Petra Schwille

List of Publications by Year in Descending Order

301 papers	20,648 citations	73 h-index	136 g-index
350 ext. papers	23,617 ext. citations	7.7 avg, IF	7.2 L-index

#	Paper	IF	Citations
301	Tracing back variations in archaeal ESCRT-based cell division to protein domain architectures.. *PLoS ONE*, **2022**, 17, e0266395	3.7	0
300	Dendrimersome synthetic cells harbor cell division machinery of bacteria.. *Advanced Materials*, **2022** , e2202364	24	1
299	3D printed protein-based robotic structures actuated by molecular motor assemblies. *Nature Materials*, **2022**, 21, 703-709	27	2
298	CTP-controlled liquid-liquid phase separation of ParB.. *Journal of Molecular Biology*, **2021**, 434, 167401	6.5	4
297	Design Features to Accelerate the Higher-Order Assembly of DNA Origami on Membranes. *Journal of Physical Chemistry B*, **2021**, 125, 13181-13191	3.4	0
296	Rapid Encapsulation of Reconstituted Cytoskeleton inside Giant Unilamellar Vesicles. *Journal of Visualized Experiments*, **2021**,	1.6	1
295	Calibration-free counting of low molecular copy numbers in single DNA-PAINT localization clusters. *Biophysical Reports*, **2021**, 1, 100032		1
294	Mass-sensitive particle tracking to elucidate the membrane-associated MinDE reaction cycle. *Nature Methods*, **2021**, 18, 1239-1246	21.6	6
293	Probing Biomolecular Interactions by a Pattern-Forming Peptide-Conjugate Sensor. *Bioconjugate Chemistry*, **2021**, 32, 172-181	6.3	
292	Increasing MinD$_B$ Membrane Affinity Yields Standing Wave Oscillations and Functional Gradients on Flat Membranes. *ACS Synthetic Biology*, **2021**, 10, 939-949	5.7	1
291	Reconstitution of contractile actomyosin rings in vesicles. *Nature Communications*, **2021**, 12, 2254	17.4	19
290	A diffusiophoretic mechanism for ATP-driven transport without motor proteins. *Nature Physics*, **2021**, 17, 850-858	16.2	9
289	Protein Reconstitution Inside Giant Unilamellar Vesicles. *Annual Review of Biophysics*, **2021**, 50, 525-548	21.1	12
288	FtsZ induces membrane deformations via torsional stress upon GTP hydrolysis. *Nature Communications*, **2021**, 12, 3310	17.4	6
287	Molecular-scale visualization of sarcomere contraction within native cardiomyocytes. *Nature Communications*, **2021**, 12, 4086	17.4	9
286	Reversible membrane deformations by straight DNA origami filaments. *Soft Matter*, **2021**, 17, 276-287	3.6	16
285	Fine-Tuning Protein Self-Organization by Orthogonal Chemo-Optogenetic Tools. *Angewandte Chemie - International Edition*, **2021**, 60, 4501-4506	16.4	4

284	Fine-Tuning Protein Self-Organization by Orthogonal Chemo-Optogenetic Tools. *Angewandte Chemie*, **2021**, 133, 4551-4556	3.6	2
283	Non-Equilibrium Large-Scale Membrane Transformations Driven by MinDE Biochemical Reaction Cycles. *Angewandte Chemie*, **2021**, 133, 6570-6576	3.6	
282	Non-Equilibrium Large-Scale Membrane Transformations Driven by MinDE Biochemical Reaction Cycles. *Angewandte Chemie - International Edition*, **2021**, 60, 6496-6502	16.4	4
281	Active shape oscillations of giant vesicles with cyclic closure and opening of membrane necks. *Soft Matter*, **2021**, 17, 319-330	3.6	9
280	Membrane-coated 3D architectures for bottom-up synthetic biology. *Soft Matter*, **2021**, 17, 5456-5466	3.6	1
279	De novo design of a reversible phosphorylation-dependent switch for membrane targeting. *Nature Communications*, **2021**, 12, 1472	17.4	6
