Jose Manuel Valverde

List of Publications by Year
in descending order

200 papers	7,482 citations	41323 49 h-index	69214 77 g-index
206 all docs	206 docs citations	206 times ranked	3268 citing authors

#	ARTICLE	IF	CITATIONS
1	The Calcium-Looping technology for CO2 capture: On the important roles of energy integration and sorbent behavior. Applied Energy, 2016, 162, 787-807.	5.1	286
2	Advances in thermal energy storage materials and their applications towards zero energy buildings: A critical review. Applied Energy, 2017, 203, 219-239.	5.1	270
3	Thermochemical energy storage of concentrated solar power by integration of the calcium looping process and a CO2 power cycle. Applied Energy, 2016, 173, 589-605.	5.1	241
4	The Calcium-Looping (CaCO3/CaO) process for thermochemical energy storage in Concentrating Solar Power plants. Renewable and Sustainable Energy Reviews, 2019, 113, 109252.	8.2	180
5	Fluidization of nanopowders: a review. Journal of Nanoparticle Research, 2012, 14, 737.	0.8	175
6	Ca-based synthetic materials with enhanced CO₂capture efficiency. Journal of Materials Chemistry A, 2013, 1, 447-468.	5.2	141
7	Calcium-Looping performance of mechanically modified Al2O3-CaO composites for energy storage and CO2 capture. Chemical Engineering Journal, 2018, 334, 2343-2355.	6.6	138
8	Optimizing the CSP-Calcium Looping integration for Thermochemical Energy Storage. Energy Conversion and Management, 2017, 136, 85-98.	4.4	136
9	Limestone Calcination Nearby Equilibrium: Kinetics, CaO Crystal Structure, Sintering and Reactivity. Journal of Physical Chemistry C, 2015, 119, 1623-1641.	1.5	130
10	Power cycles integration in concentrated solar power plants with energy storage based on calcium looping. Energy Conversion and Management, 2017, 149, 815-829.	4.4	129
11	Enhancement of Fast CO₂ Capture by a Nano-SiO₂/CaO Composite at Ca-Looping Conditions. Environmental Science & Technology, 2012, 46, 6401-6408.	4.6	127
12	Large-scale high-temperature solar energy storage using natural minerals. Solar Energy Materials and Solar Cells, 2017, 168, 14-21.	3.0	119
13	Ca-looping for postcombustion CO2 capture: A comparative analysis on the performances of dolomite and limestone. Applied Energy, 2015, 138, 202-215.	5.1	115
14	High-performance and low-cost macroporous calcium oxide based materials for thermochemical energy storage in concentrated solar power plants. Applied Energy, 2019, 235, 543-552.	5.1	115
15	Multicycle activity of natural CaCO 3 minerals for thermochemical energy storage in Concentrated Solar Power plants. Solar Energy, 2017, 153, 188-199.	2.9	112
16	Process integration of Calcium-Looping thermochemical energy storage system in concentrating solar power plants. Energy, 2018, 155, 535-551.	4.5	112
17	Role of calcium looping conditions on the performance of natural and synthetic Ca-based materials for energy storage. Journal of CO2 Utilization, 2018, 28, 374-384.	3.3	110
18	Flow Regimes in Fine Cohesive Powders. Physical Review Letters, 1999, 82, 1156-1159.	2.9	100

#	ARTICLE	IF	CITATIONS
19	Thermal decomposition of dolomite under CO₂: insights from TGA and in situ XRD analysis. Physical Chemistry Chemical Physics, 2015, 17, 30162-30176.	1.3	97
20	Low-cost Ca-based composites synthesized by biotemplate method for thermochemical energy storage of concentrated solar power. Applied Energy, 2018, 210, 108-116.	5.1	97
21	The tensile strength of cohesive powders and its relationship to consolidation, free volume and cohesivity. Powder Technology, 1998, 97, 237-245.	2.1	96
22	On the Multicycle Activity of Natural Limestone/Dolomite for Thermochemical Energy Storage of Concentrated Solar Power. Energy Technology, 2016, 4, 1013-1019.	1.8	95
23	Carbonation of Limestone Derived CaO for Thermochemical Energy Storage: From Kinetics to Process Integration in Concentrating Solar Plants. ACS Sustainable Chemistry and Engineering, 2018, 6, 6404-6417.	3.2	93
