Andres Fernando Gonzalez Barrios

List of Publications by Year
in descending order

71	1,511	516215	329751
papers	citations	16	37
		h-index	g-index

73	73	73	2377
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Classical MD and metadynamics simulations on back-pocket binders of CDK2 and VEGFR2: a guidepost to design novel small-molecule dual inhibitors. Journal of Biomolecular Structure and Dynamics, 2022, 40, 9030-9041.	2.0	1
2	Peptidomic analysis of whey protein hydrolysates and prediction of their antioxidant peptides. Food Science and Human Wellness, 2022, 11, 349-355.	2.2	5
3	Development of an integrating systems metabolic engineering and bioprocess modeling approach for rational strain improvement. Biochemical Engineering Journal, 2022, 178, 108268.	1.8	1
4	Optimization of glycerol consumption in wild–type Escherichia coli using central carbon modeling as an alternative approach. Biofuels, Bioproducts and Biorefining, 2021, 15, 825-839.	1.9	2
5	In silico Design for Systems-Based Metabolic Engineering for the Bioconversion of Valuable Compounds From Industrial By-Products. Frontiers in Genetics, 2021, 12, 633073.	1.1	3
6	Dissecting industrial fermentations of fine flavour cocoa through metagenomic analysis. Scientific Reports, 2021, 11, 8638.	1.6	16
7	Effects of processing conditions on hydrolysates of proteins from whole whey and formation of Maillard reaction products. Journal of Food Processing and Preservation, 2021, 45, e15469.	0.9	3
8	Unraveling the Genome of a High Yielding Colombian Sugarcane Hybrid. Frontiers in Plant Science, 2021, 12, 694859.	1.7	13
9	Non-Extensive Fragmentation of Natural Products and Pharmacophore-Based Virtual Screening as a Practical Approach to Identify Novel Promising Chemical Scaffolds. Frontiers in Chemistry, 2021, 9, 700802.	1.8	1
10	Dissecting fine-flavor cocoa bean fermentation through metabolomics analysis to break down the current metabolic paradigm. Scientific Reports, 2021, 11, 21904.	1.6	13
11	Magnetite–OmpA Nanobioconjugates as Cell-Penetrating Vehicles with Endosomal Escape Abilities. ACS Biomaterials Science and Engineering, 2020, 6, 415-424.	2.6	28
12	The multiscale approach t o the design of bio-based emulsions. Current Opinion in Chemical Engineering, 2020, 27, 65-71.	3.8	13
13	Analysis of Malassezia Lipidome Disclosed Differences Among the Species and Reveals Presence of Unusual Yeast Lipids. Frontiers in Cellular and Infection Microbiology, 2020, 10, 338.	1.8	22
14	Genome-Scale Metabolic Model of Xanthomonas phaseoli pv. manihotis: An Approach to Elucidate Pathogenicity at the Metabolic Level. Frontiers in Genetics, 2020, 11, 837.	1.1	5
15	Transcriptomic analysis of a Clostridium thermocellum strain engineered to utilize xylose: responses to xylose versus cellobiose feeding. Scientific Reports, 2020, 10, 14517.	1.6	6
16	Discovery of new potential CDK2/VEGFR2 type II inhibitors by fragmentation and virtual screening of natural products. Journal of Biomolecular Structure and Dynamics, 2020, 39, 1-15.	2.0	5
17	New Therapeutic Candidates for the Treatment of Malassezia pachydermatis -Associated Infections. Scientific Reports, 2020, 10, 4860.	1.6	7
18	From industrial by–products to value–added compounds: the design of efficient microbial cell factories by coupling systems metabolic engineering and bioprocesses. Biofuels, Bioproducts and Biorefining, 2020, 14, 1228-1238.	1.9	17

