Wojciech Dzwolak

List of Publications by Year
in descending order

82 papers	2,694 citations	201674 27 h-index	189892 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. Biophysical Journal, 2005, 88, 1344-1353.	0.5	261
2	Aggregation of Bovine Insulin Probed by DSC/PPC Calorimetry and FTIR Spectroscopy. Biochemistry, 2003, 42, 11347-11355.	2.5	168
3	Insulin forms amyloid in a strain-dependent manner: An FT-IR spectroscopic study. Protein Science, 2004, 13, 1927-1932.	7.6	125
4	Ethanol-Perturbed Amyloidogenic Self-Assembly of Insulin:â€‰ Looking for Origins of Amyloid Strains. Biochemistry, 2005, 44, 8948-8958.	2.5	111
5	Fourier transform infrared spectroscopy in high-pressure studies on proteins. BBA - Proteins and Proteomics, 2002, 1595, 131-144.	2.1	104
6	Amyloidogenesis of Tau protein. Protein Science, 2017, 26, 2126-2150.	7.6	102
7	Conformational Indeterminism in Protein Misfolding:â€‰ Chiral Amplification on Amyloidogenic Pathway of Insulin. Journal of the American Chemical Society, 2007, 129, 7517-7522.	13.7	97
8	Vortex-Induced Formation of Insulin Amyloid Superstructures Probed by Time-Lapse Atomic Force Microscopy and Circular Dichroism Spectroscopy. Journal of Molecular Biology, 2010, 395, 643-655.	4.2	88
9	Chiral Bifurcation in Aggregating Insulin: An Induced Circular Dichroism Study. Journal of Molecular Biology, 2008, 379, 9-16.	4.2	84
10	Chiral bias of amyloid fibrils revealed by the twisted conformation of Thioflavin T: An induced circular dichroism/DFT study. FEBS Letters, 2005, 579, 6601-6603.	2.8	83
11	High Pressure Promotes Circularly Shaped Insulin Amyloid. Journal of Molecular Biology, 2004, 338, 203-206.	4.2	78
12	The Diastereomeric Assembly of Polylysine Is the Low-Volume Pathway for Preferential Formation of Î²-Sheet Aggregates. Journal of the American Chemical Society, 2004, 126, 3762-3768.	13.7	72
13	Chain-length dependence of ?-helix to ?-sheet transition in polylysine: Model of protein aggregation studied by temperature-tuned FTIR spectroscopy. Biopolymers, 2004, 73, 463-469.	2.4	67
14	New Insights into the Self-Assembly of Insulin Amyloid Fibrils:Â An Hâ˜D Exchange FT-IR Studyâ€. Biochemistry, 2006, 45, 8143-8151.	2.5	63
15	Spiral Superstructures of Amyloid-Like Fibrils of Polyglutamic Acid: An Infrared Absorption and Vibrational Circular Dichroism Study. Journal of Physical Chemistry B, 2011, 115, 11010-11016.	2.6	54
16	Cross-Seeding of Fibrils from Two Types of Insulin Induces New Amyloid Strains. Biochemistry, 2012, 51, 9460-9469.	2.5	54
17	Size-dependent density of zirconia nanoparticles. Beilstein Journal of Nanotechnology, 2015, 6, 27-35.	2.8	49
18	Hydration and structureâ€"the two sides of the insulin aggregation process. Physical Chemistry Chemical Physics, 2004, 6, 1938-1943.	2.8	44

