Maria F Garcia-Parajo

List of Publications by Year
in descending order

134 papers	7,488 citations	38742 50 h-index	58581 82 g-index
144 all docs	144 docs citations	144 times ranked	8919 citing authors

#	Article	IF	Citations
1	Chromatin Fibers Are Formed by Heterogeneous Groups of Nucleosomes InÂVivo. Cell, 2015, 160, 1145-1158.	28.9	560
2	A review of progress in single particle tracking: from methods to biophysical insights. Reports on Progress in Physics, 2015, 78, 124601.	20.1	424
3	A plasmonic â€˜antenna-in-boxâ€™ platform for enhanced single-molecule analysis at micromolar concentrations. Nature Nanotechnology, 2013, 8, 512-516.	31.5	297
4	Nanoclustering as a dominant feature of plasma membrane organization. Journal of Cell Science, 2014, 127, 4995-5005.	2.0	243
5	Hotspots of GPI-anchored proteins and integrin nanoclusters function as nucleation sites for cell adhesion. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18557-18562.	7.1	217
6	All-Dielectric Silicon Nanogap Antennas To Enhance the Fluorescence of Single Molecules. Nano Letters, 2016, 16, 5143-5151.	9.1	197
7	Multistep Energy Transfer in Single Molecular Photonic Wires. Journal of the American Chemical Society, 2004, 126, 6514-6515.	13.7	192
8	Real-time light-driven dynamics of the fluorescence emission in single green fluorescent protein molecules. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 7237-7242.	7.1	171
9	A Simple Approach to Sensor Discovery and Fabrication on Self-Assembled Monolayers on Glass. Journal of the American Chemical Society, 2004, 126, 7293-7299.	13.7	165
10	Nonergodic Subdiffusion from Brownian Motion in an Inhomogeneous Medium. Physical Review Letters, 2014, 112, 150603.	7.8	165
11	Time-Varying Triplet State Lifetimes of Single Molecules. Physical Review Letters, 1999, 83, 2155-2158.	7.8	159
12	Influencing the Angular Emission of a Single Molecule. Physical Review Letters, 2000, 85, 5312-5315.	7.8	126
13	Weak Ergodicity Breaking of Receptor Motion in Living Cells Stemming from Random Diffusivity. Physical Review X, 2015, 5, .	8.9	120
14	Single molecule mapping of the optical field distribution of probes for near-field microscopy. Journal of Microscopy, 1999, 194, 477-482.	1.8	117
15	In-Plane Plasmonic Antenna Arrays with Surface Nanogaps for Giant Fluorescence Enhancement. Nano Letters, 2017, 17, 1703-1710.	9.1	114
16	Investigation of Perylene Photonic Wires by Combined Single-Molecule Fluorescence and Atomic Force Microscopy. Angewandte Chemie - International Edition, 2004, 43, 4045-4049.	13.8	106
17	Near-field scanning optical microscopy in liquid for high resolution single molecule detection on dendritic cells. FEBS Letters, 2004, 573, 6-10.	2.8	104
18	Power-Law-Distributed Dark States are the Main Pathway for Photobleaching of Single Organic Molecules. Physical Review Letters, 2005, 95, 097401.	7.8	104