278	Tracking single particles for hours via continuous DNA-mediated fluorophore exchange. *Nature Communications*, **2021**, 12, 4432	17.4	5
277	Hydration Layer of Only a Few Molecules Controls Lipid Mobility in Biomimetic Membranes. *Journal of the American Chemical Society*, **2021**, 143, 14551-14562	16.4	4
276	Actin crosslinker competition and sorting drive emergent GUV size-dependent actin network architecture. *Communications Biology*, **2021**, 4, 1136	6.7	7
275	Self-organized protein patterns: The MinCDE and ParABS systems. *Current Opinion in Cell Biology*, **2021**, 72, 106-115	9	3
274	Symmetry Breaking and Emergence of Directional Flows in Minimal Actomyosin Cortices. *Cells*, **2020**, 9,	7.9	4
273	Local Self-Enhancement of MinD Membrane Binding in Min Protein Pattern Formation. *Journal of Molecular Biology*, **2020**, 432, 3191-3204	6.5	6
272	Shaping Giant Membrane Vesicles in 3D-Printed Protein Hydrogel Cages. *Small*, **2020**, 16, e1906259	11	8
271	Phosphoinositides regulate force-independent interactions between talin, vinculin, and actin. *ELife*, **2020**, 9,	8.9	20
270	How Can Microfluidic and Microfabrication Approaches Make Experiments More Physiologically Relevant?. *Cell Systems*, **2020**, 11, 209-211	10.6	3
269	The speed of FtsZ treadmilling is tightly regulated by membrane binding. *Scientific Reports*, **2020**, 10, 10447	4.9	5
268	3D Printing: Shaping Giant Membrane Vesicles in 3D-Printed Protein Hydrogel Cages (Small 27/2020). *Small*, **2020**, 16, 2070151	11	
267	FtsZ Reorganization Facilitates Deformation of Giant Vesicles in Microfluidic Traps**. *Angewandte Chemie*, **2020**, 132, 21556-21560	3.6	0

266	FtsZ Reorganization Facilitates Deformation of Giant Vesicles in Microfluidic Traps*. *Angewandte Chemie - International Edition*, **2020**, 59, 21372-21376	16.4	8
265	Toward Absolute Molecular Numbers in DNA-PAINT. *Nano Letters*, **2019**, 19, 8182-8190	11.5	20
264	Cell-Free Protein Synthesis and Its Perspectives for Assembling Cells from the Bottom-Up. *Advanced Biology*, **2019**, 3, e1800322	3.5	15
263	Manfred Eigen (1927-2019). *Angewandte Chemie - International Edition*, **2019**, 58, 9323-9324	16.4	
262	Synthetic cell division via membrane-transforming molecular assemblies. *BMC Biology*, **2019**, 17, 43	7.3	30
261	Fluorescence Correlation Spectroscopy to Examine Protein-Lipid Interactions in Membranes. *Methods in Molecular Biology*, **2019**, 2003, 415-447	1.4	3
260	Bottom-up synthetic biology: reconstitution in space and time. *Current Opinion in Biotechnology*, **2019**, 60, 179-187	11.4	33
259	Design of Sealable Custom-Shaped Cell Mimicries Based on Self-Assembled Monolayers on CYTOP Polymer. *ACS Applied Materials & Interfaces*, **2019**, 11, 21372-21380	9.5	4
258	Temperature-sensitive protein expression in protocells. *Chemical Communications*, **2019**, 55, 6421-6424	5.8	9
257	124-Color Super-resolution Imaging by Engineering DNA-PAINT Blinking Kinetics. *Nano Letters*, **2019**, 19, 2641-2646	11.5	47
256	Flat-top TIRF illumination boosts DNA-PAINT imaging and quantification. *Nature Communications*, **2019**, 10, 1268	17.4	39
255	Cytoskeletal and Actin-Based Polymerization Motors and Their Role in Minimal Cell Design. *Advanced Biology*, **2019**, 3, e1800311	3.5	6
254	Functional Modules of Minimal Cell Division for Synthetic Biology. *Advanced Biology*, **2019**, 3, e1800315	3.5	7
