

Wojciech Dzwolak

List of Publications by Year in descending order

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82
papers

2,694
citations

201385

27
h-index

189595

50
g-index

87
all docs

87
docs citations

87
times ranked

2844
citing authors

#	ARTICLE	IF	CITATIONS
1	Amyloidogenic Self-Assembly of Insulin Aggregates Probed by High Resolution Atomic Force Microscopy. <i>Biophysical Journal</i> , 2005, 88, 1344-1353.	0.2	261
2	Aggregation of Bovine Insulin Probed by DSC/PPC Calorimetry and FTIR Spectroscopy. <i>Biochemistry</i> , 2003, 42, 11347-11355.	1.2	168
3	Insulin forms amyloid in a strain-dependent manner: An FT-IR spectroscopic study. <i>Protein Science</i> , 2004, 13, 1927-1932.	3.1	125
4	Ethanol-Perturbed Amyloidogenic Self-Assembly of Insulin: Looking for Origins of Amyloid Strains. <i>Biochemistry</i> , 2005, 44, 8948-8958.	1.2	111
5	Fourier transform infrared spectroscopy in high-pressure studies on proteins. <i>BBA - Proteins and Proteomics</i> , 2002, 1595, 131-144.	2.1	104
6	Amyloidogenesis of Tau protein. <i>Protein Science</i> , 2017, 26, 2126-2150.	3.1	102
7	Conformational Indeterminism in Protein Misfolding: Chiral Amplification on Amyloidogenic Pathway of Insulin. <i>Journal of the American Chemical Society</i> , 2007, 129, 7517-7522.	6.6	97
8	Vortex-Induced Formation of Insulin Amyloid Superstructures Probed by Time-Lapse Atomic Force Microscopy and Circular Dichroism Spectroscopy. <i>Journal of Molecular Biology</i> , 2010, 395, 643-655.	2.0	88
9	Chiral Bifurcation in Aggregating Insulin: An Induced Circular Dichroism Study. <i>Journal of Molecular Biology</i> , 2008, 379, 9-16.	2.0	84
10	Chiral bias of amyloid fibrils revealed by the twisted conformation of Thioflavin T: An induced circular dichroism/DFT study. <i>FEBS Letters</i> , 2005, 579, 6601-6603.	1.3	83
11	High Pressure Promotes Circularly Shaped Insulin Amyloid. <i>Journal of Molecular Biology</i> , 2004, 338, 203-206.	2.0	78
12	The Diastereomeric Assembly of Polylysine Is the Low-Volume Pathway for Preferential Formation of β -Sheet Aggregates. <i>Journal of the American Chemical Society</i> , 2004, 126, 3762-3768.	6.6	72
13	Chain-length dependence of α -helix to β -sheet transition in polylysine: Model of protein aggregation studied by temperature-tuned FTIR spectroscopy. <i>Biopolymers</i> , 2004, 73, 463-469.	1.2	67
14	New Insights into the Self-Assembly of Insulin Amyloid Fibrils: An H^2D Exchange FT-IR Study. <i>Biochemistry</i> , 2006, 45, 8143-8151.	1.2	63
15	Spiral Superstructures of Amyloid-Like Fibrils of Polyglutamic Acid: An Infrared Absorption and Vibrational Circular Dichroism Study. <i>Journal of Physical Chemistry B</i> , 2011, 115, 11010-11016.	1.2	54
16	Cross-Seeding of Fibrils from Two Types of Insulin Induces New Amyloid Strains. <i>Biochemistry</i> , 2012, 51, 9460-9469.	1.2	54
17	Size-dependent density of zirconia nanoparticles. <i>Beilstein Journal of Nanotechnology</i> , 2015, 6, 27-35.	1.5	49
18	Hydration and structure—the two sides of the insulin aggregation process. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 1938-1943.	1.3	44

