Shu-ou Shan

List of Publications by Year
in descending order

85 papers	3,902 citations	117625 34 h-index	138484 58 g-index
89 all docs	89 docs citations	89 times ranked	2813 citing authors

#	Article	IF	Citations
1	Signal Recognition Particle: An Essential Protein-Targeting Machine. Annual Review of Biochemistry, 2013, 82, 693-721.	11.1	376
2	Substrate twinning activates the signal recognition particle and its receptor. Nature, 2004, 427, 215-221.	27.8	270
3	Role of SRP RNA in the GTPase Cycles of Ffh and FtsY. Biochemistry, 2001, 40, 15224-15233.	2.5	137
4	The Crystal Structure of the Signal Recognition Particle in Complex with Its Receptor. Science, 2011, 331, 881-886.	12.6	132
5	Coâ€translational protein targeting by the signal recognition particle. FEBS Letters, 2005, 579, 921-926.	2.8	122
6	Mechanisms of Tail-Anchored Membrane Protein Targeting and Insertion. Annual Review of Cell and Developmental Biology, 2017, 33, 417-438.	9.4	101
7	Multiple conformational switches in a GTPase complex control co-translational protein targeting. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1754-1759.	7.1	95
8	Mechanism of Association and Reciprocal Activation of Two GTPases. PLoS Biology, 2004, 2, e320.	5.6	94
9	Sequential Checkpoints Govern Substrate Selection During Cotranslational Protein Targeting. Science, 2010, 328, 757-760.	12.6	94
10	Molecular Mechanism of Coâ€translational Protein Targeting by the Signal Recognition Particle. Traffic, 2011, 12, 535-542.	2.7	83
11	The Mitochondrial Fission Receptor MiD51 Requires ADP as a Cofactor. Structure, 2014, 22, 367-377.	3.3	79
12	Fidelity of Cotranslational Protein Targeting by the Signal Recognition Particle. Annual Review of Biophysics, 2014, 43, 381-408.	10.0	73
13	Unraveling the interface of signal recognition particle and its receptor by using chemical cross-linking and tandem mass spectrometry. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 16454-16459.	7.1	72
14	Demonstration of a Multistep Mechanism for Assembly of the SRPÂ·SRP Receptor Complex: Implications for the Catalytic Role of SRP RNA. Journal of Molecular Biology, 2008, 381, 581-593.	4.2	71
15	Multiple selection filters ensure accurate tail-anchored membrane protein targeting. ELife, 2016, 5, .	6.0	71
16	Cryo-EM structure of the E. coli translating ribosome in complex with SRP and its receptor. Nature Structural and Molecular Biology, 2011, 18, 88-90.	8.2	69
17	Activated GTPase movement on an RNA scaffold drives co-translational protein targeting. Nature, 2012, 492, 271-275.	27.8	69
18	ATP-independent reversal of a membrane protein aggregate by a chloroplast SRP subunit. Nature Structural and Molecular Biology, 2010, 17, 696-702.	8.2	68

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19	A Selective Small Molecule DNA2 Inhibitor for Sensitization of Human Cancer Cells to Chemotherapy. EBioMedicine, 2016, 6, 73-86.	6.1	68
20	Conformational changes in the GTPase modules of the signal reception particle and its receptor drive initiation of protein translocation. Journal of Cell Biology, 2007, 178, 611-620.	5.2	66
21	Impaired Cleavage of Preproinsulin Signal Peptide Linked to Autosomal-Dominant Diabetes. Diabetes, 2012, 61, 828-837.	0.6	61
22	Co-translational protein targeting to the bacterial membrane. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 1433-1441.	4.1	56
23	Inefficient Translocation of Preproinsulin Contributes to Pancreatic Î² Cell Failure and Late-onset Diabetes. Journal of Biological Chemistry, 2014, 289, 16290-16302.	3.4	55
24	Induced nucleotide specificity in a GTPase. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 4480-4485.	7.1	52
25	Structure of the quaternary complex between SRP, SR, and translocon bound to the translating ribosome. Nature Communications, 2017, 8, 15470.	12.8	52
26	Crystal structure of ATP-bound Get3â€“Get4â€“Get5 complex reveals regulation of Get3 by Get4. Nature Structural and Molecular Biology, 2014, 21, 437-442.	8.2	51
27	Precise timing of ATPase activation drives targeting of tail-anchored proteins. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7666-7671.	7.1	48
28	Structure of a prehandover mammalian ribosomal SRPÂ·SRP receptor targeting complex. Science, 2018, 360, 323-327.	12.6	47
29	SecYEG activates GTPases to drive the completion of cotranslational protein targeting. Journal of Cell Biology, 2013, 200, 397-405.	5.2	46
30	Chloroplast SRP43 acts as a chaperone for glutamyl-tRNA reductase, the rate-limiting enzyme in tetrapyrrole biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3588-E3596.	7.1	45
31	Lipid activation of the signal recognition particle receptor provides spatial coordination of protein targeting. Journal of Cell Biology, 2010, 190, 623-635.	5.2	44
32	Transient tether between the SRP RNA and SRP receptor ensures efficient cargo delivery during cotranslational protein targeting. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7698-7703.	7.1	44
33	The Structural Basis of FtsY Recruitment and GTPase Activation by SRP RNA. Molecular Cell, 2013, 52, 643-654.	9.7	44
34	Mechanism of signal sequence handover from NAC to SRP on ribosomes during ER-protein targeting. Science, 2022, 375, 839-844.	12.6	43
35	Efficient Interaction between Two GTPases Allows the Chloroplast SRP Pathway to Bypass the Requirement for an SRP RNA. Molecular Biology of the Cell, 2007, 18, 2636-2645.	2.1	41
36	Substrate relay in an Hsp70â€cochaperone cascade safeguards tailâ€anchored membrane protein targeting. EMBO Journal, 2018, 37, .	7.8	41

