Guylene Costentin

List of Publications by Year
in descending order

85 papers	2,931 citations	147801 31 h-index	175258 52 g-index
88 all docs	88 docs citations	88 times ranked	3078 citing authors

#	Article	IF	Citations
1	On the partial oxidation of propane and propylene on mixed metal oxide catalysts. Applied Catalysis A: General, 1996, 145, 1-48.	4.3	358
2	ZnO Oxygen Vacancies Formation and Filling Followed by in Situ Photoluminescence and in Situ EPR. Journal of Physical Chemistry C, 2012, 116, 21297-21307.	3.1	164
3	A spectroscopy and catalysis study of the nature of active sites of MgO catalysts: Thermodynamic BrÃ¸nsted basicity versus reactivity of basic sites. Journal of Catalysis, 2005, 235, 413-422.	6.2	127
4	Revisiting Acido-basicity of the MgO Surface by Periodic Density Functional Theory Calculations:Â Role of Surface Topology and Ion Coordination on Water Dissociation. Journal of Physical Chemistry B, 2006, 110, 15878-15886.	2.6	125
5	Infrared Characterization of Hydroxyl Groups on MgO:â€‰ A Periodic and Cluster Density Functional Theory Study. Journal of the American Chemical Society, 2007, 129, 6442-6452.	13.7	125
6	Identification of Surface Basic Sites and Acidâ€“Base Pairs of Hydroxyapatite. Journal of Physical Chemistry C, 2014, 118, 12744-12757.	3.1	107
7	Rare-earth elements modified hydrotalcites and corresponding mesoporous mixed oxides as basic solid catalysts. Applied Catalysis A: General, 2005, 288, 185-193.	4.3	106
8	Physicochemical and in Situ Photoluminescence Study of the Reversible Transformation of Oxide Ions of Low Coordination into Hydroxyl Groups upon Interaction of Water and Methanol with MgOâ€‚â€–. Journal of Physical Chemistry B, 2005, 109, 2404-2413.	2.6	92
9	Characterisation and reactivity of oxygen species at the surface of metal oxides. Journal of Catalysis, 2021, 393, 259-280.	6.2	70
10	Cyanoethylation of ethanol on Mgâ€“Al hydrotalcites promoted by Y3+ and La3+. Catalysis Communications, 2004, 5, 647-651.	3.3	55
11	Discrimination of Surface and Bulk Structure of Crystalline Hydroxyapatite Nanoparticles by NMR. Journal of Physical Chemistry C, 2015, 119, 23008-23020.	3.1	55
12	Thermodynamic brÃ¸nsted basicity of clean MgO surfaces determined by their deprotonation ability: Role of Mg2+â€“O2âˆ’ pairs. Catalysis Today, 2006, 116, 196-205.	4.4	54
13	Comparative study of CS2 hydrolysis catalyzed by alumina and titania. Applied Catalysis B: Environmental, 1998, 17, 167-173.	20.2	52
14	Influence of Magnesium Substitution on the Basic Properties of Hydroxyapatites. Journal of Physical Chemistry C, 2011, 115, 24317-24327.	3.1	52
15	Molybdenum (V) Phosphates: Structural Relationships and Classification. Reviews in Inorganic Chemistry, 1993, 13, 77-102.	4.1	51
16	The activity of Mg/Al reconstructed hydrotalcites by â€œmemory effectâ€• in the cyanoethylation reaction. Catalysis Communications, 2008, 9, 1974-1978.	3.3	50
17	Role of oxygen vacancies in the basicity of ZnO: From the model methylbutynol conversion to the ethanol transformation application. Applied Catalysis A: General, 2013, 453, 121-129.	4.3	49
18	Evidence for emission and transfer of energy from excited edge sites of MgO smokes by photoluminescence experiments. Surface Science, 2005, 595, 172-182.	1.9	48