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19	A conformational α -helix to β -sheet transition accompanies racemic self-assembly of polylysine: an FT-IR spectroscopic study. <i>Biophysical Chemistry</i> , 2005, 115, 49-54.	1.5	44
20	Bifurcated Hydrogen Bonds Stabilize Fibrils of Poly(α -glutamic) Acid. <i>Journal of Physical Chemistry B</i> , 2010, 114, 8278-8283.	1.2	41
21	Thermodynamic Properties Underlying the α -Helix-to- β -Sheet Transition, Aggregation, and Amyloidogenesis of Polylysine as Probed by Calorimetry, Densimetry, and Ultrasound Velocimetry. <i>Journal of Physical Chemistry B</i> , 2005, 109, 19043-19045.	1.2	36
22	Protein Amyloidogenesis in the Context of Volume Fluctuations: A Case Study on Insulin. <i>ChemPhysChem</i> , 2006, 7, 1046-1049.	1.0	36
23	Template-controlled conformational patterns of insulin fibrillar self-assembly reflect history of solvation of the amyloid nuclei. <i>Physical Chemistry Chemical Physics</i> , 2005, 7, 1349.	1.3	35
24	Thioflavin T: Electronic Circular Dichroism and Circularly Polarized Luminescence Induced by Amyloid Fibrils. <i>ChemPhysChem</i> , 2016, 17, 2931-2937.	1.0	33
25	Chirality and Chiroptical Properties of Amyloid Fibrils. <i>Chirality</i> , 2014, 26, 580-587.	1.3	30
26	Amyloidogenic cross-seeding of Tau protein: Transient emergence of structural variants of fibrils. <i>PLoS ONE</i> , 2018, 13, e0201182.	1.1	30
27	Noncooperative Dimethyl Sulfoxide-Induced Dissection of Insulin Fibrils: Toward Soluble Building Blocks of Amyloid. <i>Biochemistry</i> , 2009, 48, 4846-4851.	1.2	29
28	Highly Amyloidogenic Two-chain Peptide Fragments Are Released upon Partial Digestion of Insulin with Pepsin. <i>Journal of Biological Chemistry</i> , 2015, 290, 5947-5958.	1.6	29
29	Amino acid sequence determinants in self-assembly of insulin chiral amyloid superstructures: Role of C-terminus of β -chain in association of fibrils. <i>FEBS Letters</i> , 2013, 587, 625-630.	1.3	26
30	Thioflavin T forms a non-fluorescent complex with α -helical poly-L-glutamic acid. <i>Chemical Communications</i> , 2011, 47, 10686.	2.2	24
31	Chiral superstructures of insulin amyloid fibrils. <i>Chirality</i> , 2011, 23, 638-646.	1.3	24
32	On the DMSO-Dissolved State of Insulin: A Vibrational Spectroscopic Study of Structural Disorder. <i>Journal of Physical Chemistry B</i> , 2012, 116, 11863-11871.	1.2	24
33	An FT-IR Study on Packing Defects in Mixed β -Aggregates of Poly(α -glutamic acid) and Poly(δ -glutamic acid): A High-Pressure Rescue from a Kinetic Trap. <i>Journal of Physical Chemistry B</i> , 2012, 116, 5172-5178.	1.2	23
34	On the Heat Stability of Amyloid-Based Biological Activity: Insights from Thermal Degradation of Insulin Fibrils. <i>PLoS ONE</i> , 2014, 9, e86320.	1.1	23
35	Dimethyl Sulfoxide Induced Destabilization and Disassembly of Various Structural Variants of Insulin Fibrils Monitored by Vibrational Circular Dichroism. <i>Biochemistry</i> , 2015, 54, 7193-7202.	1.2	23
36	Comparative Two-Dimensional Fourier Transform Infrared Correlation Spectroscopic Study on the Spontaneous, Pressure-, and Temperature-Enhanced H/D Exchange in β -Lactalbumin. <i>Applied Spectroscopy</i> , 2000, 54, 963-967.	1.2	22

