ngel Berenguer-Murcia

List of Publications by Citations

102 papers	9,050 citations	37 h-index	95 g-index
111 ext. papers	10,450 ext. citations	7.6 avg, IF	6.45 L-index

#	Paper	IF	Citations
102	Modifying enzyme activity and selectivity by immobilization. *Chemical Society Reviews*, **2013**, 42, 6290-307	38.5	1298
101	Potential of Different Enzyme Immobilization Strategies to Improve Enzyme Performance. *Advanced Synthesis and Catalysis*, **2011**, 353, 2885-2904	5.6	1170
100	Selective oxidation with dioxygen by gold nanoparticle catalysts derived from 55-atom clusters. *Nature*, **2008**, 454, 981-3	50.4	1124
99	Glutaraldehyde in bio-catalysts design: a useful crosslinker and a versatile tool in enzyme immobilization. *RSC Advances*, **2014**, 4, 1583-1600	3.7	536
98	Strategies for the one-step immobilization-purification of enzymes as industrial biocatalysts. *Biotechnology Advances*, **2015**, 33, 435-56	17.8	463
97	Importance of the Support Properties for Immobilization or Purification of Enzymes. *ChemCatChem* , **2015**, 7, 2413-2432	5.2	387
96	Heterofunctional supports in enzyme immobilization: from traditional immobilization protocols to opportunities in tuning enzyme properties. *Biomacromolecules*, **2013**, 14, 2433-62	6.9	358
95	Coupling Chemical Modification and Immobilization to Improve the Catalytic Performance of Enzymes. *Advanced Synthesis and Catalysis*, **2011**, 353, 2216-2238	5.6	268
94	Immobilization of lipases on hydrophobic supports: immobilization mechanism, advantages, problems, and solutions. *Biotechnology Advances*, **2019**, 37, 746-770	17.8	254
93	Novozym 435: the “perfect” lipase immobilized biocatalyst?. *Catalysis Science and Technology*, **2019**, 9, 2380-2420	5.5	241
92	Polyethylenimine: a very useful ionic polymer in the design of immobilized enzyme biocatalysts. *Journal of Materials Chemistry B*, **2017**, 5, 7461-7490	7.3	162
91	Chemical Modification in the Design of Immobilized Enzyme Biocatalysts: Drawbacks and Opportunities. *Chemical Record*, **2016**, 16, 1436-55	6.6	132
90	Biotechnological Applications of Proteases in Food Technology. *Comprehensive Reviews in Food Science and Food Safety*, **2018**, 17, 412-436	16.4	118
89	Semihydrogenation of Phenylacetylene Catalyzed by Palladium Nanoparticles Supported on Carbon Materials. *Journal of Physical Chemistry C*, **2008**, 112, 3827-3834	3.8	113
88	Electrochemical deposition of platinum nanoparticles on different carbon supports and conducting polymers. *Journal of Applied Electrochemistry*, **2008**, 38, 259-268	2.6	105
87	Hydrogen Peroxide in Biocatalysis. A Dangerous Liaison. *Current Organic Chemistry*, **2012**, 16, 2652-2672	1.7	103
86	Semihydrogenation of phenylacetylene catalyzed by metallic nanoparticles containing noble metals. *Journal of Catalysis*, **2006**, 243, 74-81	7.3	103