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19	Solid base catalysts obtained from hydrotalcite precursors, for Knoevenagel synthesis of cinamic acid and coumarin derivatives. Applied Catalysis A: General, 2006, 308, 13-18.	4.3	45
20	Quantitative Investigation of MgO BrÃ¸nsted Basicity: DFT, IR, and Calorimetry Study of Methanol Adsorption. Journal of Physical Chemistry C, 2010, 114, 3008-3016.	3.1	45
21	Defect-related multicolour emissions in ZnO smoke: from violet, over green to yellow. Nanoscale, 2019, 11, 5102-5115.	5.6	45
22	Selective Oxidation of H2S over CuO/Al2O3: Identification and Role of the Sulfurated Species formed on the Catalyst during the Reaction. Journal of Catalysis, 2000, 189, 63-69.	6.2	44
23	Assignment of Photoluminescence Spectra of MgO Powders: TD-DFT Cluster Calculations Combined to Experiments. Part I: Structure Effects on Dehydroxylated Surfaces. Journal of Physical Chemistry C, 2008, 112, 16629-16637.	3.1	40
24	Controlled Formation of Native Defects in Ultrapure ZnO for the Assignment of Green Emissions to Oxygen Vacancies. Journal of Physical Chemistry C, 2020, 124, 12696-12704.	3.1	39
25	Propane oxydehydrogenation reaction on a VPO/TiO2 catalyst. Role of the nature of acid sites determined by dynamic in-situ IR studies. Catalysis Today, 1996, 32, 57-61.	4.4	38
26	Study of the Structure of OH Groups on MgO by 1D and 2D ¹H MAS NMR Combined with DFT Cluster Calculations. Journal of Physical Chemistry C, 2007, 111, 18279-18287.	3.1	38
27	Identification of the OH groups responsible for kinetic basicity on MgO surfaces by 1H MAS NMR. Journal of Catalysis, 2009, 268, 175-179.	6.2	36
28	Insights into the Geometry, Stability and Vibrational Properties of OH Groups on Î³-Al2O3, TiO2-Anatase and MgO from DFT Calculations. Topics in Catalysis, 2009, 52, 1005-1016.	2.8	34
29	How Surface Hydroxyls Enhance MgO Reactivity in Basic Catalysis: The Case of Methylbutynol Conversion. ACS Catalysis, 2014, 4, 4004-4014.	11.2	34
30	A molybdenum V diphosphate, BaMo2P4O16. Journal of Solid State Chemistry, 1990, 89, 83-87.	2.9	33
31	Role of Hydroxyl Groups in the Basic Reactivity of MgO: a Theoretical and Experimental Study. Oil and Gas Science and Technology, 2006, 61, 479-488.	1.4	31
32	Importance of the Nature of the Active Acid/Base Pairs of Hydroxyapatite Involved in the Catalytic Transformation of Ethanol to <i>n</i>â€Butanol Revealed by <i>Operando</i> DRIFTS. ChemCatChem, 2019, 11, 1765-1778.	3.7	31
33	Insights into the influence of the Ag loading on Al2O3 in the H2-assisted C3H6-SCR of NO. Applied Catalysis B: Environmental, 2014, 156-157, 192-201.	20.2	30
34	Control of calcium accessibility over hydroxyapatite by post-precipitation steps: influence on the catalytic reactivity toward alcohols. Physical Chemistry Chemical Physics, 2016, 18, 27837-27847.	2.8	30
35	Microcalorimetric and thermodynamic studies of CO2 and methanol adsorption on magnesium oxide. Applied Surface Science, 2011, 257, 6952-6962.	6.1	28
36	Basic reactivity of CaO: investigating active sites under operating conditions. Physical Chemistry Chemical Physics, 2010, 12, 14740.	2.8	27

