

# Francesco Simone Ruggeri

## List of Publications by Year in descending order

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Version: 2024-02-01

77  
papers

4,489  
citations

101543

36  
h-index

114465

63  
g-index

90  
all docs

90  
docs citations

90  
times ranked

5385  
citing authors

#	ARTICLE	IF	CITATIONS
1	FUS Phase Separation Is Modulated by a Molecular Chaperone and Methylation of Arginine Cation- $\pi$ Interactions. <i>Cell</i> , 2018, 173, 720-734.e15.	28.9	662
2	Infrared nanospectroscopy characterization of oligomeric and fibrillar aggregates during amyloid formation. <i>Nature Communications</i> , 2015, 6, 7831.	12.8	245
3	Cholesterol catalyses A $\beta$ 242 aggregation through a heterogeneous nucleation pathway in the presence of lipid membranes. <i>Nature Chemistry</i> , 2018, 10, 673-683.	13.6	186
4	Measurement of intrinsic properties of amyloid fibrils by the peak force QNM method. <i>Nanoscale</i> , 2012, 4, 4426.	5.6	175
5	The H50Q Mutation Enhances $\beta$ -Synuclein Aggregation, Secretion, and Toxicity. <i>Journal of Biological Chemistry</i> , 2014, 289, 21856-21876.	3.4	152
6	Different soluble aggregates of A $\beta$ 242 can give rise to cellular toxicity through different mechanisms. <i>Nature Communications</i> , 2019, 10, 1541.	12.8	140
7	Nanoscale studies link amyloid maturity with polyglutamine diseases onset. <i>Scientific Reports</i> , 2016, 6, 31155.	3.3	130
8	Influence of the $\beta$ -Sheet Content on the Mechanical Properties of Aggregates during Amyloid Fibrillization. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 2462-2466.	13.8	129
9	Detecting nanoscale vibrations as signature of life. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 378-381.	7.1	118
10	Stabilized tilted-octahedra halide perovskites inhibit local formation of performance-limiting phases. <i>Science</i> , 2021, 374, 1598-1605.	12.6	115
11	Trodusquemine enhances A $\beta$ 242 aggregation but suppresses its toxicity by displacing oligomers from cell membranes. <i>Nature Communications</i> , 2019, 10, 225.	12.8	111
12	Atomic force microscopy for single molecule characterisation of protein aggregation. <i>Archives of Biochemistry and Biophysics</i> , 2019, 664, 134-148.	3.0	109
13	Biomolecular condensates undergo a generic shear-mediated liquid-to-solid transition. <i>Nature Nanotechnology</i> , 2020, 15, 841-847.	31.5	101
14	Determination of Polypeptide Conformation with Nanoscale Resolution in Water. <i>ACS Nano</i> , 2018, 12, 6612-6619.	14.6	97
15	Silk microcococoons for protein stabilisation and molecular encapsulation. <i>Nature Communications</i> , 2017, 8, 15902.	12.8	96
16	Identification and nanomechanical characterization of the fundamental single-strand protofilaments of amyloid $\beta$ -synuclein fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7230-7235.	7.1	96
17	Small-molecule sequestration of amyloid- $\beta$ as a drug discovery strategy for Alzheimer's disease. <i>Science Advances</i> , 2020, 6, .	10.3	95
18	Nanoplasmonic mid-infrared biosensor for in vitro protein secondary structure detection. <i>Light: Science and Applications</i> , 2017, 6, e17029-e17029.	16.6	93

