Pedro E SÃ¡nchez-JimÃ©nez

List of Publications by Year
in descending order

124 papers	6,212 citations	53660 45 h-index	76769 74 g-index
124 all docs	124 docs citations	124 times ranked	4332 citing authors

#	Article	IF	Citations
1	Influence of AC fields and electrical conduction mechanisms on the flash-onset temperature: Electronic (BiFeO3) vs. ionic conductors (8YSZ). Ceramics International, 2023, 49, 14834-14843.	2.3	2
2	Predictions of polymer thermal degradation: relevance of selecting the proper kinetic model. Journal of Thermal Analysis and Calorimetry, 2022, 147, 2335-2341.	2.0	11
3	A novel Multiâ€Phase Flash Sintering (MPFS) technique for 3D complexâ€shaped ceramics. Applied Materials Today, 2022, 26, 101274.	2.3	6
4	Overlooked pitfalls in CaO carbonation kinetics studies nearby equilibrium: Instrumental effects on calculated kinetic rate constants. AEJ - Alexandria Engineering Journal, 2022, 61, 6129-6138.	3.4	1
5	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
6	Flash Sintering Research Perspective: A Bibliometric Analysis. Materials, 2022, 15, 416.	1.3	14
7	The SrCO3/SrO system for thermochemical energy storage at ultra-high temperature. Solar Energy Materials and Solar Cells, 2022, 238, 111632.	3.0	10
8	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
9	Albero: An alternative natural material for solar energy storage by the calcium-looping process. Chemical Engineering Journal, 2022, 440, 135707.	6.6	15
10	Thermal behavior of ammonium fluorosilicates complexes: Obtaining and kinetic analysis. Chemical Engineering Research and Design, 2022, 182, 490-501.	2.7	8
11	Kinetic study of complex processes composed of non-independent stages: pyrolysis of natural rubber. Polymer Degradation and Stability, 2021, 188, 109590.	2.7	14
12	Unveiling mechanochemistry: Kinematic-kinetic approach for the prediction of mechanically induced reactions. Journal of Alloys and Compounds, 2021, 866, 158925.	2.8	11
13	Paving the Way to Establish Protocols: Modeling and Predicting Mechanochemical Reactions. Journal of Physical Chemistry Letters, 2021, 12, 5540-5546.	2.1	6
14	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
15	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
16	Pure perovskite BiFeO3â€“BaTiO3 ceramics prepared by reaction flash sintering of Bi2O3â€“Fe2O3â€“BaTiO3 mixed powders. Ceramics International, 2021, 47, 26947-26954.	2.3	29
17	Relevance of Particle Size Distribution to Kinetic Analysis: The Case of Thermal Dehydroxylation of Kaolinite. Processes, 2021, 9, 1852.	1.3	10
18	Advanced parametrisation of phase change materials through kinetic approach. Journal of Energy Storage, 2021, 44, 103441.	3.9	7

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19	Processing and properties of Bi_{0.98}R_{0.02}FeO₃ (RÂ=ÂLa, Sm, Y) ceramics flash sintered at ~650Â°C in <5Âs. Journal of the American Ceramic Society, 2020, 103, 136-144.	1.9	7
20	Role of particle size on the multicycle calcium looping activity of limestone for thermochemical energy storage. Journal of Advanced Research, 2020, 22, 67-76.	4.4	58
21	Control of experimental conditions in reaction flash-sintering of complex stoichiometry ceramics. Ceramics International, 2020, 46, 29413-29420.	2.3	17
22	Development of a high-pressure thermobalance working under constantÂrate thermal analysis. Journal of Thermal Analysis and Calorimetry, 2020, 142, 1329-1334.	2.0	1
23	Calcium-Looping Performance of Biomineralized CaCO₃ for CO₂ Capture and Thermochemical Energy Storage. Industrial & Engineering Chemistry Research, 2020, 59, 12924-12933.	1.8	33
24	Insight into the BiFeO3 flash sintering process by in-situ energy dispersive X-ray diffraction (ED-XRD). Ceramics International, 2019, 45, 2828-2834.	2.3	23
25	Sampleâ€Controlled analysis under high pressure for accelerated process studies. Journal of the American Ceramic Society, 2019, 102, 1338-1346.	1.9	1
26	Electrical properties of bismuth ferrites: Bi2Fe4O9 and Bi25FeO39. Journal of the European Ceramic Society, 2019, 39, 330-339.	2.8	23
27	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
28	Anisotropic lattice expansion determined during flash sintering of BiFeO3 by in-situ energy-dispersive X-ray diffraction. Scripta Materialia, 2019, 162, 286-291.	2.6	21
29	Multicycle CO2 capture activity and fluidizability of Al-based synthesized CaO sorbents. Chemical Engineering Journal, 2019, 358, 679-690.	6.6	90
30	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
31	Crystallization Kinetics of Nanocrystalline Materials by Combined X-ray Diffraction and Differential Scanning Calorimetry Experiments. Crystal Growth and Design, 2018, 18, 3107-3116.	1.4	21
32	Phase-pure BiFeO₃ produced by reaction flash-sintering of Bi₂O₃ and Fe₂O₃. Journal of Materials Chemistry A, 2018, 6, 5356-5366.	5.2	83
33	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
34	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
35	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
36	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

