

Georg Meisl

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5536259/publications.pdf>

Version: 2024-02-01

79
papers

5,853
citations

94269

37
h-index

88477

70
g-index

97
all docs

97
docs citations

97
times ranked

5350
citing authors

#	ARTICLE	IF	CITATIONS
1	Microfluidic characterisation reveals broad range of SARS-CoV-2 antibody affinity in human plasma. <i>Life Science Alliance</i> , 2022, 5, e202101270.	1.3	24
2	The C-terminal tail of $\hat{\pm}$ -synuclein protects against aggregate replication but is critical for oligomerization. <i>Communications Biology</i> , 2022, 5, 123.	2.0	30
3	The Pathological G51D Mutation in Alpha-Synuclein Oligomers Confers Distinct Structural Attributes and Cellular Toxicity. <i>Molecules</i> , 2022, 27, 1293.	1.7	6
4	Microfluidic Antibody Affinity Profiling Reveals the Role of Memory Reactivation and Cross-Reactivity in the Defense Against SARS-CoV-2. <i>ACS Infectious Diseases</i> , 2022, 8, 790-799.	1.8	8
5	Scaling analysis reveals the mechanism and rates of prion replication in vivo. <i>Nature Structural and Molecular Biology</i> , 2021, 28, 365-372.	3.6	22
6	Kinetic analysis reveals that independent nucleation events determine the progression of polyglutamine aggregation in <i>C. elegans</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	13
7	Antibody Affinity Governs the Inhibition of SARS-CoV-2 Spike/ACE2 Binding in Patient Serum. <i>ACS Infectious Diseases</i> , 2021, 7, 2362-2369.	1.8	32
8	Pulsed Hydrogen- $\hat{\pm}$ Deuterium Exchange Reveals Altered Structures and Mechanisms in the Aggregation of Familial Alzheimer- $\hat{\pm}$ s Disease Mutants. <i>ACS Chemical Neuroscience</i> , 2021, 12, 1972-1982.	1.7	7
9	Super-resolution imaging reveals $\hat{\pm}$ -synuclein seeded aggregation in SH-SY5Y cells. <i>Communications Biology</i> , 2021, 4, 613.	2.0	26
10	Squalamine and Its Derivatives Modulate the Aggregation of Amyloid- $\hat{\pm}$ 2 and $\hat{\pm}$ -Synuclein and Suppress the Toxicity of Their Oligomers. <i>Frontiers in Neuroscience</i> , 2021, 15, 680026.	1.4	34
11	Alpha Synuclein only Forms Fibrils In Vitro when Larger than its Critical Size of 70 Monomers. <i>ChemBioChem</i> , 2021, 22, 2867-2871.	1.3	10
12	Mechanism of Secondary Nucleation at the Single Fibril Level from Direct Observations of A $\hat{\pm}$ 242 Aggregation. <i>Journal of the American Chemical Society</i> , 2021, 143, 16621-16629.	6.6	38
13	The binding of the small heat-shock protein $\hat{\pm}$ B-crystallin to fibrils of $\hat{\pm}$ -synuclein is driven by entropic forces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	15
14	In situ kinetic measurements of $\hat{\pm}$ -synuclein aggregation reveal large population of short-lived oligomers. <i>PLoS ONE</i> , 2021, 16, e0245548.	1.1	16
15	Kinetic and Thermodynamic Driving Factors in the Assembly of Phenylalanine-Based Modules. <i>ACS Nano</i> , 2021, 15, 18305-18311.	7.3	19
16	In vivo rate-determining steps of tau seed accumulation in Alzheimer- $\hat{\pm}$ s disease. <i>Science Advances</i> , 2021, 7, eabh1448.	4.7	70
17	Surface-Catalyzed Secondary Nucleation Dominates the Generation of Toxic IAPP Aggregates. <i>Frontiers in Molecular Biosciences</i> , 2021, 8, 757425.	1.6	24
18	Proliferation of Tau 304- $\hat{\pm}$ 380 Fragment Aggregates through Autocatalytic Secondary Nucleation. <i>ACS Chemical Neuroscience</i> , 2021, 12, 4406-4415.	1.7	19