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19	Optical antennas focus in on biology. Nature Photonics, 2008, 2, 201-203.	31.4	103
20	The nature of fluorescence emission in the red fluorescent protein DsRed, revealed by single-molecule detection. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 14392-14397.	7.1	100
21	Single Molecule Rotational and Translational Diffusion Observed by Near-Field Scanning Optical Microscopy. Journal of Physical Chemistry A, 1997, 101, 7318-7323.	2.5	98
22	Direct mapping of nanoscale compositional connectivity on intact cell membranes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15437-15442.	7.1	95
23	A DNA origami platform for quantifying protein copy number in super-resolution. Nature Methods, 2017, 14, 789-792.	19.0	94
24	Nanoscale Organization of the Pathogen Receptor DC-SIGN Mapped by Single-Molecule High-Resolution Fluorescence Microscopy. ChemPhysChem, 2007, 8, 1473-1480.	2.1	93
25	Power-Law Blinking in the Fluorescence of Single Organic Molecules. ChemPhysChem, 2007, 8, 823-833.	2.1	91
26	Excitonic Behavior of Rhodamine Dimers:â€‰ A Single-Molecule Study. Journal of Physical Chemistry A, 2003, 107, 43-52.	2.5	90
27	Lateral mobility of individual integrin nanoclusters orchestrates the onset for leukocyte adhesion. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4869-4874.	7.1	86
28	Matching Nanoantenna Field Confinement to FRET Distances Enhances FÃ¶rster Energy Transfer Rates. Nano Letters, 2015, 15, 6193-6201.	9.1	85
29	Molecular Printboards on Silicon Oxide: Lithographic Patterning of Cyclodextrin Monolayers with Multivalent, Fluorescent Guest Molecules. Small, 2005, 1, 242-253.	10.0	84
30	Single-Molecule Imaging of Cell Surfaces Using Near-Field Nanoscopy. Accounts of Chemical Research, 2012, 45, 327-336.	15.6	80
31	Nanoscale Fluorescence Correlation Spectroscopy on Intact Living Cell Membranes with NSOM Probes. Biophysical Journal, 2011, 100, L8-L10.	0.5	75
32	Ultrabright Bowtie Nanoaperture Antenna Probes Studied by Single Molecule Fluorescence. Nano Letters, 2012, 12, 5972-5978.	9.1	74
33	Plasmonic Nanoantennas Enable Forbidden FÃ¶rster Dipoleâ€“Dipole Energy Transfer and Enhance the FRET Efficiency. Nano Letters, 2016, 16, 6222-6230.	9.1	73
34	Geometry sensing by dendritic cells dictates spatial organization and PGE2-induced dissolution of podosomes. Cellular and Molecular Life Sciences, 2012, 69, 1889-1901.	5.4	72
35	Imaging Individual Proteins and Nanodomains on Intact Cell Membranes with a Probeâ€Based Optical Antenna. Small, 2010, 6, 270-275.	10.0	71
36	Single Molecule Photobleaching Probes the Exciton Wave Function in a Multichromophoric System. Physical Review Letters, 2004, 93, 236404.	7.8	70

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37	Separating Actin-Dependent Chemokine Receptor Nanoclustering from Dimerization Indicates a Role for Clustering in CXCR4 Signaling and Function. Molecular Cell, 2018, 70, 106-119.e10.	9.7	70
38	Single-Molecule Pump-Probe Detection Resolves Ultrafast Pathways in Individual and Coupled Quantum Systems. Physical Review Letters, 2005, 94, 078302.	7.8	67
39	Enhanced receptorâ€“clathrin interactions induced by N -glycanâ€“mediated membrane micropatterning. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11037-11042.	7.1	67
40	Enhancing Magnetic Light Emission with All-Dielectric Optical Nanoantennas. Nano Letters, 2018, 18, 3481-3487.	9.1	66
41	Enhancement and Inhibition of Spontaneous Photon Emission by Resonant Silicon Nanoantennas. Physical Review Applied, 2016, 6, .	3.8	65
42	Nanometer-scale organization of the alpha subunits of the receptors for IL2 and IL15 in human T lymphoma cells. Journal of Cell Science, 2008, 121, 627-633.	2.0	61
43	Roadmap on biosensing and photonics with advanced nano-optical methods. Journal of Optics (United) Tj ETQq1 1 0.784314 rgBT /O	2.2	61
44	Changes in membrane sphingolipid composition modulate dynamics and adhesion of integrin nanoclusters. Scientific Reports, 2016, 6, 20693.	3.3	61
45	Shear force imaging of soft samples in liquid using a diving bell concept. Applied Physics Letters, 2003, 83, 5083-5085.	3.3	60
46	Energy Transfer in Single-Molecule Photonic Wires. ChemPhysChem, 2005, 6, 819-827.	2.1	60
47	Synthesis and Characterization of Long Perylenediimide Polymer Fibers:â€‰ From Bulk to the Single-Molecule Level. Journal of Physical Chemistry B, 2006, 110, 7803-7812.	2.6	55
48	pH-Responsive Polysaccharide-Based Polyelectrolyte Complexes As Nanocarriers for Lysosomal Delivery of Therapeutic Proteins. Biomacromolecules, 2011, 12, 2524-2533.	5.4	55
49	Strong Modification of Magnetic Dipole Emission through Diabolo Nanoantennas. ACS Photonics, 2015, 2, 1071-1076.	6.6	55
50	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
51	The Neck Region of the C-type Lectin DC-SIGN Regulates Its Surface Spatiotemporal Organization and Virus-binding Capacity on Antigen-presenting Cells. Journal of Biological Chemistry, 2012, 287, 38946-38955.	3.4	52
52	Tuning fork shear-force feedback. Ultramicroscopy, 1998, 71, 149-157.	1.9	50
53	Near-field optical microscopy for DNA studies at the single molecular level. Bioimaging, 1998, 6, 43-53.	1.3	48
54	DNA-Based Molecular Wires:Â Multiple Emission Pathways of Individual Constructs. Journal of Physical Chemistry B, 2006, 110, 26349-26353.	2.6	48

