

Carlo Pirola

List of Publications by Year in descending order

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papers

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117453

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141
docs citations

141
times ranked

4087
citing authors

#	ARTICLE	IF	CITATIONS
1	Hybrid risk-based LCA to improve the Acid Gas to Syngas (AG2Sâ„ƒ) process. Journal of Loss Prevention in the Process Industries, 2022, 75, 104694.	1.7	5
2	Effect of Metal Cocatalysts and Operating Conditions on the Product Distribution and the Productivity of the CO ₂ Photoreduction. Industrial & Engineering Chemistry Research, 2022, 61, 2963-2972.	1.8	10
3	Metallosilicates as an iron support to catalyze Fischer-Tropsch synthesis. Catalysis Today, 2022, , .	2.2	3
4	Purification of air from volatile organic compounds by countercurrent liquid gas mass transfer absorption process. International Journal of Thermofluids, 2021, 9, 100060.	4.0	8
5	Toward Scaling-Up Photocatalytic Process for Multiphase Environmental Applications. Catalysts, 2021, 11, 562.	1.6	42
6	Pdâ€“Au Bimetallic Catalysts for the Hydrogenation of Muconic Acid to Bio-Adipic Acid. Catalysts, 2021, 11, 1313.	1.6	5
7	Century of Technology Trends in Methanol Synthesis: Any Need for Kinetics Refitting?. Industrial & Engineering Chemistry Research, 2021, 60, 16032-16053.	1.8	28
8	Experimental methods in chemical engineering: Process simulation. Canadian Journal of Chemical Engineering, 2020, 98, 2301-2320.	0.9	12
9	Hydrogenation of Trans,Trans-Muconic Acid to Bio-Adipic Acid: Mechanism Identification and Kinetic Modelling. Processes, 2020, 8, 929.	1.3	3
10	Biogas beyond CHP: The HPC (heat, power & chemicals) process. Energy, 2020, 203, 117820.	4.5	27
11	Immersive virtual crude distillation unit learning experience: The EYE4EDU project. Computers and Chemical Engineering, 2020, 140, 106973.	2.0	8
12	Effect of Carbon Support, Capping Agent Amount, and Pd NPs Size for Bio-Adipic Acid Production from Muconic Acid and Sodium Muconate. Nanomaterials, 2020, 10, 505.	1.9	11
13	Nonlinear desorption activation energy from TPD curves: Analysis of the influence of initial values for the regression procedure. Canadian Journal of Chemical Engineering, 2020, 98, 1115-1123.	0.9	1
14	Effects of humidified enriched air on combustion and emissions of a diesel engine. Renewable Energy, 2020, 155, 569-577.	4.3	8
15	Sonophotocatalytic degradation of sodium diclofenac using low power ultrasound and micro sized TiO ₂ . Ultrasonics Sonochemistry, 2020, 67, 105123.	3.8	35
16	Low pressure conversion of CO ₂ to methanol over Cu/Zn/Al catalysts. The effect of Mg, Ca and Sr as basic promoters. Fuel, 2020, 274, 117804.	3.4	42
17	Combustion analysis of a light duty diesel engine using oxygen-enriched and humidified combustion air. E3S Web of Conferences, 2019, 116, 00061.	0.2	0
18	Learning distillation by a combined experimental and simulation approach in a three steps laboratory: Vapor pressure, vapor-liquid equilibria and distillation column. Education for Chemical Engineers, 2019, 28, 54-65.	2.8	5

