

Alejandro Montoya

List of Publications by Year in descending order

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59
papers

2,036
citations

236833

25
h-index

243529

44
g-index

59
all docs

59
docs citations

59
times ranked

2439
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Pilot plant testing of continuous hydrothermal liquefaction of microalgae. <i>Algal Research</i> , 2013, 2, 268-277. | 2.4 | 226 |
| 2 | Spin Contamination in Hartree-Fock and Density Functional Theory Wavefunctions in Modeling of Adsorption on Graphite. <i>Journal of Physical Chemistry A</i> , 2000, 104, 6108-6110. | 1.1 | 150 |
| 3 | Two-stage hydrothermal liquefaction of a high-protein microalga. <i>Algal Research</i> , 2015, 8, 15-22. | 2.4 | 140 |
| 4 | CO Desorption from Oxygen Species on Carbonaceous Surface: 1. Effects of the Local Structure of the Active Site and the Surface Coverage. <i>Journal of Physical Chemistry A</i> , 2001, 105, 6757-6764. | 1.1 | 120 |
| 5 | CO ₂ adsorption on carbonaceous surfaces: a combined experimental and theoretical study. <i>Carbon</i> , 2003, 41, 29-39. | 5.4 | 111 |
| 6 | First-Principles Kinetics of CO Desorption from Oxygen Species on Carbonaceous Surface. <i>Journal of Physical Chemistry A</i> , 2002, 106, 4236-4239. | 1.1 | 99 |
| 7 | Application of Density Functional Theory to the Study of the Reaction of NO with Char-Bound Nitrogen during Combustion. <i>Journal of Physical Chemistry A</i> , 2000, 104, 8409-8417. | 1.1 | 74 |
| 8 | A DFT Study of Interaction of Carbon Monoxide with Carbonaceous Materials. <i>Journal of Physical Chemistry B</i> , 2004, 108, 1003-1008. | 1.2 | 74 |
| 9 | Periodic density functional study of Co ₃ O ₄ surfaces. <i>Chemical Physics Letters</i> , 2011, 502, 63-68. | 1.2 | 72 |
| 10 | Formation of CO precursors during char gasification with O ₂ , CO ₂ and H ₂ O. <i>Fuel Processing Technology</i> , 2002, 77-78, 125-130. | 3.7 | 62 |
| 11 | Sustainable transformation of fly ash industrial waste into a construction cement blend via CO ₂ carbonation. <i>Journal of Cleaner Production</i> , 2017, 156, 660-669. | 4.6 | 62 |
| 12 | Continuous hydrothermal liquefaction of macroalgae in the presence of organic co-solvents. <i>Algal Research</i> , 2016, 17, 185-195. | 2.4 | 53 |
| 13 | Reaction of Hydrogen with Ag(111): Binding States, Minimum Energy Paths, and Kinetics. <i>Journal of Physical Chemistry B</i> , 2006, 110, 17145-17154. | 1.2 | 51 |
| 14 | Graphene oxide laminates intercalated with 2D covalent-organic frameworks as a robust nanofiltration membrane. <i>Journal of Materials Chemistry A</i> , 2020, 8, 9713-9725. | 5.2 | 46 |
| 15 | Pre- and post-harvest treatment of macroalgae to improve the quality of feedstock for hydrothermal liquefaction. <i>Algal Research</i> , 2014, 6, 22-31. | 2.4 | 41 |
| 16 | Overexpression of acetyl-CoA carboxylase in <i>Aspergillus terreus</i> to increase lovastatin production. <i>New Biotechnology</i> , 2018, 44, 64-71. | 2.4 | 36 |
| 17 | Gas-Phase Interaction of H ₂ S with O ₂ : A Kinetic and Quantum Chemistry Study of the Potential Energy Surface. <i>Journal of Physical Chemistry A</i> , 2005, 109, 1057-1062. | 1.1 | 35 |
