Tatsuro Ariyama

List of Publications by Year
in descending order

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97 papers	2,330 citations	172457 29 h-index	243625 44 g-index
97 all docs	97 docs citations	97 times ranked	770 citing authors

#	Article	IF	Citations
1	Recent Progress and Future Perspective on Mathematical Modeling of Blast Furnace. ISIJ International, 2010, 50, 914-923.	1.4	139
2	Optimization of Ironmaking Process for Reducing CO2 Emissions in the Integrated Steel Works. ISIJ International, 2006, 46, 1736-1744.	1.4	110
3	Development of Waste Plastics Injection Process in Blast Furnace.. ISIJ International, 2000, 40, 244-251.	1.4	98
4	Reduction of CO2 Emissions from Integrated Steel Works and Its Subjects for a Future Study. ISIJ International, 2005, 45, 1371-1378.	1.4	87
5	Simultaneous Three-dimensional Analysis of Gasâ€“Solid Flow in Blast Furnace by Combining Discrete Element Method and Computational Fluid Dynamics. ISIJ International, 2011, 51, 41-50.	1.4	65
6	Recent Progress on Advanced Blast Furnace Mathematical Models Based on Discrete Method. ISIJ International, 2014, 54, 1457-1471.	1.4	65
7	Reaction Behavior of Ferro Coke and Its Evaluation in Blast Furnace. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2011, 97, 501-509.	0.4	58
8	Stress Field and Solid Flow Analysis of Coke Packed Bed in Blast Furnace Based on DEM. ISIJ International, 2005, 45, 1426-1431.	1.4	54
9	Improvement of Reactivity of Carbon Iron Ore Composite with Biomass Char for Blast Furnace. ISIJ International, 2009, 49, 1505-1512.	1.4	54
10	Design of Innovative Blast Furnace for Minimizing CO2 Emission Based on Optimization of Solid Fuel Injection and Top Gas Recycling. ISIJ International, 2004, 44, 2168-2177.	1.4	53
11	Reaction Model and Reduction Behavior of Carbon Iron Ore Composite in Blast Furnace. ISIJ International, 2009, 49, 827-836.	1.4	52
12	Diversification of the Ironmaking Process Toward the Long-Term Global Goal for Carbon Dioxide Mitigation. Journal of Sustainable Metallurgy, 2019, 5, 276-294.	2.3	49
13	High Rate Coal Injection of 218kg/t at Fukuyama No. 4 Blast Fukuyama.. ISIJ International, 1996, 36, 650-657.	1.4	47
14	Desirable Coke Properties for Blast Furnace in Future. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2006, 92, 114-121.	0.4	45
15	Evolution of Blast Furnace Process toward Reductant Flexibility and Carbon Dioxide Mitigation in Steel Works. ISIJ International, 2016, 56, 1681-1696.	1.4	45
16	Gasâ€“solid flow simulation of fines clogging a packed bed using DEMâ€“CFD. Chemical Engineering Science, 2012, 71, 274-282.	3.8	44
17	Dynamic Analysis of Gas and Solid Flows in Blast Furnace with Shaft Gas Injection by Hybrid Model of DEM-CFD. ISIJ International, 2011, 51, 51-58.	1.4	41
18	DEM-CFD Model Considering Softening Behavior of Ore Particles in Cohesive Zone and Gas Flow Analysis at Low Coke Rate in Blast Furnace. ISIJ International, 2012, 52, 1010-1017.	1.4	39

