Juan Carlos Colmenares

List of Publications by Year
in descending order

109 papers	5,486 citations	94433 37 h-index	82547 72 g-index
125 all docs	125 docs citations	125 times ranked	7147 citing authors

#	Article	IF	Citations
1	Heterogeneous photocatalytic nanomaterials: prospects and challenges in selective transformations of biomass-derived compounds. Chemical Society Reviews, 2014, 43, 765-778.	38.1	539
2	Hierarchically CdS Decorated 1D ZnO Nanorodsâ€2D Graphene Hybrids: Low Temperature Synthesis and Enhanced Photocatalytic Performance. Advanced Functional Materials, 2015, 25, 221-229.	14.9	394
3	One-dimension-based spatially ordered architectures for solar energy conversion. Chemical Society Reviews, 2015, 44, 5053-5075.	38.1	367
4	Synthesis, characterization and photocatalytic activity of different metal-doped titania systems. Applied Catalysis A: General, 2006, 306, 120-127.	4.3	271
5	A sustainable approach for lignin valorization by heterogeneous photocatalysis. Green Chemistry, 2016, 18, 594-607.	9.0	238
6	Nanostructured Photocatalysts and Their Applications in the Photocatalytic Transformation of Lignocellulosic Biomass: An Overview. Materials, 2009, 2, 2228-2258.	2.9	168
7	Sustainable hybrid photocatalysts: titania immobilized on carbon materials derived from renewable and biodegradable resources. Green Chemistry, 2016, 18, 5736-5750.	9.0	158
8	Agricultural biomass/waste as adsorbents for toxic metal decontamination of aqueous solutions. Journal of Molecular Liquids, 2019, 295, 111684.	4.9	131
9	Dual Functionality of TiO₂/Biochar Hybrid Materials: Photocatalytic Phenol Degradation in the Liquid Phase and Selective Oxidation of Methanol in the Gas Phase. ACS Sustainable Chemistry and Engineering, 2017, 5, 6274-6287.	6.7	130
10	Chitosan-Based N-Doped Carbon Materials for Electrocatalytic and Photocatalytic Applications. ACS Sustainable Chemistry and Engineering, 2020, 8, 4708-4727.	6.7	123
11	Multichannel Charge Transfer and Mechanistic Insight in Metal Decorated 2Dâ€“2D Bi₂WO₆â€“TiO₂ Cascade with Enhanced Photocatalytic Performance. Small, 2017, 13, 1702253.	10.0	117
12	Thermoâ€Photocatalysis: Environmental and Energy Applications. ChemSusChem, 2019, 12, 2098-2116.	6.8	115
13	Influence of the strong metal support interaction effect (SMSI) of Pt/TiO2 and Pd/TiO2 systems in the photocatalytic biohydrogen production from glucose solution. Catalysis Communications, 2011, 16, 1-6.	3.3	108
14	High-value chemicals obtained from selective photo-oxidation of glucose in the presence of nanostructured titanium photocatalysts. Bioresource Technology, 2011, 102, 11254-11257.	9.6	103
15	Mild ultrasound-assisted synthesis of TiO 2 supported on magnetic nanocomposites for selective photo-oxidation of benzyl alcohol. Applied Catalysis B: Environmental, 2016, 183, 107-112.	20.2	103
16	Selective photocatalysis of lignin-inspired chemicals by integrating hybrid nanocatalysis in microfluidic reactors. Chemical Society Reviews, 2017, 46, 6675-6686.	38.1	102
17	Enhanced uranium removal from acidic wastewater by phosphonate-functionalized ordered mesoporous silica: Surface chemistry matters the most. Journal of Hazardous Materials, 2021, 413, 125279.	12.4	76
18	Additive-free photo-assisted selective partial oxidation at ambient conditions of 5-hydroxymethylfurfural by manganese (IV) oxide nanorods. Applied Catalysis B: Environmental, 2019, 256, 117803.	20.2	74