| 18 | From ethyl biodiesel to biolubricants: Options for an Indian mustard integrated biorefinery toward a green and circular economy. <i>Industrial Crops and Products</i> , 2019, 137, 597-614. | 2.5 | 30 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Methanol and Methoxide Decomposition on Silver. <i>Journal of Physical Chemistry C</i> , 2007, 111, 9867-9876. | 1.5 | 29 |
| 20 | Local Site Selectivity and Conformational Structures in the Glycosidic Bond Scission of Cellobiose. <i>Journal of Physical Chemistry B</i> , 2011, 115, 10682-10691. | 1.2 | 29 |
| 21 | Insight into oxygen stability and vacancy formation on Co ₃ O ₄ model slabs. <i>Computational Materials Science</i> , 2013, 72, 15-25. | 1.4 | 29 |
| 22 | CO ₂ strong chemisorption as an estimate of coal char gasification reactivity. <i>Fuel</i> , 1999, 78, 971-977. | 3.4 | 28 |
| 23 | Adsorption on carbonaceous surfaces: cost-effective computational strategies for quantum chemistry studies of aromatic systems. <i>Carbon</i> , 2002, 40, 1863-1872. | 5.4 | 28 |
| 24 | DFT Analysis of the Reaction Paths of Formaldehyde Decomposition on Silver. <i>Journal of Physical Chemistry A</i> , 2009, 113, 8125-8131. | 1.1 | 28 |
| 25 | Unravelling Some of the Key Transformations in the Hydrothermal Liquefaction of Lignin. <i>ChemSusChem</i> , 2017, 10, 2140-2144. | 3.6 | 26 |
| 26 | Ultrafast hydrothermal assembly of nanocarbon microfibers in near-critical water for 3D microsupercapacitors. <i>Carbon</i> , 2018, 132, 698-708. | 5.4 | 26 |
| 27 | Lovastatin and (+)-α-Geodin production by <i>Aspergillus terreus</i> from crude glycerol. <i>Engineering in Life Sciences</i> , 2015, 15, 220-228. | 2.0 | 24 |
| 28 | Mineral sequestration of CO ₂ using sapolite mine tailings in the presence of alkaline industrial wastes. <i>Journal of Cleaner Production</i> , 2018, 188, 686-697. | 4.6 | 20 |
| 29 | Kinetics of nitric oxide desorption from carbonaceous surfaces. <i>Fuel Processing Technology</i> , 2002, 77-78, 453-458. | 3.7 | 19 |
| 30 | Conformational and Thermodynamic Properties of Gaseous Levulinic Acid. <i>Journal of Physical Chemistry A</i> , 2010, 114, 12323-12329. | 1.1 | 19 |
| 31 | The role of oxygen during the catalytic oxidation of ammonia on Co ₃ O ₄ (1 0 0). <i>Applied Surface Science</i> , 2014, 316, 355-365. | 3.1 | 18 |
| 32 | In situ synchrotron XRD analysis of the kinetics of spodumene phase transitions. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 10753-10761. | 1.3 | 18 |
| 33 | Acid-Catalyzed Ring Opening of Furan in Aqueous Solution. <i>Energy & Fuels</i> , 2018, 32, 4139-4148. | 2.5 | 17 |
| 34 | Biomass-derived nanocarbon materials for biological applications: challenges and prospects. <i>Journal of Materials Chemistry B</i> , 2020, 8, 9668-9678. | 2.9 | 16 |
| 35 | The catalytic oxidation of NH ₃ on Co ₃ O ₄ (110): A theoretical study. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 4365-4373. | 2.4 | 15 |
| 36 | The effect of surface coverage on N ₂ , NO and N ₂ O formation over Pt(111). <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 25314-25323. | 1.3 | 13 |