24	Multicycle CO2 capture activity and fluidizability of Al-based synthesized CaO sorbents. Chemical Engineering Journal, 2019, 358, 679-690.	6.6	90
25	Calcium-looping for post-combustion CO2 capture. On the adverse effect of sorbent regeneration under CO2. Applied Energy, 2014, 126, 161-171.	5.1	88
26	Nanosilica supported CaO: A regenerable and mechanically hard CO2 sorbent at Ca-looping conditions. Applied Energy, 2014, 118, 92-99.	5.1	80
27	Correlation between bulk stresses and interparticle contact forces in fine powders. Physical Review E, 2001, 64, 031301.	0.8	68
28	Crystallographic transformation of limestone during calcination under CO₂. Physical Chemistry Chemical Physics, 2015, 17, 21912-21926.	1.3	66
29	Effect of Thermal Pretreatment and Nanosilica Addition on Limestone Performance at Calcium-Looping Conditions for Thermochemical Energy Storage of Concentrated Solar Power. Energy & Fuels, 2017, 31, 4226-4236.	2.5	66
30	Self-Diffusion in a Gas-Fluidized Bed of Fine Powder. Physical Review Letters, 2001, 86, 3020-3023.	2.9	65
31	Effect of particle size and interparticle force on the fluidization behavior of gas-fluidized beds. Physical Review E, 2003, 67, 051305.	0.8	65
32	A model on the CaO multicyclic conversion in the Ca-looping process. Chemical Engineering Journal, 2013, 228, 1195-1206.	6.6	64
33	Jamming Threshold of Dry Fine Powders. Physical Review Letters, 2004, 92, 258303.	2.9	63
34	Random loose packing of cohesive granular materials. Europhysics Letters, 2006, 75, 985-991.	0.7	63
35	Aggregation and sedimentation in gas-fluidized beds of cohesive powders. Physical Review E, 2001, 64, 041304.	0.8	61
36	The Sevilla Powder Tester: A Tool for Characterizing the Physical Properties of Fine Cohesive Powders at Very Small Consolidations. KONA Powder and Particle Journal, 2004, 22, 66-81.	0.9	59

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37	Constant rate thermal analysis for enhancing the long-term CO2 capture of CaO at Ca-looping conditions. Applied Energy, 2013, 108, 108-120.	5.1	59
38	High and stable <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si9.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">CO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mm capture capacity of natural limestone at Ca-looping conditions by heat pretreatment and recarbonation synergy. Fuel, 2014, 123, 79-85.	3.4	58
39	Effect of vibration on agglomerate particulate fluidization. AICHE Journal, 2006, 52, 1705-1714.	1.8	57
40	Adhesion force between fine particles with controlled surface properties. AICHE Journal, 2006, 52, 1715-1728.	1.8	57
41	Fluidization, bubbling and jamming of nanoparticle agglomerates. Chemical Engineering Science, 2007, 62, 6947-6956.	1.9	56
42	Fluidization of fine and ultrafine particles using nitrogen and neon as fluidizing gases. AICHE Journal, 2008, 54, 86-103.	1.8	56
43	Fluidization of nanoparticles: A simple equation for estimating the size of agglomerates. Chemical Engineering Journal, 2008, 140, 296-304.	6.6	55
44	A new integration model of the calcium looping technology into coal fired power plants for CO2 capture. Applied Energy, 2016, 169, 408-420.	5.1	53
45	Avalanches in fine, cohesive powders. Physical Review E, 2000, 62, 6851-6860.	0.8	52
46	Fluidization of nanoparticles: A modified Richardson-Zaki Law. AICHE Journal, 2006, 52, 838-842.	1.8	51
47	Role of precalcination and regeneration conditions on postcombustion CO2 capture in the Ca-looping technology. Applied Energy, 2014, 136, 347-356.	5.1	51
48	Physics of Compaction of Fine Cohesive Particles. Physical Review Letters, 2005, 94, 075501.	2.9	50
49	Improving the gasâ€“solids contact efficiency in a fluidized bed of CO2 adsorbent fine particles. Physical Chemistry Chemical Physics, 2011, 13, 14906.	1.3	50
50	Enhancement of CO2 capture at Ca-looping conditions by high-intensity acoustic fields. Applied Energy, 2013, 111, 538-549.	5.1	50