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19	Development of Coating Granulation Process at Commercial Sintering Plant for Improving Productivity and Reducibility. ISIJ International, 2005, 45, 817-826.	1.4	38
20	Effect of High Reactivity Coke for Mixed Charge in Ore Layer on Reaction Behavior of Each Particle in Blast Furnace. ISIJ International, 2013, 53, 1770-1778.	1.4	37
21	Influence of Shape of Cohesive Zone on Gas Flow and Permeability in the Blast Furnace Analyzed by DEM-CFD Model. ISIJ International, 2015, 55, 1232-1236.	1.4	37
22	Evaluation of Coke Mixed Charging Based on Packed Bed Structure and Gas Permeability Changes in Blast Furnace by DEM-CFD Model. ISIJ International, 2012, 52, 1990-1999.	1.4	36
23	Characteristics of Solid Flow and Stress Distribution Including Asymmetric Phenomena in Blast Furnace Analyzed by Discrete Element Method. ISIJ International, 2010, 50, 207-214.	1.4	35
24	Development of Burden Distribution Simulation Model for Bell-less Top in a Large Blast Furnace and Its Application.. ISIJ International, 1993, 33, 1070-1077.	1.4	34
25	Penetration Effect of Injected Gas at Shaft Gas Injection in Blast Furnace Analyzed by Hybrid Model of DEM-CFD. ISIJ International, 2011, 51, 1410-1417.	1.4	33
26	Influences of Physical Properties of Particle in Discrete Element Method on Descending Phenomena and Stress Distribution in Blast Furnace. ISIJ International, 2010, 50, 981-986.	1.4	33
27	Extraction of Nonmetallic Inclusion Particles Containing MgO from Steel. ISIJ International, 2011, 51, 2050-2055.	1.4	32
28	Analysis on Nonâ€Uniform Gas Flow in Blast Furnace Based on DEMâ€CFD Combined Model. Steel Research International, 2011, 82, 964-971.	1.8	32
29	Influence of Cohesive Zone Thickness on Gas Flow in Blast Furnace Analyzed by DEM-CFD Model Considering Low Coke Operation. Steel Research International, 2013, 84, 1146-1156.	1.8	31
30	Perspective on Progressive Development of Oxygen Blast Furnace for Energy Saving. ISIJ International, 2015, 55, 1866-1875.	1.4	30
31	Predictcion of Next-Generation Ironmaking Process Based on Oxygen Blast Furnace Suitable for CO₂ Mitigation and Energy Flexibility. ISIJ International, 2015, 55, 2105-2114.	1.4	30
32	Effects of Operation Condition and Casting Strategy on Drainage Efficiency of the Blast Furnace Hearth. ISIJ International, 2005, 45, 1515-1520.	1.4	29
33	Optimization of Physical Parameters of Discrete Element Method for Blast Furnace and Its Application to the Analysis on Solid Motion around Raceway. ISIJ International, 2009, 49, 1308-1315.	1.4	29
34	Thermodynamic Consideration on the Absorption Properties of Carbon Dioxide to Basic Oxide. ISIJ International, 2010, 50, 1532-1538.	1.4	29
35	Transient Behavior of Burden Descending and Influence of Cohesive Zone Shape on Solid Flow and Stress Distribution in Blast Furnace by Discrete Element Method. ISIJ International, 2010, 50, 946-953.	1.4	29
36	Enhancement of Reactivity of Carbon Iron Ore Composite Using Redox Reaction of Iron Oxide Powder. ISIJ International, 2010, 50, 524-530.	1.4	28

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37	CO2 Absorption and Desorption Abilities of Li2Oâ€“TiO2 Compounds. ISIJ International, 2011, 51, 530-537.	1.4	28
38	Numerical Simulation of Dripping Behavior of Droplet in Packed Bed Using Particle Method. ISIJ International, 2012, 52, 1565-1573.	1.4	28
39	Effects of the Seaweed Bed Construction Using the Mixture of Steelmaking Slag and Dredged Soil on the Growth of Seaweeds. ISIJ International, 2011, 51, 1919-1928.	1.4	27
40	Sensitivity Analysis of Physical Parameters in Discrete Element Method Compared with Blast Furnace Cold Model Experiments. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2010, 96, 1-10.	0.4	22
41	Control of Peripheral Gas Flow and Design of Burden Quality for Low Reducing Agent Rate Operation of Blast Furnace. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2006, 92, 1006-1014.	0.4	22
42	Development of Injection Lance with High Combustibility for High Rate Coal Injection. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1998, 84, 37-42.	0.4	20
43	Wettability Model Considering Three-Phase Interfacial Energetics in Particle Method. Materials Transactions, 2012, 53, 662-670.	1.2	20
44	Influence of Limestone and Coke Breeze Distribution in the Quasi-particle on Permeability during Sintering and Sinter Quality. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2004, 90, 546-553.	0.4	20
45	Combustion Behavior of Pulverized Coal in Tuyere Zone of Blast Furnace and Influence of Injection Lance Arrangement on Combustibility.. ISIJ International, 1994, 34, 476-483.	1.4	19
46	Influence of Blast Furnace Inner Volume on Solid Flow and Stress Distribution by Three Dimensional Discrete Element Method. ISIJ International, 2010, 50, 1406-1412.	1.4	18
47	Influence of Profile of Blast Furnace on Motion and Stress of Burden by 3D-DEM. Journal of Iron and Steel Research International, 2011, 18, 1-6.	2.8	18
48	Influence of Physical Properties of Melt on Liquid Dripping in Packed Bed Analyzed by MPS Method. ISIJ International, 2013, 53, 590-597.	1.4	18
49	Recycling of Plastic Waste in Blast Furnace.. Nihon Enerugi Gakkaishi/Journal of the Japan Institute of Energy, 1998, 77, 423-431.	0.2	17
50	Coke Disintegration Behavior in the Raceway of the Blast Furnace at Pulverized Coal Injection. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1999, 85, 717-723.	0.4	17
51	Mean Ascending Velocity of Powder Entrained By Gas in a Packed Bed.. Kagaku Kogaku Ronbunshu, 1996, 22, 171-176.	0.3	16
52	Development of Production Process for Pre-reduced Agglomerates and Evaluation of Its Quality. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2006, 92, 815-824.	0.4	16
53	Analysis of Powder Motion in a Packed Bed of Blast Furnace Using the Discrete Element Method. ISIJ International, 2015, 55, 1313-1320.	1.4	16
54	Perspective toward Long-term Global Goal for Carbon Dioxide Mitigation in Steel Industry. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2019, 105, 567-586.	0.4	14