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55	A nanometer scale optical view on the compartmentalization of cell membranes. Biochimica Et Biophysica Acta - Biomembranes, 2010, 1798, 777-787.	2.6	48
56	Excitation-multiplexed multicolor superresolution imaging with fm-STORM and fm-DNA-PAINT. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12991-12996.	7.1	48
57	Selective Immobilization of Protein Clusters on Polymeric Nanocraters. Advanced Functional Materials, 2006, 16, 1242-1246.	14.9	44
58	Simultaneous scanning tunneling microscope and collection mode scanning nearâ€field optical microscope using gold coated optical fiber probes. Applied Physics Letters, 1994, 65, 1498-1500.	3.3	43
59	Near-Field Fluorescence Imaging of Genetic Material: Toward the Molecular Limit. Journal of Structural Biology, 1997, 119, 222-231.	2.8	43
60	Probing polymers with single fluorescent molecules. European Polymer Journal, 2004, 40, 1001-1011.	5.4	43
61	Planar Optical Nanoantennas Resolve Cholesterol-Dependent Nanoscale Heterogeneities in the Plasma Membrane of Living Cells. Nano Letters, 2017, 17, 6295-6302.	9.1	43
62	Optical Probing of Single Fluorescent Molecules and Proteins. ChemPhysChem, 2001, 2, 347-360.	2.1	41
63	Optical Antenna-Based Fluorescence Correlation Spectroscopy to Probe the Nanoscale Dynamics of Biological Membranes. Journal of Physical Chemistry Letters, 2018, 9, 110-119.	4.6	41
64	Multifunctional Nanovesicle-Bioactive Conjugates Prepared by a One-Step Scalable Method Using CO₂-Expanded Solvents. Nano Letters, 2013, 13, 3766-3774.	9.1	40
65	Î±â€Galactosidaseâ€A Loadedâ€Nanoliposomes with Enhanced Enzymatic Activity and Intracellular Penetration. Advanced Healthcare Materials, 2016, 5, 829-840.	7.6	40
66	Quantum pillar structures onn+gallium arsenide fabricated using â€˜â€˜naturalâ€™â€™ lithography. Applied Physics Letters, 1993, 62, 264-266.	3.3	39
67	Large-Scale Arrays of Bowtie Nanoaperture Antennas for Nanoscale Dynamics in Living Cell Membranes. Nano Letters, 2015, 15, 4176-4182.	9.1	39
68	Transient Nanoscopic Phase Separation in Biological Lipid Membranes Resolved by Planar Plasmonic Antennas. ACS Nano, 2017, 11, 7241-7250.	14.6	39
69	Dynamic actin-mediated nano-scale clustering of CD44 regulates its meso-scale organization at the plasma membrane. Molecular Biology of the Cell, 2020, 31, 561-579.	2.1	38
70	Gold-coated parabolic tapers for scanning near-field optical microscopy: fabrication and optimisation. Ultramicroscopy, 1995, 61, 155-163.	1.9	37
71	Effect of Disorder on Ultrafast Exciton Dynamics Probed by Single Molecule Spectroscopy. Physical Review Letters, 2006, 97, 216403.	7.8	36
72	Sphingomyelin metabolism controls the shape and function of the Golgi cisternae. ELife, 2017, 6, .	6.0	33