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19	Bio Adipic Acid Production from Sodium Muconate and Muconic Acid: A Comparison of two Systems. ChemCatChem, 2019, 11, 3075-3084.	1.8	14
20	Photocatalytic porcelain grÃ©s large slabs digitally coated with AgNPs-TiO2. Environmental Science and Pollution Research, 2019, 26, 36117-36123.	2.7	8
21	High pressure CO2 photoreduction using Au/TiO2: unravelling the effect of co-catalysts and of titania polymorphs. Catalysis Science and Technology, 2019, 9, 2253-2265.	2.1	34
22	Experimental Characterization of Polymer Surfaces Subject to Corona Discharges in Controlled Atmospheres. Polymers, 2019, 11, 1646.	2.0	13
23	Micro-TiO2 coated glass surfaces safely abate drugs in surface water. Journal of Hazardous Materials, 2019, 363, 328-334.	6.5	22
24	Fossil or Renewable Sources for Methanol Production?. , 2018, , 53-93.		11
25	Production and application of O2 enriched air produced by fresh and salt water desorption in chemical plants. Journal of Environmental Management, 2018, 217, 621-628.	3.8	8
26	Micro-sized TiO2 as photoactive catalyst coated on industrial porcelain grÃ©s tiles to photodegrade drugs in water. Environmental Science and Pollution Research, 2018, 25, 20348-20353.	2.7	17
27	Eco design LCA of an innovative lab scale plant for the production of oxygen-enriched air. Comparison between economic and environmental assessment. Journal of Cleaner Production, 2018, 171, 147-152.	4.6	29
28	Simultaneous photodegradation of VOC mixture by TiO2 powders. Chemosphere, 2018, 193, 198-206.	4.2	47
29	Performance and Exhaust Emissions Analysis of a Diesel Engine Using Oxygen-Enriched Air. , 2018, , .		5
30	High Pressure Photoreduction of CO2: Effect of Catalyst Formulation, Hole Scavenger Addition and Operating Conditions. Catalysts, 2018, 8, 430.	1.6	41
31	Ultrasound-assisted impregnation for high temperature Fischer-Tropsch catalysts. Ultrasonics Sonochemistry, 2018, 48, 523-531.	3.8	15
32	Experimental methods in chemical engineering: Temperature programmed reductionâ€™TPR. Canadian Journal of Chemical Engineering, 2018, 96, 2317-2320.	0.9	12
33	Comparison of Branched and Linear Perfluoropolyether Chains Functionalization on Hydrophobic, Morphological and Conductive Properties of Multi-Walled Carbon Nanotubes. Nanomaterials, 2018, 8, 176.	1.9	5
34	CaO and isopropanol transesterify and crack triglycerides to isopropyl esters and green diesel. Energy Conversion and Management, 2017, 139, 71-78.	4.4	17
35	Integrated reactor staging and plant optimization of a Biomass-To-Liquid technology. Computers and Chemical Engineering, 2017, 106, 719-729.	2.0	2
36	Low Impact Methanol Production from Sulfur Rich Coal Gasification. Energy Procedia, 2017, 105, 4519-4524.	1.8	13

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37	Bio-adipic acid production by catalysed hydrogenation of muconic acid in mild operating conditions. Applied Catalysis B: Environmental, 2017, 218, 220-229.	10.8	17
38	Characterization of Cobalt Catalysts on Biomass-Derived Carbon Supports. Topics in Catalysis, 2017, 60, 1415-1428.	1.3	11
39	Aspirin and paracetamol removal using a commercial micro-sized TiO ₂ catalyst in deionized and tap water. Environmental Science and Pollution Research, 2017, 24, 12646-12654.	2.7	26
40	Production of oxygen-enriched air via desorption from water: Experimental data, simulations and economic assessment. Computers and Chemical Engineering, 2017, 102, 11-16.	2.0	7
41	CO ₂ photoreduction at high pressure to both gas and liquid products over titanium dioxide. Applied Catalysis B: Environmental, 2017, 200, 386-391.	10.8	80
42	Fe-based heterogeneous catalysts for the Fischer-Tropsch reaction: Sonochemical synthesis and bench-scale experimental tests. Ultrasonics Sonochemistry, 2017, 34, 774-780.	3.8	13
43	Biomass to X: Gasification and Pyrolysis Integrated. Computer Aided Chemical Engineering, 2017, 40, 1837-1842.	0.3	0
44	Biogas: a Possible New Pathway to Methanol?. Computer Aided Chemical Engineering, 2017, 40, 523-528.	0.3	8
45	Sulfur Rich Coal Gasification and Low Impact Methanol Production. Journal of Sustainable Development of Energy, Water and Environment Systems, 2017, 6, 210-226.	0.9	17
46	Technical Feasibility of AG2Sâ„¢ Process Revamping. Computer Aided Chemical Engineering, 2017, 40, 385-390.	0.3	3
47	Systematic Design of Biorefinery Downstream Processes. , 2017, , 683-712.		0
48	Bio-syngas Conversion by FT Synthesis with High Loaded Fe-based Catalysts: Kinetic Parameters Regression. Computer Aided Chemical Engineering, 2016, 38, 589-594.	0.3	2
49	Comparison between Experimental and Simulated Data of a Distillation Column: Evaluation of Mass-Heat Balances and Trays Efficiency. Computer Aided Chemical Engineering, 2016, , 1557-1562.	0.3	1
50	Highâ€loaded Feâ€supported catalyst for the thermochemical BtLâ€FT process: Experimental results and modelling. Canadian Journal of Chemical Engineering, 2016, 94, 696-702.	0.9	10
51	Microâ€syngas technology options for GtL. Canadian Journal of Chemical Engineering, 2016, 94, 613-622.	0.9	19
52	Flame Spray Pyrolysis as fine preparation technique for stable Co and Co/Ru based catalysts for FT process. Applied Catalysis A: General, 2016, 520, 92-98.	2.2	15
53	Robust optimization of the heteroextractive distillation column for the purification of water/acetic acid mixtures using p-xylene as entrainer. Computers and Chemical Engineering, 2016, 95, 161-169.	2.0	4
54	Use of a sol-gel hybrid coating composed by a fluoropolymer and silica for the mitigation of mineral fouling in heat exchangers. Applied Thermal Engineering, 2016, 106, 427-431.	3.0	19