51	An automated apparatus for measuring the tensile strength and compressibility of fine cohesive powders. Review of Scientific Instruments, 2000, 71, 2791-2795.	0.6	49
52	Role of crystal structure on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si10.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">CO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mm capture by limestone derived CaO subjected to carbonation/recarbonation/calcination cycles at Ca-looping conditions. Applied Energy, 2014, 125, 264-275.	5.1	47
53	Types of gas fluidization of cohesive granular materials. Physical Review E, 2007, 75, 031306.	0.8	45
54	A new model of the carbonator reactor in the calcium looping technology for post-combustion CO2 capture. Fuel, 2015, 160, 328-338.	3.4	45

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55	Kinetics and cyclability of limestone (CaCO3) in presence of steam during calcination in the CaL scheme for thermochemical energy storage. Chemical Engineering Journal, 2021, 417, 129194.	6.6	45
56	Experimental study on the dynamics of gas-fluidized beds. Physical Review E, 2003, 67, 016303.	0.8	44
57	Pressure Effect on the Multicycle Activity of Natural Carbonates and a Ca/Zr Composite for Energy Storage of Concentrated Solar Power. ACS Sustainable Chemistry and Engineering, 2018, 6, 7849-7858.	3.2	44
58	Pull-off force of coated fine powders under small consolidation. Physical Review E, 2009, 79, 041305.	0.8	43
59	CO2 multicyclic capture of pretreated/doped CaO in the Ca-looping process. Theory and experiments. Physical Chemistry Chemical Physics, 2013, 15, 11775.	1.3	43
60	District heating systems based on low-carbon energy technologies in Mediterranean areas. Energy, 2017, 120, 397-416.	4.5	43
61	Calcium-Looping performance of steel and blast furnace slags for thermochemical energy storage in concentrated solar power plants. Journal of CO2 Utilization, 2017, 22, 143-154.	3.3	43
62	Electrofluidization of Silica Nanoparticle Agglomerates. Industrial & Engineering Chemistry Research, 2012, 51, 531-538.	1.8	41
63	On the negative activation energy for limestone calcination at high temperatures nearby equilibrium. Chemical Engineering Science, 2015, 132, 169-177.	1.9	40
64	The settling of fine cohesive powders. Europhysics Letters, 2001, 54, 329-334.	0.7	39
65	Relevant Influence of Limestone Crystallinity on CO₂ Capture in The Ca-Looping Technology at Realistic Calcination Conditions. Environmental Science & Technology, 2014, 48, 9882-9889.	4.6	39
66	Influence of Ball Milling on CaO Crystal Growth During Limestone and Dolomite Calcination: Effect on CO₂ Capture at Calcium Looping Conditions. Crystal Growth and Design, 2016, 16, 7025-7036.	1.4	39
67	The Oxy-CaL process: A novel CO 2 capture system by integrating partial oxy-combustion with the Calcium-Looping process. Applied Energy, 2017, 196, 1-17.	5.1	39
68	Dispatchability of solar photovoltaics from thermochemical energy storage. Energy Conversion and Management, 2019, 191, 237-246.	4.4	38
69	Effect of vibration on the stability of a gas-fluidized bed of fine powder. Physical Review E, 2001, 64, 021302.	0.8	37
70	Scaling-up the Calcium-Looping Process for CO₂ Capture and Energy Storage. KONA Powder and Particle Journal, 2021, 38, 189-208.	0.9	37
71	Nanofluidization as affected by vibration and electrostatic fields. Chemical Engineering Science, 2008, 63, 5559-5569.	1.9	36
72	Carbon capture and utilization for sodium bicarbonate production assisted by solar thermal power. Energy Conversion and Management, 2017, 149, 860-874.	4.4	36

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73	CO2 capture performance of Ca-Mg acetates at realistic Calcium Looping conditions. Fuel, 2017, 196, 497-507.	3.4	35
74	Limestone calcination under calcium-looping conditions for CO₂ capture and thermochemical energy storage in the presence of H₂O: an <i>in situ</i> XRD analysis. Physical Chemistry Chemical Physics, 2017, 19, 7587-7596.	1.3	35