253	More from less - bottom-up reconstitution of cell biology. *Journal of Cell Science*, **2019**, 132,	5.3	35
252	Heated gas bubbles enrich, crystallize, dry, phosphorylate and encapsulate prebiotic molecules. *Nature Chemistry*, **2019**, 11, 779-788	17.6	32
251	Reconstitution and Coupling of DNA Replication and Segregation in a Biomimetic System. *ChemBioChem*, **2019**, 20, 2633-2642	3.8	6
250	The E. coli MinCDE system in the regulation of protein patterns and gradients. *Cellular and Molecular Life Sciences*, **2019**, 76, 4245-4273	10.3	28
249	Optical manipulation of sphingolipid biosynthesis using photoswitchable ceramides. *ELife*, **2019**, 8,	8.9	12

248	Design of biochemical pattern forming systems from minimal motifs. *ELife*, **2019**, 8,	8.9	16
247	Physik und Leben **2019**, 273-282		
246	Division in synthetic cells. *Emerging Topics in Life Sciences*, **2019**, 3, 551-558	3.5	7
245	An order of magnitude faster DNA-PAINT imaging by optimized sequence design and buffer conditions. *Nature Methods*, **2019**, 16, 1101-1104	21.6	55
244	Single Particle Tracking and Super-Resolution Imaging of Membrane-Assisted Stop-and-Go Diffusion and Lattice Assembly of DNA Origami. *ACS Nano*, **2019**, 13, 996-1002	16.7	17
243	Stationary Patterns in a Two-Protein Reaction-Diffusion System. *ACS Synthetic Biology*, **2019**, 8, 148-157	5.7	19
242	In vitro reconstitution of the bacterial cytoskeleton: expected and unexpected new insights. *Microbial Biotechnology*, **2019**, 12, 74-76	6.3	0
241	Membrane sculpting by curved DNA origami scaffolds. *Nature Communications*, **2018**, 9, 811	17.4	105
240	MinE conformational switching confers robustness on self-organized Min protein patterns. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 4553-4558	11.5	43
239	Quantifying Reversible Surface Binding via Surface-Integrated Fluorescence Correlation Spectroscopy. *Nano Letters*, **2018**, 18, 3185-3192	11.5	27
238	Freeze-thaw cycles induce content exchange between cell-sized lipid vesicles. *New Journal of Physics*, **2018**, 20, 055008	2.9	25
237	Reverse and forward engineering of protein pattern formation. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2018**, 373,	5.8	8
236	Optical Control of a Biological Reaction□Diffusion System. *Angewandte Chemie*, **2018**, 130, 2386-2390	3.6	4
235	Optical Control of a Biological Reaction-Diffusion System. *Angewandte Chemie - International Edition*, **2018**, 57, 2362-2366	16.4	17
234	Photophysical Behavior of mNeonGreen, an Evolutionarily Distant Green Fluorescent Protein. *Biophysical Journal*, **2018**, 114, 2419-2431	2.9	10
233	FCS Analysis of Protein Mobility on Lipid Monolayers. *Biophysical Journal*, **2018**, 114, 2444-2454	2.9	5
232	There and back again: from the origin of life to single molecules. *European Biophysics Journal*, **2018**, 47, 493-498	1.9	5
231	MaxSynBio: Avenues Towards Creating Cells from the Bottom Up. *Angewandte Chemie - International Edition*, **2018**, 57, 13382-13392	16.4	155

230	Direct characterization of the evanescent field in objective-type total internal reflection fluorescence microscopy. *Optics Express*, **2018**, 26, 20492-20506	3.3	10
229	Myosin-II activity generates a dynamic steady state with continuous actin turnover in a minimal actin cortex. *Journal of Cell Science*, **2018**, 132,	5.3	23
228	High-Speed Atomic Force Microscopy Reveals the Inner Workings of the MinDE Protein Oscillator. *Nano Letters*, **2018**, 18, 288-296	11.5	20