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55	Acid Gas to Syngas (AG2S ₄) technology applied to solid fuel gasification: Cutting H ₂ S and CO ₂ emissions by improving syngas production. Applied Energy, 2016, 184, 1284-1291.	5.1	49
56	Sol-gel hybrid coatings containing silica and a perfluoropolyether derivative with high resistance and anti-fouling properties in liquid media. Journal of Fluorine Chemistry, 2016, 188, 43-49.	0.9	23
57	Copper NPs decorated titania: A novel synthesis by high energy US with a study of the photocatalytic activity under visible light. Ultrasonics Sonochemistry, 2016, 31, 295-301.	3.8	25
58	NO _x degradation in a continuous large-scale reactor using full-size industrial photocatalytic tiles. Catalysis Science and Technology, 2016, 6, 2261-2267.	2.1	16
59	First-principles models and sensitivity analysis for the lignocellulosic biomass-to-methanol conversion process. Computers and Chemical Engineering, 2016, 84, 558-567.	2.0	14
60	A robust sustainable optimization & control strategy (RSOCS) for (fed-)batch processes towards the low-cost reduction of utilities consumption. Journal of Cleaner Production, 2016, 111, 181-192.	4.6	11
61	Perfluoropolyethers Coatings Design for Fouling Reduction on Heat Transfer Stainless-Steel Surfaces. Heat Transfer Engineering, 2016, 37, 210-219.	1.2	17
62	Heterogeneous Oil Transesterification in a Single-Phase Liquid Mixture using a Co-Solvent for Improved Biofuels Production. Energy Technology, 2015, 3, 1170-1173.	1.8	8
63	Multi-scale Kinetic Modeling and Experimental Investigation of Syngas Production from Coal Gasification in Updraft Gasifiers. Energy & Fuels, 2015, 29, 3972-3984.	2.5	24
64	The effect of oxygen in the photocatalytic oxidation pathways of perfluorooctanoic acid. Journal of Fluorine Chemistry, 2015, 179, 159-168.	0.9	32
65	CO ₂ photoconversion to fuels under high pressure: effect of TiO ₂ phase and of unconventional reaction conditions. Catalysis Science and Technology, 2015, 5, 4481-4487.	2.1	52
66	Nano and micro-TiO ₂ for the photodegradation of ethanol: experimental data and kinetic modelling. RSC Advances, 2015, 5, 53419-53425.	1.7	37
67	Robust kinetic modeling of heterogeneously catalyzed free fatty acids esterification in monophasic liquid/solid packed bed reactor: rival model discrimination. Clean Technologies and Environmental Policy, 2015, 17, 1139-1147.	2.1	6
68	Water gas shift membrane reactors. , 2015, , 3-29.		14
69	The Role of the Nano/Microstructure in the Case of the Photodegradation of Two Model VOC Pollutants Using Commercial TiO ₂ . Energy and Environment Focus, 2015, 4, 226-231.	0.3	1
70	Online model-based optimization and control for the combined optimal operation and runaway prediction and prevention in (fed-)batch systems. Chemical Engineering Science, 2015, 138, 760-771.	1.9	15
71	Surface properties and anti-fouling assessment of coatings obtained from perfluoropolyethers and ceramic oxides nanopowders deposited on stainless steel. Journal of Fluorine Chemistry, 2015, 180, 7-14.	0.9	39
72	Surface fluorination on TiO ₂ catalyst induced by photodegradation of perfluorooctanoic acid. Catalysis Today, 2015, 241, 8-14.	2.2	46

