List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Giant Vesicles: Preparations and Applications. ChemBioChem, 2010, 11, 848-865.	2.6	624
2	Approaches to semi-synthetic minimal cells: a review. Die Naturwissenschaften, 2006, 93, 1-13.	1.6	415
3	Gene-Expressing Liposomes as Synthetic Cells for Molecular Communication Studies. Frontiers in Bioengineering and Biotechnology, 2019, 7, 1.	4.1	247
4	A synthetic biology approach to the construction of membrane proteins in semi-synthetic minimal cells. Biochimica Et Biophysica Acta - Biomembranes, 2009, 1788, 567-574.	2.6	216
5	Achievements and open questions in the self-reproduction of vesicles and synthetic minimal cells. Chemical Communications, 2010, 46, 3639.	4.1	204
6	Compartmentalized reactions as a case of soft-matter biotechnology: synthesis of proteins and nucleic acids inside lipid vesicles. Journal of Materials Chemistry, 2011, 21, 18887.	6.7	135
7	The Minimal Size of Liposomeâ€Based Model Cells Brings about a Remarkably Enhanced Entrapment and Protein Synthesis. ChemBioChem, 2009, 10, 1056-1063.	2.6	128
8	Spontaneous Protein Crowding in Liposomes: A New Vista for the Origin of Cellular Metabolism. ChemBioChem, 2010, 11, 1989-1992.	2.6	115
9	Semi-synthetic minimal cells: origin and recent developments. Current Opinion in Biotechnology, 2013, 24, 633-638.	6.6	115
10	Emergent properties arising from the assembly of amphiphiles. Artificial vesicle membranes as reaction promoters and regulators. Chemical Communications, 2014, 50, 10177-10197.	4.1	115
11	Permeability changes induced by 130 GHz pulsed radiation on cationic liposomes loaded with carbonic anhydrase. Bioelectromagnetics, 2007, 28, 587-598.	1.6	106
12	Highly oriented photosynthetic reaction centers generate a proton gradient in synthetic protocells. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3837-3842.	7.1	102
13	Giant Vesicles "Colonies― A Model for Primitive Cell Communities. ChemBioChem, 2012, 13, 1497-1502.	2.6	95
14	Novel Camptothecin Analogue (Gimatecan) ontaining Liposomes Prepared by the Ethanol Injection Method. Journal of Liposome Research, 2004, 14, 87-109.	3.3	90
15	Synthetic cells produce a quorum sensing chemical signal perceived by <i>Pseudomonas aeruginosa</i> . Chemical Communications, 2018, 54, 2090-2093.	4.1	89
16	Serâ€His catalyses the formation of peptides and PNAs. FEBS Letters, 2009, 583, 153-156.	2.8	81
17	A Possible Route to Prebiotic Vesicle Reproduction. Artificial Life, 2004, 10, 297-308.	1.3	74
18	Bacterial Division Proteins FtsZ and ZipA Induce Vesicle Shrinkage and Cell Membrane Invagination. Journal of Biological Chemistry, 2013, 288, 26625-26634.	3.4	71

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19	A plant spermine oxidase/dehydrogenase regulated by the proteasome and polyamines. Journal of Experimental Botany, 2014, 65, 1585-1603.	4.8	71
20	Spontaneous Crowding of Ribosomes and Proteins inside Vesicles: A Possible Mechanism for the Origin of Cell Metabolism. ChemBioChem, 2011, 12, 2325-2330.	2.6	69
21	Chemical approaches to synthetic biology. Current Opinion in Biotechnology, 2009, 20, 492-497.	6.6	65
22	A Remarkable Selfâ€Organization Process as the Origin of Primitive Functional Cells. Angewandte Chemie - International Edition, 2013, 52, 13397-13400.	13.8	62
23	Is Research on "Synthetic Cells―Moving to the Next Level?. Life, 2019, 9, 3.	2.4	58
24	Investigation ofde novo Totally Random Biosequences, Part II. Chemistry and Biodiversity, 2006, 3, 840-859.	2.1	56
25	Semi-synthetic minimal cells as a tool for biochemical ICT. BioSystems, 2012, 109, 24-34.	2.0	56
26	An Amphotericin B–Fluorescein Conjugate as a Powerful Probe for Biochemical Studies of the Membrane. Angewandte Chemie - International Edition, 2004, 43, 5181-5185.	13.8	53
