

Shungo Natsui

List of Publications by Year in descending order

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Version: 2024-02-01

67
papers

1,369
citations

279798

23
h-index

361022

35
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67
all docs

67
docs citations

67
times ranked

675
citing authors

#	ARTICLE	IF	CITATIONS
1	Impact of high-temperature non-uniform degradation on fines clogging and gas flow in a coke bed. Chemical Engineering Journal, 2022, 427, 131484.	12.7	7
2	Droplet behavior analysis on inclined, highly sticky, or slippery superhydrophobic nanostructured surfaces by observation and SPH simulation. Chemical Engineering Science, 2022, 248, 117214.	3.8	5
3	Quantification of the Impact of Residual H ₂ O on Cathodic Behavior in Molten CaCl ₂ Electrolysis. Journal of Sustainable Metallurgy, 2022, 8, 532-540.	2.3	4
4	Formation of Bright White Plasma Electrolytic Oxidation Films with a Uniform Maze-Like Structure by Anodizing Aluminum in Ammonium Tetraborate Solutions. Journal of the Electrochemical Society, 2022, 169, 043505.	2.9	2
5	SPH simulations of binary droplet deformation considering the Fowkes theory. Chemical Engineering Science, 2021, 229, 116035.	3.8	9
6	Recent Studies on Titanium Refining: 2017–2020. Materials Transactions, 2021, 62, 905-913.	1.2	9
7	Comprehensive numerical assessment of molten iron–slag trickle flow and gas countercurrent in complex coke bed by Eulerian–Lagrangian approach. Chemical Engineering Journal, 2021, 414, 128606.	12.7	8
8	Method for Simulating Gas Permeability of a Coke Bed Including Fines Based on 3D Imaging on the Coke Particle Morphology. ISIJ International, 2021, 61, 1814-1825.	1.4	4
9	Synchronized High-Speed Microscopy and Thermoanalytical Measurement for Sub-mm/sub-ms-scale Cathodic Behavior in Molten Salt Electrolysis. Minerals, Metals and Materials Series, 2021, , 338-345.	0.4	0
10	Detailed modelling of packed-bed gas clogging due to thermal-softening of iron ore by Eulerian–Lagrangian approach. Chemical Engineering Journal, 2020, 392, 123643.	12.7	16
11	Visualization of TiO ₂ Reduction Behavior in Molten Salt Electrolysis. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 11-15.	2.1	6
12	Photoluminescence from Anodic Aluminum Oxide Formed via Etidronic Acid Anodizing and Enhancing the Intensity. Materials Transactions, 2020, 61, 1130-1137.	1.2	7
13	Characterization of the Cathodic Thermal Behavior of Molten CaCl ₂ and Its Hygroscopic Chloride Mixture During Electrolysis. Journal of the Electrochemical Society, 2020, 167, 102507.	2.9	5
14	Numerical Study of Binary Trickle Flow of Liquid Iron and Molten Slag in Coke Bed by Smoothed Particle Hydrodynamics. Processes, 2020, 8, 221.	2.8	8
15	Fabrication of a plasma electrolytic oxidation/anodic aluminum oxide multi-layer film via one-step anodizing aluminum in ammonium carbonate. Thin Solid Films, 2020, 697, 137799.	1.8	12
16	OS process. , 2020, , 287-313.		6
17	Numerical Simulation of Coexisting Solid-liquid Slag Trickle Flow in a Coke Bed by the SPH Method with a Non-Newtonian Fluid Model. ISIJ International, 2020, 60, 1445-1452.	1.4	9
18	Topological Consideration of 3-D Local Void Structure for Static Holdup Site in Packed Bed. ISIJ International, 2020, 60, 1453-1460.	1.4	7