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73	Pigmentary TiO ₂ : A challenge for its use as photocatalyst in NO _x air purification. <i>Chemical Engineering Journal</i> , 2015, 261, 76-82.	6.6	46
74	Biomass gasification using low-temperature solar-driven steam supply. <i>Renewable Energy</i> , 2015, 74, 671-680.	4.3	40
75	Surface decoration of commercial micro-sized TiO ₂ by means of high energy ultrasound: A way to enhance its photocatalytic activity under visible light. <i>Applied Catalysis B: Environmental</i> , 2015, 178, 124-132.	10.8	31
76	Co- and Co(Ru)-Based Catalysts for Fischer-Tropsch Synthesis Prepared by High Power Ultrasound. <i>Materials Focus</i> , 2015, 4, 295-301.	0.4	4
77	Batch and Continuous Ultrasonic Reactors for the Production of Methyl Esters from Vegetable Oils. <i>Biofuels and Biorefineries</i> , 2015, , 87-114.	0.5	2
78	Simulation and Related Experimental Validation of Acetic Acid/Water Distillation Using <i>p</i> -Xylene as Entrainer. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 18063-18070.	1.8	16
79	Aromatization of propane: Techno-economic analysis by multiscale kinetics-to-process simulation. <i>Computers and Chemical Engineering</i> , 2014, 71, 457-466.	2.0	20
80	Ultrasonic free fatty acids esterification in tobacco and canola oil. <i>Ultrasonics Sonochemistry</i> , 2014, 21, 1969-1975.	3.8	42
81	Process intensification using energy-free highly enriched air: Application to seawater desalination plants. <i>Chemical Engineering and Processing: Process Intensification</i> , 2014, 79, 40-47.	1.8	5
82	Decomposition of perfluorooctanoic acid photocatalyzed by titanium dioxide: Chemical modification of the catalyst surface induced by fluoride ions. <i>Applied Catalysis B: Environmental</i> , 2014, 148-149, 29-35.	10.8	66
83	Preservation of carotenes in the deacidification of crude palm oil. <i>RSC Advances</i> , 2014, 4, 46922-46925.	1.7	5
84	A novel high-pressure photoreactor for CO ₂ photoconversion to fuels. <i>RSC Advances</i> , 2014, 4, 28883-28885.	1.7	33
85	Mathematical Modelling of Coal and Biomass Gasification: Comparison on the Syngas H ₂ /CO Ratio under Different Operating Conditions. <i>Computer Aided Chemical Engineering</i> , 2014, 33, 1669-1674.	0.3	6
86	Vegetable Oil Deacidification by Methanol Heterogeneously Catalyzed Esterification in (Monophasic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.5	17
87	Co-based hydrotalcites as new catalysts for the Fischer-Tropsch synthesis process. <i>Fuel</i> , 2014, 119, 62-69.	3.4	33
88	Systematic staging design applied to the fixed-bed reactor series for methanol and one-step methanol/dimethyl ether synthesis. <i>Applied Thermal Engineering</i> , 2014, 70, 1228-1237.	3.0	36
89	Assessing thermal energy storage technologies of concentrating solar plants for the direct coupling with chemical processes. The case of solar-driven biomass gasification. <i>Energy</i> , 2014, 75, 45-52.	4.5	19
90	Fischer-Tropsch synthesis: EXAFS study of Ru and Pt bimetallic Co based catalysts. <i>Fuel</i> , 2014, 132, 62-70.	3.4	32