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37	Combined kinetic analysis of multistep processes of thermal decomposition of polydimethylsiloxane silicone. Polymer, 2018, 153, 558-564.	1.8	25
38	Thermoanalytical Characterization Techniques for Multiferroic Materials. Handbook of Thermal Analysis and Calorimetry, 2018, 6, 643-683.	1.6	5
39	Synthesis, characterization and combined kinetic analysis of thermal decomposition of hydrotalcite (Mg6Al2(OH)16CO3Â·4H2O). Thermochimica Acta, 2018, 667, 177-184.	1.2	30
40	Large-Scale Storage of Concentrated Solar Power from Industrial Waste. ACS Sustainable Chemistry and Engineering, 2017, 5, 2265-2272.	3.2	22
41	CO2 capture performance of Ca-Mg acetates at realistic Calcium Looping conditions. Fuel, 2017, 196, 497-507.	3.4	35
42	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
43	Large-scale high-temperature solar energy storage using natural minerals. Solar Energy Materials and Solar Cells, 2017, 168, 14-21.	3.0	119
44	Flash sintering of highly insulating nanostructured phaseâ€pure BiFeO₃. Journal of the American Ceramic Society, 2017, 100, 3365-3369.	1.9	58
45	Leadâ€Free Polycrystalline Ferroelectric Nanowires with Enhanced Curie Temperature. Advanced Functional Materials, 2017, 27, 1701169.	7.8	19
46	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
47	Characterization of mechanosynthesized Bi 1âˆ’x Sm x FeO 3 samples unencumbered by secondary phases or compositional inhomogeneity. Journal of Alloys and Compounds, 2017, 711, 541-551.	2.8	20
48	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
49	Defect chemistry and electrical properties of BiFeO₃. Journal of Materials Chemistry C, 2017, 5, 10077-10086.	2.7	54
50	A Promising approach to the kinetics of crystallization processes: The sample controlled thermal analysis. Journal of the American Ceramic Society, 2017, 100, 1125-1133.	1.9	7
51	Microcalorimetry: A powerful tool for quantitative analysis of aging hardening response of Cu-Ni-Sn alloys. Journal of Alloys and Compounds, 2017, 694, 710-714.	2.8	9
52	Structural and Chemical Characteristics of Sisal Fiber and Its Components: Effect of Washing and Grinding. Journal of Natural Fibers, 2017, 14, 26-39.	1.7	27
53	Preparation of ytterbium substituted BiFeO3 multiferroics by mechanical activation. Journal of the European Ceramic Society, 2017, 37, 945-954.	2.8	18
54	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

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55	The calorimetric analysis as a tool for studying the aging hardening mechanism of a Cu-10wt%Ni-5.5wt%Sn alloy. Journal of Alloys and Compounds, 2016, 688, 288-294.	2.8	32
56	Use of steel slag for CO2 capture under realistic calcium-looping conditions. RSC Advances, 2016, 6, 37656-37663.	1.7	28
57	Magnesium hydride for energy storage applications: The kinetics of dehydrogenation under different working conditions. Journal of Alloys and Compounds, 2016, 681, 571-579.	2.8	24
58	Template-Assisted Hydrothermal Growth of Aligned Zinc Oxide Nanowires for Piezoelectric Energy Harvesting Applications. ACS Applied Materials & Interfaces, 2016, 8, 13678-13683.	4.0	69
59	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
60	Combined TGA-MS kinetic analysis of multistep processes. Thermal decomposition and ceramification of polysilazane and polysiloxane preceramic polymers. Physical Chemistry Chemical Physics, 2016, 18, 29348-29360.	1.3	38
61	Constant rate thermal analysis of a dehydrogenation reaction. RSC Advances, 2016, 6, 81454-81460.	1.7	3
62	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
63	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
64	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
65	Reductive lithium insertion into B-cation deficient niobium perovskite oxides. Dalton Transactions, 2015, 44, 10636-10643.	1.6	3
66	Synthesis of a nanosilica supported CO2 sorbent in a fluidized bed reactor. Applied Surface Science, 2015, 328, 548-553.	3.1	15
67	Preparation of phase pure, dense fine grained ceramics by conventional and spark plasma sintering of La-substituted BiFeO3 nanoparticles. Journal of the European Ceramic Society, 2015, 35, 2283-2293.	2.8	23
68	Limestone Calcination Nearby Equilibrium: Kinetics, CaO Crystal Structure, Sintering and Reactivity. Journal of Physical Chemistry C, 2015, 119, 1623-1641.	1.5	130
69	Applications of sample-controlled thermal analysis (SCTA) to kinetic analysis and synthesis of materials. Journal of Thermal Analysis and Calorimetry, 2015, 120, 45-51.	2.0	9
70	Structural, Optical, and Electrical Characterization of Yttrium-Substituted BiFeO3 Ceramics Prepared by Mechanical Activation. Inorganic Chemistry, 2015, 54, 9876-9884.	1.9	18
71	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
72	New Insights on the Kinetic Analysis of Isothermal Data: The Independence of the Activation Energy from the Assumed Kinetic Model. Energy & Fuels, 2015, 29, 392-397.	2.5	10