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37	Reduction of sulfate species by H2S on different metal oxides and promoted aluminas. Applied Catalysis B: Environmental, 2000, 26, 71-80.	20.2	26
38	How to determine IR molar absorption coefficients of co-adsorbed species? Application to methanol adsorption for quantification of MgO basic sites. Physical Chemistry Chemical Physics, 2011, 13, 10797.	2.8	26
39	Assignment of Photoluminescence Spectra of MgO Powders: TD-DFT Cluster Calculations Combined to Experiments. Part II. Hydroxylation Effects. Journal of Physical Chemistry C, 2008, 112, 19710-19717.	3.1	25
40	Phosphate niobium bronzes and bronzoids with the MPTBp structure: Na4Nb8P4O32 and Na4â^'xAxNb7MP4O32 fourth members of the series Ax(PO2)4(NbO3)2m. Materials Research Bulletin, 1991, 26, 1051-1057.	5.2	24
41	Discrimination of MgO Ions by Means of an Improved In Situ Photoluminescence Cell and of Propyne as Probe Molecule. Catalysis Letters, 2004, 92, 101-105.	2.6	21
42	Incorporation of vanadium into the framework of hydroxyapatites: importance of the vanadium content and pH conditions during the precipitation step. Physical Chemistry Chemical Physics, 2017, 19, 9630-9640.	2.8	21
43	Insights into OCP identification and quantification in the context of apatite biomineralization. CrystEngComm, 2020, 22, 2728-2742.	2.6	20
44	Study of H2S selective oxidation on new model catalysts. Catalysis Today, 2000, 61, 149-155.	4.4	19
45	Molecular Understanding of the Bulk Composition of Crystalline Nonstoichiometric Hydroxyapatites: Application to the Rationalization of Structureâ€"Reactivity Relationships. European Journal of Inorganic Chemistry, 2016, 2016, 2709-2720.	2.0	19
46	Origins of the deactivation process in the conversion of methylbutynol on zinc oxide monitored by operando DRIFTS. Catalysis Today, 2013, 205, 67-75.	4.4	18
47	Determination of the crystal structure of Mo2VP4O15. Zeitschrift FÃ¼r Kristallographie, 1992, 201, 53-58.	1.1	16
48	1H MAS NMR study of the coordination of hydroxyl groups generated upon adsorption of H2O and CD3OH on clean MgO surfaces. Applied Catalysis A: General, 2006, 307, 239-244.	4.3	16
49	Kinetic Model of Energy Transfer Processes Between Low-Coordinated Ions on MgO by Photoluminescence Decay Measurements. ChemPhysChem, 2006, 7, 904-911.	2.1	16
50	Role of the nature of the acid sites in the oxydehydrogenation of propane on a VPO/TiO2 catalyst. An in situ FT-IR spectroscopy investigation. Catalysis Letters, 1996, 38, 197-201.	2.6	15
51	Structural Effects on Propane Mild Oxidation from Comparative Performances of Molybdenum and Vanadium Phosphate Model Catalysts. Chemistry of Materials, 1998, 10, 59-64.	6.7	15
52	Mechanism and deactivation process of the conversion of methylbutynol on basic faujasite monitored by operando DRIFTS. Physical Chemistry Chemical Physics, 2010, 12, 937-946.	2.8	15
53	Influence of natural adsorbates of magnesium oxide on its reactivity in basic catalysis. Physical Chemistry Chemical Physics, 2013, 15, 19870.	2.8	15
54	Combined effect of magnesium and amino glutamic acid on the structure of hydroxyapatite prepared by hydrothermal method. Materials Chemistry and Physics, 2018, 212, 21-29.	4.0	15