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73	Dynamic Imaging of Cellâ€Free and Cellâ€Associated Viral Capture in Mature Dendritic Cells. Traffic, 2011, 12, 1702-1713.	2.7	32
74	Hybrid Photonic Antennas for Subnanometer Multicolor Localization and Nanoimaging of Single Molecules. Nano Letters, 2014, 14, 4895-4900.	9.1	31
75	The actin cytoskeleton modulates the activation of iNKT cells by segregating CD1d nanoclusters on antigen-presenting cells. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E772-81.	7.1	29
76	Moulded photoplastic probes for near-field optical applications. Journal of Microscopy, 2001, 202, 16-21.	1.8	26
77	The ER cholesterol sensor SCAP promotes CARTS biogenesis at ERâ€“Golgi membrane contact sites. Journal of Cell Biology, 2021, 220, .	5.2	25
78	Ion implantation effects in polycrystalline WO3thin films. Journal of Applied Physics, 1991, 70, 3509-3511.	2.5	24
79	Photon Antibunching Proves Emission from a Single Subunit in the Autofluorescent Protein DsRed. ChemPhysChem, 2004, 5, 1782-1785.	2.1	23
80	Near-field optical and shear-force microscopy of single fluorophores and DNA molecules. Ultramicroscopy, 1998, 71, 311-319.	1.9	22
81	Nearâ€field effects in single molecule emission. Journal of Microscopy, 2001, 202, 374-378.	1.8	21
82	Near-Field Fluorescence Microscopy: An Optical Nanotool to Study Protein Organization at the Cell Membrane. Nanobiotechnology, 2005, 1, 113-120.	1.2	21
83	Molecular recognition imaging using tuning fork-based transverse dynamic force microscopy. Ultramicroscopy, 2010, 110, 605-611.	1.9	21
84	Up-regulation of EP2 and EP3 receptors in human tolerogenic dendritic cells boosts the immunosuppressive activity of PGE2. Journal of Leukocyte Biology, 2017, 102, 881-895.	3.3	21
85	Recent progress in cell surface nanoscopy: Light and force in the near-field. Nano Today, 2012, 7, 390-403.	11.9	20
86	PSF decomposition of nanoscopy images via Bayesian analysis unravels distinct molecular organization of the cell membrane. Scientific Reports, 2014, 4, 4354.	3.3	20
87	Highly Versatile Polyelectrolyte Complexes for Improving the Enzyme Replacement Therapy of Lysosomal Storage Disorders. ACS Applied Materials & Interfaces, 2016, 8, 25741-25752.	8.0	20
88	Memory in Single Emitter Fluorescence Blinking Reveals the Dynamic Character of Nanoscale Charge Tunneling. Journal of Physical Chemistry C, 2008, 112, 3417-3422.	3.1	18
89	Frequency-Encoded Multicolor Fluorescence Imaging with Single-Photon-Counting Color-Blind Detection. Biophysical Journal, 2018, 115, 725-736.	0.5	16
90	Tailored interfaces for biosensors and cell-surface interaction studies via activation and derivatization of polystyrene-block-poly(tert-butyl acrylate) thin films. European Polymer Journal, 2007, 43, 2177-2190.	5.4	14

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91	Uncovering homo-and hetero-interactions on the cell membrane using single particle tracking approaches. Journal Physics D: Applied Physics, 2016, 49, 104002.	2.8	13
92	Visualising individual green fluorescent proteins with a near field optical microscope. Cytometry, 1999, 36, 239-246.	1.8	13
93	Dynamic Reâ€organization of Individual Adhesion Nanoclusters in Living Cells by Ligandâ€Patterned Surfaces. Small, 2009, 5, 1258-1263.	10.0	12
94	Biochemical and Imaging Methods to Study Receptor Membrane Organization and Association with Lipid Rafts. Methods in Cell Biology, 2013, 117, 105-122.	1.1	11
95	Nanoscale control of single molecule FÃ¶rster resonance energy transfer by a scanning photonic nanoantenna. Nanophotonics, 2020, 9, 4021-4031.	6.0	11
96	Shear forces induce ICAM-1 nanoclustering on endothelial cells that impact on T-cell migration. Biophysical Journal, 2021, 120, 2644-2656.	0.5	10
97	Nanophotonic approaches for nanoscale imaging and singleâ€molecule detection at ultrahigh concentrations. Microscopy Research and Technique, 2014, 77, 537-545.	2.2	8
98	Priming by Chemokines Restricts Lateral Mobility of the Adhesion Receptor LFA-1 and Restores Adhesion to ICAM-1 Nano-Aggregates on Human Mature Dendritic Cells. PLoS ONE, 2014, 9, e99589.	2.5	8
99	Altered CXCR4 dynamics at the cell membrane impairs directed cell migration in WHIM syndrome patients. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2119483119.	7.1	7
100	Lateral Mobility and Nanoscale Spatial Arrangement of Chemokine-activated Î±4Î²1 Integrins on T Cells. Journal of Biological Chemistry, 2016, 291, 21053-21062.	3.4	6
101	Design and implementation of a combined scanning tunneling and near-field optical microscope. Ultramicroscopy, 1995, 61, 253-258.	1.9	5
102	Inhomogeneous membrane receptor diffusion explained by a fractional heteroscedastic time series model. Physical Chemistry Chemical Physics, 2019, 21, 3114-3121.	2.8	5
103	Impact of Glycans on Lipid Membrane Dynamics at the Nanoscale Unveiled by Planar Plasmonic Nanogap Antennas and Atomic Force Spectroscopy. Journal of Physical Chemistry Letters, 2021, 12, 1175-1181.	4.6	5
104	On the way to a multi-task near field optical microscope: Simultaneous STM/SNOM and PSTM imaging. Microscopy Microanalysis Microstructures, 1994, 5, 399-407.	0.4	5
105	Ultrafast single-molecule photonics: Excited state dynamics in coherently coupled complexes. Journal of Luminescence, 2008, 128, 1050-1052.	3.1	4
106	Roadmap on bio-nano-photonics. Journal of Optics (United Kingdom), 2021, 23, 073001.	2.2	4
107	Probing the local field of nanoantennas using single particle luminescence. Journal of Physics: Conference Series, 2008, 100, 052038.	0.4	3
108	The Role of Nanophotonics in Regenerative Medicine. Methods in Molecular Biology, 2012, 811, 267-284.	0.9	3