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37	ATPase and GTPase Tangos Drive Intracellular Protein Transport. Trends in Biochemical Sciences, 2016, 41, 1050-1060.	7.5	38
38	A ribosome-associated chaperone enables substrate triage in a cotranslational protein targeting complex. Nature Communications, 2020, 11, 5840.	12.8	36
39	Site-Specific Fluorescent Labeling of Nascent Proteins on the Translating Ribosome. Journal of the American Chemical Society, 2011, 133, 14936-14939.	13.7	35
40	Differential gradients of interaction affinities drive efficient targeting and recycling in the GET pathway. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E4929-35.	7.1	34
41	Signal Recognition Particle (SRP) and SRP Receptor: A New Paradigm for Multistate Regulatory GTPases. Biochemistry, 2009, 48, 6696-6704.	2.5	33
42	Regulation of cargo recognition, commitment, and unloading drives cotranslational protein targeting. Journal of Cell Biology, 2014, 205, 693-706.	5.2	33
43	Conformational dynamics of a membrane protein chaperone enables spatially regulated substrate capture and release. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1615-24.	7.1	33
44	Translation Elongation Regulates Substrate Selection by the Signal Recognition Particle. Journal of Biological Chemistry, 2012, 287, 7652-7660.	3.4	32
45	Regulation by a chaperone improves substrate selectivity during cotranslational protein targeting. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E3169-78.	7.1	31
46	SecA mediates cotranslational targeting and translocation of an inner membrane protein. Journal of Cell Biology, 2017, 216, 3639-3653.	5.2	31
47	Structure of the Chloroplast Signal Recognition Particle (SRP) Receptor: Domain Arrangement Modulates SRPâ€“Receptor Interaction. Journal of Molecular Biology, 2008, 375, 425-436.	4.2	29
48	Direct visualization reveals dynamics of a transient intermediate during protein assembly. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6450-6455.	7.1	29
49	Synergistic actions between the SRP RNA and translating ribosome allow efficient delivery of the correct cargos during cotranslational protein targeting. Rna, 2011, 17, 892-902.	3.5	26
50	Ribosomeâ€“SRPâ€“FtsY cotranslational targeting complex in the closed state. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3943-3948.	7.1	26
51	Chloroplast SRP43 autonomously protects chlorophyll biosynthesis proteins against heat shock. Nature Plants, 2021, 7, 1420-1432.	9.3	26
52	Molecular Mechanism of GTPase Activation at the Signal Recognition Particle (SRP) RNA Distal End. Journal of Biological Chemistry, 2013, 288, 36385-36397.	3.4	25
53	Mechanism of an ATP-independent Protein Disaggregase. Journal of Biological Chemistry, 2013, 288, 13431-13445.	3.4	25
54	The molecular mechanism of cotranslational membrane protein recognition and targeting by SecA. Nature Structural and Molecular Biology, 2019, 26, 919-929.	8.2	25