75	Effect of milling mechanism on the CO2 capture performance of limestone in the Calcium Looping process. Chemical Engineering Journal, 2018, 346, 549-556.	6.6	35
76	Solar combined cycle with high-temperature thermochemical energy storage. Energy Conversion and Management, 2021, 241, 114274.	4.4	35
77	The tensile strength and free volume of cohesive powders compressed by gas flow. Powder Technology, 2001, 115, 45-50.	2.1	34
78	Attrition of Caâ€based CO₂â€adsorbents by a high velocity gas jet. AICHE Journal, 2013, 59, 1096-1107.	1.8	34
79	Multicyclic conversion of limestone at Ca-looping conditions: The role of solid-sate diffusion controlled carbonation. Fuel, 2014, 127, 131-140.	3.4	34
80	Reduction of Calcination Temperature in the Calcium Looping Process for CO₂ Capture by Using Helium: In Situ XRD Analysis. ACS Sustainable Chemistry and Engineering, 2016, 4, 7090-7097.	3.2	34
81	Nanofluidization electrostatics. Physical Review E, 2008, 77, 031301.	0.8	33
82	Effect of Heat Pretreatment/Recarbonation in the Ca-Looping Process at Realistic Calcination Conditions. Energy & Fuels, 2014, 28, 4062-4067.	2.5	33
83	Calcium-Looping Performance of Biomineralized CaCO₃ for CO₂ Capture and Thermochemical Energy Storage. Industrial & Engineering Chemistry Research, 2020, 59, 12924-12933.	1.8	33
84	The memory of granular materials. Contemporary Physics, 2003, 44, 389-399.	0.8	31
85	Comparison of cohesive powder flowability measured by Schulze Shear Cell, Raining Bed Method, Sevilla Powder Tester and new Ball Indentation Method. Powder Technology, 2015, 286, 807-816.	2.1	31
86	Dry carbonate process for CO2 capture and storage: Integration with solar thermal power. Renewable and Sustainable Energy Reviews, 2018, 82, 1796-1812.	8.2	31
87	CO2 capture enhancement in a fluidized bed of a modified Geldart C powder. Powder Technology, 2012, 224, 247-252.	2.1	30
88	Role of Looping-Calcination Conditions on Self-Reactivation of Thermally Pretreated CO₂ Sorbents Based on CaO. Energy & Fuels, 2013, 27, 3373-3384.	2.5	30
89	Magnetic stabilization of fluidized beds: Effect of magnetic field orientation. Chemical Engineering Journal, 2017, 313, 1335-1345.	6.6	29
90	Use of steel slag for CO2 capture under realistic calcium-looping conditions. RSC Advances, 2016, 6, 37656-37663.	1.7	28

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91	Increasing the solar share in combined cycles through thermochemical energy storage. Energy Conversion and Management, 2021, 229, 113730.	4.4	28
92	Acoustic streaming in gas-fluidized beds of small particles. Soft Matter, 2013, 9, 8792.	1.2	27
93	The Calcium Looping process for energy storage: Insights from in situ XRD analysis. Chemical Engineering Journal, 2022, 429, 132244.	6.6	27
94	Enhancing the catalytic activity and selectivity of the partial oxidation of methanol by electrochemical promotion. Journal of Catalysis, 2012, 293, 149-157.	3.1	26
95	Identification of best available thermal energy storage compounds for low-to-moderate temperature storage applications in buildings. Materiales De Construccion, 2018, 68, 160.	0.2	26
96	Looking for Self-Organized Critical Behavior in Avalanches of Slightly Cohesive Powders. Physical Review Letters, 2001, 87, 194301.	2.9	25
97	Electromechanics of fluidized beds of nanoparticles. Physical Review E, 2009, 79, 011304.	0.8	25
98	The Ca-looping process for CO2 capture and energy storage: role of nanoparticle technology. Journal of Nanoparticle Research, 2018, 20, 1.	0.8	25
99	Fine cohesive powders in rotating drums: Transition from rigid-plastic flow to gas-fluidized regime. Physical Review E, 2002, 65, 061301.	0.8	24
100	Energy Consumption for CO₂ Capture by means of the Calcium Looping Process: A Comparative Analysis using Limestone, Dolomite, and Steel Slag. Energy Technology, 2016, 4, 1317-1327.	1.8	24