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55	Characterization of AgMo3P2O14Catalyst Active in Propane Mild Oxidation. Journal of Catalysis, 1997, 169, 287-300.	6.2	14
56	A correlation between crystal structure and catalytic activity in the solid solutions CdMoxW1â^'xO4. Catalysis Today, 2000, 61, 231-236.	4.4	14
57	Activation of Câ^'H Bond of Propane by Strong Basic Sites Generated by Bulk Proton Conduction on Vâ€Modified Hydroxyapatites for the Formation of Propene.. ChemCatChem, 2020, 12, 2506-2521.	3.7	14
58	A molybdenophosphate with a mixed valence of molybdenum, Mo(VI)î—¸Mo(V): NaMo3P3O16. Journal of Solid State Chemistry, 1991, 95, 168-175.	2.9	13
59	Î¶-NaMo2P3O13, a second form of pentavalent molybdenum sodium phosphate. Journal of Solid State Chemistry, 1990, 89, 31-38.	2.9	12
60	Evidence of the reverse Claus reaction on metal oxides. Applied Catalysis B: Environmental, 2000, 27, 137-142.	20.2	12
61	Ethylene selective dimerization on polymer complex catalyst of Ni(4,4â€²-bipyridine)Cl2 coactivated with AlCl(C2H5)2. Journal of Molecular Catalysis A, 2004, 219, 13-19.	4.8	11
62	An EPR study of physi- and chemisorption of NO on MgO: Effect of outgassing temperature and nature of surface sites. Applied Catalysis B: Environmental, 2008, 84, 58-64.	20.2	9
63	BaNb7P6O33: A niobium monophosphate with a tunnel structure related to HTBs and ITBs. Journal of Solid State Chemistry, 1991, 93, 46-52.	2.9	8
64	New Catalysts Active for the Mild Oxidation of Hydrogen Sulfide to Sulfur. Journal of Catalysis, 1999, 187, 385-391.	6.2	8
65	A niobium phosphate with a tunnel structure: Ca0.5+xCs2Nb6P3O24. Journal of Solid State Chemistry, 1991, 90, 279-284.	2.9	7
66	Unraveling the Direct Decomposition of NO<i>_x</i> over Keggin Heteropolyacids and Their Deactivation Using a Combination of Gas-IR/MS and In Situ DRIFT Spectroscopy. Journal of Physical Chemistry C, 2020, 124, 22459-22470.	3.1	7
67	Development of a thermodynamic approach to assist the control of the precipitation of hydroxyapatites and associated calcium phosphates in open systems. CrystEngComm, 2021, 23, 4857-4870.	2.6	7
68	On the Comprehensive Precipitation of Hydroxyapatites Unraveled by a Combined Kineticâ€"Thermodynamic Approach. Inorganic Chemistry, 2022, 61, 3296-3308.	4.0	7
69	A large family of niobium phosphates with the Ca0.5Cs2Nb6P3O24 structure. Materials Research Bulletin, 1991, 26, 301-307.	5.2	6
70	Structure-sensitivity study of partial propene oxidation over AV2P2O10 vanadium phosphate compounds. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 1423.	1.7	6
71	Effects of the structural and cationic properties of AV2P2O10 solids on propane selective oxidation. Catalysis Today, 1996, 32, 305-309.	4.4	6
72	Exploring an alternative route for meixnerite synthesis. The impact of the gaseous environment on the reconstruction of the lamellar structure and the catalytic performances. Applied Clay Science, 2015, 104, 59-65.	5.2	6

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73	The Concentration of Bone-Related Organic Additives Drives the Pathway of Apatite Formation. Crystal Growth and Design, 2021, 21, 3994-4004.	3.0	5
74	The genesis of a heterogeneous catalyst: in situ observation of a transition metal complex adsorbing onto an oxide surface in solution. Chemical Communications, 2014, 50, 2409-2411.	4.1	4
75	A new series of bronzes and bronzoids with KNb3P3O15 structure. Materials Research Bulletin, 1990, 25, 1155-1160.	5.2	3
76	Mo Oxidation State of Cd, Fe, and Ag Catalysts Under Propane Mild Oxidation Reaction Conditions. Journal of Catalysis, 2001, 200, 360-369.	6.2	3
77	Identification and Distribution of Surface Ions in Low Coordination of CaO Powders with Photoluminescence Spectroscopy. Journal of Physical Chemistry C, 2011, 115, 751-756.	3.1	3
78	Acidic Properties of Alkaline-Earth Phosphates Determined by an Experimental-Theoretical Approach. Journal of Physical Chemistry C, 2020, 124, 2013-2023.	3.1	3
79	Synergistic Effect Between Ca 4 V 4 O 14 and Vanadiumâ€Substituted Hydroxyapatite in the Oxidative Dehydrogenation of Propane. ChemCatChem, 2021, 13, 3995-4009.	3.7	3
80	Structure of Î²-TlMo2P3O13. Acta Crystallographica Section C: Crystal Structure Communications, 1991, 47, 1136-1138.	0.4	2
81	EPR studies on molybdenum phosphates Mo2P4O15, NaMo3P3O16 and BaMo2P4O16 in the temperature range 300â€“4Â·2K. Bulletin of Materials Science, 1995, 18, 125-131.	1.7	2
82	Probing the strength, concentration and environment of basic sites in zeolites by IR spectroscopy. Studies in Surface Science and Catalysis, 2008, 174, 861-864.	1.5	2
83	In-situ monitoring of transition metal complex adsorption on oxide surfaces during the first stages of supported metal catalyst preparation. Catalysis Today, 2014, 235, 245-249.	4.4	2
84	Comment on â€œDirect Decomposition of NO_{<i>x</i>} over TiO₂ Supported Transition Metal Oxides at Low Temperaturesâ€. Industrial & Engineering Chemistry Research, 2020, 59, 4835-4837.	3.7	1
85	Modifications of the AgMo3P2O14Catalyst in the Oxidation of Propane. European Physical Journal Special Topics, 1997, 7, C2-893-C2-894.	0.2	0