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55	Molecular mechanism of cargo recognition and handover by the mammalian signal recognition particle. Cell Reports, 2021, 36, 109350.	6.4	23
56	A Chaperone Lid Ensures Efficient and Privileged Client Transfer during Tail-Anchored Protein Targeting. Cell Reports, 2019, 26, 37-44.e7.	6.4	22
57	Sequential activation of human signal recognition particle by the ribosome and signal sequence drives efficient protein targeting. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E5487-E5496.	7.1	21
58	Guiding tail-anchored membrane proteins to the endoplasmic reticulum in a chaperone cascade. Journal of Biological Chemistry, 2019, 294, 16577-16586.	3.4	20
59	Molecular Crosstalk between the Nucleotide Specificity Determinant of the SRP GTPase and the SRP Receptor. Biochemistry, 2005, 44, 6214-6222.	2.5	18
60	Novel Proteomic Tools Reveal Essential Roles of SRP and Importance of Proper Membrane Protein Biogenesis. Molecular and Cellular Proteomics, 2012, 11, M111.011585.	3.8	18
61	Mechanism of an ATP-independent Protein Disaggregase. Journal of Biological Chemistry, 2013, 288, 13420-13430.	3.4	17
62	A Distinct Mechanism to Achieve Efficient Signal Recognition Particle (SRP)â€“SRP Receptor Interaction by the Chloroplast SRP Pathway. Molecular Biology of the Cell, 2009, 20, 3965-3973.	2.1	16
63	Structural basis of signal sequence surveillance and selection by the SRPâ€“FtsY complex. Nature Structural and Molecular Biology, 2013, 20, 604-610.	8.2	16
64	Timing and specificity of cotranslational nascent protein modification in bacteria. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23050-23060.	7.1	15
65	Mechanism of Assembly of a Substrate Transfer Complex during Tail-anchored Protein Targeting. Journal of Biological Chemistry, 2015, 290, 30006-30017.	3.4	14
66	A protean clamp guides membrane targeting of tail-anchored proteins. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8585-E8594.	7.1	14
67	Receptor compaction and GTPase rearrangement drive SRP-mediated cotranslational protein translocation into the ER. Science Advances, 2021, 7, .	10.3	14
68	J-domain proteins promote client relay from Hsp70 during tail-anchored membrane protein targeting. Journal of Biological Chemistry, 2021, 296, 100546.	3.4	14
69	Fidelity of Cotranslational Protein Targeting to the Endoplasmic Reticulum. International Journal of Molecular Sciences, 2022, 23, 281.	4.1	14
70	A tale of two GTPases in cotranslational protein targeting. Protein Science, 2011, 20, 1790-1795.	7.6	12
71	A molecular recognition feature mediates ribosome-induced SRP-receptor assembly during protein targeting. Journal of Cell Biology, 2019, 218, 3307-3319.	5.2	12
72	Fingerloop activates cargo delivery and unloading during cotranslational protein targeting. Molecular Biology of the Cell, 2013, 24, 63-73.	2.1	11

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73	Analyzing Single-Molecule Protein Transportation Experiments via Hierarchical Hidden Markov Models. Journal of the American Statistical Association, 2016, 111, 951-966.	3.1	11
74	Anionic Phospholipids and the Albino3 Translocase Activate Signal Recognition Particle-Receptor Interaction during Light-harvesting Chlorophyll a/b-binding Protein Targeting. Journal of Biological Chemistry, 2017, 292, 397-406.	3.4	11
75	Concerted Complex Assembly and GTPase Activation in the Chloroplast Signal Recognition Particle. Biochemistry, 2011, 50, 7208-7217.	2.5	9
76	Co-evolution of Two GTPases Enables Efficient Protein Targeting in an RNA-less Chloroplast Signal Recognition Particle Pathway. Journal of Biological Chemistry, 2017, 292, 386-396.	3.4	9
77	Ribosome profiling reveals multiple roles of SecA in cotranslational protein export. Nature Communications, 2022, 13, .	12.8	9
78	Two distinct sites of client protein interaction with the chaperone cpSRP43. Journal of Biological Chemistry, 2018, 293, 8861-8873.	3.4	8
79	A Disorder-to-Order Transition Activates an ATP-Independent Membrane Protein Chaperone. Journal of Molecular Biology, 2020, 432, 166708.	4.2	8
80	Two-step membrane binding by the bacterial SRP receptor enable efficient and accurate Co-translational protein targeting. ELife, 2017, 6, .	6.0	7
81	<i>In vitro</i> Assays for Targeting and Insertion of Tailâ€Anchored Proteins Into the ER Membrane. Current Protocols in Cell Biology, 2018, 81, e63.	2.3	3
82	Ribosome-nascent Chain Interaction Regulates N-terminal Protein Modification. Journal of Molecular Biology, 2022, 434, 167535.	4.2	3
83	System-wide analyses reveal essential roles of N-terminal protein modification in bacterial membrane integrity. IScience, 2022, 25, 104756.	4.1	3
84	Subunit cooperation in the Get1/2 receptor promotes tail-anchored membrane protein insertion. Journal of Cell Biology, 2021, 220, .	5.2	2
85	Activated GTPase movement on an RNA scaffold drives cotranslational protein targeting. FASEB Journal, 2013, 27, 556.3.	0.5	0