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19	Numerical Approach to Comprehend for Effect of Melts Physical Properties on Iron-slag Separation Behaviour in Self-reducing Pellet. ISIJ International, 2020, 60, 2695-2704.	1.4	3
20	Electrochemical and morphological characterization of porous alumina formed by galvanostatic anodizing in etidronic acid. Electrochimica Acta, 2019, 320, 134606.	5.2	15
21	Corrosion-Resistant Porous Alumina Formed via Anodizing Aluminum in Etidronic Acid and Its Pore-Sealing Behavior in Boiling Water. Journal of the Electrochemical Society, 2019, 166, C261-C269.	2.9	36
22	Numerical Analysis of Interfacial Morphology and Dispersion Behavior of High-Temperature Melts. Journal of MMIJ, 2019, 135, 71-82.	0.3	1
23	Gas Generation Reactions during TiO ₂ Reduction Using Molten Salt. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2019, 83, 441-448.	0.4	3
24	Solubility of CaS in CaCl ₂ -LiCl Eutectic Melt. Materials Transactions, 2019, 60, 411-415.	1.2	5
25	Fabrication of anodic porous alumina via galvanostatic anodizing in alkaline sodium tetraborate solution and their morphology. Journal of Electroanalytical Chemistry, 2019, 846, 113152.	3.8	18
26	A Superhydrophilic Aluminum Surface with Fast Water Evaporation Based on Anodic Alumina Bundle Structures via Anodizing in Pyrophosphoric Acid. Materials, 2019, 12, 3497.	2.9	24
27	Mirror-finished superhydrophobic aluminum surfaces modified by anodic alumina nanofibers and self-assembled monolayers. Applied Surface Science, 2018, 440, 506-513.	6.1	37
28	DEM-SPH study of molten slag trickle flow in coke bed. Chemical Engineering Science, 2018, 175, 25-39.	3.8	30
29	Fabrication of ordered submicrometer-scale convex lens array via nanoimprint lithography using an anodized aluminum mold. Microelectronic Engineering, 2018, 185-186, 61-68.	2.4	23
30	Advancing and receding contact angle investigations for highly sticky and slippery aluminum surfaces fabricated from nanostructured anodic oxide. RSC Advances, 2018, 8, 37315-37323.	3.6	19
31	Holdup Characteristics of Melt in Coke Beds of Different Shapes. ISIJ International, 2018, 58, 1742-1744.	1.4	7
32	Spontaneous colloidal metal network formation driven by molten salt electrolysis. Scientific Reports, 2018, 8, 13114.	3.3	11
33	Reduction of CaTiO ₃ by Electrolysis in the Molten Salt CaCl ₂ -CaO. Electrochemistry, 2018, 86, 82-87.	1.4	17
34	Column and film lifetimes in bubble-induced two-liquid flow. Physical Review E, 2018, 97, 062802.	2.1	8
35	Detailed Modeling of Melt Dripping in Coke Bed by DEM – SPH. ISIJ International, 2018, 58, 282-291.	1.4	26
36	Calciothermic Reduction and Electrolysis of Sulfides in CaCl ₂ Melt. Minerals, Metals and Materials Series, 2018, , 763-771.	0.4	2