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73	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
74	Nanosilica supported CaO: A regenerable and mechanically hard CO2 sorbent at Ca-looping conditions. Applied Energy, 2014, 118, 92-99.	5.1	80
75	Scission kinetic model for the prediction of polymer pyrolysis curves from chain structure. Polymer Testing, 2014, 37, 1-5.	2.3	23
76	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
77	Comparison of thermal behavior of natural and hot-washed sisal fibers based on their main components: Cellulose, xylan and lignin. TG-FTIR analysis of volatile products. Thermochimica Acta, 2014, 581, 70-86.	1.2	88
78	Comments on â€œPyrolysis kinetics of biomass from product informationâ€•(Applied Energy 110 (2013) 1â€“8) regarding the inability to obtain meaningful kinetic parameters from a single non-isothermal curve. Applied Energy, 2014, 125, 132-135.	5.1	15
79	The effect of polymer matrices on the thermal hazard properties of RDX-based PBXs by using model-free and combined kinetic analysis. Journal of Hazardous Materials, 2014, 271, 185-195.	6.5	34
80	Characterization of thermally stable gamma alumina fibres biomimicking sisal. Microporous and Mesoporous Materials, 2014, 185, 167-178.	2.2	18
81	Thermal Stability of Multiferroic BiFeO₃: Kinetic Nature of the Î²â€“Î³ Transition and Peritectic Decomposition. Journal of Physical Chemistry C, 2014, 118, 26387-26395.	1.5	44
82	Single phase, electrically insulating, multiferroic La-substituted BiFeO₃ prepared by mechanosynthesis. Journal of Materials Chemistry C, 2014, 2, 8398-8411.	2.7	45
83	Effect of Heat Pretreatment/Recarbonation in the Ca-Looping Process at Realistic Calcination Conditions. Energy & Fuels, 2014, 28, 4062-4067.	2.5	33
84	Role of precalcination and regeneration conditions on postcombustion CO2 capture in the Ca-looping technology. Applied Energy, 2014, 136, 347-356.	5.1	51
85	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
86	The Mitigation Effect of Synthetic Polymers on Initiation Reactivity of CL-20: Physical Models and Chemical Pathways of Thermolysis. Journal of Physical Chemistry C, 2014, 118, 22881-22895.	1.5	46
87	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
88	Multicyclic conversion of limestone at Ca-looping conditions: The role of solid-sate diffusion controlled carbonation. Fuel, 2014, 127, 131-140.	3.4	34
89	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
90	Improvement of the thermal stability of branched poly(lactic acid) obtained by reactive extrusion. Polymer Degradation and Stability, 2014, 104, 40-49.	2.7	24