85	Inorganic materials as supports for palladium nanoparticles: Application in the semi-hydrogenation of phenylacetylene. *Journal of Catalysis*, **2008**, 257, 87-95	7.3	93
84	Amination of enzymes to improve biocatalyst performance: coupling genetic modification and physicochemical tools. *RSC Advances*, **2014**, 4, 38350-38374	3.7	91
83	Beyond the H2/CO2 upper bound: one-step crystallization and separation of nano-sized ZIF-11 by centrifugation and its application in mixed matrix membranes. *Journal of Materials Chemistry A*, **2015**, 3, 6549-6556	13	85
82	Capillary microreactors wall-coated with mesoporous titania thin film catalyst supports. *Lab on A Chip*, **2009**, 9, 503-6	7.2	84
81	Selective Hydrogenation of 2-Methyl-3-butyne-2-ol in a Wall-Coated Capillary Microreactor with a Pd25Zn75/TiO2 Catalyst. *Organic Process Research and Development*, **2009**, 13, 991-998	3.9	78
80	Highly efficient catalysts for the hydrogenation of nitro-substituted aromatics. *Chemical Communications*, **2005**, 2026-8	5.8	73
79	Enzyme co-immobilization: Always the biocatalyst designers' choice or not?. *Biotechnology Advances*, **2021**, 51, 107584	17.8	63
78	New Trends in the Recycling of NAD(P)H for the Design of Sustainable Asymmetric Reductions Catalyzed by Dehydrogenases. *Current Organic Chemistry*, **2010**, 14, 1000-1021	1.7	60
77	Clay-supported graphene materials: application to hydrogen storage. *Physical Chemistry Chemical Physics*, **2013**, 15, 18635-41	3.6	53
76	Immobilization of Proteins in Poly-Styrene-Divinylbenzene Matrices: Functional Properties and Applications. *Current Organic Chemistry*, **2015**, 19, 1707-1718	1.7	51
75	Stabilization of enzymes via immobilization: Multipoint covalent attachment and other stabilization strategies. *Biotechnology Advances*, **2021**, 52, 107821	17.8	50
74	Key factors improving oxygen reduction reaction activity in cobalt nanoparticles modified carbon nanotubes. *Applied Catalysis B: Environmental*, **2017**, 217, 303-312	21.8	46
73	Evolution of the PVP-Pd Surface Interaction in Nanoparticles through the Case Study of Formic Acid Decomposition. *Langmuir*, **2016**, 32, 12110-12118	4	46
72	Preferential oxidation of CO catalyzed by supported polymer-protected palladium-based nanoparticles. *Applied Catalysis B: Environmental*, **2010**, 98, 161-170	21.8	43
71	Probe Molecule Kinetic Studies of Adsorption on MCM-41. *Journal of Physical Chemistry B*, **2003**, 107, 1012-1020	3.4	43
70	Palladium and Bimetallic Palladium–Nickel Nanoparticles Supported on Multiwalled Carbon Nanotubes: Application to Carbon?Carbon Bond-Forming Reactions in Water. *ChemCatChem*, **2015**, 7, 1841-1847	5.2	42
69	Use of Alcalase in the production of bioactive peptides: A review. *International Journal of Biological Macromolecules*, **2020**, 165, 2143-2196	7.9	42
68	Liquid lipase preparations designed for industrial production of biodiesel. Is it really an optimal solution?. *Renewable Energy*, **2021**, 164, 1566-1587	8.1	42

67	Biotechnological relevance of the lipase A from Candida antarctica. *Catalysis Today*, **2021**, 362, 141-154	5.3	39
66	Single wall carbon nanotubes loaded with Pd and NiPd nanoparticles for H2 sensing at room temperature. *Carbon*, **2014**, 66, 599-611	10.4	38
65	One Pot Use of Combilipases for Full Modification of Oils and Fats: Multifunctional and Heterogeneous Substrates. *Catalysts*, **2020**, 10, 605	4	35
64	Control of the thickness of mesoporous titania films for application in multiphase catalytic microreactors. *Journal of Catalysis*, **2010**, 271, 161-169	7.3	35
63	Hydrogen Storage in Porous Materials: Status, Milestones, and Challenges. *Chemical Record*, **2018**, 18, 900-912	6.6	34
62	Gold supported on mesoporous titania thin films for application in microstructured reactors in low-temperature water-gas shift reaction. *Catalysis Today*, **2008**, 138, 210-215	5.3	32
61	Au-IDA microelectrodes modified with Au-doped graphene oxide for the simultaneous determination of uric acid and ascorbic acid in urine samples. *Electrochimica Acta*, **2017**, 227, 275-284	6.7	30
60	Effect of the aging time of PVP coated palladium nanoparticles colloidal suspensions on their catalytic activity in the preferential oxidation of CO. *Catalysis Today*, **2012**, 187, 2-9	5.3	29
59	Photocatalytic oxidation of propene at low concentration. *Applied Catalysis B: Environmental*, **2007**, 71, 298-309	21.8	28
58	Genipin as An Emergent Tool in the Design of Biocatalysts: Mechanism of Reaction and Applications. *Catalysts*, **2019**, 9, 1035	4	27
57	Capillary microreactors based on hierarchical SiO2 monoliths incorporating noble metal nanoparticles for the Preferential Oxidation of CO. *Chemical Engineering Journal*, **2015**, 275, 71-78	14.7	26
56	Pd/zeolite-based catalysts for the preferential CO oxidation reaction: ion-exchange, Si/Al and structure effect. *Catalysis Science and Technology*, **2016**, 6, 2623-2632	5.5	26
55	One step-synthesis of highly dispersed iron species into silica for propylene epoxidation with dioxygen. *Journal of Catalysis*, **2016**, 338, 154-167	7.3	25
54	Catalytic growth of carbon nanotubes on stainless steel: Characterization and frictional properties. *Diamond and Related Materials*, **2008**, 17, 1853-1857	3.5	25
53	Lecitase ultra: A phospholipase with great potential in biocatalysis. *Molecular Catalysis*, **2019**, 473, 110405	3.3	24
52	Ficin: A protease extract with relevance in biotechnology and biocatalysis. *International Journal of Biological Macromolecules*, **2020**, 162, 394-404	7.9	24
51	Total oxidation of naphthalene using palladium nanoparticles supported on BETA, ZSM-5, SAPO-5 and alumina powders. *Applied Catalysis B: Environmental*, **2013**, 129, 98-105	21.8	24
50	Carbon Nanotubes Modified With Au for Electrochemical Detection of Prostate Specific Antigen: Effect of Au Nanoparticle Size Distribution. *Frontiers in Chemistry*, **2019**, 7, 147	5	23

