Erdinc Sezgin

List of Publications by Year
in descending order

93 papers	6,257 citations	109137 35 h-index	82410 72 g-index
127 all docs	127 docs citations	127 times ranked	7460 citing authors

#	Article	IF	Citations
1	The mystery of membrane organization: composition, regulation and roles of lipid rafts. Nature Reviews Molecular Cell Biology, 2017, 18, 361-374.	16.1	1,471
2	Elucidating membrane structure and protein behavior using giant plasma membrane vesicles. Nature Protocols, 2012, 7, 1042-1051.	5.5	461
3	Plasma membranes are asymmetric in lipid unsaturation, packing and protein shape. Nature Chemical Biology, 2020, 16, 644-652.	3.9	414
4	Partitioning, diffusion, and ligand binding of raft lipid analogs in model and cellular plasma membranes. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 1777-1784.	1.4	301
5	Scanning STED-FCS reveals spatiotemporal heterogeneity of lipid interaction in the plasma membrane of living cells. Nature Communications, 2014, 5, 5412.	5.8	257
6	Functional convergence of hopanoids and sterols in membrane ordering. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14236-14240.	3.3	154
7	Laurdan and Di-4-ANEPPDHQ probe different properties of the membrane. Journal Physics D: Applied Physics, 2017, 50, 134004.	1.3	119
8	Diffusion of lipids and GPI-anchored proteins in actin-free plasma membrane vesicles measured by STED-FCS. Molecular Biology of the Cell, 2017, 28, 1507-1518.	0.9	110
9	Infection with a Brazilian isolate of Zika virus generates RIGâ€I stimulatory RNA and the viral NS5 protein blocks type I IFN induction and signaling. European Journal of Immunology, 2018, 48, 1120-1136.	1.6	106
10	Mechanical properties of plasma membrane vesicles correlate with lipid order, viscosity and cell density. Communications Biology, 2019, 2, 337.	2.0	105
11	Regulation of lipid saturation without sensing membrane fluidity. Nature Communications, 2020, 11, 756.	5.8	105
12	Lypd6 Enhances Wnt/Î²-Catenin Signaling by Promoting Lrp6 Phosphorylation in Raft Plasma Membrane Domains. Developmental Cell, 2013, 26, 331-345.	3.1	101
13	Self-organizing actin patterns shape membrane architecture but not cell mechanics. Nature Communications, 2017, 8, 14347.	5.8	99
14	Spectral Imaging to Measure Heterogeneity in Membrane Lipid Packing. ChemPhysChem, 2015, 16, 1387-1394.	1.0	98
15	Bile Acids Modulate Signaling by Functional Perturbation of Plasma Membrane Domains. Journal of Biological Chemistry, 2013, 288, 35660-35670.	1.6	96
16	Adaptive Lipid Packing and Bioactivity in Membrane Domains. PLoS ONE, 2015, 10, e0123930.	1.1	96
17	Fluorescence Techniques to Study Lipid Dynamics. Cold Spring Harbor Perspectives in Biology, 2011, 3, a009803-a009803.	2.3	87
18	Measuring Lipid Packing of Model and Cellular Membranes with Environment Sensitive Probes. Langmuir, 2014, 30, 8160-8166.	1.6	86

