Jose A Gavira

List of Publications by Year
in descending order

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131 papers	3,451 citations	159525 30 h-index	175177 52 g-index
136 all docs	136 docs citations	136 times ranked	3347 citing authors

#	Article	IF	Citations
1	A short overview on practical techniques for protein crystallization and a new approach using low intensity electromagnetic fields. Progress in Crystal Growth and Characterization of Materials, 2022, 68, 100559.	1.8	5
2	Chemotaxis of the Human Pathogen Pseudomonas aeruginosa to the Neurotransmitter Acetylcholine. MBio, 2022, 13, e0345821.	1.8	19
3	A New L-Proline Amide Hydrolase with Potential Application within the Amidase Process. Crystals, 2022, 12, 18.	1.0	1
4	Structural insights into choline-O-sulfatase reveal the molecular determinants for ligand binding. Acta Crystallographica Section D: Structural Biology, 2022, 78, 669-682.	1.1	0
5	Interactions Between Peptide Assemblies and Proteins for Medicine. Israel Journal of Chemistry, 2022, 62, .	1.0	5
6	Lysozyme crystallization in hydrogel media under ultrasound irradiation. Ultrasonics Sonochemistry, 2022, , 106096.	3.8	3
7	The structural basis for signal promiscuity in a bacterial chemoreceptor. FEBS Journal, 2021, 288, 2294-2310.	2.2	9
8	Heme-binding enables allosteric modulation in an ancient TIM-barrel glycosidase. Nature Communications, 2021, 12, 380.	5.8	20
9	Nonclassical Nucleationâ€"Role of Metastable Intermediate Phase in Crystal Nucleation: An Editorial Prefix. Crystals, 2021, 11, 174.	1.0	6
10	Resurrected Ancestral TIM-Barrel Glycosidase Displays Heme Binding and Allosteric Modulation. Biophysical Journal, 2021, 120, 125a-126a.	0.2	0
11	Production of Cross-Linked Lipase Crystals at a Preparative Scale. Crystal Growth and Design, 2021, 21, 1698-1707.	1.4	11
12	Pseudomonas aeruginosa as a Model To Study Chemosensory Pathway Signaling. Microbiology and Molecular Biology Reviews, 2021, 85, .	2.9	39
13	Hinge-shift mechanism as a protein design principle for the evolution of Î²-lactamases from substrate promiscuity to specificity. Nature Communications, 2021, 12, 1852.	5.8	43
14	Insulin Crystals Grown in Short-Peptide Supramolecular Hydrogels Show Enhanced Thermal Stability and Slower Release Profile. ACS Applied Materials & Interfaces, 2021, 13, 11672-11682.	4.0	20
15	Tuning Transport Phenomena in Agarose Gels for the Control of Protein Nucleation Density and Crystal Form. Crystals, 2021, 11, 466.	1.0	5
16	Histamine: A Bacterial Signal Molecule. International Journal of Molecular Sciences, 2021, 22, 6312.	1.8	12
17	Combining Ancestral Reconstruction with Folding-Landscape Simulations to Engineer Heterologous Protein Expression. Journal of Molecular Biology, 2021, 433, 167321.	2.0	5
18	X-ray Characterization of Conformational Changes of Human Apo- and Holo-Transferrin. International Journal of Molecular Sciences, 2021, 22, 13392.	1.8	7

