Pau Gorostiza

List of Publications by Year
in descending order

124 papers	5,657 citations	71102 41 h-index	85541 71 g-index
140 all docs	140 docs citations	140 times ranked	6100 citing authors

#	Article	IF	Citations
1	Allosteric control of an ionotropic glutamate receptor with an optical switch. Nature Chemical Biology, 2006, 2, 47-52.	8.0	558
2	Remote Control of Neuronal Activity with a Light-Gated Glutamate Receptor. Neuron, 2007, 54, 535-545.	8.1	310
3	Collective behaviour in two-dimensional cobalt nanoparticle assemblies observed by magnetic force microscopy. Nature Materials, 2004, 3, 263-268.	27.5	297
4	Optical Switches for Remote and Noninvasive Control of Cell Signaling. Science, 2008, 322, 395-399.	12.6	296
5	A robust molecular platform for non-volatile memory devices with optical and magnetic responses. Nature Chemistry, 2011, 3, 359-364.	13.6	192
6	Mechanisms of photoswitch conjugation and light activation of an ionotropic glutamate receptor. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 10865-10870.	7.1	169
7	Reversibly Caged Glutamate:Â A Photochromic Agonist of Ionotropic Glutamate Receptors. Journal of the American Chemical Society, 2007, 129, 260-261.	13.7	154
8	An allosteric modulator to control endogenous G protein-coupled receptors with light. Nature Chemical Biology, 2014, 10, 813-815.	8.0	147
9	The twisted ion-permeation pathway of a resting voltage-sensing domain. Nature, 2007, 445, 546-549.	27.8	130
10	Two-Photon Neuronal and Astrocytic Stimulation with Azobenzene-Based Photoswitches. Journal of the American Chemical Society, 2014, 136, 8693-8701.	13.7	103
11	Direct Observation of the Valence Band Edge by in Situ ECSTM-ECTS in p-Type Cu₂O Layers Prepared by Copper Anodization. Journal of Physical Chemistry C, 2009, 113, 1028-1036.	3.1	99
12	Charge Exchange Processes during the Open-Circuit Deposition of Nickel on Silicon from Fluoride Solutions. Journal of the Electrochemical Society, 2000, 147, 1026.	2.9	90
13	Transistor-like Behavior of Single Metalloprotein Junctions. Nano Letters, 2012, 12, 2679-2684.	9.1	90
14	Control of neurotransmitter release by an internal gel matrix in synaptic vesicles. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 3485-3490.	7.1	88
15	Lightâ€Regulated Stapled Peptides to Inhibit Proteinâ€“Protein Interactions Involved in Clathrinâ€Mediated Endocytosis. Angewandte Chemie - International Edition, 2013, 52, 7704-7708.	13.8	88
16	Rationally designed azobenzene photoswitches for efficient two-photon neuronal excitation. Nature Communications, 2019, 10, 907.	12.8	86
17	Nanometerâ€scale oxidation of Si(100) surfaces by tapping mode atomic force microscopy. Journal of Applied Physics, 1995, 78, 6797-6801.	2.5	84
18	Bioengineering a Single-Protein Junction. Journal of the American Chemical Society, 2017, 139, 15337-15346.	13.7	84