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19	Rational Design of Photo-Electrochemical Hybrid Devices Based on Graphene and Chlamydomonas reinhardtii Light-Harvesting Proteins. Scientific Reports, 2020, 10, 3376.	1.6	9
20	Insights into the behavior of six rationally designed peptides based on Escherichia coli's OmpA at the water-dodecane interface. PLoS ONE, 2019, 14, e0223670.	1.1	2
21	Impact of the Mode of Extraction on the Lipidomic Profile of Oils Obtained from Selected Amazonian Fruits. Biomolecules, 2019, 9, 329.	1.8	20
22	Pushing the Ligand Efficiency Metrics: Relative Group Contribution (RGC) Model as a Helpful Strategy to Promote a Fragment "Rescue" Effect. Frontiers in Chemistry, 2019, 7, 564.	1.8	4
23	Multiscale design of a dairy beverage model composed of Candida utilis single cell protein supplemented with oleic acid. Journal of Dairy Science, 2019, 102, 9749-9762.	1.4	11
24	Economic evaluation of the development of a phage therapy product for the control of $Salmonella$ in poultry. Biotechnology Progress, 2019, 35, e2852.	1.3	27
25	Metagenome level metabolic network reconstruction analysis reveals the microbiome in the Bogotá River is functionally close to the microbiome in produced water. Ecological Modelling, 2019, 399, 1-12.	1.2	7
26	Evaluation of the phenol degradation capacity of microalgae-bacteria consortia from the bay of Cartagena, Colombia. Tecno Lógicas, 2019, 22, 149-158.	0.1	10
27	Effects of metabolic engineering on downstream processing operational cost and energy consumption: the case of $Escherichia coli$'s glycerol conversion to succinic acid. Journal of Chemical Technology and Biotechnology, 2018, 93, 2011-2020.	1.6	10
28	Clostridium butyricum population balance model: Predicting dynamic metabolic flux distributions using an objective function related to extracellular glycerol content. PLoS ONE, 2018, 13, e0209447.	1.1	9
29	Everyday chemical product design as platform for teaching transport phenomena. Education for Chemical Engineers, 2018, 25, 9-15.	2.8	6
30	Intramolecular energies of the cytotoxic protein CagA of Helicobacter pylori as a possible descriptor of strains' pathogenicity level. Computational Biology and Chemistry, 2018, 76, 17-22.	1.1	3
31	Development of a $Chlamydomonas reinhardtii$ metabolic network dynamic model to describe distinct phenotypes occurring at different CO_2 levels. PeerJ, 2018, 6, e5528.	0.9	19
32	Influence of agricultural activities in the structure and metabolic functionality of paramo soil samples in Colombia studied using a metagenomics analysis in dynamic state. Ecological Modelling, 2017, 351, 63-76.	1.2	11
33	In vitro and in silico characterization of metagenomic soil-derived cellulases capable of hydrolyzing oil palm empty fruit bunch. Biotechnology Reports (Amsterdam, Netherlands), 2017, 15, 55-62.	2.1	8
34	Clostridium butyricum maximizes growth while minimizing enzyme usage and ATP production: metabolic flux distribution of a strain cultured in glycerol. BMC Systems Biology, 2017, 11, 58.	3.0	22
35	Lipid Metabolic Versatility in Malassezia spp. Yeasts Studied through Metabolic Modeling. Frontiers in Microbiology, 2017, 8, 1772.	1.5	31
36	Compartmentalized metabolic network reconstruction of microbial communities to determine the effect of agricultural intervention on soils. PLoS ONE, 2017, 12, e0181826.	1.1	6

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37	A synthetic multi-cellular network of coupled self-sustained oscillators. PLoS ONE, 2017, 12, e0180155.	1.1	7
38	Analysis of Sensitive CO2 Pathways and Genes Related to Carbon Uptake and Accumulation in Chlamydomonas reinhardtii through Genomic Scale Modeling and Experimental Validation. Frontiers in Plant Science, 2016, 7, 43.	1.7	16
39	A generalized model for bacterial disinfection: Stochastic approach. Biochemical Engineering Journal, 2016, 114, 218-225.	1.8	3
40	Development of a group contribution method for estimating free energy of peptides in a dodecane-water system via molecular dynamic simulations. BMC Bioinformatics, 2016, 17, 522.	1.2	2
41	A comparison between conventional Pseudomonas aeruginosa rhamnolipids and Escherichia coli transmembrane proteins for oil recovery enhancing. International Biodeterioration and Biodegradation, 2016, 112, 59-65.	1.9	16
42	Peptides design based on transmembrane Escherichia coli â€™ s OmpA protein through molecular dynamics simulations in waterâ€"dodecane interfaces. Journal of Molecular Graphics and Modelling, 2016, 68, 216-223.	1.3	11
43	Draft Genome Sequence of the Animal and Human Pathogen *Malassezia pachydermatis* Strain CBS 1879. Genome Announcements, 2015, 3, .	0.8	30
44	Proteins interaction network and modeling of IGVH mutational status in chronic lymphocytic leukemia. Theoretical Biology and Medical Modelling, 2015, 12, 12.	2.1	11
45	Phage Î¦Pan70, a Putative Temperate Phage, Controls Pseudomonas aeruginosa in Planktonic, Biofilm and Burn Mouse Model Assays. Viruses, 2015, 7, 4602-4623.	1.5	42
46	A comparison between functional frequency and metabolic flows framed by biogeochemical cycles in metagenomes: The case of â€œEl Coquitoâ€•hot spring located at Colombia's national Nevados park. Ecological Modelling, 2015, 313, 259-265.	1.2	3
47	Fagoterapia, alternativa para el control de las infecciones bacterianas. Perspectivas en Colombia. Universitas Scientiarum, 2014, 20, 43.	0.2	0
48	ELUCIDATING THE ROLE OF METABOLITES AS QUORUM SENSING SIGNALS USING PHASE PLANE ANALYSIS: THE CASE OF INDOLE IN ESCHERICHIA COLI. Journal of Biological Systems, 2014, 22, 523-531.	0.5	1
49	DYNAMIC FLUX BALANCE ANALYSIS FOR PREDICTING GENE OVEREXPRESSION EFFECTS IN BATCH CULTURES. Journal of Biological Systems, 2014, 22, 327-338.	0.5	4
50	In Silico Analysis for Biomass Synthesis under Different CO2 Levels for Chlamydomonas reinhardtii Utilizing a Flux Balance Analysis Approach. Advances in Intelligent Systems and Computing, 2014, , 279-285.	0.5	3
51	Escherichia coliâ€™s OmpA as Biosurfactant for Cosmetic Industry: Stability Analysis and Experimental Validation Based on Molecular Simulations. Advances in Intelligent Systems and Computing, 2014, , 265-271.	0.5	6
52	Computational approaches for evaluating the effect of sequence variations and the intrinsically disordered C-terminal region of the Helicobacter pylori CagA protein on the interaction with tyrosine kinase Src. Journal of Molecular Modeling, 2014, 20, 2406.	0.8	3
53	Analysis of Metabolic Functionality and Thermodynamic Feasibility of a Metagenomic Sample from â€œEl Coquitoâ€•Hot Spring. Advances in Intelligent Systems and Computing, 2014, , 287-293.	0.5	0
54	Carbon acquisition and accumulation in microalgae Chlamydomonas: Insights from â€œomicsâ€• approaches. Journal of Proteomics, 2013, 94, 207-218.	1.2	24