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19	A conformational Î±-helix to Î²-sheet transition accompanies racemic self-assembly of polylysine: an FT-IR spectroscopic study. Biophysical Chemistry, 2005, 115, 49-54.	2.8	44
20	Bifurcated Hydrogen Bonds Stabilize Fibrils of Poly(<scp>l</scp>-glutamic) Acid. Journal of Physical Chemistry B, 2010, 114, 8278-8283.	2.6	41
21	Thermodynamic Properties Underlying the Î±-Helix-to-Î²-Sheet Transition, Aggregation, and Amyloidogenesis of Polylysine as Probed by Calorimetry, Densimetry, and Ultrasound Velocimetry. Journal of Physical Chemistry B, 2005, 109, 19043-19045.	2.6	36
22	Protein Amyloidogenesis in the Context of Volume Fluctuations: A Case Study on Insulin. ChemPhysChem, 2006, 7, 1046-1049.	2.1	36
23	Template-controlled conformational patterns of insulin fibrillar self-assembly reflect history of solvation of the amyloid nuclei. Physical Chemistry Chemical Physics, 2005, 7, 1349.	2.8	35
24	Thioflavinâ€…T: Electronic Circular Dichroism and Circularly Polarized Luminescence Induced by Amyloid Fibrils. ChemPhysChem, 2016, 17, 2931-2937.	2.1	33
25	Chirality and Chiroptical Properties of Amyloid Fibrils. Chirality, 2014, 26, 580-587.	2.6	30
26	Amyloidogenic cross-seeding of Tau protein: Transient emergence of structural variants of fibrils. PLoS ONE, 2018, 13, e0201182.	2.5	30
27	Noncooperative Dimethyl Sulfoxide-Induced Dissection of Insulin Fibrils: Toward Soluble Building Blocks of Amyloid. Biochemistry, 2009, 48, 4846-4851.	2.5	29
28	Highly Amyloidogenic Two-chain Peptide Fragments Are Released upon Partial Digestion of Insulin with Pepsin. Journal of Biological Chemistry, 2015, 290, 5947-5958.	3.4	29
29	Amino acid sequence determinants in selfâ€assembly of insulin chiral amyloid superstructures: Role of Câ€terminus of Bâ€chain in association of fibrils. FEBS Letters, 2013, 587, 625-630.	2.8	26
30	Thioflavin T forms a non-fluorescent complex with Î±-helical poly-l-glutamic acid. Chemical Communications, 2011, 47, 10686.	4.1	24
31	Chiral superstructures of insulin amyloid fibrils. Chirality, 2011, 23, 638-646.	2.6	24
32	On the DMSO-Dissolved State of Insulin: A Vibrational Spectroscopic Study of Structural Disorder. Journal of Physical Chemistry B, 2012, 116, 11863-11871.	2.6	24
33	An FT-IR Study on Packing Defects in Mixed Î²-Aggregates of Poly(<scp>l</scp>-glutamic acid) and Poly(<scp>d</scp>-glutamic acid): A High-Pressure Rescue from a Kinetic Trap. Journal of Physical Chemistry B, 2012, 116, 5172-5178.	2.6	23
34	On the Heat Stability of Amyloid-Based Biological Activity: Insights from Thermal Degradation of Insulin Fibrils. PLoS ONE, 2014, 9, e86320.	2.5	23
35	Dimethyl Sulfoxide Induced Destabilization and Disassembly of Various Structural Variants of Insulin Fibrils Monitored by Vibrational Circular Dichroism. Biochemistry, 2015, 54, 7193-7202.	2.5	23
36	Comparative Two-Dimensional Fourier Transform Infrared Correlation Spectroscopic Study on the Spontaneous, Pressure-, and Temperature-Enhanced H/D Exchange in Î²-Lactalbumin. Applied Spectroscopy, 2000, 54, 963-967.	2.2	22