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55	Decrease of Sulfide in Enclosed Coastal Sea by Using Steelmaking Slag. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2012, 98, 207-214.	0.4	13
56	Analysis on Formation Processes of Burden Distribution in Blast Furnace. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1982, 68, 2330-2337.	0.4	13
57	Combustion Behavior of Pulverized Coal in Tuyere Zone of Blast Furnace and Influence of Injection Lance Arrangement on Combustibility. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1994, 80, 288-293.	0.4	13
58	Catalytic Effect of Fe, CaO and Molten Oxide on the Gasification Reaction of Coke and Biomass Char. ISIJ International, 2011, 51, 1262-1268.	1.4	12
59	Decrease of Sulfide in Enclosed Coastal Sea by Using Steelmaking Slag. ISIJ International, 2013, 53, 1894-1901.	1.4	12
60	Development of Shaft-type Scrap Melting Process Characterized by Massive Coal and Plastics Injection.. ISIJ International, 1997, 37, 977-985.	1.4	12
61	Thermodynamics of Zirconium Deoxidation Equilibrium in Liquid Iron by EMF Measurements. ISIJ International, 2008, 48, 1175-1181.	1.4	12
62	Development of Dechlorination Process for PVC in Waste Plastics.. Nihon Enerugi Gakkaishi/Journal of the Japan Institute of Energy, 2000, 79, 210-221.	0.2	10
63	Analysis of Heat and Mass Transfer in a Packed Bed by Considering Particle Arrangement. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2012, 98, 341-350.	0.4	10
64	Mechanism of Suppression of Sulfide Ion in Seawater Using Steelmaking Slag. ISIJ International, 2014, 54, 1741-1748.	1.4	10
65	Control of Biomass Composition for Optimum Injection in Blast Furnace to Mitigate CO2 Emission in Ironmaking Process. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2008, 94, 468-474.	0.4	9
66	Combustion and Gasification Behaviors of Plastics Injected into Raceway of Blast Furnace. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1997, 83, 617-622.	0.4	9
67	Flow Characteristics of Liquid and Fine Particles in the Lower Part of Blast Furnace. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2002, 88, 249-255.	0.4	8
68	Effect of Pore Structure of Coke on CO₂ Reactivity and Abrasion of Coke. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2003, 89, 1198-1204.	0.4	8
69	Utilization of Waste Wood for Production of Iron, Carbon Monoxide and Hydrogen without generating Carbon Dioxide. Steel Research International, 2006, 77, 774-784.	1.8	8
70	Influence of Gas Flow on Burden Distribution in Blast Furnace. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1980, 66, 1878-1887.	0.4	8
71	Mechanism of Suppression of Sulfide Ion in Seawater Using Steelmaking Slag. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2012, 98, 618-625.	0.4	7
72	Recent Progress on Advanced Blast Furnace Mathematical Model Based on Discrete Method. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2014, 100, 198-210.	0.4	7