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|----|---|-----|-----------|
| 37 | Improved lovastatin production by inhibiting (+)-geodin biosynthesis in <i>Aspergillus terreus</i> . <i>New Biotechnology</i> , 2019, 52, 19-24. | 2.4 | 12 |
| 38 | Kinetic Insights into the Hydrothermal Decomposition of Dihydroxyacetone: A Combined Experimental and Modeling Study. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 8437-8447. | 1.8 | 11 |
| 39 | Growth and lovastatin production by <i>Aspergillus terreus</i> under different carbohydrates as carbon sources. <i>Biocatalysis and Agricultural Biotechnology</i> , 2017, 10, 379-385. | 1.5 | 11 |
| 40 | Mechanistic Insights and Kinetic Modeling of Cellobiose Decomposition in Hot Compressed Water. <i>Energy & Fuels</i> , 2017, 31, 2203-2216. | 2.5 | 11 |
| 41 | Atomic order, electronic structure and thermodynamic stability of nickel aluminate. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 25952-25961. | 1.3 | 10 |
| 42 | Molecular Dynamics Study of Acid-Catalyzed Hydrolysis of Dimethyl Ether in Aqueous Solution. <i>Journal of Physical Chemistry B</i> , 2011, 115, 8199-8206. | 1.2 | 9 |
| 43 | Effect of the Local Atomic Ordering on the Stability of \hat{I}^2 -Spodumene. <i>Inorganic Chemistry</i> , 2016, 55, 6426-6434. | 1.9 | 9 |
| 44 | The influence of a chloride-based supporting electrolyte on electrodeposited zinc in zinc/bromine flow batteries. <i>Electrochimica Acta</i> , 2018, 292, 903-913. | 2.6 | 9 |
| 45 | Binding and activation of ethylene on tungsten carbide and platinum surfaces. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 17332-17342. | 1.3 | 9 |
| 46 | Electrochemical oxidation of nitrogen-rich post-hydrothermal liquefaction wastewater. <i>Algal Research</i> , 2020, 48, 101919. | 2.4 | 9 |
| 47 | Molecular modelling of the decomposition of NH_3 over $\text{CoO}(100)$. <i>Materials Chemistry and Physics</i> , 2015, 156, 141-149. | 2.0 | 8 |
| 48 | Increasing Lovastatin Production by Re-routing the Precursors Flow of <i>Aspergillus terreus</i> via Metabolic Engineering. <i>Molecular Biotechnology</i> , 2022, 64, 90-99. | 1.3 | 8 |
| 49 | Reactions of Hydroxyl on the Topmost Layer of $\text{Ag}(111)$: A Density Functional Theory Study. <i>Journal of Physical Chemistry C</i> , 2007, 111, 1333-1341. | 1.5 | 7 |
| 50 | Mechanistic insight into catalytic carbon dioxide hydrogenation to formic acid over Pt-doped boron nitride nanosheets. <i>Molecular Catalysis</i> , 2021, 510, 111675. | 1.0 | 7 |
| 51 | Reaction Analysis of Diaryl Ether Decomposition under Hydrothermal Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 2014-2022. | 1.8 | 6 |
| 52 | N_2O formation and dissociation during ammonia combustion: A combined DFT and experimental study. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 637-644. | 2.4 | 5 |
| 53 | Hydrothermal Decomposition of Glucose in the Presence of Ammonium. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 10129-10138. | 1.8 | 4 |
| 54 | Comparative Study of the Catalytic Oxidation of Hydrocarbons on Platinum and Palladium Wires and Nanoparticles. <i>Energy & Fuels</i> , 2022, 36, 2044-2057. | 2.5 | 4 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 55 | Vertical garden for treating greywater. AIP Conference Proceedings, 2017, , . | 0.3 | 2 |
| 56 | Substituted Aromatic Aldehyde Decomposition under Hydrothermal Conditions. Energy & Fuels, 2022, 36, 5375-5383. | 2.5 | 1 |
| 57 | Energy profiles of hydrogen migration in the early stages of lizardite dehydroxylation. Computational Materials Science, 2015, 98, 435-445. | 1.4 | 0 |
| 58 | Selective heterogeneous hydrodeoxygenation of acetophenone over monometallic and bimetallic Pt-Co catalyst. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200346. | 1.6 | 0 |
| 59 | The Interactions Between Chlorides and Zn(001) Surfaces in Zinc/Bromine Flow Battery Electrolytes. ECS Meeting Abstracts, 2016, , . | 0.0 | 0 |