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19	Single molecule secondary structure determination of proteins through infrared absorption nanospectroscopy. <i>Nature Communications</i> , 2020, 11, 2945.	12.8	92
20	AFM-Based Single Molecule Techniques: Unraveling the Amyloid Pathogenic Species. <i>Current Pharmaceutical Design</i> , 2016, 22, 3950-3970.	1.9	75
21	Soluble aggregates present in cerebrospinal fluid change in size and mechanism of toxicity during Alzheimer's disease progression. <i>Acta Neuropathologica Communications</i> , 2019, 7, 120.	5.2	64
22	N-terminal Huntingtin (Htt) phosphorylation is a molecular switch regulating Htt aggregation, helical conformation, internalization, and nuclear targeting. <i>Journal of Biological Chemistry</i> , 2018, 293, 18540-18558.	3.4	63
23	Nanobodies raised against monomeric $\alpha$ -synuclein inhibit fibril formation and destabilize toxic oligomeric species. <i>BMC Biology</i> , 2017, 15, 57.	3.8	61
24	Rational design of a conformation-specific antibody for the quantification of $A\beta$ oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 13509-13518.	7.1	61
25	Transthyretin Inhibits Primary and Secondary Nucleations of Amyloid- $\beta$ Peptide Aggregation and Reduces the Toxicity of Its Oligomers. <i>Biomacromolecules</i> , 2020, 21, 1112-1125.	5.4	59
26	The Influence of Pathogenic Mutations in $\alpha$ -Synuclein on Biophysical and Structural Characteristics of Amyloid Fibrils. <i>ACS Nano</i> , 2020, 14, 5213-5222.	14.6	58
27	Mutant Exon1 Huntingtin Aggregation is Regulated by T3 Phosphorylation-Induced Structural Changes and Crosstalk between T3 Phosphorylation and Acetylation at K6. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 5202-5207.	13.8	54
28	Infrared nanospectroscopy reveals the molecular interaction fingerprint of an aggregation inhibitor with single $A\beta$ oligomers. <i>Nature Communications</i> , 2021, 12, 688.	12.8	52
29	Controlled self-assembly of plant proteins into high-performance multifunctional nanostructured films. <i>Nature Communications</i> , 2021, 12, 3529.	12.8	50
30	One-Pot Semisynthesis of Exon-1 of the Huntingtin Protein: New Tools for Elucidating the Role of Posttranslational Modifications in the Pathogenesis of Huntington's Disease. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 1928-1933.	13.8	48
31	Nanoscale spatially resolved infrared spectra from single microdroplets. <i>Lab on A Chip</i> , 2014, 14, 1315-1319.	6.0	46
32	Identification of Oxidative Stress in Red Blood Cells with Nanoscale Chemical Resolution by Infrared Nanospectroscopy. <i>International Journal of Molecular Sciences</i> , 2018, 19, 2582.	4.1	46
33	A critical concentration of N-terminal pyroglutamylated amyloid beta drives the misfolding of Ab1-42 into more toxic aggregates. <i>International Journal of Biochemistry and Cell Biology</i> , 2016, 79, 261-270.	2.8	44
34	Trodusquemine displaces protein misfolded oligomers from cell membranes and abrogates their cytotoxicity through a generic mechanism. <i>Communications Biology</i> , 2020, 3, 435.	4.4	44
35	Stabilization and Characterization of Cytotoxic $A\beta$ Oligomers Isolated from an Aggregation Reaction in the Presence of Zinc Ions. <i>ACS Chemical Neuroscience</i> , 2018, 9, 2959-2971.	3.5	42
36	Microfluidic deposition for resolving single-molecule protein architecture and heterogeneity. <i>Nature Communications</i> , 2018, 9, 3890.	12.8	40