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19	Efficient and simple reactive milling preparation of photocatalytically active porous ZnO nanostructures using biomass derived polysaccharides. Green Chemistry, 2014, 16, 2876-2885.	9.0	68
20	Nanoengineered Electrodes for Biomass-Derived 5-Hydroxymethylfurfural Electrocatalytic Oxidation to 2,5-Furandicarboxylic Acid. ACS Sustainable Chemistry and Engineering, 2021, 9, 1970-1993.	6.7	65
21	Low-temperature ultrasound-promoted synthesis of Crâ€“TiO2-supported photocatalysts for valorization of glucose and phenol degradation from liquid phase. Applied Catalysis B: Environmental, 2013, 134-135, 136-144.	20.2	61
22	Metal Organic Frameworks as Desulfurization Adsorbents of DBT and 4,6-DMDBT from Fuels. Molecules, 2019, 24, 4525.	3.8	61
23	Modification of the photocatalytic activity of Pd/TiO2 and Zn/TiO2 systems through different oxidative and reductive calcination treatments. Applied Catalysis B: Environmental, 2008, 80, 88-97.	20.2	59
24	Effect of the redox treatment of Pt/TiO2 system on its photocatalytic behaviour in the gas phase selective photooxidation of propan-2-ol. Catalysis Today, 2007, 128, 235-244.	4.4	58
25	Sonophotodeposition of Bimetallic Photocatalysts Pdâ€“Au/TiO₂: Application to Selective Oxidation of Methanol to Methyl Formate. ChemSusChem, 2015, 8, 1676-1685.	6.8	55
26	Ultrasound-activated TiO2/GO-based bifunctional photoreactive adsorbents for detoxification of chemical warfare agent surrogate vapors. Chemical Engineering Journal, 2020, 395, 125099.	12.7	54
27	A comprehensive review on selected graphene synthesis methods: from electrochemical exfoliation through rapid thermal annealing towards biomass pyrolysis. Journal of Materials Chemistry C, 2021, 9, 6722-6748.	5.5	54
28	Lignin-Based Composite Materials for Photocatalysis and Photovoltaics. Topics in Current Chemistry, 2018, 376, 20.	5.8	53
29	Selective Oxidation of 5â€Hydroxymethylfurfural to 2,5â€Diformylfuran by Visible Lightâ€Driven Photocatalysis over In Situ Substrateâ€Sensitized Titania. ChemSusChem, 2021, 14, 1351-1362.	6.8	53
30	Room temperature versatile conversion of biomass-derived compounds by means of supported TiO2 photocatalysts. Journal of Molecular Catalysis A, 2013, 366, 156-162.	4.8	46
31	Sonochemistry: from Basic Principles to Innovative Applications. Topics in Current Chemistry, 2017, 375, 8.	5.8	45
32	Polydopamine Films with 2D-like Layered Structure and High Mechanical Resilience. ACS Applied Materials & Interfaces, 2021, 13, 23113-23120.	8.0	44
33	Carbonaceous residues from biomass gasification as catalysts for biodiesel production. Journal of Natural Gas Chemistry, 2012, 21, 246-250.	1.8	43
34	Facile mechanochemical modification of g-C3N4 for selective photo-oxidation of benzyl alcohol. Chemical Engineering Science, 2019, 194, 78-84.	3.8	43
35	Sonicationâ€Induced Pathways in the Synthesis of Lightâ€Active Catalysts for Photocatalytic Oxidation of Organic Contaminants. ChemSusChem, 2014, 7, 1512-1527.	6.8	42
36	Mechanochemical Synthesis of TiO2 Nanocomposites as Photocatalysts for Benzyl Alcohol Photo-Oxidation. Nanomaterials, 2016, 6, 93.	4.1	41