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19	Evidence for Pentapeptide-Dependent and Independent CheB Methylesterases. International Journal of Molecular Sciences, 2020, 21, 8459.	1.8	5
20	Attaining atomic resolution from in situ data collection at room temperature using counter-diffusion-based low-cost microchips. Acta Crystallographica Section D: Structural Biology, 2020, 76, 751-758.	1.1	9
21	Enhancing ade novoenzyme activity by computationally-focused ultra-low-throughput screening. Chemical Science, 2020, 11, 6134-6148.	3.7	24
22	What are the Design Principles for Evolution from Promiscuous to Substrate Specificity?. Biophysical Journal, 2020, 118, 205a.	0.2	0
23	Agarose Gel as a Medium for Growing and Tailoring Protein Crystals. Crystal Growth and Design, 2020, 20, 5564-5571.	1.4	13
24	N-succinylamino acid racemases: Enzymatic properties and biotechnological applications. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2020, 1868, 140377.	1.1	8
25	How Bacterial Chemoreceptors Evolve Novel Ligand Specificities. MBio, 2020, 11, .	1.8	52
26	On the Quality of Protein Crystals Grown under Diffusion Mass-transport Controlled Regime (I). Crystals, 2020, 10, 68.	1.0	9
27	Catalytic and Electron Conducting Carbon Nanotubeâ€“Reinforced Lysozyme Crystals. Advanced Functional Materials, 2019, 29, 1807351.	7.8	25
28	Resurrection of efficient Precambrian endoglucanases for lignocellulosic biomass hydrolysis. Communications Chemistry, 2019, 2, .	2.0	21
29	Enhanced Stability against Radiation Damage of Lysozyme Crystals Grown in Fmoc-CF Hydrogels. Crystal Growth and Design, 2019, 19, 4229-4233.	1.4	8
30	Extending the pool of compatible peptide hydrogels for protein crystallization. Crystals, 2019, 9, 244.	1.0	3
31	Efficacy of aldose reductase inhibitors is affected by oxidative stress induced under X-ray irradiation. Scientific Reports, 2019, 9, 3177.	1.6	11
32	The Molecular Mechanism of Nitrate Chemotaxis via Direct Ligand Binding to the PilJ Domain of McpN. MBio, 2019, 10, .	1.8	40
33	A novel cysteine carbamoyl-switch is responsible for the inhibition of formamidase, a nitrilase superfamily member. Archives of Biochemistry and Biophysics, 2019, 662, 151-159.	1.4	3
34	Non-conservation of folding rates in the thioredoxin family reveals degradation of ancestral unassisted-folding. Biochemical Journal, 2019, 476, 3631-3647.	1.7	16
35	A simple and versatile microfluidic device for efficient biomacromolecule crystallization and structural analysis by serial crystallography. IUCrJ, 2019, 6, 454-464.	1.0	23
36	Protein separation under a microfluidic regime. Analyst, The, 2018, 143, 606-619.	1.7	27

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37	Seeding from silica-reinforced lysozyme crystals for neutron crystallography. Acta Crystallographica Section D: Structural Biology, 2018, 74, 1200-1207.	1.1	3
38	High-Affinity Chemotaxis to Histamine Mediated by the TlpQ Chemoreceptor of the Human Pathogen Pseudomonas aeruginosa. MBio, 2018, 9, .	1.8	57
39	Functional Annotation of Bacterial Signal Transduction Systems: Progress and Challenges. International Journal of Molecular Sciences, 2018, 19, 3755.	1.8	19
40	Structural Basis for Polyamine Binding at the dCACHE Domain of the McpU Chemoreceptor from Pseudomonas putida. Journal of Molecular Biology, 2018, 430, 1950-1963.	2.0	33
41	On the versatility of CLECs for biotechnological applications, from micro to macro-fluidics devices. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, e208-e208.	0.0	0
42	Synthesis and characterization of cross-linked lysozyme crystals filled with single-walled carbon nanotube bionanomaterials. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, e184-e184.	0.0	0
43	Efficient Screening Methodology for Protein Crystallization Based on the Counter-Diffusion Technique. Crystal Growth and Design, 2017, 17, 6780-6786.	1.4	14
44	Enhanced vulnerability of human proteins towards disease-associated inactivation through divergent evolution. Human Molecular Genetics, 2017, 26, 3531-3544.	1.4	34
45	De novo active sites for resurrected Precambrian enzymes. Nature Communications, 2017, 8, 16113.	5.8	60
46	The International Crystallization Schools IS(B)C of Granada. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C506-C506.	0.0	0
47	Identification and characterization of a bacterial hyaluronidase and its production in recombinant form. FEBS Letters, 2016, 590, 2180-2189.	1.3	15
48	Macromolecular crystallography: An old science with new perspectives. Archives of Biochemistry and Biophysics, 2016, 602, 1-2.	1.4	0
49	Bioinspired Calcium Phosphate Coated Mica Sheets by Vapor Diffusion and Its Effects on Lysozyme Assembly and Crystallization. Crystal Growth and Design, 2016, 16, 5150-5158.	1.4	6
50	Continuous Sensing Photonic Lab-on-a-Chip Platform Based on Cross-Linked Enzyme Crystals. Analytical Chemistry, 2016, 88, 11919-11923.	3.2	13
51	Current trends in protein crystallization. Archives of Biochemistry and Biophysics, 2016, 602, 3-11.	1.4	62
52	Influence of the chirality of short peptide supramolecular hydrogels in protein crystallogenesis. Chemical Communications, 2015, 51, 3862-3865.	2.2	30
53	Mutational Studies on Resurrected Ancestral Proteins Reveal Conservation of Site-Specific Amino Acid Preferences throughout Evolutionary History. Molecular Biology and Evolution, 2015, 32, 440-455.	3.5	71
54	A multiple path photonic lab on a chip for parallel protein concentration measurements. Lab on A Chip, 2015, 15, 1133-1139.	3.1	15