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91	Clarifications regarding the use of model-fitting methods of kinetic analysis for determining the activation energy from a single non-isothermal curve. Chemistry Central Journal, 2013, 7, 25.	2.6	18
92	Kinetic studies in solid state reactions by sample-controlled methods and advanced analysis procedures. Journal of Thermal Analysis and Calorimetry, 2013, 113, 1447-1453.	2.0	7
93	Pyrolysis kinetics of ethyleneâ€“propylene (EPM) and ethyleneâ€“propyleneâ€“diene (EPDM). Polymer Degradation and Stability, 2013, 98, 1571-1577.	2.7	23
94	Generalized master plots as a straightforward approach for determining the kinetic model: The case of cellulose pyrolysis. Thermochimica Acta, 2013, 552, 54-59.	1.2	150
95	Enhanced general analytical equation for the kinetics of the thermal degradation of poly(lactic acid) driven by random scission. Polymer Testing, 2013, 32, 937-945.	2.3	47
96	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
97	Limitations of model-fitting methods for kinetic analysis: Polystyrene thermal degradation. Resources, Conservation and Recycling, 2013, 74, 75-81.	5.3	42
98	Direct mechanosynthesis of pure BiFeO3 perovskite nanoparticles: reaction mechanism. Journal of Materials Chemistry C, 2013, 1, 3551.	2.7	49
99	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
100	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
101	Comments on â€œThermal decomposition of pyridoxine: an evolved gas analysisâ€ion attachment mass spectrometry studyâ€• About the application of modelâ€fitting methods of kinetic analysis to single nonâ€isothermal curves. Rapid Communications in Mass Spectrometry, 2013, 27, 500-502.	0.7	2
102	Electrical Properties of Stoichiometric <scp><scp>BiFeO</scp></scp>₃ Prepared by Mechanosynthesis with Either Conventional or Spark Plasma Sintering. Journal of the American Ceramic Society, 2013, 96, 1220-1227.	1.9	53
103	Nanoclay Nucleation Effect in the Thermal Stabilization of a Polymer Nanocomposite: A Kinetic Mechanism Change. Journal of Physical Chemistry C, 2012, 116, 11797-11807.	1.5	88
104	Kinetic Analysis of Complex Solid-State Reactions. A New Deconvolution Procedure. Journal of Physical Chemistry B, 2011, 115, 1780-1791.	1.2	318
105	An improved model for the kinetic description of the thermal degradation of cellulose. Cellulose, 2011, 18, 1487-1498.	2.4	67
106	Constant rate thermal analysis for thermal stability studies of polymers. Polymer Degradation and Stability, 2011, 96, 974-981.	2.7	40
107	A new model for the kinetic analysis of thermal degradation of polymers driven by random scission. Polymer Degradation and Stability, 2010, 95, 733-739.	2.7	143
108	Giant piezoresistivity of polymer-derived ceramics at high temperatures. Journal of the European Ceramic Society, 2010, 30, 2203-2207.	2.8	70

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109	Kinetic model for thermal dehydrochlorination of poly(vinyl chloride). Polymer, 2010, 51, 3998-4007.	1.8	159
110	Mechanochemical preparation of BaTiO3â€“Ni nanocomposites with high dielectric constant. Composite Structures, 2010, 92, 2236-2240.	3.1	26
111	Lithium Insertion in Polymerâ€Derived Silicon Oxycarbide Ceramics. Journal of the American Ceramic Society, 2010, 93, 1127-1135.	1.9	70
112	Study of the Dehydroxylationâ€“Rehydroxylation of Pyrophyllite. Journal of the American Ceramic Society, 2010, 93, 2392-2398.	1.9	16
113	Transient Viscous Flow During the Evolution of a Ceramic (Silicon Carbonitride) from a Polymer (Polysilazane). Journal of the American Ceramic Society, 2010, 93, 2567-2570.	1.9	9
114	Quantitative Characterization of Multicomponent Polymers by Sample-Controlled Thermal Analysis. Analytical Chemistry, 2010, 82, 8875-8880.	3.2	27
115	Generalized Kinetic Master Plots for the Thermal Degradation of Polymers Following a Random Scission Mechanism. Journal of Physical Chemistry A, 2010, 114, 7868-7876.	1.1	85
116	Combined kinetic analysis of thermal degradation of polymeric materials under any thermal pathway. Polymer Degradation and Stability, 2009, 94, 2079-2085.	2.7	92
117	Thermal characterization of montmorillonite clays saturated with various cations. Journal of Thermal Analysis and Calorimetry, 2008, 92, 191-197.	2.0	21
118	Critical study of the isoconversional methods of kinetic analysis. Journal of Thermal Analysis and Calorimetry, 2008, 92, 199-203.	2.0	156
119	Kissinger kinetic analysis of data obtained under different heating schedules. Journal of Thermal Analysis and Calorimetry, 2008, 94, 427-432.	2.0	96
120	Development of a universal constant rate thermal analysis system for being used with any thermoanalytical instrument. Journal of Thermal Analysis and Calorimetry, 2007, 87, 297-300.	2.0	30
121	Combined Kinetic Analysis of Solid-State Reactions:Â A Powerful Tool for the Simultaneous Determination of Kinetic Parameters and the Kinetic Model without Previous Assumptions on the Reaction Mechanism. Journal of Physical Chemistry A, 2006, 110, 12456-12462.	1.1	253
122	Evaluation of the integral methods for the kinetic study of thermally stimulated processes in polymer science. Polymer, 2005, 46, 2950-2954.	1.8	51
123	Kinetic analysis of solid-state reactions: Precision of the activation energy calculated by integral methods. International Journal of Chemical Kinetics, 2005, 37, 658-666.	1.0	61
124	Dependence of the preexponential factor on temperature. Journal of Thermal Analysis and Calorimetry, 2005, 82, 671-675.	2.0	133