227	Membrane association and remodeling by intraflagellar transport protein IFT172. *Nature Communications*, **2018**, 9, 4684	17.4	21
226	Tanzende Vesikel: Proteinoszillationen führen zu periodischer Membranverformung. *Angewandte Chemie*, **2018**, 130, 16522-16527	3.6	9
225	Protein Pattern Formation **2018**, 229-260		11
224	Plasmonic Nanosensors Reveal a Height Dependence of MinDE Protein Oscillations on Membrane Features. *Journal of the American Chemical Society*, **2018**, 140, 17901-17906	16.4	15
223	Photo-Induced Depletion of Binding Sites in DNA-PAINT Microscopy. *Molecules*, **2018**, 23,	4.8	23
222	The MinDE system is a generic spatial cue for membrane protein distribution in vitro. *Nature Communications*, **2018**, 9, 3942	17.4	27
221	Beating Vesicles: Encapsulated Protein Oscillations Cause Dynamic Membrane Deformations. *Angewandte Chemie - International Edition*, **2018**, 57, 16286-16290	16.4	82
220	Control of Membrane Binding and Diffusion of Cholesteryl-Modified DNA Origami Nanostructures by DNA Spacers. *Langmuir*, **2018**, 34, 14921-14931	4	23
219	Light-Induced Printing of Protein Structures on Membranes in Vitro. *Nano Letters*, **2018**, 18, 7133-7140	11.5	12
218	Switching protein patterns on membranes. *Current Opinion in Colloid and Interface Science*, **2018**, 38, 100-107	7.6	0
217	In Vitro Reconstitution of Self-Organizing Protein Patterns on Supported Lipid Bilayers. *Journal of Visualized Experiments*, **2018**,	1.6	11
216	Liposomes and polymersomes: a comparative review towards cell mimicking. *Chemical Society Reviews*, **2018**, 47, 8572-8610	58.5	458
215	MaxSynBio: Wege zur Synthese einer Zelle aus nicht lebenden Komponenten. *Angewandte Chemie*, **2018**, 130, 13566-13577	3.6	25
214	Treadmilling analysis reveals new insights into dynamic FtsZ ring architecture. *PLoS Biology*, **2018**, 16, e2004845	9.7	61
213	Reconstitution of Protein Dynamics Involved in Bacterial Cell Division. *Sub-Cellular Biochemistry*, **2017**, 84, 419-444	5.5	6

212	Large-scale modulation of reconstituted Min protein patterns and gradients by defined mutations in MinE3 membrane targeting sequence. *PLoS ONE*, **2017**, 12, e0179582	3.7	23
211	How Simple Could Life Be?. *Angewandte Chemie - International Edition*, **2017**, 56, 10998-11002	16.4	12
210	Wie einfach kann Leben sein?. *Angewandte Chemie*, **2017**, 129, 11142-11146	3.6	0
209	Biology and the art of abstraction. *Biophysical Reviews*, **2017**, 9, 273-275	3.7	2
208	Cell-free protein synthesis in micro compartments: building a minimal cell from biobricks. *New Biotechnology*, **2017**, 39, 199-205	6.4	34
207	Revolving around constriction by ESCRT-III. *Nature Cell Biology*, **2017**, 19, 754-756	23.4	2
206	Diffusion of Single-Pass Transmembrane Receptors: From the Plasma Membrane into Giant Liposomes. *Journal of Membrane Biology*, **2017**, 250, 393-406	2.3	10
205	Control of lipid domain organization by a biomimetic contractile actomyosin cortex. *ELife*, **2017**, 6,	8.9	27
204	Optical Control of Lipid Rafts with Photoswitchable Ceramides. *Journal of the American Chemical Society*, **2016**, 138, 12981-12986	16.4	46
203	Transport efficiency of membrane-anchored kinesin-1 motors depends on motor density and diffusivity. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E7185-E7193	11.5	41
202	Protein Patterns and Oscillations on Lipid Monolayers and in Microdroplets. *Angewandte Chemie*, **2016**, 128, 13653-13657	3.6	11