27	Insights into the self-reproduction of oleate vesicles. Journal of Physics Condensed Matter, 2006, 18, S2231-S2238.	1.8	47
28	Minimal cell mimicry. Nature Chemistry, 2011, 3, 755-756.	13.6	46
29	Chromatophores efficiently promote light-driven ATP synthesis and DNA transcription inside hybrid multicompartment artificial cells. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	46
30	Human Serum Albumin Is an Essential Component of the Host Defense Mechanism Against Clostridium difficile Intoxication. Journal of Infectious Diseases, 2018, 218, 1424-1435.	4.0	45
31	Gene Expression Inside Liposomes: From Early Studies to Current Protocols. Chemistry - A European Journal, 2019, 25, 7798-7814.	3.3	44
32	Structure and Enzymatic Properties of Molecular Dendronized Polymer–Enzyme Conjugates and Their Entrapment inside Giant Vesicles. Langmuir, 2013, 29, 10831-10840.	3.5	40
33	Lecithinâ€Based Waterâ€Inâ€Oil Compartments as Dividing Bioreactors. ChemBioChem, 2007, 8, 1965-1973.	2.6	38
34	Small and Random Peptides: An Unexplored Reservoir of Potentially Functional Primitive Organocatalysts. The Case of Seryl-Histidine. Life, 2017, 7, 19.	2.4	38
35	Minimal cells: Relevance and interplay of physical and biochemical factors. Biotechnology Journal, 2011, 6, 850-859.	3.5	37
36	Characterization of a Lysine-Specific Histone Demethylase from Arabidopsis thaliana. Biochemistry, 2008, 47, 4936-4947.	2.5	36

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37	Spontaneous Encapsulation and Concentration of Biological Macromolecules in Liposomes: An Intriguing Phenomenon and Its Relevance in Origins of Life. Journal of Molecular Evolution, 2014, 79, 179-192.	1.8	36
38	Probing mammalian spermine oxidase enzyme–substrate complex through molecular modeling, site-directed mutagenesis and biochemical characterization. Amino Acids, 2011, 40, 1115-1126.	2.7	35
39	Reactivity and fusion between cationic vesicles and fatty acid anionic vesicles. Journal of Colloid and Interface Science, 2010, 345, 561-565.	9.4	34
40	From Never Born Proteins to Minimal Living Cells: Two Projects in Synthetic Biology. Origins of Life and Evolution of Biospheres, 2007, 36, 605-616.	1.9	33
41	Vesicle Behavior: In Search of Explanations. Journal of Physical Chemistry B, 2008, 112, 14655-14664.	2.6	33
42	The Arabidopsis polyamine oxidase/dehydrogenase 5 interferes with cytokinin and auxin signaling pathways to control xylem differentiation. Journal of Experimental Botany, 2017, 68, 997-1012.	4.8	33
43	Recent Biophysical Issues About the Preparation of Solute-Filled Lipid Vesicles. Mechanics of Advanced Materials and Structures, 2015, 22, 748-759.	2.6	31
44	Crude phosphorylation mixtures containing racemic lipid amphiphiles self-assemble to give stable primitive compartments. Scientific Reports, 2017, 7, 18106.	3.3	31
45	Extrinsic stochastic factors (solute partition) in gene expression inside lipid vesicles and lipid-stabilized water-in-oil droplets: a review. Synthetic Biology, 2018, 3, ysy011.	2.2	31
46	A Simple Protein Synthesis Model for the PURE System Operation. Bulletin of Mathematical Biology, 2015, 77, 1185-1212.	1.9	30
47	Vesicle aggregates as a model for primitive cellular assemblies. Physical Chemistry Chemical Physics, 2017, 19, 20082-20092.	2.8	30
48	Characterization of the emergent properties of a synthetic quasi-cellular system. BMC Bioinformatics, 2012, 13, S9.	2.6	28
49	On the "Life-Likeness―of Synthetic Cells. Frontiers in Bioengineering and Biotechnology, 2020, 8, 953.	4.1	27
50	Physical Routes to Primitive Cells: An Experimental Model Based on the Spontaneous Entrapment of Enzymes inside Micrometer-Sized Liposomes. Life, 2015, 5, 969-996.	2.4	25
51	Amphotericin B as a Potential Probe of the Physical State of Vesicle Membranes. Organic Letters, 2004, 6, 3683-3686.	4.6	24