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109	PLANT: A Method for Detecting Changes of Slope in Noisy Trajectories. Biophysical Journal, 2018, 114, 2044-2051.	0.5	3
110	Correlative nanophotonic approaches to enlighten the nanoscale dynamics of living cell membranes. Biochemical Society Transactions, 2021, 49, 2357-2369.	3.4	3
111	Looking at the photodynamics of individual fluorescent molecules and proteins. Pure and Applied Chemistry, 2001, 73, 431-434.	1.9	2
112	Meeting Report â€“ Visualizing signaling nanoplatforms at a higher spatiotemporal resolution. Journal of Cell Science, 2013, 126, 3817-3821.	2.0	2
113	Hotspots of GPI-Anchored Proteins and Integrin Nanoclusters Function as Nucleation Sites for Cell Adhesion. Biophysical Journal, 2010, 98, 577a.	0.5	1
114	Weak Ergodicity Breaking of Membrane Receptor Motion Stemming from Random Diffusivity. Biophysical Journal, 2015, 108, 418a.	0.5	1
115	Advances in nanophotonics: ultrafast & amp; ultrasensitive. , 0, , .		0
116	Optical tools for nanoscale imaging. New Biotechnology, 2009, 25, S26.	4.4	0
117	Near-Field Fluorescence Correlation Spectroscopy Approach to the Study of Living Cell Membrane Dynamics. Biophysical Journal, 2010, 98, 184a.	0.5	0
118	Near-Field Optical Nanoscopy of Biological Membranes. Springer Series on Fluorescence, 2012, , 339-363.	0.8	0
119	2.8 Super-Resolution Near-Field Optical Microscopy. , 2012, , 144-164.		0
120	Automated Algorithm for Quantitative Analysis of Fluorescence Nanoscopy Images. Biophysical Journal, 2013, 104, 668a.	0.5	0
121	The Neck Region Regulates Spatiotemporal Organization and Virus-Binding Capability of the Pathogen Recognition Receptor DC-Sign. Biophysical Journal, 2013, 104, 610a.	0.5	0
122	Integrating High-Resolution Bioimaging Techniques to Unravel How Membrane Lipids Influence Nanoscale Organization and Lateral Mobility of Adhesion Receptors. Biophysical Journal, 2013, 104, 612a.	0.5	0
123	Plasmonic nanoantennas for enhanced single molecule analysis at micromolar conentrations. , 2013, , .		0
124	Glycan-Based Connectivity Regulates the Hierarchical Organization of Membrane Receptors by Coupling their Micro- and Nano-Scale Lateral Mobility. Biophysical Journal, 2015, 108, 417a.	0.5	0
125	Editorial: ImmunoPhysics and ImmunoEngineering. Frontiers in Physics, 2020, 8, .	2.1	0
126	Single molecule femtosecond dynamics in an excitonicaly coupled system. , 2004, , .		0

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127	Single Molecule Pump-Probe Detection on Coupled Quantum Systems. , 2006, , .		0
128	Ultrafast spectroscopy of single molecules. Springer Series in Chemical Physics, 2007, , 231-233.	0.2	0
129	Near-Field Scanning Optical Microscopy of Biological Membranes. , 2011, , 185-207.		0
130	Individual green fluorescent proteins (GFP) studied by near-field optical microscopy. , 1999, , 89-92.		0
131	DNA-protein interactions: single molecule spectroscopy and imaging. , 1999, , 273-274.		0
132	Nanophotonic Approaches for Nanoscale Imaging and Single- Molecule Detection at Ultrahigh Concentrations. , 2014, , 474-493.		0
133	Nearâ€field optical microscopy for DNA studies at the single molecular level. Bioimaging, 1998, 6, 43-53.	1.3	0
134	Optical Probing of Single Fluorescent Molecules and Proteins. ChemPhysChem, 2001, 2, 347-360.	2.1	0