201	Innentitelbild: Protein Patterns and Oscillations on Lipid Monolayers and in Microdroplets (Angew. Chem. 43/2016). *Angewandte Chemie*, **2016**, 128, 13548-13548	3.6	
200	Single DNA molecules on freestanding and supported cationic lipid bilayers: diverse conformational dynamics controlled by the local bilayer properties. *Journal Physics D: Applied Physics*, **2016**, 49, 074001	3	7
199	Pattern formation on membranes and its role in bacterial cell division. *Current Opinion in Cell Biology*, **2016**, 38, 52-9	9	37
198	Coordinated recruitment of Spir actin nucleators and myosin V motors to Rab11 vesicle membranes. *ELife*, **2016**, 5,	8.9	36
197	Effect of anchor positioning on binding and diffusion of elongated 3D DNA nanostructures on lipid membranes. *Journal Physics D: Applied Physics*, **2016**, 49, 194001	3	24
196	DNA Nanostructures on Membranes as Tools for Synthetic Biology. *Biophysical Journal*, **2016**, 110, 1698-1707	3.7	62
195	Single Particle Plasmon Sensors as Label-Free Technique To Monitor MinDE Protein Wave Propagation on Membranes. *Nano Letters*, **2016**, 16, 3540-4	11.5	20

194	In vitro Reconstitution of a Membrane Switch Mechanism for the Polarity Protein LGL. *Journal of Molecular Biology*, **2016**, 428, 4828-4842	6.5	14
193	Protein Patterns and Oscillations on Lipid Monolayers and in Microdroplets. *Angewandte Chemie - International Edition*, **2016**, 55, 13455-13459	16.4	44
192	Membrane targeting of the Spir□formin actin nucleator complex requires a sequential handshake of polar interactions. *Journal of Biological Chemistry*, **2015**, 290, 6428-44	5.4	16
191	Amphipathic DNA Origami Nanoparticles to Scaffold and Deform Lipid Membrane Vesicles. *Angewandte Chemie*, **2015**, 127, 6601-6605	3.6	13
190	Reconstituting geometry-modulated protein patterns in membrane compartments. *Methods in Cell Biology*, **2015**, 128, 149-63	1.8	7
189	Amphipathic DNA origami nanoparticles to scaffold and deform lipid membrane vesicles. *Angewandte Chemie - International Edition*, **2015**, 54, 6501-5	16.4	73
188	Rekonstitution biologischer Selbstorganisation in vitro. *BioSpektrum*, **2015**, 21, 148-150	0.1	
187	FtsZ Polymers Tethered to the Membrane by ZipA Are Susceptible to Spatial Regulation by Min Waves. *Biophysical Journal*, **2015**, 108, 2371-83	2.9	22
186	Cytoskeletal pinning controls phase separation in multicomponent lipid membranes. *Biophysical Journal*, **2015**, 108, 1104-13	2.9	39
185	Essential role of endocytosis for interleukin-4-receptor-mediated JAK/STAT signalling. *Journal of Cell Science*, **2015**, 128, 3781-95	5.3	36
184	Jump-starting life? Fundamental aspects of synthetic biology. *Journal of Cell Biology*, **2015**, 210, 687-90	7.3	27
183	Introducing a fluorescence-based standard to quantify protein partitioning into membranes. *Biochimica Et Biophysica Acta - Biomembranes*, **2015**, 1848, 2932-41	3.8	7
182	DNA origami nanoneedles on freestanding lipid membranes as a tool to observe isotropic-nematic transition in two dimensions. *Nano Letters*, **2015**, 15, 649-55	11.5	39
181	Diffusion coefficients and dissociation constants of enhanced green fluorescent protein binding to free standing membranes. *Data in Brief*, **2015**, 5, 537-41	1.2	2
180	Petra Schwille: Taking a minimalist approach to membranes. *Journal of Cell Biology*, **2015**, 209, 320-1	7.3	