#	ARTICLE	IF	CITATIONS
19	$\hat{\pm}$ -Synuclein strains target distinct brain regions and cell types. <i>Nature Neuroscience</i> , 2020, 23, 21-31.	7.1	195
20	Kinetic fingerprints differentiate the mechanisms of action of anti- $\hat{\pm}$ antibodies. <i>Nature Structural and Molecular Biology</i> , 2020, 27, 1125-1133.	3.6	123
21	Thermodynamic and kinetic design principles for amyloid-aggregation inhibitors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 24251-24257.	3.3	49
22	Kinetic diversity of amyloid oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 12087-12094.	3.3	103
23	Templating S100A9 amyloids on $\hat{\pm}$ fibrillar surfaces revealed by charge detection mass spectrometry, microscopy, kinetic and microfluidic analyses. <i>Chemical Science</i> , 2020, 11, 7031-7039.	3.7	20
24	Identification of on- and off-pathway oligomers in amyloid fibril formation. <i>Chemical Science</i> , 2020, 11, 6236-6247.	3.7	64
25	The Influence of Pathogenic Mutations in $\hat{\pm}$ -Synuclein on Biophysical and Structural Characteristics of Amyloid Fibrils. <i>ACS Nano</i> , 2020, 14, 5213-5222.	7.3	58
26	The molecular processes underpinning prion-like spreading and seed amplification in protein aggregation. <i>Current Opinion in Neurobiology</i> , 2020, 61, 58-64.	2.0	26
27	Autoantibodies against the prion protein in individuals with <i>PRNP</i> mutations. <i>Neurology</i> , 2020, 95, e2028-e2037.	1.5	7
28	The catalytic nature of protein aggregation. <i>Journal of Chemical Physics</i> , 2020, 152, 045101.	1.2	24
29	Transthyretin Inhibits Primary and Secondary Nucleations of Amyloid- $\hat{\pm}$ Peptide Aggregation and Reduces the Toxicity of Its Oligomers. <i>Biomacromolecules</i> , 2020, 21, 1112-1125.	2.6	59
30	Dynamics of oligomer populations formed during the aggregation of Alzheimer's $\hat{\pm}$ 242 peptide. <i>Nature Chemistry</i> , 2020, 12, 445-451.	6.6	223
31	Effects of sedimentation, microgravity, hydrodynamic mixing and air-water interface on $\hat{\pm}$ -synuclein amyloid formation. <i>Chemical Science</i> , 2020, 11, 3687-3693.	3.7	18
32	Ultrastructural evidence for self-replication of Alzheimer-associated $\hat{\pm}$ 242 amyloid along the sides of fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 11265-11273.	3.3	37
33	The role of fibril structure and surface hydrophobicity in secondary nucleation of amyloid fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 25272-25283.	3.3	58
34	Autocatalytic amplification of Alzheimer-associated $\hat{\pm}$ 242 peptide aggregation in human cerebrospinal fluid. <i>Communications Biology</i> , 2019, 2, 365.	2.0	46
35	Plant Polyphenols Inhibit Functional Amyloid and Biofilm Formation in <i>Pseudomonas</i> Strains by Directing Monomers to Off-Pathway Oligomers. <i>Biomolecules</i> , 2019, 9, 659.	1.8	30
36	Mechanism of Fibril and Soluble Oligomer Formation in Amyloid Beta and Hen Egg White Lysozyme Proteins. <i>Journal of Physical Chemistry B</i> , 2019, 123, 5678-5689.	1.2	20

#	ARTICLE	IF	CITATIONS
37	Direct observation of prion protein oligomer formation reveals an aggregation mechanism with multiple conformationally distinct species. <i>Chemical Science</i> , 2019, 10, 4588-4597.	3.7	22
38	A method of predicting the in vitro fibril formation propensity of A ²⁴⁰ mutants based on their inclusion body levels in <i>E. coli</i> . <i>Scientific Reports</i> , 2019, 9, 3680.	1.6	6
39	Increased Secondary Nucleation Underlies Accelerated Aggregation of the Four-Residue N-Terminally Truncated A ²⁴² Species A ²⁵⁴ . <i>ACS Chemical Neuroscience</i> , 2019, 10, 2374-2384.	1.7	16
40	Physical Determinants of Amyloid Assembly in Biofilm Formation. <i>MBio</i> , 2019, 10, .	1.8	66
41	Trodusquemine enhances A ²⁴² aggregation but suppresses its toxicity by displacing oligomers from cell membranes. <i>Nature Communications</i> , 2019, 10, 225.	5.8	111
42	Dynamics and Control of Peptide Self-Assembly and Aggregation. <i>Advances in Experimental Medicine and Biology</i> , 2019, 1174, 1-33.	0.8	6
43	Chemical Kinetics for Bridging Molecular Mechanisms and Macroscopic Measurements of Amyloid Fibril Formation. <i>Annual Review of Physical Chemistry</i> , 2018, 69, 273-298.	4.8	161
44	On-chip measurements of protein unfolding from direct observations of micron-scale diffusion. <i>Chemical Science</i> , 2018, 9, 3503-3507.	3.7	11
45	Microfluidic Diffusion Platform for Characterizing the Sizes of Lipid Vesicles and the Thermodynamics of Protein-Lipid Interactions. <i>Analytical Chemistry</i> , 2018, 90, 3284-3290.	3.2	20
46	Measurement of Tau Filament Fragmentation Provides Insights into Prion-like Spreading. <i>ACS Chemical Neuroscience</i> , 2018, 9, 1276-1282.	1.7	68
47	Direct Observation of Murine Prion Protein Replication in Vitro. <i>Journal of the American Chemical Society</i> , 2018, 140, 14789-14798.	6.6	23
48	Kinetic barriers to I [±] -synuclein protofilament formation and conversion into mature fibrils. <i>Chemical Communications</i> , 2018, 54, 7854-7857.	2.2	31
49	Multistep Inhibition of I [±] -Synuclein Aggregation and Toxicity <i>in Vitro</i> and <i>in Vivo</i> by Trodusquemine. <i>ACS Chemical Biology</i> , 2018, 13, 2308-2319.	1.6	86
50	Oligomer Diversity during the Aggregation of the Repeat Region of Tau. <i>ACS Chemical Neuroscience</i> , 2018, 9, 3060-3071.	1.7	50
51	Extrinsic Amyloid-Binding Dyes for Detection of Individual Protein Aggregates in Solution. <i>Analytical Chemistry</i> , 2018, 90, 10385-10393.	3.2	20
52	Secondary nucleation in amyloid formation. <i>Chemical Communications</i> , 2018, 54, 8667-8684.	2.2	323
53	On the role of sidechain size and charge in the aggregation of A ²⁴² with familial mutations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E5849-E5858.	3.3	98
54	Kinetic Analysis of Amyloid Formation. <i>Methods in Molecular Biology</i> , 2018, 1779, 181-196.	0.4	16