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55	Modeling of the hypothalamic-pituitary-adrenal axis-mediated interaction between the serotonin regulation pathway and the stress response using a Boolean approximation: a novel study of depression. Theoretical Biology and Medical Modelling, 2013, 10, 59.	2.1	18
56	Molecular dynamics approach to investigate the coupling of the hydrophilicâ€"lipophilic balance with the configuration distribution function in biosurfactant-based emulsions. Journal of Molecular Modeling, 2013, 19, 5539-5543.	0.8	7
57	&lt;i&gt;cysA, cysP, and rpoS&lt;/i&gt; mutations increase the power density in &lt;i&gt;P. aeruginosa&lt;/i&gt; microbial fuel cells: Performing enhancement based on metabolic flux analysis. Advances in Bioscience and Biotechnology (Print), 2013, 04, 103-111.	0.3	6
58	FBA Analysis, Plant-Pathogen Interactions. , 2013, , 733-736.		0
59	Network Modeling of Biochemical Transport Phenomena. , 2013, , 1517-1518.		0
60	Optimization Algorithms for Metabolites Production. , 2013, , 1596-1600.		0
61	Metagenome, Metabolic Reconstruction and Analysis. , 2013, , 1283-1287.		0
62	Characterization of cellulases of fungal endophytes isolated from Espeletia spp.. Journal of Microbiology, 2012, 50, 1009-1013.	1.3	20
63	Optimization of the bioconversion of glycerol to ethanol using &lt;i&gt;Escherichia coli&lt;/i&gt; by implementing a bi-level programming framework for proposing gene transcription control strategies based on genetic algorithms. Advances in Bioscience and Biotechnology (Print), 2012, 03, 336-343.	0.3	3
64	A network model for biofilm development in Escherichia coli K-12. Theoretical Biology and Medical Modelling, 2011, 8, 34.	2.1	4
65	Comparative analysis for three different immobilisation strategies in the hexavalent chromium biosorption process using <i>Bacillus sphaericus</i> Sâ€layer. Canadian Journal of Chemical Engineering, 2011, 89, 1281-1287.	0.9	6
66	Escherichia coli autoinducer-2 uptake network does not display hysteretic behavior but AI-2 synthesis rate controls transient bifurcation. BioSystems, 2010, 99, 17-26.	0.9	12
67	Improved Production of Bacillus thuringiensis by Intermittent Fed-Batch Culture with Total Cell Retention. International Journal of Chemical Reactor Engineering, 2010, 8, .	0.6	0
68	Quorum quenching analysis in PseudomonasÂaeruginosa and EscherichiaÂcoli: network topology and inhibition mechanism effect on the optimized inhibitor dose. Bioprocess and Biosystems Engineering, 2009, 32, 545-556.	1.7	14
69	Autoinducer 2 Controls Biofilm Formation in Escherichia coli through a Novel Motility Quorum-Sensing Regulator (MqsR, B3022). Journal of Bacteriology, 2006, 188, 305-316.	1.0	478
70	Motility influences biofilm architecture in Escherichia coli. Applied Microbiology and Biotechnology, 2006, 72, 361-367.	1.7	286
71	Hha, YbaJ, and OmpA regulateEscherichia coli K12 biofilm formation and conjugation plasmids abolish motility. Biotechnology and Bioengineering, 2006, 93, 188-200.	1.7	96