179	Adaptive lipid packing and bioactivity in membrane domains. *PLoS ONE*, **2015**, 10, e0123930	3.7	70
178	Bacterial cell division: a swirling ring to rule them all?. *Current Biology*, **2014**, 24, R157-9	6.3	7
177	Cross-linked and pH sensitive supported polymer bilayers from polymersomes - studies concerning thickness, rigidity and fluidity. *Soft Matter*, **2014**, 10, 75-82	3.6	15

176	Surface topology assisted alignment of Min protein waves. *FEBS Letters*, **2014**, 588, 2545-9	3.8	24
175	Fluorescence fluctuation microscopy: a diversified arsenal of methods to investigate molecular dynamics inside cells. *Current Opinion in Structural Biology*, **2014**, 28, 69-76	8.1	19
174	Asymmetric supported lipid bilayer formation via methyl-ßcyclodextrin mediated lipid exchange: influence of asymmetry on lipid dynamics and phase behavior. *Langmuir*, **2014**, 30, 7475-84	4	44
173	Toward Spatially Regulated Division of Protocells: Insights into the E. coli Min System from in Vitro Studies. *Life*, **2014**, 4, 915-28	3	14
172	MinCDE exploits the dynamic nature of FtsZ filaments for its spatial regulation. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, E1192-200	11.5	52
171	ESCRT-III mediated cell division in Sulfolobus acidocaldarius - a reconstitution perspective. *Frontiers in Microbiology*, **2014**, 5, 257	5.7	10
170	PyCorrFit-generic data evaluation for fluorescence correlation spectroscopy. *Bioinformatics*, **2014**, 30, 2532-3	7.2	56
169	Dynamics and interaction of interleukin-4 receptor subunits in living cells. *Biophysical Journal*, **2014**, 107, 2515-27	2.9	31
168	Reconstitution of cytoskeletal protein assemblies for large-scale membrane transformation. *Current Opinion in Chemical Biology*, **2014**, 22, 18-26	9.7	37
167	Reconstitution of self-organizing protein gradients as spatial cues in cell-free systems. *ELife*, **2014**, 3,	8.9	99
166	Author response: Reconstitution of self-organizing protein gradients as spatial cues in cell-free systems **2014**,		3
165	Single-stranded nucleic acids promote SAMHD1 complex formation. *Journal of Molecular Medicine*, **2013**, 91, 759-70	5.5	62
164	A monolayer assay tailored to investigate lipid-protein systems. *ChemPhysChem*, **2013**, 14, 1877-81	3.2	9
163	Lypd6 enhances Wnt/ßcatenin signaling by promoting Lrp6 phosphorylation in raft plasma membrane domains. *Developmental Cell*, **2013**, 26, 331-45	10.2	72
162	The design of MACs (minimal actin cortices). *Cytoskeleton*, **2013**, 70, 706-17	2.4	21
161	High-resolution three-photon biomedical imaging using doped ZnS nanocrystals. *Nature Materials*, **2013**, 12, 359-66	27	218
160	Rekonstitution der Pol-zu-Pol-Oszillationen von Min-Proteinen in mikrotechnisch hergestellten Polydimethylsiloxan-Kammern. *Angewandte Chemie*, **2013**, 125, 477-481	3.6	7
159	Reconstitution of pole-to-pole oscillations of min proteins in microengineered polydimethylsiloxane compartments. *Angewandte Chemie - International Edition*, **2013**, 52, 459-62	16.4	79

158	Multimerizable HIV Gag derivative binds to the liquid-disordered phase in model membranes. *Cellular Microbiology*, **2013**, 15, 237-47	3.9	24
157	Influence of glycosaminoglycans on lipid dynamics in supported phospholipid bilayers. *Soft Matter*, **2013**, 9, 3859	3.6	9
156	Loss-of-function mutations in the IL-21 receptor gene cause a primary immunodeficiency syndrome. *Journal of Experimental Medicine*, **2013**, 210, 433-43	16.6	156