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91	Photocatalytic degradation of acetone, acetaldehyde and toluene in gas-phase: Comparison between nano and micro-sized TiO ₂ . Applied Catalysis B: Environmental, 2014, 146, 123-130.	10.8	178
92	Micro-TiO ₂ as a starting material for new photocatalytic tiles. Cement and Concrete Composites, 2013, 36, 116-120.	4.6	25
93	Free fatty acids esterification of waste cooking oil and its mixtures with rapeseed oil and diesel. Fuel, 2013, 108, 612-619.	3.4	46
94	Ultrasonic enhancement of the acidity, surface area and free fatty acids esterification catalytic activity of sulphated ZrO ₂ –TiO ₂ systems. Journal of Catalysis, 2013, 297, 17-26.	3.1	65
95	Porous TiO ₂ microspheres with tunable properties for photocatalytic air purification. Ultrasonics Sonochemistry, 2013, 20, 445-451.	3.8	45
96	Pressurized photo-reactor for the degradation of the scarcely biodegradable DPC cationic surfactant in water. Chemical Engineering Journal, 2013, 225, 416-422.	6.6	10
97	Ultrafast Biodiesel Production Using Ultrasound in Batch and Continuous Reactors. ACS Sustainable Chemistry and Engineering, 2013, 1, 1432-1439.	3.2	47
98	New Surface Properties in Porcelain Gres Tiles with a Look to Human and Environmental Safety. Advances in Materials Science and Engineering, 2012, 2012, 1-8.	1.0	8
99	Stability of Metallic Ruthenium in Ru–Co Supported Silica Catalysts. Catalysis Letters, 2012, 142, 1452-1460.	1.4	10
100	Photocatalytic coatings for building industry: study of 1 year of activity in the NO _x degradation. Journal of Coatings Technology Research, 2012, 9, 453-458.	1.2	29
101	Simultaneous ultrasound and microwave new reactor: Detailed description and energetic considerations. Ultrasonics Sonochemistry, 2012, 19, 872-876.	3.8	23
102	Photocatalytic NO _x abatement: The role of the material supporting the TiO ₂ active layer. Journal of Hazardous Materials, 2012, 211-212, 203-207.	6.5	29
103	Bisphenol A endocrine disruptor complete degradation using TiO ₂ photocatalysis with ozone. Environmental Chemistry Letters, 2012, 10, 55-60.	8.3	39
104	Non Edible Oils: Raw Materials for Sustainable Biodiesel. , 2011, , .		5
105	Transmission control for power-shift agricultural tractors: Design and end-of-line automatic tuning. Mechatronics, 2011, 21, 285-297.	2.0	42
106	Low Temperature De-acidification Process of Animal Fat as a Pre-Step to Biodiesel Production. Catalysis Letters, 2010, 134, 179-183.	1.4	35
107	Feasibility study for the production of biofuels from Brassicaceae spp. and Nicotiana tabacum oilseeds and from by-products or waste materials. Journal of Biotechnology, 2010, 150, 173-173.	1.9	0
108	Ultrasound and microwave assisted synthesis of high loading Fe-supported Fischer–Tropsch catalysts. Ultrasonics Sonochemistry, 2010, 17, 610-616.	3.8	35