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55	McCLEC, a robust and stable enzymatic based microreactor platform. Lab on A Chip, 2015, 15, 4083-4089.	3.1	7
56	Protein crystallization in short-peptide supramolecular hydrogels: a versatile strategy towards biotechnological composite materials. CrystEngComm, 2015, 17, 8072-8078.	1.3	21
57	Evolution of Conformational Dynamics Determines the Conversion of a Promiscuous Generalist into a Specialist Enzyme. Molecular Biology and Evolution, 2015, 32, 132-143.	3.5	125
58	Phenotypic comparisons of consensus variants versus laboratory resurrections of Precambrian proteins. Proteins: Structure, Function and Bioinformatics, 2014, 82, 887-896.	1.5	56
59	Thermostable and promiscuous <scp>P</scp>recambrian proteins. Environmental Microbiology, 2014, 16, 1485-1489.	1.8	33
60	Cloning, expression, purification, crystallization and preliminary X-ray characterization of allantoinase fromBacillus licheniformisATCC 14580. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 1513-1516.	0.4	2
61	Introduction to protein crystallization. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 2-20.	0.4	291
62	Use of Cross-Linked Poly(ethylene glycol)-Based Hydrogels for Protein Crystallization. Crystal Growth and Design, 2014, 14, 3239-3248.	1.4	20
63	Mechanistic Insights of Î²-Lactmases Evolution. Biophysical Journal, 2014, 106, 663a.	0.2	0
64	Conservation of Protein Structure over Four Billion Years. Structure, 2013, 21, 1690-1697.	1.6	115
65	Hyperstability and Substrate Promiscuity in Laboratory Resurrections of Precambrian Î²-Lactamases. Journal of the American Chemical Society, 2013, 135, 2899-2902.	6.6	212
66	Growth of Ultrastable Proteinâ€“Silica Composite Crystals. Crystal Growth and Design, 2013, 13, 2522-2529.	1.4	26
67	Heterogeneous Crystallization of Proteins: Is it a Prenucleation Clusters Mediated Process?. Crystal Growth and Design, 2013, 13, 3110-3115.	1.4	21
68	Purification, crystallization and preliminary crystallographic analysis of the ligand-binding regions of the PctA and PctB chemoreceptors fromPseudomonas aeruginosain complex with amino acids. Acta Crystallographica Section F: Structural Biology Communications, 2013, 69, 1431-1435.	0.7	4
69	Mutational and Structural Analysis of l - N -Carbamoylase Reveals New Insights into a Peptidase M20/M25/M40 Family Member. Journal of Bacteriology, 2012, 194, 5759-5768.	1.0	23
70	Evidence for chemoreceptors with bimodular ligand-binding regions harboring two signal-binding sites. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 18926-18931.	3.3	68
71	In situX-ray data collection from highly sensitive crystals ofPseudomonas putidaPtxS in complex with DNA. Acta Crystallographica Section F: Structural Biology Communications, 2012, 68, 1307-1310.	0.7	6
72	Protein Experiment: Scientific Data Processing Platform for On-Flight Experiment Tuning. Microgravity Science and Technology, 2012, 24, 327-334.	0.7	1