155	Dual-color fluorescence cross-correlation spectroscopy with continuous laser excitation in a confocal setup. *Methods in Enzymology*, **2013**, 518, 43-70	1.7	18
154	Lateral membrane diffusion modulated by a minimal actin cortex. *Biophysical Journal*, **2013**, 104, 1465-75	2.9	65
153	Photoconversion of bodipy-labeled lipid analogues. *ChemBioChem*, **2013**, 14, 695-8	3.8	15
152	Switchable domain partitioning and diffusion of DNA origami rods on membranes. *Faraday Discussions*, **2013**, 161, 31-43; discussion 113-50	3.6	57
151	MinC, MinD, and MinE drive counter-oscillation of early-cell-division proteins prior to Escherichia coli septum formation. *MBio*, **2013**, 4, e00856-13	7.8	34
150	Membrane binding of MinE allows for a comprehensive description of Min-protein pattern formation. *PLoS Computational Biology*, **2013**, 9, e1003347	5	50
149	Propagation of MinCDE waves on free-standing membranes. *Environmental Microbiology*, **2013**, 15, 3319-26	5.2	16
148	Caspase-8 binding to cardiolipin in giant unilamellar vesicles provides a functional docking platform for bid. *PLoS ONE*, **2013**, 8, e55250	3.7	21
147	Myosin motors fragment and compact membrane-bound actin filaments. *ELife*, **2013**, 2, e00116	8.9	95
146	Cholesterol and sphingomyelin drive ligand-independent T-cell antigen receptor nanoclustering. *Journal of Biological Chemistry*, **2012**, 287, 42664-74	5.4	98
145	Excitation spectra and brightness optimization of two-photon excited probes. *Biophysical Journal*, **2012**, 102, 934-44	2.9	76
144	Effect of temperature on the formation of liquid phase-separating giant unilamellar vesicles (GUV). *Chemistry and Physics of Lipids*, **2012**, 165, 630-7	3.7	12
143	Efficient electroformation of supergiant unilamellar vesicles containing cationic lipids on ITO-coated electrodes. *Langmuir*, **2012**, 28, 5518-21	4	50
142	Penetration of amphiphilic quantum dots through model and cellular plasma membranes. *ACS Nano* , **2012**, 6, 2150-6	16.7	56
141	Quantifying lipid diffusion by fluorescence correlation spectroscopy: a critical treatise. *Langmuir*, **2012**, 28, 13395-404	4	34

140	Functional convergence of hopanoids and sterols in membrane ordering. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 14236-40	11.5	122
139	Geometry sensing by self-organized protein patterns. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 15283-8	11.5	93
138	Model membrane platforms to study protein-membrane interactions. *Molecular Membrane Biology*, **2012**, 29, 144-54	3.4	58
137	Partitioning, diffusion, and ligand binding of raft lipid analogs in model and cellular plasma membranes. *Biochimica Et Biophysica Acta - Biomembranes*, **2012**, 1818, 1777-84	3.8	258
136	Surface Topology Engineering of Membranes for the Mechanical Investigation of the Tubulin Homologue FtsZ. *Angewandte Chemie*, **2012**, 124, 12028-12032	3.6	4
135	Surface topology engineering of membranes for the mechanical investigation of the tubulin homologue FtsZ. *Angewandte Chemie - International Edition*, **2012**, 51, 11858-62	16.4	48
134	The role of lipids in VDAC oligomerization. *Biophysical Journal*, **2012**, 102, 523-31	2.9	82
133	Minimal systems to study membrane-cytoskeleton interactions. *Current Opinion in Biotechnology*, **2012**, 23, 758-65	11.4	36
132	Towards a bottom-up reconstitution of bacterial cell division. *Trends in Cell Biology*, **2012**, 22, 634-43	18.3	49