101	Calcination under low CO2 pressure enhances the calcium Looping performance of limestone for thermochemical energy storage. Chemical Engineering Journal, 2021, 417, 127922.	6.6	24
102	Multi-objective optimisation and guidelines for the design of dispatchable hybrid solar power plants with thermochemical energy storage. Applied Energy, 2021, 282, 116257.	5.1	23
103	Enhanced nanofluidization by alternating electric fields. AIChE Journal, 2010, 56, 54-65.	1.8	22
104	On the relevant role of solids residence time on their CO2 capture performance in the Calcium Looping technology. Energy, 2016, 113, 160-171.	4.5	22
105	Effect of dolomite decomposition under CO₂ on its multicycle CO₂ capture behaviour under calcium looping conditions. Physical Chemistry Chemical Physics, 2016, 18, 16325-16336.	1.3	22
106	Large-Scale Storage of Concentrated Solar Power from Industrial Waste. ACS Sustainable Chemistry and Engineering, 2017, 5, 2265-2272.	3.2	22
107	Effect of inclination on gas-fluidized beds of fine cohesive powders. Powder Technology, 2008, 182, 398-405.	2.1	21
108	Dry gasâ€“solid carbonation in fluidized beds of Ca(OH)2 and nanosilica/Ca(OH)2 at ambient temperature and low CO2 pressure. Chemical Engineering Journal, 2013, 222, 546-552.	6.6	21

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109	Stabilization of gas-fluidized beds of magnetic powders by a cross-flow magnetic field. Journal of Fluid Mechanics, 2011, 680, 80-113.	1.4	20
110	Effect of particle size polydispersity on the yield stress of magnetofluidized beds as depending on the magnetic field orientation. Chemical Engineering Journal, 2015, 277, 269-285.	6.6	20
111	Effect of Steam Injection during Carbonation on the Multicyclic Performance of Limestone (CaCO₃) under Different Calcium Looping Conditions: A Comparative Study. ACS Sustainable Chemistry and Engineering, 2022, 10, 850-859.	3.2	20
112	Fluidization of Fine Powders. Particle Technology Series, 2013, , .	0.5	18
113	Biomass District Heating Systems Based on Agriculture Residues. Applied Sciences (Switzerland), 2018, 8, 476.	1.3	18
114	The effect of particle size on interparticle adhesive forces for small loads. Powder Technology, 2001, 118, 236-241.	2.1	17
115	High viscosity gas fluidization of fine particles: An extended window of quasihomogeneous flow. Physical Review E, 2006, 74, 021302.	0.8	17
116	A modified Richardsonâ€“Zaki equation for fluidization of Geldart B magnetic particles. Powder Technology, 2008, 181, 347-350.	2.1	16
117	Magnetofluidization of fine magnetite powder. Physical Review E, 2009, 79, 031306.	0.8	16
118	Electrofluidized bed of silica nanoparticles. Journal of Electrostatics, 2009, 67, 439-444.	1.0	16
119	Stabilization of fluidized beds of particles magnetized by an external field: effects of particle size and field orientation. Journal of Fluid Mechanics, 2013, 732, 282-303.	1.4	16
120	Modelling of a fluidized bed carbonator reactor for post-combustion CO2 capture considering bed hydrodynamics and sorbent characteristics. Chemical Engineering Journal, 2021, 406, 126762.	6.6	16
121	The cohesive behavior of granular solids at high temperature in solar energy storage. Energy Conversion and Management, 2021, 240, 114217.	4.4	16
122	On the breakup of slender liquid bridges: Experiments and a 1-D numerical analysis. European Journal of Mechanics, B/Fluids, 1999, 18, 649-658.	1.2	15
123	Avalanches in moistened beds of glass beads. Powder Technology, 2009, 196, 257-262.	2.1	15
124	Synthesis of a nanosilica supported CO2 sorbent in a fluidized bed reactor. Applied Surface Science, 2015, 328, 548-553.	3.1	15
125	Albero: An alternative natural material for solar energy storage by the calcium-looping process. Chemical Engineering Journal, 2022, 440, 135707.	6.6	15
126	Magnetic field assisted fluidization: A modified Richardsonâ€“Zaki equation. Particuology: Science and Technology of Particles, 2007, 5, 61-70.	0.4	14