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37	Tyrosine side chains as an electrochemical probe of stacked β -sheet protein conformations. <i>Bioelectrochemistry</i> , 2008, 72, 34-40.	2.4	22
38	Amyloidogenic Properties of Short β -Glutamic Acid Oligomers. <i>Langmuir</i> , 2015, 31, 10500-10507.	1.6	21
39	Tuning amyloidogenic conformations through cosolvents and hydrostatic pressure: When the soft matter becomes even softer. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2006, 1764, 470-480.	1.1	19
40	Vortex-Induced Amyloid Superstructures of Insulin and Its Component A and B Chains. <i>Langmuir</i> , 2013, 29, 5271-5278.	1.6	19
41	Insulin Amyloid Fibrils Form an Inclusion Complex with Molecular Iodine: A Misfolded Protein as a Nanoscale Scaffold. <i>Biochemistry</i> , 2007, 46, 1568-1572.	1.2	18
42	Conformational Memory Effect Reverses Chirality of Vortex-Induced Insulin Amyloid Superstructures. <i>Langmuir</i> , 2013, 29, 365-370.	1.6	18
43	Vortex-induced chiral bifurcation in aggregating insulin. <i>Chirality</i> , 2010, 22, E154-60.	1.3	17
44	Master and Slave Relationship Between Two Types of Self-Propagating Insulin Amyloid Fibrils. <i>Journal of Physical Chemistry B</i> , 2014, 118, 13582-13589.	1.2	16
45	The emergence of superstructural order in insulin amyloid fibrils upon multiple rounds of self-seeding. <i>Scientific Reports</i> , 2016, 6, 32022.	1.6	16
46	Conducting microhelices from self-assembly of protein fibrils. <i>Soft Matter</i> , 2017, 13, 4412-4417.	1.2	16
47	SERS and DFT Study of Noble-Metal-Anchored Cys-Trp/Trp-Cys Dipeptides: Influence of Main-Chain Direction and Terminal Modifications. <i>Journal of Physical Chemistry C</i> , 2020, 124, 7097-7116.	1.5	16
48	The Hunt for Ancient Prions: Archaeal Prion-Like Domains Form Amyloid-Based Epigenetic Elements. <i>Molecular Biology and Evolution</i> , 2021, 38, 2088-2103.	3.5	15
49	FTIR study on heat-induced and pressure-assisted cold-induced changes in structure of bovine β -lactalbumin: Stabilizing role of calcium ion. <i>Biopolymers</i> , 2001, 62, 29-39.	1.2	14
50	Beware of Cocktails: Chain-Length Bidispersity Triggers Explosive Self-Assembly of Poly- β -Glutamic Acid β -Fibrils. <i>Biomacromolecules</i> , 2016, 17, 1376-1382.	2.6	14
51	Exploring the polymorphism, conformational dynamics and function of amyloidogenic peptides and proteins by temperature and pressure modulation. <i>Biophysical Chemistry</i> , 2021, 268, 106506.	1.5	14
52	Insulin Amyloid Superstructures as Templates for Surface Enhanced Raman Scattering. <i>Langmuir</i> , 2010, 26, 18303-18307.	1.6	13
53	Chirality inversions in self-assembly of fibrillar superstructures: a computational study. <i>Soft Matter</i> , 2013, 9, 8005.	1.2	13
54	Immunoenzymatic sensitisation of membrane ion-selective electrodes. <i>Sensors and Actuators B: Chemical</i> , 1998, 47, 246-250.	4.0	12