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19	Model membrane platforms to study protein-membrane interactions. Molecular Membrane Biology, 2012, 29, 144-154.	2.0	83
20	A comparative study on fluorescent cholesterol analogs as versatile cellular reporters. Journal of Lipid Research, 2016, 57, 299-309.	2.0	78
21	Measuring nanoscale diffusion dynamics in cellular membranes with super-resolution STEDâ€“FCS. Nature Protocols, 2019, 14, 1054-1083.	5.5	76
22	Super-resolution optical microscopy for studying membrane structure and dynamics. Journal of Physics Condensed Matter, 2017, 29, 273001.	0.7	75
23	STED-FLCS: An Advanced Tool to Reveal Spatiotemporal Heterogeneity of Molecular Membrane Dynamics. Nano Letters, 2015, 15, 5912-5918.	4.5	71
24	A dynamic and adaptive network of cytosolic interactions governs protein export by the T3SS injectisome. Nature Communications, 2017, 8, 15940.	5.8	68
25	Interaction of gold nanoparticles with mitochondria. Colloids and Surfaces B: Biointerfaces, 2009, 71, 315-318.	2.5	65
26	Polarity-Sensitive Probes for Superresolution Stimulated Emission Depletion Microscopy. Biophysical Journal, 2017, 113, 1321-1330.	0.2	63
27	Penetration of Amphiphilic Quantum Dots through Model and Cellular Plasma Membranes. ACS Nano, 2012, 6, 2150-2156.	7.3	59
28	FoCuS-point: software for STED fluorescence correlation and time-gated single photon counting. Bioinformatics, 2016, 32, 958-960.	1.8	57
29	Electroformation of Giant Unilamellar Vesicles on Stainless Steel Electrodes. ACS Omega, 2017, 2, 994-1002.	1.6	53
30	Spironaphthoxazine switchable dyes for biological imaging. Chemical Science, 2018, 9, 3029-3040.	3.7	53
31	A straightforward approach for gated STED-FCS to investigate lipid membrane dynamics. Methods, 2015, 88, 67-75.	1.9	50
32	A bispecific monomeric nanobody induces spike trimer dimers and neutralizes SARS-CoV-2 in vivo. Nature Communications, 2022, 13, 155.	5.8	49
33	Binding of canonical Wnt ligands to their receptor complexes occurs in ordered plasma membrane environments. FEBS Journal, 2017, 284, 2513-2526.	2.2	45
34	Redesigning Solvatochromic Probe Laurdan for Imaging Lipid Order Selectively in Cell Plasma Membranes. Analytical Chemistry, 2020, 92, 14798-14805.	3.2	45
35	Modulation of the molecular arrangement in artificial and biological membranes by phospholipid-shelled microbubbles. Biomaterials, 2017, 113, 105-117.	5.7	44
36	Nanoscale dynamics of cholesterol in the cell membrane. Journal of Biological Chemistry, 2019, 294, 12599-12609.	1.6	44

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37	Influenza A viruses use multivalent sialic acid clusters for cell binding and receptor activation. PLoS Pathogens, 2020, 16, e1008656.	2.1	43
38	Photoswitchable Spiropyran Dyads for Biological Imaging. Organic Letters, 2016, 18, 3666-3669.	2.4	40
39	Regulatory TÂcell differentiation is controlled by Î±KG-induced alterations in mitochondrial metabolism and lipid homeostasis. Cell Reports, 2021, 37, 109911.	2.9	39
40	Nanoclusters of the resting T cell antigen receptor (TCR) localize to non-raft domains. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 802-809.	1.9	36
41	Phase Partitioning of GM1 and Its Bodipy-Labeled Analog Determine Their Different Binding to Cholera Toxin. Frontiers in Physiology, 2017, 8, 252.	1.3	34
42	How Does Liquid-Liquid Phase Separation in Model Membranes Reflect Cell Membrane Heterogeneity?. Membranes, 2021, 11, 323.	1.4	32
43	CD45 exclusionâ€" and cross-linkingâ€"based receptor signaling together broaden FcÎµRI reactivity. Science Signaling, 2018, 11, .	1.6	31
44	How to minimize dye-induced perturbations while studying biomembrane structure and dynamics: PEG linkers as a rational alternative. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 2436-2445.	1.4	31
45	Lipidâ€"Protein Interactions in Plasma Membrane Organization and Function. Annual Review of Biophysics, 2022, 51, 135-156.	4.5	30
46	HDL particles incorporate into lipid bilayers â€" a combined AFM and single molecule fluorescence microscopy study. Scientific Reports, 2017, 7, 15886.	1.6	29
47	Use of <scp>BODIPY</scp>â€Cholesterol (<scp>TF</scp>â€Chol) for Visualizing Lysosomal Cholesterol Accumulation. Traffic, 2016, 17, 1054-1057.	1.3	28
48	Nanoscale Spatiotemporal Diffusion Modes Measured by Simultaneous Confocal and Stimulated Emission Depletion Nanoscopy Imaging. Nano Letters, 2018, 18, 4233-4240.	4.5	28
49	Statistical Analysis of Scanning Fluorescence Correlation Spectroscopy Data Differentiates Free from Hindered Diffusion. ACS Nano, 2018, 12, 8540-8546.	7.3	27
50	Reconstitution of immune cell interactions in free-standing membranes. Journal of Cell Science, 2018, 132, .	1.2	25
51	Model membrane systems to reconstitute immune cell signaling. FEBS Journal, 2021, 288, 1070-1090.	2.2	25
52	Aggregation and mobility of membrane proteins interplay with local lipid order in the plasma membrane of T cells. FEBS Letters, 2021, 595, 2127-2146.	1.3	25
53	Maturation of Monocyte-Derived DCs Leads to Increased Cellular Stiffness, Higher Membrane Fluidity, and Changed Lipid Composition. Frontiers in Immunology, 2020, 11, 590121.	2.2	24
54	Reorganization of Lipid Diffusion by Myelin Basic Protein as Revealed by STED Nanoscopy. Biophysical Journal, 2016, 110, 2441-2450.	0.2	23