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19	Photoswitchable Antimetabolite for Targeted Photoactivated Chemotherapy. Journal of the American Chemical Society, 2018, 140, 15764-15773.	13.7	84
20	First Stages of Electrochemical Growth of the Passive Film on Iron. Journal of the Electrochemical Society, 2001, 148, B307.	2.9	82
21	Nanosculpting reversed wavelength sensitivity into a photoswitchable iGluR. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 6814-6819.	7.1	82
22	Nanoindentation: Toward the sensing of atomic interactions. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 5228-5232.	7.1	69
23	Optical switches and triggers for the manipulation of ion channels and pores. Molecular BioSystems, 2007, 3, 686.	2.9	68
24	OptoGluNAM4.1, a Photoswitchable Allosteric Antagonist for Real-Time Control of mGlu 4 Receptor Activity. Cell Chemical Biology, 2016, 23, 929-934.	5.2	68
25	Illuminating Phenylazopyridines To Photoswitch Metabotropic Glutamate Receptors: From the Flask to the Animals. ACS Central Science, 2017, 3, 81-91.	11.3	58
26	Determination of micromechanical properties of thin films by beam bending measurements with an atomic force microscope. Sensors and Actuators A: Physical, 1999, 74, 134-138.	4.1	55
27	Nanotribological Properties of Octadecyltrichlorosilane Self-Assembled Ultrathin Films Studied by Atomic Force Microscopy:â€‰ Contact and Tapping Modes. Langmuir, 1997, 13, 2333-2339.	3.5	54
28	Water Exclusion at the Nanometer Scale Provides Long-Term Passivation of Silicon (111) Grafted with Alkyl Monolayers. Journal of Physical Chemistry B, 2006, 110, 5576-5585.	2.6	54
29	Currentâ€“Voltage Characteristics and Transition Voltage Spectroscopy of Individual Redox Proteins. Journal of the American Chemical Society, 2012, 134, 20218-20221.	13.7	53
30	Self-assembly of the amphipathic helix (VHLPPP)8. A mechanism for zein protein body formation11Edited by W. Baumeister. Journal of Molecular Biology, 2001, 312, 907-913.	4.2	52
31	Optical Control of Cardiac Function with a Photoswitchable Muscarinic Agonist. Journal of the American Chemical Society, 2019, 141, 7628-7636.	13.7	52
32	Atomic Force Microscopy Study of the Silicon Doping Influence on the First Stages of Platinum Electroless Deposition. Journal of the Electrochemical Society, 1997, 144, 909-914.	2.9	51
33	Electrochemical Characterization of the Open-Circuit Deposition of Platinum on Silicon from Fluoride Solutions. Journal of Physical Chemistry B, 2003, 107, 6454-6461.	2.6	51
34	Supramolecular Properties of the Proline-Rich Î³-Zein N-Terminal Domain. Biophysical Journal, 2002, 83, 1194-1204.	0.5	50
35	Optical control of endogenous receptors and cellular excitability using targeted covalent photoswitches. Nature Communications, 2016, 7, 12221.	12.8	50
36	An Azobenzene-Based Single-Component Supramolecular Polymer Responsive to Multiple Stimuli in Water. Journal of the American Chemical Society, 2020, 142, 10069-10078.	13.7	49

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37	Direct Measurement of Electron Transfer Distance Decay Constants of Single Redox Proteins by Electrochemical Tunneling Spectroscopy. ACS Nano, 2011, 5, 2060-2066.	14.6	48
38	First stages of platinum electroless deposition on silicon (100) from hydrogen fluoride solutions studied by AFM. Thin Solid Films, 1996, 275, 12-17.	1.8	46
39	Simultaneous platinum deposition and formation of a photoluminescent porous silicon layer. Journal of Electroanalytical Chemistry, 1999, 469, 48-52.	3.8	45
40	Conductance Switching in Single Wired Redox Proteins. Small, 2014, 10, 2537-2541.	10.0	44
41	Photomodulation of G Protein-Coupled Adenosine Receptors by a Novel Light-Switchable Ligand. Bioconjugate Chemistry, 2014, 25, 1847-1854.	3.6	44
42	Measurement of micromechanical properties of polysilicon microstructures with an atomic force microscope. Sensors and Actuators A: Physical, 1998, 67, 215-219.	4.1	42
43	In situ studies of metal passive films. Current Opinion in Solid State and Materials Science, 2006, 10, 144-152.	11.5	42
44	Synthetic Photoswitchable Neurotransmitters Based on Bridged Azobenzenes. Organic Letters, 2019, 21, 3780-3784.	4.6	42
45	Preparation of Reliable Probes for Electrochemical Tunneling Spectroscopy. Analytical Chemistry, 2004, 76, 5218-5222.	6.5	41
46	Electronic barriers in the iron oxide film govern its passivity and redox behavior: Effect of electrode potential and solution pH. Electrochemistry Communications, 2006, 8, 1595-1602.	4.7	37
47	Different Behavior in the Deposition of Platinum from HF Solutions on nâ€•and pâ€Type (100) Si Substrates. Journal of the Electrochemical Society, 1997, 144, 4119-4122.	2.9	31
48	Direct Evidence of the Electronic Conduction of the Passive Film on Iron by EC-STM. Journal of the Electrochemical Society, 2003, 150, B348.	2.9	31
49	An Optimized Glutamate Receptor Photoswitch with Sensitized Azobenzene Isomerization. Journal of Organic Chemistry, 2015, 80, 9915-9925.	3.2	31
50	Platinum Electroless Deposition on Silicon from Hydrogen Fluoride Solutions: Electrical Properties. Journal of the Electrochemical Society, 2001, 148, C528.	2.9	30
51	Nanomechanics of silicon surfaces with atomic force microscopy: An insight to the first stages of plastic deformation. Journal of Chemical Physics, 2005, 123, 114711.	3.0	30
52	The iron passive film breakdown in chloride media may be mediated by transient chloride-induced surface states located within the band gap. Electrochemistry Communications, 2006, 8, 627-632.	4.7	30
53	Long distance electron transfer through the aqueous solution between redox partner proteins. Nature Communications, 2018, 9, 5157.	12.8	30
54	Nanoscale charge transfer in redox proteins and DNA: Towards biomolecular electronics. Electrochimica Acta, 2014, 140, 83-95.	5.2	29

