	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	4.9	3
47	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		3
46	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	2.5	3
45	Metals Production and Metal Oxides Reduction Using Hydrogen: A Review. *Journal of Sustainable Metallurgy*, **2022**, 8, 1	2.7	3
44	Reduction of Lead-Rich Slags with Coke in the Lead Blast Furnace. *Minerals, Metals and Materials Series*, **2020**, 173-185	0.3	3
43	Solar Carbothermic Reduction of Ilmenite Using Palm Kernel Shell Biomass. *Jom*, **2020**, 72, 3410-3421	2.1	3
42	Computational Modeling in Pyrometallurgy: Part I. *Jom*, **2021**, 73, 2658-2659	2.1	3
41	General heat balance for oxygen steelmaking. *Journal of Iron and Steel Research International*, **2021**, 28, 538-551	1.2	3
40	Novel multi-stage aluminium production: part 2 Experimental investigation on carbosulphidation of Al2O3 using H2S and sodiothermic reduction of Al2S3. *Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy*, **2017**, 126, 245-258		2
39	Dissolution of Sapphire and Alumina Magnesia Particles in CaO SiO2 Al2O3 Liquid Slags. *Minerals, Metals and Materials Series*, **2019**, 61-73	0.3	2
38	Oxidation of Commercial Purity Aluminum Melts: An Experimental Study. *Minerals, Metals and Materials Series*, **2016**, 993-997	0.3	2
37	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	2.4	2
36	Thermodynamic Analysis of Ti, Zr, V and Cr Impurities in Aluminum Melt **2011**, 751-756		2
35	Application of mass and energy balance in oxygen steelmaking. *Ironmaking and Steelmaking*, **2020**, 1-6	1.3	2

34	Small scale recycling process for spent alkaline batteries: Technoeconomic analysis and potential use of solar energy. *Resources, Conservation and Recycling*, **2021**, 166, 105367	11.9	2
33	Thermodynamic modelling of ultra-high vacuum thermal decomposition for lunar resource processing. *Planetary and Space Science*, **2021**, 204, 105272	2	2
32	Stochastic techno-economic evaluation model for biomass supply chain: A biomass gasification case study with supply chain uncertainties. *Renewable and Sustainable Energy Reviews*, **2021**, 152, 111644	16.2	2
31	High Temperature Properties of Molten Nitrate Salt for Solar Thermal Energy Storage Application. *Minerals, Metals and Materials Series*, **2017**, 531-539	0.3	1
30	Mass and energy analysis of composite pellet process. *Ironmaking and Steelmaking*, **2018**, 45, 978-983	1.3	1
29	Novel multi-stage aluminium production: part 1 thermodynamic assessment of carbosulphidation of Al2O3/bauxite using H2S and sodiothermic reduction of Al2S3. *Mineral Processing and Extractive Metallurgy: Transactions of the Institute of Mining and Metallurgy*, **2018**, 127, 91-102	0.8	1
28	High Temperature Recovery of Rare Earth Ortho-Ferrites from Permanent Magnets. *Minerals, Metals and Materials Series*, **2018**, 805-813	0.3	1
27	Analysis of Boron Treatment for V Removal Using AlB2 and AlB12 Based Master Alloys **2014**, 963-968		1
26	Interfacial Tension in the CaO-Al2O3-SiO2-(MgO) Liquid Slag–Solid Oxide Systems. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2017**, 48, 1970-1980	2.5	1
25	Study of Early Stage Interaction of Oxygen with Al; Methods, Challenges and Difficulties **2011**, 725-730		1
24	Kinetics and Mechanisms of Carbothermic Reduction of Weathered Ilmenite Using Palm Kernel Shell Biomass. *Journal of Sustainable Metallurgy*,1	2.7	1
23	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
22	Development of High Flux Solar Simulators for Solar Thermal Research **2015**, 149-159		1
21	Microstructure Observation of Oxidation of Nd-Magnet at High Temperatures. *Minerals, Metals and Materials Series*, **2017**, 65-74	0.3	1
20	Analysis of Boron Treatment for V Removal Using AlB 2 and AlB 12 Based Master Alloys **2014**, 963-968		1
19	Effect of impurity oxides on CWF (CaFe3O5) formation in lime magnetite pellets part I: thermodynamic assessments and experimental investigations. *Ironmaking and Steelmaking*, **2021**, 48, 299-312	1.3	1
18	Effect of impurity oxides on CWF (CaFe3O5) formation in lime magnetite pellets part II: microstructural analysis and physical and mechanical testing. *Ironmaking and Steelmaking*, **2021**, 48, 313-323	1.3	1
17	Tensile Properties of Vacuum Heat-treated Ti6Al4V Alloy Processed by Selective Laser Melting. *IOP Conference Series: Materials Science and Engineering*, **2018**, 377, 012138	0.4	1

16	Electrically Enhanced Metal Purification Using Slag **2014**, 587-595		0
15	Droplet Heat Transfer in Oxygen Steelmaking. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2021**, 52, 4141	2.5	0
14	Mineral Processing and Metal Extraction on the Lunar Surface - Challenges and Opportunities. *Mineral Processing and Extractive Metallurgy Review*,1-27	3.1	0
13	Contribution of CO2 Emissions from Basic Oxygen Steelmaking Process. *Metals*, **2022**, 12, 797	2.3	0
12	Reactivity of Selected Oxide Inclusions with CaO-Al2O3-SiO2-(MgO) Slags **2016**, 135-143		
11	Wetting Characteristics of Cryolite-Based Melts on Spinels Substrate **2014**, 609-614		
10	Electrically Enhanced Metal Purification Using Slag **2014**, 587-595		
9	Structure Thermodynamics Interrelation for the GeO2 and PdO Containing MgO-Saturated Ferrous Calcium Silicate (FCS) Slag Relevant to E-waste Processing. *Minerals, Metals and Materials Series*, **2020**, 83-93	0.3	
8	Development of High Flux Solar Simulators for Solar Thermal Research147-159		
7	Reactivity of Selected Oxide Inclusions with CaO-Al2O3-SiO2-(MgO) Slags **2016**, 135-143		
6	Management of Impurities in Cast House with Particular Reference to Ni and V. *Minerals, Metals and Materials Series*, **2016**, 33-38	0.3	
5	Production of Aluminum Sulfide through Carbosulfidation Utilising H2S. *Minerals, Metals and Materials Series*, **2016**, 1299-1304	0.3	
4	Study of Ni-Impurity Removal from Al Melt **2012**, 1091-1097		
3	Oxidation of Commercial Purity Aluminium Melts: An Experimental Study993-997		
2	Wetting Characteristics of Cryolite-Based Melts on Spinels Substrate **2014**, 609-614		
1	Exploring Possibility of the Chromium (Cr) Removal from Molten Aluminum by adding Boron Bearing Additive (Aluminum-Boron Master Alloy). *Microscopy and Microanalysis*, **2018**, 24, 2272-2273	0.5	