52	Protocells Models in Origin of Life and Synthetic Biology. Life, 2015, 5, 1700-1702.	2.4	24
53	Synthetic Biology and Artificial Intelligence: Grounding a Cross-Disciplinary Approach to the Synthetic Exploration of (Embodied) Cognition. Complex Systems, 2018, 27, 199-228.	0.3	24
54	Experiments on and Numerical Modeling of the Capture and Concentration of Transcription-Translation Machinery inside Vesicles. Artificial Life, 2015, 21, 445-463.	1.3	23

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55	Condensed DNA in Lipid Microcompartments. Journal of Physical Chemistry B, 2005, 109, 19929-19935.	2.6	22
56	A synthetic biology approach to bio-chem-ICT: first moves towards chemical communication between synthetic and natural cells. Natural Computing, 2014, 13, 333-349.	3.0	22
57	Antioxidant activity of hydroxytyrosyl esters studied in liposome models. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 600-610.	2.6	21
58	Quasi-cellular systems: stochastic simulation analysis at nanoscale range. BMC Bioinformatics, 2013, 14, S7.	2.6	19
59	Recent Theoretical Approaches to Minimal Artificial Cells. Entropy, 2014, 16, 2488-2511.	2.2	19
60	First moves towards photoautotrophic synthetic cells: In vitro study of photosynthetic reaction centre and cytochrome bc 1 complex interactions. Biophysical Chemistry, 2017, 229, 46-56.	2.8	19
61	Kinetic models for autopoietic chemical systems: the role of fluctuations in a homeostatic regime. Physical Biology, 2010, 7, 016010.	1.8	18
62	Encapsulation of Ferritin, Ribosomes, and Ribo-Peptidic Complexes Inside Liposomes: Insights Into the Origin of Metabolism. Origins of Life and Evolution of Biospheres, 2012, 42, 421-428.	1.9	18
63	Synthetic biology of minimal living cells: primitive cell models and semi-synthetic cells. Systems and Synthetic Biology, 2010, 4, 149-156.	1.0	17
64	The Rise of the Nested Multicompartment Model in Synthetic Cell Research. Frontiers in Molecular Biosciences, 2021, 8, 750576.	3.5	17
65	Effect of Tryptophan Oligopeptides on the Size Distribution of POPC Liposomes: A Dynamic Light Scattering and Turbidimetric Study. Journal of Liposome Research, 2005, 15, 29-47.	3.3	16
66	A novel strategy for bioconjugation: synthesis and preliminary evaluation with amphotericin B. Organic and Biomolecular Chemistry, 2007, 5, 1339.	2.8	16
67	Nuclear Shield: A Multi-Enzyme Task-Force for Nucleus Protection. PLoS ONE, 2010, 5, e14125.	2.5	16
68	Biosynthesis of Proteins Inside Liposomes. Methods in Molecular Biology, 2010, 606, 127-145.	0.9	16
69	A Wetware Embodied AI? Towards an Autopoietic Organizational Approach Grounded in Synthetic Biology. Frontiers in Bioengineering and Biotechnology, 2021, 9, 724023.	4.1	16
70	New Class of Aggregates in Aqueous Solution:Â An NMR, Thermodynamic, and Dynamic Light Scattering Study. Langmuir, 2006, 22, 6031-6041.	3.5	15
71	Basic Questions About the Origins of Life: Proceedings of the Erice International School of Complexity (Fourth Course). Origins of Life and Evolution of Biospheres, 2007, 37, 303-307.	1.9	15
72	Approaches to chemical synthetic biology. FEBS Letters, 2012, 586, 2138-2145.	2.8	15

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73	ldentification of an estrogen receptor alpha non-covalent ubiquitin binding surface: role in 17beta-estradiol-induced transcriptional activity. Journal of Cell Science, 2013, 126, 2577-82.	2.0	15
74	Chemical synthetic biology: a mini-review. Frontiers in Microbiology, 2013, 4, 285.	3.5	15
75	New Insights into the Growth and Transformation of Vesicles: A Free-Flow Electrophoresis Study. Journal of Physical Chemistry B, 2015, 119, 12212-12223.	2.6	15
76	Xanthium strumariumL. Extracts Produce DNA Damage Mediated by Cytotoxicity inIn VitroAssays but Does Not Induce Micronucleus in Mice. BioMed Research International, 2014, 2014, 1-8.	1.9	14