49	Preparation of thin silicalite-1 layers on carbon materials by electrochemical methods. *Microporous and Mesoporous Materials*, **2003**, 66, 331-340	5.3	23
48	Enzyme production of D-gluconic acid and glucose oxidase: successful tales of cascade reactions. *Catalysis Science and Technology*, **2020**, 10, 5740-5771	5.5	23
47	Dextran Aldehyde in Biocatalysis: More Than a Mere Immobilization System. *Catalysts*, **2019**, 9, 622	4	22
46	Nanoarchitectures based on layered titanosilicates supported on glass fibers: application to hydrogen storage. *Langmuir*, **2013**, 29, 7449-55	4	22
45	Graphene-Clay Based Nanomaterials for Clean Energy Storage. *Science of Advanced Materials*, **2014**, 6, 151-158	2.3	21
44	Selectivity control in hydrogenation reactions by nanoconfinement of polymetallic nanoparticles in mesoporous thin films. *Applied Catalysis A: General*, **2009**, 368, 87-96	5.1	19
43	About the exclusive mesoporous character of MCM-41. *Studies in Surface Science and Catalysis*, **2002**, 144, 83-90	1.8	18
42	Binderless thin films of zeolite-templated carbon electrodes useful for electrochemical microcapacitors with ultrahigh rate performance. *Physical Chemistry Chemical Physics*, **2013**, 15, 10331-4	3.6	17
41	Silicalite-1 membranes supported on porous carbon discs. *Microporous and Mesoporous Materials*, **2003**, 59, 147-159	5.3	17
40	Structural and textural features of TiO2/SAPO-34 nanocomposite prepared by the sol–gel method. *Research on Chemical Intermediates*, **2016**, 42, 8039-8053	2.8	16
39	Preparation of silicalite-1 layers on Pt-coated carbon materials: a possible electrochemical approach towards membrane reactors. *Microporous and Mesoporous Materials*, **2005**, 78, 159-167	5.3	15
38	Synthesis of TiO with Hierarchical Porosity for the Photooxidation of Propene. *Molecules*, **2017**, 22,	4.8	14
37	K- and Ca-promoted ferrosilicates for the gas-phase epoxidation of propylene with O 2. *Applied Catalysis A: General*, **2017**, 538, 139-147	5.1	13
36	Facile encapsulation of P25 (TiO2) in spherical silica with hierarchical porosity with enhanced photocatalytic properties for gas-phase propene oxidation. *Applied Catalysis A: General*, **2018**, 564, 123-132	5.1	13
35	Nanoparticulate PdZn--pathways towards the synthetic control of nanosurface properties. *Nanotechnology*, **2011**, 22, 205701	3.4	13
34	Zeolite LTA/carbon membranes for air separation. *Microporous and Mesoporous Materials*, **2008**, 115, 51-60	5.3	13
33	Photocatalytically-driven H2 production over Cu/TiO2 catalysts decorated with multi-walled carbon nanotubes. *Catalysis Today*, **2021**, 364, 182-189	5.3	13
32	Magnetic zeolites: novel nanoreactors through radiofrequency heating. *Chemical Communications*, **2017**, 53, 4262-4265	5.8	12