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55	Adrenergic Modulation With Photochromic Ligands. Angewandte Chemie - International Edition, 2021, 60, 3625-3631.	13.8	29
56	Nanoengineering Ion Channels for Optical Control. Physiology, 2008, 23, 238-247.	3.1	27
57	Large-scale dendrimer-based uneven nanopatterns for the study of local arginine-glycine-aspartic acid (RGD) density effects on cell adhesion. Nano Research, 2014, 7, 399-409.	10.4	27
58	Titration Force Microscopy on Supported Lipid Bilayers. Analytical Chemistry, 2006, 78, 61-70.	6.5	26
59	Lightâ€induced regulation of ligandâ€gated channel activity. British Journal of Pharmacology, 2018, 175, 1892-1902.	5.4	25
60	Conductance Maps by Electrochemical Tunneling Spectroscopy To Fingerprint the Electrode Electronic Structure. Analytical Chemistry, 2006, 78, 7325-7329.	6.5	23
61	Electrodeposition of Zincâ€Cobalt Alloys: Tapping Mode AFM Technique Applied to Study the Initial Stages of Deposition. Journal of the Electrochemical Society, 1995, 142, 4091-4096.	2.9	22
62	Atomic-layer expulsion in nanoindentations on an ionic single crystal. Applied Physics Letters, 2000, 77, 839-841.	3.3	22
63	Optical Control of Enzyme Enantioselectivity in Solid Phase. ACS Catalysis, 2014, 4, 1004-1009.	11.2	22
64	Atomic force microscopy observation of the first stages of diamond growth on silicon. Diamond and Related Materials, 1996, 5, 592-597.	3.9	20
65	Nature of multilayer steps on the {100} cleavage planes of MgO single crystals. Surface Science, 1997, 383, 78-87.	1.9	20
66	Absence of a Stable Secondary Structure Is Not a Limitation for Photoswitchable Inhibitors of Î²-Arrestin/Î²-Adaptin 2 Protein-Protein Interaction. Chemistry and Biology, 2015, 22, 31-37.	6.0	20
67	A photoswitchable GABA receptor channel blocker. British Journal of Pharmacology, 2019, 176, 2661-2677.	5.4	20
68	Atomic force microscopy study of nanoindentation deformation and indentation size effect in MgO crystals. Journal of Materials Research, 1999, 14, 3973-3982.	2.6	19
69	Shining Light on an mGlu5 Photoswitchable NAM: A Theoretical Perspective. Current Neuropharmacology, 2016, 14, 441-454.	2.9	18
70	Atomic force microscopic study of step bunching and macrostep formation during the growth of L-arginine phosphate monohydrate single crystals. Journal of Crystal Growth, 1997, 172, 209-218.	1.5	17
71	In situ study of the recovery of nanoindentation deformation of the (100) face of MgO crystals by atomic force microscopy. Surface Science, 1999, 442, 161-178.	1.9	17
72	An electrochemical study of tin oxide thin film in borate buffer solutions. Journal of the Brazilian Chemical Society, 2003, 14, 523-529.	0.6	17