77	OPEN QUESTIONS IN ORIGIN OF LIFE: EXPERIMENTAL STUDIES ON THE ORIGIN OF NUCLEIC ACIDS AND PROTEINS WITH SPECIFIC AND FUNCTIONAL SEQUENCES BY A CHEMICAL SYNTHETIC BIOLOGY APPROACH. Computational and Structural Biotechnology Journal, 2014, 9, e201402004.	4.1	14
78	Racemic Phospholipids for Origin of Life Studies. Symmetry, 2020, 12, 1108.	2.2	14
79	Synthetic Cells Engaged in Molecular Communication: An Opportunity for Modelling Shannon- and Semantic-Information in the Chemical Domain. Frontiers in Communications and Networks, 2021, 2, .	3.0	14
80	A hydrophobic disordered peptide spontaneously anchors a covalently bound RNA hairpin to giant lipidic vesicles. Organic and Biomolecular Chemistry, 2014, 12, 6363-6373.	2.8	13
81	Do protocells preferentially retain macromolecular solutes upon division/fragmentation? A study based on the extrusion of POPC giant vesicles. Integrative Biology (United Kingdom), 2018, 10, 6-17.	1.3	13
82	Rapid purification of giant lipid vesicles by microfiltration. PLoS ONE, 2018, 13, e0192975.	2.5	13
83	Chemical Neural Networks Inside Synthetic Cells? A Proposal for Their Realization and Modeling. Frontiers in Bioengineering and Biotechnology, 0, 10, .	4.1	13
84	Question 7: New Aspects of Interactions Among Vesicles. Origins of Life and Evolution of Biospheres, 2007, 37, 439-444.	1.9	12
85	Computing with bacterial constituents, cells and populations: from bioputing to bactoputing. Theory in Biosciences, 2011, 130, 211-228.	1.4	12
86	Design and biophysical characterization of atrazine-sensing peptides mimicking the Chlamydomonas reinhardtii plastoquinone binding niche. Physical Chemistry Chemical Physics, 2013, 15, 13108.	2.8	12
87	Spontaneous Overcrowding in Liposomes as Possible Origin of Metabolism. Origins of Life and Evolution of Biospheres, 2014, 44, 313-317.	1.9	12
88	Xanthium strumarium extract inhibits mammalian cell proliferation through mitotic spindle disruption mediated by xanthatin. Journal of Ethnopharmacology, 2016, 194, 781-788.	4.1	12
89	Extremely High Frequency Electromagnetic Fields Facilitate Electrical Signal Propagation by Increasing Transmembrane Potassium Efflux in an Artificial Axon Model. Scientific Reports, 2018, 8, 9299.	3.3	12
90	Synthesis and Investigation of Tryptophan–Amphotericin B Conjugates. ChemBioChem, 2009, 10, 1617-1620.	2.6	11

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91	The Glu216/Ser218 pocket is a major determinant of spermine oxidase substrate specificity. Biochemical Journal, 2014, 461, 453-459.	3.7	11
92	Stability of spermine oxidase to thermal and chemical denaturation: comparison with bovine serum amine oxidase. Amino Acids, 2016, 48, 2283-2291.	2.7	11
93	Permeability Changes of Cationic Liposomes Loaded with Carbonic Anhydrase Induced by Millimeter Waves Radiation. Radiation Research, 2012, 178, 437-446.	1.5	10
94	Chemical communication between synthetic and natural cells: a possible experimental design Electronic Proceedings in Theoretical Computer Science, EPTCS, 2013, 130, 14-26.	0.8	9
95	Engineering Enzyme-Driven Dynamic Behaviour in Lipid Vesicles. Communications in Computer and Information Science, 2016, , 197-208.	0.5	9
96	Measurement and Numerical Modeling of Cell-Free Protein Synthesis: Combinatorial Block-Variants of the PURE System. Data, 2018, 3, 41.	2.3	9
97	Molecular Communications in the Context of "Synthetic Cells―Research. IEEE Transactions on Nanobioscience, 2019, 18, 43-50.	3.3	9
98	A two-enzyme cascade reaction consisting of two reaction pathways. Studies in bulk solution for understanding the performance of a flow-through device with immobilised enzymes. RSC Advances, 2020, 10, 18655-18676.	3.6	9