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55	Extremely Amyloidogenic Single-Chain Analogues of Insulin's H-Fragment: Structural Adaptability of an Amyloid Stretch. <i>Langmuir</i> , 2020, 36, 12150-12159.	1.6	12
56	Docking interactions determine early cleavage events in insulin proteolysis by pepsin: Experiment and simulation. <i>International Journal of Biological Macromolecules</i> , 2020, 149, 1151-1160.	3.6	12
57	On the Function and Fate of Chloride Ions in Amyloidogenic Self-Assembly of Insulin in an Acidic Environment: Salt-Induced Condensation of Fibrils. <i>Langmuir</i> , 2015, 31, 2180-2186.	1.6	11
58	Revisiting the conformational state of albumin conjugated to gold nanoclusters: A self-assembly pathway to giant superstructures unraveled. <i>PLoS ONE</i> , 2019, 14, e0218975.	1.1	11
59	Beyond amino acid sequence: disulfide bonds and the origins of the extreme amyloidogenic properties of insulin's H-fragment. <i>FEBS Journal</i> , 2019, 286, 3194-3205.	2.2	11
60	Zipper-like properties of [poly(L-lysine)+ poly(L-glutamic acid)] ² -pleated molecular self-assembly. <i>Chemical Communications</i> , 2005, , 5557.	2.2	10
61	Supramolecular photochirogenesis with functional amyloid superstructures. <i>Chemical Communications</i> , 2013, 49, 8916.	2.2	10
62	Selective and stoichiometric incorporation of ATP by self-assembling amyloid fibrils. <i>Journal of Materials Chemistry B</i> , 2021, 9, 8626-8630.	2.9	9
63	Covalent Defects Restrict Supramolecular Self-Assembly of Homopolypeptides: Case Study of β 2-Fibrils of Poly-L-Glutamic Acid. <i>PLoS ONE</i> , 2014, 9, e105660.	1.1	8
64	Reversible Freeze-Induced β -Sheet-to-Disorder Transition in Aggregated Homopolypeptide System. <i>Journal of Physical Chemistry B</i> , 2019, 123, 9080-9086.	1.2	8
65	Neurotoxicity of oligomers of phosphorylated Tau protein carrying tauopathy-associated mutation is inhibited by prion protein. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2021, 1867, 166209.	1.8	8
66	β 2-Type Amyloidlike Fibrils of Poly-L-glutamic Acid Convert into Long, Highly Ordered Helices upon Dissolution in Dimethyl Sulfoxide. <i>Journal of Physical Chemistry B</i> , 2018, 122, 11895-11905.	1.2	7
67	A tale of two tails: Self-assembling properties of A- and B-chain parts of insulin's highly amyloidogenic H-fragment. <i>International Journal of Biological Macromolecules</i> , 2021, 186, 510-518.	3.6	7
68	pH-Responsive mixed-thiol-modified surface of roughened GaN: A wettability and SERS study. <i>Applied Surface Science</i> , 2020, 502, 144108.	3.1	6
69	De novo Refolding and Aggregation of Insulin in a Nonaqueous Environment: An Inside out Protein Remake. <i>Journal of Physical Chemistry B</i> , 2008, 112, 8744-8747.	1.2	5
70	Rapid self-association of highly amyloidogenic H-fragments of insulin: Experiment and molecular dynamics simulations. <i>International Journal of Biological Macromolecules</i> , 2020, 150, 894-903.	3.6	5
71	Virtual Quasi-2D Intermediates as Building Blocks for Plausible Structural Models of Amyloid Fibrils from Proteins with Complex Topologies: A Case Study of Insulin. <i>Langmuir</i> , 2022, 38, 7024-7034.	1.6	5
72	Mellitate: A multivalent anion with extreme charge density causes rapid aggregation and misfolding of wild type lysozyme at neutral pH. <i>PLoS ONE</i> , 2017, 12, e0187328.	1.1	4

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73	Multiscale Modeling of Amyloid Fibrils Formed by Aggregating Peptides Derived from the Amyloidogenic Fragment of the A-Chain of Insulin. <i>International Journal of Molecular Sciences</i> , 2021, 22, 12325.	1.8	4
74	Pressure tuning of insulin aggregation pathways. <i>High Pressure Research</i> , 2004, 24, 511-516.	0.4	3
75	Molecules of Congo red caught hopping between insulin fibrils: a chiroptical probe of the dye's amyloid binding dynamics. <i>RSC Advances</i> , 2016, 6, 97331-97337.	1.7	3
76	Effects of terminal capping on the fibrillation of short (L-Glu) _n peptides. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017, 159, 861-868.	2.5	3
77	Insulin and Polylysine as Model Polypeptides for FTIR Studies of the Pressure-effect on Protein Aggregation. , 2003, , 79-82.		1
78	Electronic Circular Dichroism Spectroscopy in Structural Analysis of Biomolecular Systems. Challenges and Advances in Computational Chemistry and Physics, 2014, , 161-177.	0.6	1
79	Enzymatic digestion of luminescent albumin-stabilized gold nanoclusters under anaerobic conditions: clues to the quenching mechanism. <i>Journal of Materials Chemistry C</i> , 0, , .	2.7	1
80	DMSO Induced Breaking up of Insulin Fibrils Monitored by Vibrational Circular Dichroism. <i>Biophysical Journal</i> , 2015, 108, 387a.	0.2	0
81	Reduction of a disulfide-constrained oligo-glutamate peptide triggers self-assembly of Î²2-type amyloid fibrils with the chiroptical properties determined by supramolecular chirality. <i>International Journal of Biological Macromolecules</i> , 2020, 162, 866-872.	3.6	0
82	Biopolymer. Recent Advances in High-Pressure Infrared Spectroscopic Studies on Proteins.. Review of High Pressure Science and Technology/ <i>Koatsuryoku No Kagaku To Gijutsu</i> , 2000, 10, 95-100.	0.1	0