#	ARTICLE	IF	CITATIONS
55	Origin of metastable oligomers and their effects on amyloid fibril self-assembly. <i>Chemical Science</i> , 2018, 9, 5937-5948.	3.7	76
56	A natural product inhibits the initiation of β -synuclein aggregation and suppresses its toxicity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E1009-E1017.	3.3	231
57	Physical principles of filamentous protein self-assembly kinetics. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 153002.	0.7	21
58	Acceleration of β -synuclein aggregation. <i>Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis</i> , 2017, 24, 20-21.	1.4	4
59	Secondary nucleation of monomers on fibril surface dominates β -synuclein aggregation and provides autocatalytic amyloid amplification. <i>Quarterly Reviews of Biophysics</i> , 2017, 50, e6.	2.4	183
60	Modulation of electrostatic interactions to reveal a reaction network unifying the aggregation behaviour of the A β 242 peptide and its variants. <i>Chemical Science</i> , 2017, 8, 4352-4362.	3.7	60
61	Phage display and kinetic selection of antibodies that specifically inhibit amyloid self-replication. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 6444-6449.	3.3	60
62	Absolute Quantification of Amyloid Propagons by Digital Microfluidics. <i>Analytical Chemistry</i> , 2017, 89, 12306-12313.	3.2	21
63	Scaling behaviour and rate-determining steps in filamentous self-assembly. <i>Chemical Science</i> , 2017, 8, 7087-7097.	3.7	65
64	Self-assembly of MPG1, a hydrophobin protein from the rice blast fungus that forms functional amyloid coatings, occurs by a surface-driven mechanism. <i>Scientific Reports</i> , 2016, 6, 25288.	1.6	67
65	Electrostatically-guided inhibition of Curli amyloid nucleation by the CsgC-like family of chaperones. <i>Scientific Reports</i> , 2016, 6, 24656.	1.6	51
66	Mutations associated with familial Parkinson's disease alter the initiation and amplification steps of β -synuclein aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 10328-10333.	3.3	252
67	Quantitative analysis of intrinsic and extrinsic factors in the aggregation mechanism of Alzheimer-associated A β -peptide. <i>Scientific Reports</i> , 2016, 6, 18728.	1.6	77
68	Physical determinants of the self-replication of protein fibrils. <i>Nature Physics</i> , 2016, 12, 874-880.	6.5	90
69	β -Synuclein suppresses both the initiation and amplification steps of β -synuclein aggregation via competitive binding to surfaces. <i>Scientific Reports</i> , 2016, 6, 36010.	1.6	65
70	An Environmentally Sensitive Fluorescent Dye as a Multidimensional Probe of Amyloid Formation. <i>Journal of Physical Chemistry B</i> , 2016, 120, 2087-2094.	1.2	3
71	Molecular mechanisms of protein aggregation from global fitting of kinetic models. <i>Nature Protocols</i> , 2016, 11, 252-272.	5.5	546
72	Lipid vesicles trigger β -synuclein aggregation by stimulating primary nucleation. <i>Nature Chemical Biology</i> , 2015, 11, 229-234.	3.9	532

#	ARTICLE	IF	CITATIONS
73	Preventing peptide and protein misbehavior. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5267-5268.	3.3	7
74	N-Terminal Extensions Retard A β 242 Fibril Formation but Allow Cross-Seeding and Coaggregation with A β 42. Journal of the American Chemical Society, 2015, 137, 14673-14685.	6.6	58
75	The A β 40 and A β 42 peptides self-assemble into separate homomolecular fibrils in binary mixtures but cross-react during primary nucleation. Chemical Science, 2015, 6, 4215-4233.	3.7	121
76	Differences in nucleation behavior underlie the contrasting aggregation kinetics of the A β 40 and A β 42 peptides. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9384-9389.	3.3	405
77	Diffuse transition state structure for the unfolding of a leucine-rich repeat protein. Physical Chemistry Chemical Physics, 2014, 16, 6448.	1.3	4
78	Solvent and conformation dependence of amide I vibrations in peptides and proteins containing proline. Journal of Chemical Physics, 2011, 135, 234507.	1.2	58
79	Mechanistic Models of Protein Aggregation Across Length-Scales and Time-Scales: From the Test Tube to Neurodegenerative Disease. Frontiers in Neuroscience, 0, 16, .	1.4	8