99	Lysozyme Effect on Oleic Acid/Oleate Vesicles. Journal of Liposome Research, 2006, 16, 143-154.	3.3	8
100	Novel directions in molecular systems design: The case of light-transducing synthetic cells. Communicative and Integrative Biology, 2017, 10, e1365993.	1.4	8
101	Approaches to Molecular Communication Between Synthetic Compartments Based on Encapsulated Chemical Oscillators. Communications in Computer and Information Science, 2014, , 58-74.	0.5	8
102	Exploring Information and Communication Theories for Synthetic Cell Research. Frontiers in Bioengineering and Biotechnology, 0, 10, .	4.1	8
103	Inducible expression of maize polyamine oxidase in the nucleus of MCF-7 human breast cancer cells confers sensitivity to etoposide. Amino Acids, 2008, 34, 403-412.	2.7	7
104	Self-Reproduction of Micelles, Reverse Micelles, and Vesicles. Behavior Research Methods, 2008, 7, 221-263.	4.0	7
105	Protein Synthesis in Subâ€Micrometer Waterâ€inâ€Oil Droplets. ChemBioChem, 2015, 16, 2073-2079.	2.6	7
106	What can synthetic biology offer to artificial intelligence (and vice versa)?. BioSystems, 2016, 148, 1-3.	2.0	7
107	Synthetic biology and (embodied) artificial intelligence: opportunities and challenges. Adaptive Behavior, 2018, 26, 41-44.	1.9	7
108	Understanding Embodied Cognition by Building Models of Minimal Life. Communications in Computer and Information Science, 2018, , 73-87.	0.5	6

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109	On the Construction of Minimal Cell Models in Synthetic Biology and Origins of Life Studies. , 2011, , 337-368.		5
110	The atypical retinoid E-3-(3'-Adamantan-1-yl-4'-methoxybiphenyl-4-yl)-2-propenoic acid (ST1898) displays comedolytic activity in the rhino mouse model. European Journal of Dermatology, 2012, 22, 505-511.	0.6	5
111	Approaches to the Construction of the Minimal Cell. Advances in Science and Technology, 2008, 58, 10-19.	0.2	3
112	Philosophical and scientific perspectives on emergence. SynthÃ^se, 2012, 185, 165-169.	1.1	3
113	Editorial overview: Synthetic Biology. Current Opinion in Chemical Biology, 2014, 22, v-vii.	6.1	3
114	Spectroscopic and calorimetric characterization of spermine oxidase and its association forms. Biochemical Journal, 2017, 474, 4253-4268.	3.7	3
115	Current Directions in Synthetic Cell Research. Lecture Notes in Bioengineering, 2018, , 141-154.	0.4	3
116	Molecular Communication Technology: General Considerations on the Use of Synthetic Cells and Some Hints from In Silico Modelling. Communications in Computer and Information Science, 2014, , 169-189.	0.5	3
117	Towards the Engineering of Chemical Communication Between Semi-Synthetic and Natural Cells. , 2014, , 91-104.		3
118	Preparation methods for giant unilamellar vesicles. , 2019, , 3-20.		3
119	An Amphotericin B-Fluorescein Conjugate as a Powerful Probe for Biochemical Studies of the Membrane. Angewandte Chemie - International Edition, 2004, 43, 5428-5428.	13.8	2
120	Pacific oyster polyamine oxidase: a protein missing link in invertebrate evolution. Amino Acids, 2015, 47, 949-961.	2.7	2
121	Advances in Artificial Life, Evolutionary Computation and Systems Chemistry. Communications in Computer and Information Science, 2016, , .	0.5	2
122	Charge Recombination Kinetics of Bacterial Photosynthetic Reaction Centres Reconstituted in Liposomes: Deterministic Versus Stochastic Approach. Data, 2020, 5, 53.	2.3	2
123	Towards Autopoietic SB-AI. , 2021, , .		2
124	Modelling Giant Lipid Vesicles Designed for Light Energy Transduction. Lecture Notes in Bioengineering, 2018, , 97-109.	0.4	2
125	Effect of Tryptophan Oligopeptides on the Size Distribution of POPC Liposomes: A Dynamic Light Scattering and Turbidimetric Study. Journal of Liposome Research, 2005, 15, 29-47.	3.3	1

Approaches to semi-synthetic minimal cells: a review. , 0, , 272-288.