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73	Monitoring and Scoring Counter-Diffusion Protein Crystallization Experiments in Capillaries by in situ Dynamic Light Scattering. PLoS ONE, 2012, 7, e33545.	1.1	17
74	Crystallization and crystallographic analysis of the ligand-binding domain of thePseudomonas putidachemoreceptor McpS in complex with malate and succinate. Acta Crystallographica Section F: Structural Biology Communications, 2012, 68, 428-431.	0.7	2
75	Protein crystallization in gels: the better choice to grow crystals for structural determination. Acta Crystallographica Section A: Foundations and Advances, 2012, 68, s145-s145.	0.3	0
76	Optimization of Protein Crystallization: The OptiCryst Project. Crystal Growth and Design, 2011, 11, 2112-2121.	1.4	13
77	Combining Counter-Diffusion and Microseeding to Increase the Success Rate in Protein Crystallization. Crystal Growth and Design, 2011, 11, 2122-2126.	1.4	16
78	Hetero- vs Homogeneous Nucleation of Protein Crystals Discriminated by Supersaturation. Crystal Growth and Design, 2011, 11, 1542-1548.	1.4	26
79	Understanding the polymorphic behaviour of a mutant of the Î±-spectrin SH3 domain by means of two 1.1â€…Ã… resolution structures. Acta Crystallographica Section D: Biological Crystallography, 2011, 67, 189-196.	2.5	7
80	Isolation and crystallization studies of selected proteins from plant photosystem II. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C744-C745.	0.3	0
81	L-N-carbamoylase structure suggests a striking case of protein evolution. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C769-C769.	0.3	0
82	Crystallization in gels and microgravity: a comparative study. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C89-C89.	0.3	0
83	Structure of a novel bacterial small molecule sensor domain with two ligands. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C226-C226.	0.3	0
84	Atomic resolution studies of haloalkane dehalogenases DhaA04, DhaA14 and DhaA15 with engineered access tunnels. Acta Crystallographica Section D: Biological Crystallography, 2010, 66, 962-969.	2.5	12
85	Two-step counterdiffusion protocol for the crystallization of haemoglobin II fromLucina pectinatain the pH range 4â€“9. Acta Crystallographica Section F: Structural Biology Communications, 2010, 66, 264-268.	0.7	6
86	Biophysical and atomic force microscopy characterization of the RNA from satellite tobacco mosaic virus. Nucleic Acids Research, 2010, 38, 8284-8294.	6.5	18
87	Toward the Crystallization of Photosystem II Core Complex from Pisum sativum L.. Crystal Growth and Design, 2010, 10, 3391-3396.	1.4	1
88	Modulation of Buried Ionizable Groups in Proteins with Engineered Surface Charge. Journal of the American Chemical Society, 2010, 132, 1218-1219.	6.6	31
89	Structure of dihydropyrimidinase from Sinorhizobium meliloti CECT4114: New features in an amidohydrolase family member. Journal of Structural Biology, 2010, 169, 200-208.	1.3	28
90	Novel conformational aspects of the third PDZ domain of the neuronal post-synaptic density-95 protein revealed from two 1.4 Ã… X-ray structures. Journal of Structural Biology, 2010, 170, 565-569.	1.3	21

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91	Crystallization in gels: a practical workshop. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s83-s83.	0.3	0
92	Counterdiffusion methods applied to protein crystallization. Progress in Biophysics and Molecular Biology, 2009, 101, 26-37.	1.4	103
93	Crystallization and diffraction patterns of the oxy and cyano forms of theLucina pectinatahaemoglobins complex. Acta Crystallographica Section F: Structural Biology Communications, 2009, 65, 25-28.	0.7	8
94	Precise protein solubility determination by Laser confocal differential interference contrast microscopy. Journal of Crystal Growth, 2009, 311, 3479-3484.	0.7	22
95	Direct Observation of Adsorption Sites of Protein Impurities and Their Effects on Step Advancement of Protein Crystals. Crystal Growth and Design, 2009, 9, 3062-3071.	1.4	35
96	Effects of a Magnetic Field on Lysozyme Crystal Nucleation and Growth in a Diffusive Environment. Crystal Growth and Design, 2009, 9, 2610-2615.	1.4	34
97	Crystallization of proteins on functionalized surfaces. Acta Crystallographica Section D: Biological Crystallography, 2008, 64, 1054-1061.	2.5	29
98	Crystallization and preliminary crystallographic studies of an active-site mutant hydantoin racemase fromSinorhizobium melilotiCECT4114. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 50-53.	0.7	5
99	Crystallization and preliminary crystallographic studies of the recombinantL-N-carbamoylase fromGeobacillus stearothermophilusCECT43. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 1135-1138.	0.7	4
100	Is Agarose an Impurity or an Impurity Filter? In Situ Observation of the Joint Gel/Impurity Effect on Protein Crystal Growth Kinetics. Crystal Growth and Design, 2008, 8, 3623-3629.	1.4	33
101	Toward a Definition of X-ray Crystal Quality. Crystal Growth and Design, 2008, 8, 4284-4290.	1.4	9
102	Comparison of Different Experimental Techniques for the Measurement of Crystal Growth Kinetics. Crystal Growth and Design, 2008, 8, 4316-4323.	1.4	55
103	Granada Crystallization Facility-2: A Versatile Platform for Crystallization in Space. Crystal Growth and Design, 2008, 8, 4324-4329.	1.4	15
104	Structure and Ligand Selection of Hemoglobin II from Lucina pectinata. Journal of Biological Chemistry, 2008, 283, 9414-9423.	1.6	24
105	Force-Clamp Spectroscopy Detects Residue Co-evolution in Enzyme Catalysis. Journal of Biological Chemistry, 2008, 283, 27121-27129.	1.6	16
106	Structure of the mexicainâ€"E-64 complex and comparison with other cysteine proteases of the papain family. Acta Crystallographica Section D: Biological Crystallography, 2007, 63, 555-563.	2.5	11
107	Crystallization by capillary counter-diffusion and structure determination of the N114A mutant of the SH3 domain of Abl tyrosine kinase complexed with a high-affinity peptide ligand. Acta Crystallographica Section D: Biological Crystallography, 2007, 63, 646-652.	2.5	10
108	New techniques for membrane protein crystallization tested on photosystem II core complex of PisumÂsativum. Photosynthesis Research, 2007, 90, 255-259.	1.6	14