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37	The Hsc70 disaggregation machinery removes monomer units directly from $\alpha$ -synuclein fibril ends. <i>Nature Communications</i> , 2021, 12, 5999.	12.8	37
38	Ultrathin Polydopamine Films with Phospholipid Nanodiscs Containing a Glycophorin A Domain. <i>Advanced Functional Materials</i> , 2020, 30, 2000378.	14.9	36
39	Squalamine and Its Derivatives Modulate the Aggregation of Amyloid- $\beta$ and $\alpha$ -Synuclein and Suppress the Toxicity of Their Oligomers. <i>Frontiers in Neuroscience</i> , 2021, 15, 680026.	2.8	34
40	Soluble amyloid beta-containing aggregates are present throughout the brain at early stages of Alzheimer's disease. <i>Brain Communications</i> , 2021, 3, fcab147.	3.3	32
41	Molecular determinants of the interaction of EGCG with ordered and disordered proteins. <i>Biopolymers</i> , 2018, 109, e23117.	2.4	30
42	Water-Dispersible Polydopamine-Coated Nanofibers for Stimulation of Neuronal Growth and Adhesion. <i>Advanced Healthcare Materials</i> , 2018, 7, e1701485.	7.6	29
43	Fabrication and Characterization of Reconstituted Silk Microgels for the Storage and Release of Small Molecules. <i>Macromolecular Rapid Communications</i> , 2019, 40, e1800898.	3.9	29
44	Solution fibre spinning technique for the fabrication of tuneable decellularised matrix-laden fibres and fibrous micromembranes. <i>Acta Biomaterialia</i> , 2018, 78, 111-122.	8.3	27
45	Micro- and nanoscale hierarchical structure of core-shell protein microgels. <i>Journal of Materials Chemistry B</i> , 2016, 4, 7989-7999.	5.8	26
46	A dopamine metabolite stabilizes neurotoxic amyloid- $\beta$ oligomers. <i>Communications Biology</i> , 2021, 4, 19.	4.4	25
47	Concentration-dependent and surface-assisted self-assembly properties of a bioactive estrogen receptor $\alpha$ -derived peptide. <i>Journal of Peptide Science</i> , 2015, 21, 95-104.	1.4	24
48	Influence of the $\beta$ -Sheet Content on the Mechanical Properties of Aggregates during Amyloid Fibrillization. <i>Angewandte Chemie</i> , 2015, 127, 2492-2496.	2.0	22
49	Amyloid single-cell cytotoxicity assays by nanomotion detection. <i>Cell Death Discovery</i> , 2017, 3, 17053.	4.7	20
50	Evolution of Conformation, Nanomechanics, and Infrared Nanospectroscopy of Single Amyloid Fibrils Converting into Microcrystals. <i>Advanced Science</i> , 2021, 8, 2002182.	11.2	20
51	Imaging protein aggregates in the serum and cerebrospinal fluid in Parkinson's disease. <i>Brain</i> , 2022, 145, 632-643.	7.6	20
52	Infrared nanospectroscopic mapping of a single metaphase chromosome. <i>Nucleic Acids Research</i> , 2019, 47, e108-e108.	14.5	19
53	Sequence-Optimized Peptide Nanofibers as Growth Stimulators for Regeneration of Peripheral Neurons. <i>Advanced Functional Materials</i> , 2019, 29, 1809112.	14.9	19
54	Effects of sedimentation, microgravity, hydrodynamic mixing and air-water interface on $\alpha$ -synuclein amyloid formation. <i>Chemical Science</i> , 2020, 11, 3687-3693.	7.4	18