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73	Optical modulation of neurotransmission using calcium photocurrents through the ion channel LiGluR. Frontiers in Molecular Neuroscience, 2013, 6, 3.	2.9	17
74	Reversible silencing of endogenous receptors in intact brain tissue using 2-photon pharmacology. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13680-13689.	7.1	17
75	Atomic force microscopy study of nanoindentation creep on the (100) face of MgO single crystals. Surface Science, 2000, 446, 314-322.	1.9	16
76	In situ analysis of the conductance of SnO2 crystalline nanoparticles in the presence of oxidizing or reducing atmosphere by scanning tunneling microscopy. Sensors and Actuators B: Chemical, 2001, 78, 57-63.	7.8	16
77	Alkali halide nanocrystal growth and etching studied by AFM and modeled by MD simulations. Journal of Chemical Physics, 2004, 120, 2963-2971.	3.0	16
78	Direct Measurement of the Nanomechanical Stability of a Redox Protein Active Site and Its Dependence upon Metal Binding. Journal of Physical Chemistry B, 2015, 119, 12050-12058.	2.6	16
79	Photocontrol of Endogenous Glycine Receptors InÂVivo. Cell Chemical Biology, 2020, 27, 1425-1433.e7.	5.2	16
80	Electrochemically Grown Tin Oxide Thin Films:â€‰ In Situ Characterization of Electronic Properties and Growth Mechanism. Journal of Physical Chemistry B, 2004, 108, 8173-8181.	2.6	15
81	Optical control of calcium-regulated exocytosis. Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 2853-2860.	2.4	15
82	Kainate Receptor Activation Shapes Short-Term Synaptic Plasticity by Controlling Receptor Lateral Mobility at Glutamatergic Synapses. Cell Reports, 2020, 31, 107735.	6.4	15
83	Surface morphology of grown thin films of the quasi one-dimensional organic conductor TTF-TCNQ studied by Atomic Force Microscopy. Surface Science, 1998, 395, 205-215.	1.9	14
84	Dislocation hollow cores observed on surfaces of molecular organic thin films: p-nitrophenyl nitroxyl nitroxide radical. Surface Science, 1998, 415, 241-250.	1.9	14
85	Positional isomers of bispyridine benzene derivatives induce efficacy changes on mGlu5 negative allosteric modulation. European Journal of Medicinal Chemistry, 2017, 127, 567-576.	5.5	14
86	Differential Electrochemical Conductance Imaging at the Nanoscale. Small, 2017, 13, 1700958.	10.0	14
87	Self-Assembly of Drugâ€“Polymer Complexes: A Spontaneous Nanoencapsulation Process Monitored by Atomic Force Microscopy**This work was presented in part at the 13th International Symposium on Microencapsulation, September 5â€“7, 2001, Angers, France.. Journal of Pharmaceutical Sciences, 2003, 92, 77-83.	3.3	13
88	A double effect molecular switch leads to a novel potent negative allosteric modulator of metabotropic glutamate receptor 5. MedChemComm, 2014, 5, 1548-1554.	3.4	12
89	Optical Control of GABA_A Receptors with a Fulgimideâ€Based Potentiator. Chemistry - A European Journal, 2020, 26, 12722-12727.	3.3	12
90	Surface step bunching and crystal defects in InAlAs films grown by molecular beam epitaxy on (111)B InP substrates. Applied Physics Letters, 1997, 71, 2961-2963.	3.3	11