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109	Vegetable Oil Deacidification by Amberlyst: Study of the Catalyst Lifetime and a Suitable Reactor Configuration. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 4601-4606.	1.8	29
110	Photocatalysis for the Degradation of Ionic Surfactants in Water: The Case of DPC. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1171, 71.	0.1	0
111	High Loading Fe-supported Fischer-Tropsch Catalysts: Optimization of the Catalyst Performance. <i>Catalysis Letters</i> , 2009, 131, 294-304.	1.4	16
112	Photodegradation of Pollutants in Air: Enhanced Properties of Nano-TiO ₂ Prepared by Ultrasound. <i>Nanoscale Research Letters</i> , 2009, 4, 97-105.	3.1	85
113	N-doped TiO ₂ from TiCl ₃ for photodegradation of air pollutants. <i>Catalysis Today</i> , 2009, 144, 31-36.	2.2	56
114	Fischer Tropsch and Water Gas Shift chemical regimes on supported iron-based catalysts at high metal loading. <i>Catalysis Communications</i> , 2009, 10, 823-827.	1.6	38
115	Efficiency of 1,4-dichlorobenzene degradation in water under photolysis, photocatalysis on TiO ₂ and sonolysis. <i>Journal of Hazardous Materials</i> , 2008, 153, 1136-1141.	6.5	80
116	Photocatalytic Degradation of Toluene in the Gas Phase: Relationship between Surface Species and Catalyst Features. <i>Environmental Science & Technology</i> , 2008, 42, 6671-6676.	4.6	98
117	Tailored Anatase/Brookite Nanocrystalline TiO ₂ . The Optimal Particle Features for Liquid- and Gas-Phase Photocatalytic Reactions. <i>Journal of Physical Chemistry C</i> , 2007, 111, 13222-13231.	1.5	150
118	The beneficial influence of ultrasound in the polymerization of $\hat{\mu}$ -caprolactam to polyamide-6 (Nylon 6). Part I: Primary experimental results. <i>Ultrasonics Sonochemistry</i> , 2007, 14, 680-688.	3.8	6
119	The beneficial influence of ultrasound in the polymerization of $\hat{\mu}$ -caprolactam to polyamide-6 (Nylon 6). Part II: Additional experiment to understand the "pre-sonication effect". <i>Ultrasonics Sonochemistry</i> , 2007, 14, 689-694.	3.8	2
120	Kinetic of esterification of diluted acetic acid with pure 2-ethyl-1-hexanol. <i>Chemical Engineering Journal</i> , 2007, 131, 257-262.	6.6	8
121	Choosing the best diluent for a fixed catalytic bed: The case of CO hydrogenation. <i>Catalysis Communications</i> , 2006, 7, 669-672.	1.6	18
122	Increasing the value of dilute acetic acid streams through esterification. <i>Applied Catalysis B: Environmental</i> , 2006, 64, 66-71.	10.8	23
123	Mechanism and efficiency of atrazine degradation under combined oxidation processes. <i>Applied Catalysis B: Environmental</i> , 2006, 64, 131-138.	10.8	108
124	Degradation of methyl tert-butyl ether in water: effects of the combined use of sonolysis and photocatalysis. <i>Ultrasonics Sonochemistry</i> , 2005, 12, 395-400.	3.8	46
125	Separation of some light monocarboxylic acids from water in binary solutions in a reverse osmosis pilot plant. <i>Desalination</i> , 2005, 171, 21-32.	4.0	7
126	Destruction of carbon tetrachloride in the presence of hydrogen-supplying compounds with ionisation and catalytic oxidation. <i>Applied Catalysis B: Environmental</i> , 2004, 47, 257-267.	10.8	8

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127	A new method to clean industrial water from acetic acid via esterification. Applied Catalysis B: Environmental, 2003, 40, 93-99.	10.8	32
128	Degradation of organic water pollutants through sonophotocatalysis in the presence of TiO ₂ . Ultrasonics Sonochemistry, 2003, 10, 247-254.	3.8	191
129	Destruction of carbon tetrachloride in the presence of hydrogen-supplying compounds with ionisation and catalytic oxidation. Applied Catalysis B: Environmental, 2002, 38, 17-28.	10.8	23
130	Sono-photocatalytic degradation of 2-chlorophenol in water: kinetic and energetic comparison with other techniques. Ultrasonics Sonochemistry, 2001, 8, 251-258.	3.8	93
131	Soybean Oil De-Acidification as a First Step Towards Biodiesel Production. , 0, , .		2
132	A New Frontier of Photocatalysis Employing Micro-Sized TiO ₂ : Air/Water Pollution Abatement and Self-Cleaning/ Antibacterial Applications. , 0, , .		9
133	Photocatalytic TiO ₂ : From Airless Jet Spray Technology to Digital Inkjet Printing. , 0, , .		3
134	Basic Economic Analysis for Sonochemical Processes. Journal of Chemical Engineering Research Updates, 0, 7, 1-5.	0.1	0