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37	Sonocatalysis: A Potential Sustainable Pathway for the Valorization of Lignocellulosic Biomass and Derivatives. Topics in Current Chemistry, 2017, 375, 41.	5.8	41
38	Sustainable hydrogen production by plasmonic thermophotocatalysis. Catalysis Today, 2021, 380, 156-186.	4.4	39
39	A Combined Approach using Sonochemistry and Photocatalysis: How to Apply Sonophotocatalysis for Biomass Conversion?. ChemCatChem, 2017, 9, 2615-2621.	3.7	38
40	A novel biomass-based support (Starbon) for TiO₂ hybrid photocatalysts: a versatile green tool for water purification. RSC Advances, 2013, 3, 20186-20192.	3.6	37
41	Sonicationâ€Assisted Lowâ€Temperature Routes for the Synthesis of Supported Feâ€“TiO₂ Econanomaterials: Partial Photooxidation of Glucose and Phenol Aqueous Degradation. ChemCatChem, 2013, 5, 2270-2277.	3.7	36
42	Toward a Comprehensive Understanding of Enhanced Photocatalytic Activity of the Bimetallic PdAu/TiO₂ Catalyst for Selective Oxidation of Methanol to Methyl Formate. ACS Applied Materials & Interfaces, 2017, 9, 31825-31833.	8.0	36
43	Photoactive Hybrid Catalysts Based on Natural and Synthetic Polymers: A Comparative Overview. Molecules, 2017, 22, 790.	3.8	35
44	Design and Fabrication of TiO₂/Lignocellulosic Carbon Materials: Relevance of Lowâ€temperature Sonocrystallization to Photocatalysts Performance. ChemCatChem, 2018, 10, 3469-3480.	3.7	35
45	When sonochemistry meets heterogeneous photocatalysis: designing a sonophotoreactor towards sustainable selective oxidation. Green Chemistry, 2020, 22, 4896-4905.	9.0	34
46	Polypropylene nonwoven filter with nanosized ZnO rods: Promising hybrid photocatalyst for water purification. Applied Catalysis B: Environmental, 2015, 170-171, 273-282.	20.2	32
47	Ultrasound assisted ZnO coating in a microflow based photoreactor for selective oxidation of benzyl alcohol to benzaldehyde. Green Chemistry, 2019, 21, 1241-1246.	9.0	32
48	Zeolitic imidazolate frameworks (ZIFs) of various morphologies against eriochrome black-T (EBT): Optimizing the key physicochemical features by process modeling. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 606, 125391.	4.7	32
49	Mechanochemical Forces as a Synthetic Tool for Zero- and One-Dimensional Titanium Oxide-Based Nano-photocatalysts. Topics in Current Chemistry, 2020, 378, 2.	5.8	31
50	Selective redox photocatalysis: Is there any chance for solar bio-refineries?. Current Opinion in Green and Sustainable Chemistry, 2019, 15, 38-46.	5.9	30
51	A new photocatalytic tool in VOCs abatement: Effective synergetic combination of sonication and light for the synthesis of monometallic palladium-containing TiO2. Applied Catalysis B: Environmental, 2014, 147, 624-632.	20.2	28
52	Preparation by sonophotodeposition method of bimetallic photocatalysts Pdâ€“Cu/TiO2 for sustainable gaseous selective oxidation of methanol to methyl formate. Journal of Molecular Catalysis A, 2016, 411, 247-256.	4.8	28
53	Novel biomass-derived hybrid TiO 2 /carbon material using tar-derived secondary char to improve TiO 2 bonding to carbon matrix. Journal of Analytical and Applied Pyrolysis, 2018, 131, 35-41.	5.5	28
54	Catalytic activity of NiO cathode in molten carbonate fuel cells. Applied Catalysis B: Environmental, 2018, 222, 73-75.	20.2	28