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55	Spectral imaging toolbox: segmentation, hyperstack reconstruction, and batch processing of spectral images for the determination of cell and model membrane lipid order. BMC Bioinformatics, 2017, 18, 254.	1.2	23
56	Complementary studies of lipid membrane dynamics using iSCAT and super-resolved fluorescence correlation spectroscopy. Journal Physics D: Applied Physics, 2018, 51, 235401.	1.3	23
57	Receptor-Independent Transfer of Low Density Lipoprotein Cargo to Biomembranes. Nano Letters, 2019, 19, 2562-2567.	4.5	23
58	Impact of Nanoscale Hindrances on the Relationship between Lipid Packing and Diffusion in Model Membranes. Journal of Physical Chemistry B, 2020, 124, 1487-1494.	1.2	23
59	z-STED Imaging and Spectroscopy to Investigate Nanoscale Membrane Structure and Dynamics. Biophysical Journal, 2020, 118, 2448-2457.	0.2	22
60	Long-term STED imaging of membrane packing and dynamics by exchangeable polarity-sensitive dyes. Biophysical Reports, 2021, 1, 100023.	0.7	19
61	Super-resolution RESOLFT microscopy of lipid bilayers using a fluorophore-switch dyad. Chemical Science, 2020, 11, 8955-8960.	3.7	18
62	Lipoprotein Particles Interact with Membranes and Transfer Their Cargo without Receptors. Biochemistry, 2020, 59, 4421-4428.	1.2	18
63	T-cell trans-synaptic vesicles are distinct and carry greater effector content than constitutive extracellular vesicles. Nature Communications, 2022, 13, .	5.8	18
64	Photoconversion of Bodipyâ€Labeled Lipid Analogues. ChemBioChem, 2013, 14, 695-698.	1.3	16
65	High photon count rates improve the quality of super-resolution fluorescence fluctuation spectroscopy. Journal Physics D: Applied Physics, 2020, 53, 164003.	1.3	15
66	Giant plasma membrane vesicles to study plasma membrane structure and dynamics. Biochimica Et Biophysica Acta - Biomembranes, 2022, 1864, 183857.	1.4	12
67	Membrane Nanoclustersâ€"Tails of the Unexpected. Cell, 2015, 161, 433-434.	13.5	10
68	More Favorable Palmitic Acid Over Palmitoleic Acid Modification of Wnt3 Ensures Its Localization and Activity in Plasma Membrane Domains. Frontiers in Cell and Developmental Biology, 2019, 7, 281.	1.8	10
69	Fluidity and Lipid Composition of Membranes of Peroxisomes, Mitochondria and the ER From Oleic Acid-Induced Saccharomyces cerevisiae. Frontiers in Cell and Developmental Biology, 2020, 8, 574363.	1.8	10
70	FOXN1 forms higher-order nuclear condensates displaced by mutations causing immunodeficiency. Science Advances, 2021, 7, eabj9247.	4.7	10
71	Impact of social contacts on SARS-CoV-2 exposure among healthcare workers. Occupational Medicine, 2022, 72, 10-16.	0.8	9
72	Influence of nanobody binding on fluorescence emission, mobility, and organization of GFP-tagged proteins. IScience, 2021, 24, 101891.	1.9	7