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73	Reduction Behavior of Packed Bed of Sinter Reduced by COâ€“CO₂â€“H₂â€“H₂Oâ€“N₂ Gas. ISIJ International, 2015, 55, 1213-1222.		
74	Development of One-dimensional Mathematical Model for Pulverized Coal Combustion Considering Particle Dispersion. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1996, 82, 731-736.	0.4	4
75	Experimental Study and Atomic Level Description of Adsorption Process of CO2 on Doped Alkaline Earth Oxides. ISIJ International, 2012, 52, 1233-1240.	1.4	4
76	Perspective on Progressive Development of Oxygen Blast Furnace for Energy Saving. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2016, 102, 365-374.	0.4	4
77	Modeling of Coke Particle Breakage in Blast Furnace Considering Pore Structure by Discrete Element Method. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2019, 105, 1108-1117.	0.4	4
78	Modeling of Coke Particle Breakage in Blast Furnace Considering Pore Structure by Discrete Element Method. ISIJ International, 2021, 61, 1488-1497.	1.4	4
79	Fluidization and Degradation Characteristics of Iron Ore Fines in Prereduction Fluidized Bed.. ISIJ International, 1993, 33, 1220-1227.	1.4	4
80	Improvement of Burden and Gas Distribution in Blast Furnace Based on Full Scale Model Experiments. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1982, 68, 1523-1531.	0.4	4
81	Analysis of the Burden Descending Behavior in an Enlarged Shaft Furnace for Ferro-Coke Production by DEM. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2014, 100, 593-600.	0.4	4
82	Development of Cast Copper Cooling Staves and Its Application to Commercial Blast Furnace. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2002, 88, 487-492.	0.4	3
83	Development of new recycling process for ASR. Review of Automotive Engineering, 2002, 23, 504-505.	0.2	3
84	Reaction Behavior in Packed Bed Considering Bed Structure and Reaction Properties of Particles. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2013, 99, 391-400.	0.4	3
85	Reaction and Consumption Behavior of Unburnt Char in Lower Part of Blast Furnace. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2001, 87, 365-372.	0.4	3
86	Verification of PVC Dechlorination Process Based on 1,000 t/y Semi-commercial Plant Operation.. Kagaku Kogaku Ronbunshu, 2001, 27, 326-334.	0.3	2
87	Waste Treatment Technologies. Preparation of Activated Coke from Organic Wastes.. Kagaku Kogaku Ronbunshu, 2002, 28, 598-605.	0.3	2
88	Development of the Recycling Process of Automobile Shredder Residue by Coal-tar Based Oil Bath Treatment. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2002, 88, 635-642.	0.4	2
89	Preface to the Special Issue on â€œRecent Progress in Modeling, Data-processing and Control of Ironmaking Processâ€. ISIJ International, 2010, 50, 913.	1.4	2
90	Descending Behavior of Particles in Vertical Type Coke Oven by Cold Model and DEM Calculation. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2012, 98, 459-468.	0.4	2

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91	Simulation Model of Burden Distribution in Blast Furnace Equipped with Bells and Movable Armors. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 1987, 73, 1527-1534.	0.4	2
92	Reaction between CaO-SiO2-Al2O3Slags and H2+ HCl + H2O Gas Mixtures. Steel Research International, 2006, 77, 379-384.	1.8	1
93	Removal of Mn, Nb, V and Î¡ from Iron Ore using Iron and Steelmaking Processes. High Temperature Materials and Processes, 2010, 29, 447-460.	1.4	1
94	Reduction Behavior of Iron Ore Fines and Circulation Characteristics of Fines is Prereduction Fluidized Bed.. ISIJ International, 1993, 33, 1211-1219.	1.4	1
95	Development of innovative shredder residue separation and recycling system. Revue De Metallurgie, 2002, 99, 819-824.	0.3	0
96	Catalytic Decomposition of Chlorofluorocarbons with Directly Induced Heating System. Nihon Enerugi Gakkaishi/Journal of the Japan Institute of Energy, 2004, 83, 745-750.	0.2	0
97	Development of a production process for coal-water-mixture.. Nenryo Kyokai-Shi/Journal of the Fuel Society of Japan, 1988, 67, 405-412.	0.0	0