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55	Selective photooxidation of alcohols as test reaction for photocatalytic activity. Applied Catalysis B: Environmental, 2012, 128, 150-158.	20.2	27
56	Catalytic Dry Reforming for Biomassâ€Based Fuels Processing: Progress and Future Perspectives. Energy Technology, 2016, 4, 881-890.	3.8	27
57	Insight on the Interaction of Methanol-Selective Oxidation Intermediates with Au- or/and Pd-Containing Monometallic and Bimetallic Core@Shell Catalysts. Langmuir, 2016, 32, 7493-7502.	3.5	25
58	Development of photocatalyst coated fluoropolymer based microreactor using ultrasound for water remediation. Ultrasonics Sonochemistry, 2018, 41, 297-302.	8.2	25
59	Photocatalytic degradation of chlorinated pyridines in titania aqueous suspensions. Catalysis Today, 2008, 138, 110-116.	4.4	24
60	The effect of copper and gold on the catalytic behavior of nickel/alumina catalysts in hydrogen-assisted dechlorination of 1,2-dichloroethane. Catalysis Today, 2011, 169, 186-191.	4.4	24
61	Boosting the Photoactivity of Grafted Titania: Ultrasoundâ€Driven Synthesis of a Multiâ€Phase Heterogeneous Nanoâ€Architected Photocatalyst. Advanced Functional Materials, 2021, 31, .	14.9	23
62	In Situ Coupling of Ultrasound to Electro- and Photo-Deposition Methods for Materials Synthesis. Molecules, 2017, 22, 216.	3.8	22
63	Biomass-derived porous aminated graphitic nanosheets for removal of the pharmaceutical metronidazole: Optimization of physicochemical features and exploration of process mechanisms. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 611, 125791.	4.7	21
64	Ironâ€Containing Titania Photocatalyst Prepared by the Sonophotodeposition Method for the Oxidation of Benzyl Alcohol. ChemCatChem, 2016, 8, 536-539.	3.7	19
65	Screening of different zeolite-based catalysts for gas-phase selective photooxidation of propan-2-ol. Catalysis Today, 2007, 129, 102-109.	4.4	18
66	Atomistic insight into the electrode reaction mechanism of the cathode in molten carbonate fuel cells. Journal of Materials Chemistry A, 2017, 5, 13763-13768.	10.3	18
67	Ultrasound and Photochemical Procedures for Nanocatalysts Preparation: Application in Photocatalytic Biomass Valorization. Journal of Nanoscience and Nanotechnology, 2013, 13, 4787-4798.	0.9	17
68	Insight into the synthesis procedure of Fe3+/TiO2-based photocatalyst applied in the selective photo-oxidation of benzyl alcohol under sun-imitating lamp. Ultrasonics Sonochemistry, 2017, 38, 189-196.	8.2	17
69	Design and development of TiO2 coated microflow reactor for photocatalytic partial oxidation of benzyl alcohol. Molecular Catalysis, 2020, 486, 110884.	2.0	17
70	Scrolled titanate nanosheet composites with reduced graphite oxide for photocatalytic and adsorptive removal of toxic vapors. Chemical Engineering Journal, 2021, 415, 128907.	12.7	17
71	Titania nano-photocatalysts synthesized by ultrasound and microwave methodologies: Application in depuration of water from 3-chloropyridine. Journal of Molecular Catalysis A, 2010, 331, 58-63.	4.8	16
72	Synthesis of Photoactive Materials by Sonication: Application in Photocatalysis and Solar Cells. Topics in Current Chemistry, 2016, 374, 59.	5.8	14

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73	Supported Plasmonic Nanocatalysts for Hydrogen Production by Wet and Dry Photoreforming of Biomass and Biogas Derived Compounds: Recent Progress and Future Perspectives. ChemCatChem, 2021, 13, 4458-4496.	3.7	14
74	Recent progress on post-synthetic treatments of photoelectrodes for photoelectrochemical water splitting. Journal of Materials Chemistry A, 2021, 9, 26628-26649.	10.3	14
75	A short synthesis of (+)-hygrine. Tetrahedron Letters, 2008, 49, 3995-3996.	1.4	13
76	Poly(4-vinylpyridine) catalyzed hydrolysis of methyl bromide to methanol and dimethyl ether. Journal of Molecular Catalysis A, 2009, 310, 180-183.	4.8	13
77	Unprecedented photocatalytic activity of carbonized leather skin residues containing chromium oxide phases. Applied Catalysis B: Environmental, 2014, 150-151, 432-437.	20.2	13
78	Physicochemical and catalytic properties of Pd/MoO3 prepared by the sonophotodeposition method. Materials Chemistry and Physics, 2018, 204, 361-372.	4.0	13
79	Role of catalyst supports in biocatalysis. Journal of Chemical Technology and Biotechnology, 2023, 98, 7-21.	3.2	13
80	Sonication and light irradiation as green energy sources simultaneously implemented in the synthesis of Pd-Fe- and Pt-Fe- doped TiO2-based photocatalysts. Journal of Molecular Catalysis A, 2016, 425, 1-9.	4.8	12
81	Carbon-Based Nanocatalysts (CnCs) for Biomass Valorization and Hazardous Organics Remediation. Nanomaterials, 2022, 12, 1679.	4.1	12
82	Bandgap Funneling in Bismuthâ€Based Hybrid Perovskite Photocatalyst with Efficient Visibleâ€Lightâ€Driven Hydrogen Evolution. Small Methods, 2022, 6, .	8.6	12
83	A versatile synthesis of (+)-deoxoprosopinine and (â^')-deoxoprosophylline. Tetrahedron Letters, 2008, 49, 6972-6973.	1.4	11
84	Wheat bran valorisation: Towards photocatalytic nanomaterials for benzyl alcohol photo-oxidation. Journal of Environmental Management, 2017, 203, 768-773.	7.8	11
85	Big Data analytics in Smart Grids for renewable energy networks: Systematic review of information and communication technology tools. Cogent Engineering, 2021, 8, .	2.2	10
86	Titania/chitosanâ€“lignin nanocomposite as an efficient photocatalyst for the selective oxidation of benzyl alcohol under UV and visible light. RSC Advances, 2021, 11, 34996-35010.	3.6	7
87	Poly(4-vinylpyridine) catalyzed selective methanolysis of methyl and methylene bromides. Tetrahedron Letters, 2009, 50, 6016-6018.	1.4	6
88	Novel Trends in the Utilization of CO2 as a Reagent and Mild Oxidant in the C-C Coupling Reactions. Current Organic Synthesis, 2010, 7, 533-542.	1.3	6
89	Assessment of biofuels production in Colombia. Cogent Engineering, 2020, 7, 1740041.	2.2	5
90	Framework to design water-energy solutions based on community perceptions: Case study from a Caribbean coast community in Colombia. Cogent Engineering, 2021, 8, .	2.2	5