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127	Adhesive elastic plastic contact: theory and numerical simulation. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2007, 87, 128-138.	0.9	14
128	Effect of magnetic field orientation on fluidized beds of magnetic particles: Theory and experiment. Particuology, 2014, 12, 54-63.	2.0	14
129	Cross effect between temperature and consolidation on the flow behavior of granular materials in thermal energy storage systems. Powder Technology, 2020, 363, 135-145.	2.1	14
130	Steam-enhanced calcium-looping performance of limestone for thermochemical energy storage: The role of particle size. Journal of Energy Storage, 2022, 51, 104305.	3.9	14
131	Rheology of magnetofluidized fine powders: The role of interparticle contact forces. Journal of Rheology, 2010, 54, 719-740.	1.3	13
132	Flow properties of CO2 sorbent powders modified with nanosilica. Powder Technology, 2013, 249, 443-455.	2.1	13
133	Pattern-formation under acoustic driving forces. Contemporary Physics, 2015, 56, 338-358.	0.8	13
134	The transitional behaviour of avalanches in cohesive granular materials. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P07015-P07015.	0.9	12
135	Compaction of fine powders: from fluidized agglomerates to primary particles. Granular Matter, 2006, 9, 19-24.	1.1	12
136	Novel instrument to characterize dry granular materials at low consolidations. Review of Scientific Instruments, 2007, 78, 073901.	0.6	12
137	Fluid to solid transition in magnetofluidized beds of fine powders. Journal of Applied Physics, 2010, 108, .	1.1	12
138	Convection and fluidization in oscillatory granular flows: The role of acoustic streaming. European Physical Journal E, 2015, 38, 66.	0.7	12
139	Tensile strength and compressibility of fine <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si187.svg"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">CaCO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow> powders. Effect of nanosilica addition.. Chemical Engineering Journal, 2019, 378, 122166.	6.6	12
140	Low-pressure calcination to enhance the calcium looping process for thermochemical energy storage. Journal of Cleaner Production, 2022, 363, 132295.	4.6	12
141	Stability and Bifurcation Analysis of a Spinning Space Tether. Journal of Nonlinear Science, 2006, 16, 507-542.	1.0	11
142	Acoustic Streaming Enhances the Multicyclic CO₂ Capture of Natural Limestone at Ca-Looping Conditions. Environmental Science & Technology, 2013, 47, 9538-9544.	4.6	11
143	Nanosilica to improve the flowability of fine limestone powders in thermochemical storage units. Chemical Engineering Journal, 2021, 426, 131789.	6.6	11
144	Vibrationâ€induced dynamical weakening of pyroclastic flows: Insights from rotating drum experiments. Journal of Geophysical Research: Solid Earth, 2015, 120, 6182-6190.	1.4	11

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145	Use of silica nanopowder to accelerate CO2 sorption by Ca(OH)2. Particuology, 2013, 11, 448-453.	2.0	10
146	Off-design model of concentrating solar power plant with thermochemical energy storage based on calcium-looping. AIP Conference Proceedings, 2019, , .	0.3	10
147	The SrCO3/SrO system for thermochemical energy storage at ultra-high temperature. Solar Energy Materials and Solar Cells, 2022, 238, 111632.	3.0	10
148	Unusual Isotopic Abundances in a Fully Convective Stellar Binary. Astrophysical Journal Letters, 2019, 871, L3.	3.0	9
149	Interparticle contact forces in fine cohesive powders. Theory and experiments. Proceedings in Applied Mathematics and Mechanics, 2003, 3, 206-207.	0.2	8
150	Effect of vibration on flow properties of fine glass beads. AICHE Journal, 2008, 54, 886-896.	1.8	8
151	Bubbling Suppression in Fluidized Beds of Fine and Ultrafine Powders. Particulate Science and Technology, 2008, 26, 197-213.	1.1	8