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127	Advances in Minimal Cell Models: a New Approach to Synthetic Biology and Origin of Life. , 0, , .		1
128	Semi-Synthetic Minimal Cells. , 2013, , 261-276.		1
129	Interfacing Synthetic Cells with Biological Cells: An Application of the Synthetic Method. , 2018, , .		1
130	Frontispiece: Gene Expression Inside Liposomes: From Early Studies to Current Protocols. Chemistry - A European Journal, 2019, 25, .	3.3	1
131	Giant Vesicles as Compartmentalized Bio-reactors: A 3D Modelling Approach. Communications in Computer and Information Science, 2016, , 184-196.	0.5	1
132	From Cells as Computation to Cells as Apps. IFIP Advances in Information and Communication Technology, 2016, , 116-130.	0.7	1
133	New and Unexpected Insights on the Formation of Protocells from a Synthetic Biology Approach: The Case of Entrapment of Biomacromolecules and Protein Synthesis Inside Vesicles. , 2011, , 195-216.		1
134	Self-Reproduction of Vesicles and Other Compartments. , 2008, , 681-701.		0
135	2P-239 Cell-free expression of phospholipid-synthesizing membrane proteins in the interior of liposomes(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S112.	0.1	0
136	SEMI-SYNTHETIC MINIMAL CELLS. , 2009, , .		0
137	Small-size wire phantom to study the effect of MMW on nerve fibre. , 2016, , .		0
138	Organocatalytic stereoselective epoxidation of alphaâ€alkylidene oxindoles using alpha,alphaâ€diphenylprolinol in liposome membrane. ChemCatChem, 2018, 11, 974.	3.7	0
139	Towards the Synthesis of Photo-Autotrophic Protocells. Lecture Notes in Computer Science, 2019, , 186-199.	1.3	0
140	Exploiting the photoactivity of bacterial reaction center to investigate liposome dynamics. Photochemical and Photobiological Sciences, 2021, 20, 321-326.	2.9	0
141	Toward artificial cells/living cells communication in hybrid ensembles. , 2021, , .		0
142	Recent advancements in synthetic cells research. , 0, , .		0
143	Chapter 11. Chemical synthetic biology projects: never born biopolymers and synthetic cells. Synthetic Biology, 2014, , 292-329.	0.2	0
144	Minimal Cellular Models for Origins-of-Life Studies and Biotechnology. Springer Series in Biophysics, 2017, , 177-219.	0.4	0

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145	Synthetic Biology and Artificial Intelligence: Toward Cross-Fertilization. Complex Systems, 2018, 27, i-vii.	0.3	0
146	Chemical Exchanges and Actuation in Liposome-Based Synthetic Cells: Interaction with Biological Cells. Lecture Notes in Computer Science, 2019, , 145-158.	1.3	0
147	Experimental Evidences Suggest High Between-Vesicle Diversity of Artificial Vesicle Populations: Results, Models and Implications. Lecture Notes in Computer Science, 2019, , 171-185.	1.3	0
148	Single Compartment Approach for Assembling Photosynthetic Protocells. Lecture Notes in Bioengineering, 2020, , 223-232.	0.4	0
149	Trends and Outlooks in Synthetic Biology: A Special Issue for Celebrating 10 Years of Life and Its Landmarks. Life, 2022, 12, 181.	2.4	0