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91	Ultrasound-assisted decoration of CuOx nanoclusters on TiO2 nanoparticles for additives free photocatalytic hydrogen production and biomass valorization by selective oxidation. Molecular Catalysis, 2021, 514, 111664.	2.0	5
92	Chapter 8. Nanophotocatalysis in Selective Transformations of Lignocellulose-derived Molecules: A Green Approach for the Synthesis of Fuels, Fine Chemicals, and Pharmaceuticals. RSC Green Chemistry, 2015, , 168-201.	0.1	5
93	Renewable energy smart sensing system monitoring for off-grid vulnerable community in Colombia. Cogent Engineering, 2021, 8, 1936372.	2.2	4
94	Analysis of the energy service in non-interconnected zones of Colombia using business intelligence. Cogent Engineering, 2021, 8, .	2.2	4
95	Methodology for automatic fault detection in photovoltaic arrays from artificial neural networks. Cogent Engineering, 2021, 8, .	2.2	4
96	Ligninâ€'Based Composite Materials for Photocatalysis and Photovoltaics. Topics in Current Chemistry Collections, 2020, , 1-31.	0.5	4
97	Techno-environmental assessment of a micro-cogeneration system based on natural gas for residential application. CTyF - Ciencia, Tecnologia Y Futuro, 2018, 8, 101-112.	0.5	4
98	High-frequency sonication for the synthesis of nanocluster-decorated titania nanorods: Making a better photocatalyst for the selective oxidation of monoaromatic alcohol. Catalysis Communications, 2022, 163, 106406.	3.3	4
99	Synthesis of Photoactive Materials by Sonication: Application in Photocatalysis and Solar Cells. Topics in Current Chemistry Collections, 2017, , 95-115.	0.5	3
100	Route planning in real time for short-range aircraft with a constant-volume-combustor-geared turbofan to minimize operating costs by particle swarm optimization. Cogent Engineering, 2018, 5, 1429984.	2.2	3
101	Computational framework for the selection of energy solutions in indigenous communities in Colombia: Kanalitojo case study. Cogent Engineering, 2021, 8, 1926406.	2.2	3
102	Chemical trapping studies to the determination of surface species under reaction conditions for the catalytic side-chain oxidative alkylation of toluene by methane. Journal of Molecular Catalysis A, 2009, 309, 21-27.	4.8	2
103	A simple and efficient approach to the synthesis of Î²-N-methylamino-l-alanine (BMAA). Tetrahedron Letters, 2014, 55, 2335-2336.	1.4	2
104	Trajectory optimization of an innovative-turbofan-powered aircraft based on particle swarm approach for low environmental impact. Cogent Engineering, 2019, 6, .	2.2	2
105	Application of a simulation tool based on a bio-inspired algorithm for optimisation of distributed power generation systems. Cogent Engineering, 2021, 8, 1909791.	2.2	2
106	Solarâ€"Chemical Energy Conversion by Photocatalysis. Green Chemistry and Sustainable Technology, 2016, , 249-282.	0.7	1
107	Diphenylmethane transformations over boron trifluoride modified alumina and silica-alumina. Reaction Kinetics and Catalysis Letters, 2004, 81, 333-339.	0.6	0
108	Homogeneous photocatalysts immobilized on polymeric supports: Environmental and chemical synthesis applications. , 2021, , 575-588.		0

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109	Application of the Geared Turbofan With Constant Volume Combustor on Short-Range Aircraft: A Feasibility Study. , 2009, , .		0