131	Translational and rotational diffusion of micrometer-sized solid domains in lipid membranes. *Soft Matter*, **2012**, 8, 7552	3.6	50
130	Elucidating membrane structure and protein behavior using giant plasma membrane vesicles. *Nature Protocols*, **2012**, 7, 1042-51	18.8	323
129	Fluorescence correlation spectroscopy. *BioEssays*, **2012**, 34, 361-8	4.1	172
128	Long-range transport of giant vesicles along microtubule networks. *ChemPhysChem*, **2012**, 13, 1001-6	3.2	21
127	Correcting for spectral cross-talk in dual-color fluorescence cross-correlation spectroscopy. *ChemPhysChem*, **2012**, 13, 1221-31	3.2	35
126	Intracellular localization and routing of miRNA and RNAi pathway components. *Current Topics in Medicinal Chemistry*, **2012**, 12, 79-88	3	43
125	Near-critical fluctuations and cytoskeleton-assisted phase separation lead to subdiffusion in cell membranes. *Biophysical Journal*, **2011**, 100, 80-9	2.9	89
124	Asymmetric GUVs prepared by MβCD-mediated lipid exchange: an FCS study. *Biophysical Journal*, **2011**, 100, L1-3	2.9	98
123	Fluorescence cross-correlation spectroscopy reveals mechanistic insights into the effect of 2PO-methyl modified siRNAs in living cells. *Biophysical Journal*, **2011**, 100, 2981-90	2.9	10

122	Single cell analysis of ligand binding and complex formation of interleukin-4 receptor subunits. *Biophysical Journal*, **2011**, 101, 2360-9	2.9	28
121	Protein self-organization: lessons from the min system. *Annual Review of Biophysics*, **2011**, 40, 315-36	21.1	98
120	Circular scanning fluorescence correlation spectroscopy on membranes. *Optics Express*, **2011**, 19, 25006-21	3.5	12
119	Anti-HIV-1 antibodies 2F5 and 4E10 interact differently with lipids to bind their epitopes. *Aids*, **2011**, 25, 419-28	3.5	17
118	Min protein patterns emerge from rapid rebinding and membrane interaction of MinE. *Nature Structural and Molecular Biology*, **2011**, 18, 577-83	17.6	136
117	Oligomerization and pore formation by equinatoxin II inhibit endocytosis and lead to plasma membrane reorganization. *Journal of Biological Chemistry*, **2011**, 286, 37768-77	5.4	46
116	Time correlated fluorescence characterization of an asymmetrically focused flow in a microfluidic device. *Microfluidics and Nanofluidics*, **2011**, 10, 551-561	2.8	9
115	Protein-membrane interactions: the virtue of minimal systems in systems biology. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2011**, 3, 269-80	6.6	15
114	FRET and FCS--friends or foes?. *ChemPhysChem*, **2011**, 12, 532-41	3.2	25
113	Preparation of micrometer-sized free-standing membranes. *ChemPhysChem*, **2011**, 12, 2568-71	3.2	29
112	Bottom-up synthetic biology: engineering in a tinkerer's world. *Science*, **2011**, 333, 1252-4	33.3	165
111	Fluorescence techniques to study lipid dynamics. *Cold Spring Harbor Perspectives in Biology*, **2011**, 3, a009803	18.3	64
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5	Actin crosslinker competition and sorting drive emergent GUV size-dependent actin network architecture		3
4	Bidirectional FtsZ filament treadmilling transforms lipid membranes via torsional stress		6
3	Microfluidic trapping of vesicles reveals membrane-tension dependent FtsZ cytoskeletal re-organisation		1
2	Mass-sensitive particle tracking (MSPT) to elucidate the membrane-associated MinDE reaction cycle		1
1	Hydration layer of only few molecules controls lipid mobility in biomimetic membranes		1