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73	Creating Supported Plasma Membrane Bilayers Using Acoustic Pressure. Membranes, 2020, 10, 30.	1.4	6
74	Single-Molecule, Super-Resolution, and Functional Analysis of G Protein-Coupled Receptor Behavior Within the T Cell Immunological Synapse. Frontiers in Cell and Developmental Biology, 2020, 8, 608484.	1.8	6
75	The chaperonin CCT8 controls proteostasis essential for T cell maturation, selection, and function. Communications Biology, 2021, 4, 681.	2.0	6
76	Nradd Acts as a Negative Feedback Regulator of Wnt/Î²-Catenin Signaling and Promotes Apoptosis. Biomolecules, 2021, 11, 100.	1.8	4
77	Understanding immune signaling using advanced imaging techniques. Biochemical Society Transactions, 2022, 50, 853-866.	1.6	4
78	Diffusion and interaction dynamics of the cytosolic peroxisomal import receptor PEX5. Biophysical Reports, 2022, 2, 100055.	0.7	4
79	STED-FCS Reveals Diffusional Heterogeneity of Lipids and GPI-Anchored Proteins in the Plasma Membrane and Actin Cytoskeleton Free Plasma Membrane Vesicles. Biophysical Journal, 2018, 114, 99a.	0.2	2
80	Editorial: The Role of Biomembranes and Biophysics in Immune Cell Signaling. Frontiers in Immunology, 2021, 12, 740373.	2.2	1
81	Partitioning, Diffusion, and Ligand Binding of Raft Lipid Analogs in Model and Cellular Plasma Membranes. Biophysical Journal, 2012, 102, 296a-297a.	0.2	0
82	HDL-Lipid Uptake is Regulated by Elastic Properties of the Plasma Membrane. Biophysical Journal, 2014, 106, 392a.	0.2	0
83	Membrane Nanoclustersâ€"Tails of the Unexpected. Cell, 2015, 161, 1472.	13.5	0
84	Receptor-Mediated HDL-Lipid Uptake is Regulated by Elastic Properties of the Plasma Membrane. Biophysical Journal, 2016, 110, 521a.	0.2	0
85	Membrane Heterogeneity and its Role in Immune Signaling Elucidated by Spectral Imaging. Biophysical Journal, 2016, 110, 190a.	0.2	0
86	Spectral STED Imaging of Cell Membranes. Biophysical Journal, 2018, 114, 16a.	0.2	0
87	Direct Visualization of Lipoprotein Mediated Cholesterol Transport at the Phospholipid Bilayer Interface. Biophysical Journal, 2018, 114, 347a-348a.	0.2	0
88	Cell-Like Mechanical Response in Passive Plasma Membrane Vesicles. Biophysical Journal, 2018, 114, 273a.	0.2	0
89	Triggering of the High-Affinity IgE Receptor in an Aggregation-Independent Manner. Biophysical Journal, 2018, 114, 108a-109a.	0.2	0
90	Advanced STED Microscopy of the Membrane Organization in Activating T-Cells. Biophysical Journal, 2018, 114, 99a.	0.2	0

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91	Rituximab capping triggers intracellular reorganization of B cells. Matters, 0, , .	1.0	0
92	Interferometric scattering (iSCAT) microscopy: studies of biological membrane dynamics. , 2018, , .		0
93	Uniting diversity to create a more inclusive academic environment. Journal of Cell Science, 2022, 135, .	1.2	0