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55	A rationally designed bicyclic peptide remodels A $\beta$ 242 aggregation in vitro and reduces its toxicity in a worm model of Alzheimer's disease. <i>Scientific Reports</i> , 2020, 10, 15280.	3.3	15
56	The Nt17 Domain and its Helical Conformation Regulate the Aggregation, Cellular Properties and Neurotoxicity of Mutant Huntingtin Exon 1. <i>Journal of Molecular Biology</i> , 2021, 433, 167222.	4.2	15
57	Supramolecular Peptide Nanofibrils with Optimized Sequences and Molecular Structures for Efficient Retroviral Transduction. <i>Advanced Functional Materials</i> , 2021, 31, 2009382.	14.9	14
58	Characterizing Individual Protein Aggregates by Infrared Nanospectroscopy and Atomic Force Microscopy. <i>Journal of Visualized Experiments</i> , 2019, , .	0.3	13
59	Environmental Control of Amyloid Polymorphism by Modulation of Hydrodynamic Stress. <i>ACS Nano</i> , 2021, 15, 944-953.	14.6	13
60	Rationally Designed Antibodies as Research Tools to Study the Structure-Toxicity Relationship of Amyloid- $\beta$ Oligomers. <i>International Journal of Molecular Sciences</i> , 2020, 21, 4542.	4.1	12
61	In situ Subcellular Identification of Functional Amyloids in Bacteria and Archaea by Infrared Nanospectroscopy. <i>Small Methods</i> , 2021, 5, e2001002.	8.6	11
62	Thermoresponsive, Pyrrolidone-Based Antifouling Polymer Brushes. <i>Advanced Materials Interfaces</i> , 2022, 9, .	3.7	11
63	Structure-specific amyloid precipitation in biofluids. <i>Nature Chemistry</i> , 2022, 14, 1045-1053.	13.6	11
64	Alpha Synuclein only Forms Fibrils In Vitro when Larger than its Critical Size of 70 Monomers. <i>ChemBioChem</i> , 2021, 22, 2867-2871.	2.6	10
65	Frontispiece: Mutant Exon1 Huntingtin Aggregation is Regulated by T3 Phosphorylation-Induced Structural Changes and Crosstalk between T3 Phosphorylation and Acetylation at K6. <i>Angewandte Chemie - International Edition</i> , 2017, 56, .	13.8	6
66	Analysis of $\beta$ -crystallin polydispersity in solution through native microfluidic electrophoresis. <i>Analyst</i> , 2019, 144, 4413-4424.	3.5	6
67	Influence of the electro-optical properties of an $\beta$ -Si:H single layer on the performances of a pin solar cell. <i>Thin Solid Films</i> , 2012, 520, 4036-4040.	1.8	5
68	Mutant Exon1 Huntingtin Aggregation is Regulated by T3 Phosphorylation-Induced Structural Changes and Crosstalk between T3 Phosphorylation and Acetylation at K6. <i>Angewandte Chemie</i> , 2017, 129, 5286-5291.	2.0	2
69	Modulating Amyloid-Beta Aggregation to Reduce the Toxicity of its Oligomeric Aggregates. <i>Biophysical Journal</i> , 2018, 114, 430a.	0.5	2
70	Attenuating the Toxicity of Amyloid-Beta Aggregation with Specific Species. <i>Biophysical Journal</i> , 2017, 112, 494a.	0.5	1
71	Frontispiz: Mutant Exon1 Huntingtin Aggregation is Regulated by T3 Phosphorylation-Induced Structural Changes and Crosstalk between T3 Phosphorylation and Acetylation at K6. <i>Angewandte Chemie</i> , 2017, 129, .	2.0	1
72	Berichtigung: One-Pot Semisynthesis of Exon...1 of the Huntingtin Protein: New Tools for Elucidating the Role of Posttranslational Modifications in the Pathogenesis of Huntington's Disease. <i>Angewandte Chemie</i> , 2014, 126, 7517-7517.	2.0	0

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73	Mid-infrared plasmonic nanoantennas for protein structure detection. , 2017, , .		0
74	Probing the Interaction of ABETA42 Amyloid Species with an Aggregation Suppressor Molecule by Infrared Nanospectroscopy. Biophysical Journal, 2018, 114, 224a.	0.5	0
75	Unraveling the Physicochemical Determinants of Protein Liquid-liquid Phase Separation by Nanoscale Infrared Vibrational Spectroscopy. Bio-protocol, 2021, 11, e4122.	0.4	0
76	Octahedral Tilt Engineering: Atomic-Level Picture of Stabilized $\hat{\pm}$ -FAPbI <sub>3</sub> . , 0, , .		0
77	Tilted-octahedra stabilize FA rich halide perovskites. , 0, , .		0