31	Enhanced ammonia-borane decomposition by synergistic catalysis using CoPd nanoparticles supported on titano-silicates. *RSC Advances*, **2016**, 6, 91768-91772	3.7	11
30	Total oxidation of naphthalene at low temperatures using palladium nanoparticles supported on inorganic oxide-coated cordierite honeycomb monoliths. *Catalysis Science and Technology*, **2013**, 3, 2708	5.5	11
29	Synthesis of robust hierarchical silica monoliths by surface-mediated solution/precipitation reactions over different scales: designing capillary microreactors for environmental applications. *ACS Applied Materials & Interfaces*, **2014**, 6, 22506-18	9.5	11
28	Hydrogen purification for PEM fuel cells using membranes prepared by ion-exchange of Na-LTA/carbon membranes. *Journal of Membrane Science*, **2010**, 351, 123-130	9.6	11
27	Bioactive peptides from fisheries residues: A review of use of papain in proteolysis reactions. *International Journal of Biological Macromolecules*, **2021**, 184, 415-428	7.9	11
26	Photocatalytic Oxidation of VOCs in Gas Phase Using Capillary Microreactors with Commercial TiO (P25) Fillings. *Materials*, **2018**, 11,	3.5	10
25	Development of exfoliated layered stannosilicate for hydrogen adsorption. *International Journal of Hydrogen Energy*, **2014**, 39, 13180-13188	6.7	10
24	Confined palladium colloids in mesoporous frameworks for carbon nanotube growth. *Journal of Materials Science*, **2009**, 44, 6563-6570	4.3	9
23	Ordered mesoporous titanium oxide for thin film microbatteries with enhanced lithium storage. *Electrochimica Acta*, **2015**, 166, 293-301	6.7	8
22	Immobilization of papain: A review. *International Journal of Biological Macromolecules*, **2021**, 188, 94-113	7.9	8
21	Pd and Cu-Pd nanoparticles supported on multiwall carbon nanotubes for H2 detection. *Materials Research Bulletin*, **2017**, 93, 102-111	5.1	7
20	Photo-microfluidic chip reactors for propene complete oxidation with TiO2 photocalyst using UV-LED light. *Journal of Environmental Chemical Engineering*, **2019**, 7, 103408	6.8	7
19	Zn-Promoted Selective Gas-Phase Hydrogenation of Tertiary and Secondary C4 Alkynols over Supported Pd. *ACS Applied Materials & Interfaces*, **2020**, 12, 28158-28168	9.5	7
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17	A new zeolitic hydroxymethylimidazolate material and its use in mixed matrix membranes based on 6FDA-DAM for gas separation. *Journal of Membrane Science*, **2017**, 544, 88-97	9.6	7
16	Zeolite A/carbon membranes for H2 purification from a simulated gas reformer mixture. *Journal of Membrane Science*, **2011**, 378, 407-414	9.6	7
15	Bimetallic PdZn Nanoparticles for the Partial Hydrogenation of Phenylacetylene. *Materials Science Forum*, **2008**, 604-605, 13-17	0.4	7
14	Synthesis and Permeation Properties of Silicalite-1/Carbon Membranes. *Industrial & Engineering Chemistry Research*, **2007**, 46, 3997-4006	3.9	7

13	MCM-41 Porosity: Are Surface Corrugations Micropores?. *Adsorption Science and Technology*, **2011**, 29, 443-455	3.6	6
12	Nanoparticulate PdZn as a Novel Catalyst for ZnO Nanowire Growth. *Nanoscale Research Letters*, **2010**, 5, 904-7	5	5
11	Preparation of homogeneous CNT coatings in insulating capillary tubes by an innovative electrochemically-assisted method. *Carbon*, **2014**, 67, 564-571	10.4	4
10	Novelty without nobility: Outstanding Ni/Ti-SiO2 catalysts for propylene epoxidation. *Journal of Catalysis*, **2020**, 386, 94-105	7.3	4
9	Synthesis of TiO/Nanozeolite Composites for Highly Efficient Photocatalytic Oxidation of Propene in the Gas Phase. *ACS Omega*, **2020**, 5, 31323-31331	3.9	3
8	Efficient Production of Multi-Layer Graphene from Graphite Flakes in Water by Lipase-Graphene Sheets Conjugation. *Nanomaterials*, **2019**, 9,	5.4	3
7	Exploring CuxO-doped TiO2 modified with carbon nanotubes for CO2 photoreduction in a 2D-flow reactor. *Journal of CO2 Utilization*, **2021**, 54, 101796	7.6	3
6	Fullerene-Related Nanocarbons and Their Applications. *Journal of Nanotechnology*, **2012**, 2012, 1-2	3.5	1
5	Electrochemical Preparation of Nanoparticle Deposits: Application to Membranes and Catalysis **2011**, 395-407		1
4	Study of MWCNT Dispersion Effect in TiO2-MWCNT Composites for Gas-Phase Propene Photooxidation. *Materials Research Bulletin*, **2021**, 134, 111089	5.1	1
3	Controlled synthesis of mono- and bimetallic Pt-based catalysts for electrochemical ethanol oxidation. *Materials Chemistry and Physics*, **2022**, 275, 125282	4.4	0
2	Efficient production of hydrogen from a valuable CO2-derived molecule: Formic acid dehydrogenation boosted by biomass waste-derived catalysts. *Fuel*, **2022**, 320, 123900	7.1	0
1	Electrophoretic Deposition for the Synthesis of Inorganic Membranes **2011**, 381-393		