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109	Capillary crystallization and molecular-replacement solution of haemoglobin II from the clamLucina pectinata. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 196-199.	0.7	15
110	Crystallization and preliminary crystallographic studies of the recombinant dihydropyrimidinase fromSinorhizobium melilotiCECT4114. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 1223-1226.	0.7	10
111	Toward the getting of photosystem II core complex crystals fromPisum sativum. Acta Crystallographica Section A: Foundations and Advances, 2006, 62, s145-s145.	0.3	0
112	Mexicain, from the crystal to the structure: a sixty years journey. Acta Crystallographica Section A: Foundations and Advances, 2005, 61, c179-c179.	0.3	0
113	Binding curves by continuous gradient flow-mix calorimetry. Thermochimica Acta, 2005, 437, 140-144.	1.2	0
114	Life in the fast lane for protein crystallization and X-ray crystallography. Progress in Biophysics and Molecular Biology, 2005, 88, 359-386.	1.4	77
115	Purification, crystallization and preliminary X-ray analysis of mexicain. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 2058-2060.	2.5	8
116	The effect of the low magnetic field on the quality of tetragonal lysozyme crystals grown with paramagnetic salts. Acta Crystallographica Section A: Foundations and Advances, 2004, 60, s282-s282.	0.3	0
117	Crystallization of photosystem II core complex fromPisum sativum. Acta Crystallographica Section A: Foundations and Advances, 2004, 60, s131-s131.	0.3	0
118	Protein crystal quality in diffusive environments and its evaluation. Journal of Crystal Growth, 2003, 247, 177-184.	0.7	9
119	Purification, crystallization and preliminary X-ray analysis ofCaenorhabditis elegansubiquitin-conjugation enzyme M7.1. Acta Crystallographica Section D: Biological Crystallography, 2003, 59, 544-546.	2.5	0
120	Protein crystallization by capillary counterdiffusion for applied crystallographic structure determination. Journal of Structural Biology, 2003, 142, 218-231.	1.3	117
121	Ab initiocrystallographic structure determination of insulin from protein to electron density without crystal handling. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 1147-1154.	2.5	49
122	Granada Crystallisation Box: a new device for protein crystallisation by counter-diffusion techniques. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 1638-1642.	2.5	75
123	Agarose as crystallisation media for proteins II: Trapping of gel fibres into the crystals. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 1653-1656.	2.5	75
124	Crystallization and cryocrystallography inside X-ray capillaries. Journal of Applied Crystallography, 2001, 34, 365-370.	1.9	29
125	Experimental evidence for the stability of the depletion zone around a growing protein crystal under microgravity. Acta Crystallographica Section D: Biological Crystallography, 2001, 57, 412-417.	2.5	34
126	Structure of tetragonal hen egg-white lysozyme at 0.94â€…Ã… from crystals grown by the counter-diffusion method. Acta Crystallographica Section D: Biological Crystallography, 2001, 57, 1119-1126.	2.5	86

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127	A supersaturation wave of protein crystallization. Journal of Crystal Growth, 2001, 232, 149-155.	0.7	44
128	Agarose as crystallization media for proteins. Journal of Crystal Growth, 2001, 232, 165-172.	0.7	99
129	In-situmeasurement of rocking curves during lysozyme crystal growth. Acta Crystallographica Section D: Biological Crystallography, 1999, 55, 650-655.	2.5	4
130	Topography and high resolution diffraction studies in tetragonal lysozyme. Journal of Crystal Growth, 1999, 196, 546-558.	0.7	59
131	Reinforced protein crystals. Materials Research Bulletin, 1998, 33, 1593-1598.	2.7	60