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91	Study of the surface morphology of the (100) cleavage planes of MgO single crystals by atomic force microscopy. Surface Science, 1999, 424, 139-144.	1.9	10
92	Enhanced surface atomic step motion observed in real time after nanoindentation of NaCl(100). Surface Science, 1997, 380, 427-433.	1.9	9
93	Polymorphic transformations observed on molecular organic thin films: p -nitrophenyl nitronyl nitroxide radical. Europhysics Letters, 1999, 48, 461-467.	2.0	9
94	Rational Design of Photochromic Analogues of Tricyclic Drugs. Journal of Medicinal Chemistry, 2021, 64, 9259-9270.	6.4	9
95	Subunit-Specific Photocontrol of Glycine Receptors by Azobenzene-Nitrazepam Photoswitcher. ENeuro, 2021, 8, ENEURO.0294-20.2020.	1.9	9
96	Electrochemically Gated Longâ€Distance Charge Transport in Photosystemâ€…I. Angewandte Chemie - International Edition, 2019, 58, 13280-13284.	13.8	8
97	Control of Brain State Transitions with a Photoswitchable Muscarinic Agonist. Advanced Science, 2021, 8, e2005027.	11.2	8
98	Targeted Nanoswitchable Inhibitors of Proteinâ€“Protein Interactions Involved in Apoptosis. ChemMedChem, 2018, 14, 100-106.	3.2	7
99	Surface characterization of TTF-TCNQ thin films evaporated on alkali halide substrates. Synthetic Metals, 1999, 102, 1607-1608.	3.9	6
100	Electrochemical deposition of metal layers and structures for Si-based microsystems. Sensors and Actuators A: Physical, 2002, 99, 41-44.	4.1	6
101	Sequential atomic force microscopy imaging of a spontaneous nanoencapsulation process. International Journal of Pharmaceutics, 2002, 242, 291-294.	5.2	6
102	Dendrimer-based Uneven Nanopatterns to Locally Control Surface Adhesiveness: A Method to Direct Chondrogenic Differentiation. Journal of Visualized Experiments, 2018, , .	0.3	5
103	Adrenergic Modulation With Photochromic Ligands. Angewandte Chemie, 2021, 133, 3669-3675.	2.0	5
104	Nanomechanical properties of surfaces of molecular organic thin films. Synthetic Metals, 2001, 121, 1417-1418.	3.9	4
105	Tight temporal coupling between synaptic rewiring of olfactory glomeruli and the emergence of odorâ€guided behavior in Xenopus tadpoles. Journal of Comparative Neurology, 2017, 525, 3769-3783.	1.6	4
106	Photoswitchable Ion Channels and Receptors. Advances in Atom and Single Molecule Machines, 2014, , 169-188.	0.0	4
107	Molecular probes and switches for functional analysis of receptors, ion channels and synaptic networks. Frontiers in Molecular Neuroscience, 2013, 6, 48.	2.9	4
108	Distance and Potential Dependence of Charge Transport Through the Reaction Center of Individual Photosynthetic Complexes. Small, 2022, 18, 2104366.	10.0	4

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109	Molecular Handles for the Mechanical Manipulation of Single-Membrane Proteins in Living Cells. IEEE Transactions on Nanobioscience, 2005, 4, 269-276.	3.3	3
110	Photoswitchable dynasore analogs to control endocytosis with light. Chemical Science, 2020, 11, 8981-8988.	7.4	3
111	Automated high-throughput measurement of body movements and cardiac activity of Xenopus tropicalis tadpoles. Journal of Biological Methods, 2014, 1, e9.	0.6	3
112	Fast Photoswitchable Molecular Prosthetics Control Neuronal Activity in the Cochlea. Journal of the American Chemical Society, 2022, 144, 9229-9239.	13.7	3
113	Fast Photo-Chrono-Amperometry of Photosynthetic Complexes for Biosensors and Electron Transport Studies. ACS Sensors, 2021, 6, 581-587.	7.8	2
114	Structural and Micromechanical Assessment of Electrochemically Grown Metal Layers for Si Magnetic Microactuators. Materials Research Society Symposia Proceedings, 2000, 657, 421.	0.1	1
115	Optical Modulation of Neurotransmission. Biophysical Journal, 2013, 104, 497a.	0.5	1
116	New GABA amides activating GABAA-receptors. Beilstein Journal of Organic Chemistry, 2013, 9, 406-410.	2.2	1
117	Photochromic antifolate for light-activated chemotherapy. , 2019, , .		1
118	Nanoindentation: From forces to energies. Materials Research Society Symposia Proceedings, 2002, 738, 621.	0.1	0
119	Diving in Solid/Liquid Nanointerfaces. Imaging & Microscopy, 2007, 9, 61-62.	0.1	0
120	Titelbild: Light-Regulated Stapled Peptides to Inhibit Protein-Protein Interactions Involved in Clathrin-Mediated Endocytosis (Angew. Chem. 30/2013). Angewandte Chemie, 2013, 125, 7759-7759.	2.0	0
121	Electrochemically Gated Longâ€Distance Charge Transport in Photosystemâ€…I. Angewandte Chemie, 2019, 131, 13414-13418.	2.0	0
122	Photomodulation of Inhibitory Neurotransmission. Insights from Molecular Modeling. Biophysical Journal, 2020, 118, 325a-326a.	0.5	0
123	Photoswitchable Ligand-Gated Ion Channels. Neuromethods, 2011, , 267-285.	0.3	0
124	Scanning Tunneling Microscopy Studies of Immobilized Biomolecules. , 2014, , 1851-1868.		0