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37	Advanced functional aluminum materials based on nanostructured surface. Keikinzoku/Journal of Japan Institute of Light Metals, 2018, 68, 211-218.	0.4	2
38	Evaluation of Coke Degradation Effect on Flow Characteristics in Packed Bed Using 3D Scanning for Rotational Mechanical Strength Test and Solid-liquid-gas Three-phase Dynamic Model Analysis. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2018, 104, 347-357.	0.4	7
39	Porous Anodic Oxide Films on Aluminum. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2018, 69, 554-561.	0.2	8
40	An SPH Study of Molten Matte-Slag Dispersion. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1792-1806.	2.1	15
41	Morphology of lithium droplets electrolytically deposited in LiCl-KCl-Li ₂ O melt. Electrochemistry Communications, 2017, 81, 43-47.	4.7	8
42	Capturing the non-spherical shape of granular media and its trickle flow characteristics using fully-Lagrangian method. AIChE Journal, 2017, 63, 2257-2271.	3.6	10
43	Advanced hard anodic alumina coatings via etidronic acid anodizing. Surface and Coatings Technology, 2017, 326, 72-78.	4.8	39
44	Superhydrophilic and superhydrophobic aluminum alloys fabricated via pyrophosphoric acid anodizing and fluorinated SAM modification. Journal of Alloys and Compounds, 2017, 725, 379-387.	5.5	34
45	Reduction of CaTiO ₃ in Molten CaCl ₂ - as Basic Understanding of Electrolysis. Materials Transactions, 2017, 58, 341-349.	1.2	15
46	Temperature Dependence of Behavior of Interface Between Molten Sn and LiCl-KCl Eutectic Melt Due to Rising Gas Bubble. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 1532-1537.	2.1	4
47	Superhydrophilicity of a nanofiber-covered aluminum surface fabricated via pyrophosphoric acid anodizing. Applied Surface Science, 2016, 389, 173-180.	6.1	28
48	Fabrication of Alumina Nanofibers via Anodizing and Its Surface Functionalization. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2016, 67, 527-532.	0.2	0
49	Exploration for the Self-ordering of Porous Alumina Fabricated via Anodizing in Etidronic Acid. Electrochimica Acta, 2016, 211, 515-523.	5.2	61
50	SPH simulations of the behavior of the interface between two immiscible liquid stirred by the movement of a gas bubble. Chemical Engineering Science, 2016, 141, 342-355.	3.8	25
51	Self-ordered Porous Alumina Fabricated via Phosphonic Acid Anodizing. Electrochimica Acta, 2016, 190, 471-479.	5.2	60
52	Numerical Analysis of Blast Furnace by Discrete Element Type Model. Japanese Journal of Multiphase Flow, 2016, 30, 166-173.	0.3	0
53	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
54	Characterization of Liquid Trickle Flow in Poor-Wetting Packed Bed. ISIJ International, 2015, 55, 1259-1266.	1.4	20

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55	Fabrication of Self-Ordered Porous Alumina via Etidronic Acid Anodizing and Structural Color Generation from Submicrometer-Scale Dimple Array. <i>Electrochimica Acta</i> , 2015, 156, 235-243.	5.2	98
56	Polymer nanoimprinting using an anodized aluminum mold for structural coloration. <i>Applied Surface Science</i> , 2015, 341, 19-27.	6.1	40
57	Model study of the effect of particles structure on the heat and mass transfer through the packed bed in ironmaking blast furnace. <i>International Journal of Heat and Mass Transfer</i> , 2015, 91, 1176-1186.	4.8	26
58	Porous Aluminum Oxide Formed by Anodizing in Various Electrolyte Species. <i>Current Nanoscience</i> , 2015, 11, 560-571.	1.2	64
59	Analysis of Effect of Packed Bed Structure on Liquid Flow in Packed Bed Using Moving Particle Semi-implicit Method. <i>ISIJ International</i> , 2015, 55, 1284-1290.	1.4	25
60	Numerical Analysis of Carbon Monoxide-Hydrogen Gas Reduction of Iron Ore in a Packed Bed by an Euler-Lagrange Approach. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014, 45, 2395-2413.	2.1	40
61	Stable mesh-free moving particle semi-implicit method for direct analysis of gas-liquid two-phase flow. <i>Chemical Engineering Science</i> , 2014, 111, 286-298.	3.8	25
62	Multiphase Particle Simulation of Gas Bubble Passing Through Liquid/Liquid Interfaces. <i>Materials Transactions</i> , 2014, 55, 1707-1715.	1.2	25
63	Porous anodic oxide films on aluminum and their nanofabrication. <i>Keikinzoku/Journal of Japan Institute of Light Metals</i> , 2014, 64, 476-482.	0.4	4
64	Effect of High Reactivity Coke for Mixed Charge in Ore Layer on Reaction Behavior of Each Particle in Blast Furnace. <i>ISIJ International</i> , 2013, 53, 1770-1778.	1.4	37
65	Wettability Model Considering Three-Phase Interfacial Energetics in Particle Method. <i>Materials Transactions</i> , 2012, 53, 662-670.	1.2	20
66	Gas-solid flow simulation of fines clogging a packed bed using DEM-CFD. <i>Chemical Engineering Science</i> , 2012, 71, 274-282.	3.8	44
67	Recent Progress and Future Perspective on Mathematical Modeling of Blast Furnace. <i>ISIJ International</i> , 2010, 50, 914-923.	1.4	139