152	Role of particle size on the cohesive behavior of limestone powders at high temperature. Chemical Engineering Journal, 2020, 391, 123520.	6.6	8
153	High Intensity Sound Enhances Calcination and CO₂ Capture of Limestone and Dolomite at Ca-Looping Conditions. Industrial & Engineering Chemistry Research, 2016, 55, 8671-8678.	1.8	7
154	In situ XRD analysis of dolomite calcination under CO2 in a humid environment. CrystEngComm, 2020, 22, 6502-6516.	1.3	7
155	Crystallographic and Morphological Transformation of Natrite and Nahcolite in the Dry Carbonate Process for CO₂ Capture. Crystal Growth and Design, 2018, 18, 4578-4592.	1.4	6
156	Mechanical stresses of a layer of colloidal particles aggregated by means of an electric field. Journal of Electrostatics, 2001, 53, 107-121.	1.0	5
157	Effect of compaction history on the fluidization behavior of fine cohesive powders. Physical Review E, 2006, 73, 056310.	0.8	5
158	Magnetic field induced inversion in the effect of particle size on powder cohesiveness. Journal of Chemical Physics, 2010, 133, 024706.	1.2	5
159	Effect of temperature on flow properties of magnetofluidized beds at low consolidations. Chemical Engineering Journal, 2019, 361, 50-59.	6.6	5
160	Thermochemical Energy Storage Based on Carbonates: A Brief Overview. Energies, 2021, 14, 4336.	1.6	5
161	Probing the nature of the contact between fine particles by using ultrasound propagation. Particuology, 2011, 9, 659-662.	2.0	4
162	State Diagram of fine cohesive powders at zero shear. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2000, 80, 423-424.	0.9	3

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163	Granular avalanches: Deterministic, correlated and decorrelated dynamics. Europhysics Letters, 2004, 68, 818-824.	0.7	3
164	Cohesion and Internal Friction of Fine Glass Beads as Affected by Small Intensity Vertical Vibration. , 2009, , .		3
165	A laboratory-scale study on the role of mechanical vibrations in pore pressure generation in pyroclastic materials: implications for pyroclastic flows. Bulletin of Volcanology, 2019, 81, 1.	1.1	3
166	FMEA and Risks Assessment for Thermochemical Energy Storage Systems Based on Carbonates. Energies, 2021, 14, 6013.	1.6	3
167	Rheological Testing of Xerographic Liquid Inks: A Need for Printing Technology. Applied Rheology, 2004, 14, 190-196.	3.5	2
168	Extension of Geldartâ€™s Diagram to Fluidizable Fine and Ultrafine Particles. , 2009, , .		2
169	Mesoscopic structuring and yield stress of magnetofluidized fine particles. Europhysics Letters, 2009, 88, 24003.	0.7	2
170	Effects of Particle Size and Field Orientation on the Yield Stress of Magnetostabilized Fluidized Beds. Industrial & Engineering Chemistry Research, 2012, 51, 8134-8140.	1.8	2
171	Helical buckling of a whirling conducting rod in a uniform magnetic field. International Journal of Non-Linear Mechanics, 2012, 47, 38-53.	1.4	2
172	The yield stress of jammed magnetofluidized beds. Granular Matter, 2013, 15, 477-485.	1.1	2
173	Dynamical weakening by fluidization under oscillatory viscous flows. Journal of Geophysical Research: Solid Earth, 2015, 120, 7641-7654.	1.4	2
174	Introduction. The Classical Geldartâ€™s Diagram and the New Type of Gas-Fluidization Behavior. Particle Technology Series, 2013, , 1-6.	0.5	1
175	Enhancement of CO2 capture in limestone and dolomite granular beds by high intensity sound waves. EPJ Web of Conferences, 2017, 140, 14001.	0.1	1
176	Sampleâ€Controlled analysis under high pressure for accelerated process studies. Journal of the American Ceramic Society, 2019, 102, 1338-1346.	1.9	1
177	The Sevilla Powder Tester: A Tool for Measuring the Flow Properties of Cohesive Powders at High Temperatures. KONA Powder and Particle Journal, 2022, 39, 29-44.	0.9	1
178	Magnetofluidization of Fine Magnetite Particles. , 2009, , .		0
179	Mechanical Strength of Humidified Glass Beads. , 2009, , .		0
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