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37	Tyrosine side chains as an electrochemical probe of stacked Î²-sheet protein conformations. Bioelectrochemistry, 2008, 72, 34-40.	4.6	22
38	Amyloidogenic Properties of Short Î±-<scp>l</scp>-Glutamic Acid Oligomers. Langmuir, 2015, 31, 10500-10507.	3.5	21
39	Tuning amyloidogenic conformations through cosolvents and hydrostatic pressure: When the soft matter becomes even softer. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2006, 1764, 470-480.	2.3	19
40	Vortex-Induced Amyloid Superstructures of Insulin and Its Component A and B Chains. Langmuir, 2013, 29, 5271-5278.	3.5	19
41	Insulin Amyloid Fibrils Form an Inclusion Complex with Molecular Iodine:Â A Misfolded Protein as a Nanoscale Scaffoldâ€. Biochemistry, 2007, 46, 1568-1572.	2.5	18
42	Conformational Memory Effect Reverses Chirality of Vortex-Induced Insulin Amyloid Superstructures. Langmuir, 2013, 29, 365-370.	3.5	18
43	Vortexâ€induced chiral bifurcation in aggregating insulin. Chirality, 2010, 22, E154-60.	2.6	17
44	Master and Slave Relationship Between Two Types of Self-Propagating Insulin Amyloid Fibrils. Journal of Physical Chemistry B, 2014, 118, 13582-13589.	2.6	16
45	The emergence of superstructural order in insulin amyloid fibrils upon multiple rounds of self-seeding. Scientific Reports, 2016, 6, 32022.	3.3	16
46	Conducting microhelices from self-assembly of protein fibrils. Soft Matter, 2017, 13, 4412-4417.	2.7	16
47	SERS and DFT Study of Noble-Metal-Anchored Cys-Trp/Trp-Cys Dipeptides: Influence of Main-Chain Direction and Terminal Modifications. Journal of Physical Chemistry C, 2020, 124, 7097-7116.	3.1	16
48	The Hunt for Ancient Prions: Archaeal Prion-Like Domains Form Amyloid-Based Epigenetic Elements. Molecular Biology and Evolution, 2021, 38, 2088-2103.	8.9	15
49	FTIR study on heat-induced and pressure-assisted cold-induced changes in structure of bovine ?-lactalbumin: Stabilizing role of calcium ion. Biopolymers, 2001, 62, 29-39.	2.4	14
50	Beware of Cocktails: Chain-Length Bidispersity Triggers Explosive Self-Assembly of Poly-<scp>l</scp>-Glutamic Acid Î²₂-Fibrils. Biomacromolecules, 2016, 17, 1376-1382.	5.4	14
51	Exploring the polymorphism, conformational dynamics and function of amyloidogenic peptides and proteins by temperature and pressure modulation. Biophysical Chemistry, 2021, 268, 106506.	2.8	14
52	Insulin Amyloid Superstructures as Templates for Surface Enhanced Raman Scattering. Langmuir, 2010, 26, 18303-18307.	3.5	13
53	Chirality inversions in self-assembly of fibrillar superstructures: a computational study. Soft Matter, 2013, 9, 8005.	2.7	13
54	Immunoenzymatic sensitisation of membrane ion-selective electrodes. Sensors and Actuators B: Chemical, 1998, 47, 246-250.	7.8	12

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55	Extremely Amyloidogenic Single-Chain Analogues of Insulinâ€™s H-Fragment: Structural Adaptability of an Amyloid Stretch. Langmuir, 2020, 36, 12150-12159.	3.5	12
56	Docking interactions determine early cleavage events in insulin proteolysis by pepsin: Experiment and simulation. International Journal of Biological Macromolecules, 2020, 149, 1151-1160.	7.5	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. Langmuir, 2015, 31, 2180-2186.	3.5	11
58	Revisiting the conformational state of albumin conjugated to gold nanoclusters: A self-assembly pathway to giant superstructures unraveled. PLoS ONE, 2019, 14, e0218975.	2.5	11
59	Beyond amino acid sequence: disulfide bonds and the origins of the extreme amyloidogenic properties of insulin's Hâ€fragment. FEBS Journal, 2019, 286, 3194-3205.	4.7	11
60	Zipper-like properties of [poly(l-lysine)+ poly(l-glutamic acid)]Î²-pleated molecular self-assembly. Chemical Communications, 2005, , 5557.	4.1	10
61	Supramolecular photochirogenesis with functional amyloid superstructures. Chemical Communications, 2013, 49, 8916.	4.1	10
62	Selective and stoichiometric incorporation of ATP by self-assembling amyloid fibrils. Journal of Materials Chemistry B, 2021, 9, 8626-8630.	5.8	9
63	Covalent Defects Restrict Supramolecular Self-Assembly of Homopolypeptides: Case Study of Î²2-Fibrils of Poly-L-Glutamic Acid. PLoS ONE, 2014, 9, e105660.	2.5	8
64	Reversible Freeze-Induced Î²-Sheet-to-Disorder Transition in Aggregated Homopolypeptide System. Journal of Physical Chemistry B, 2019, 123, 9080-9086.	2.6	8
65	Neurotoxicity of oligomers of phosphorylated Tau protein carrying tauopathy-associated mutation is inhibited by prion protein. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2021, 1867, 166209.	3.8	8
66	Î²2-Type Amyloidlike Fibrils of Poly-l-glutamic Acid Convert into Long, Highly Ordered Helices upon Dissolution in Dimethyl Sulfoxide. Journal of Physical Chemistry B, 2018, 122, 11895-11905.	2.6	7
67	A tale of two tails: Self-assembling properties of A- and B-chain parts of insulin's highly amyloidogenic H-fragment. International Journal of Biological Macromolecules, 2021, 186, 510-518.	7.5	7
68	pH-Responsive mixed-thiol-modified surface of roughened GaN: A wettability and SERS study. Applied Surface Science, 2020, 502, 144108.	6.1	6
69	De novo Refolding and Aggregation of Insulin in a Nonaqueous Environment: An Inside out Protein Remake. Journal of Physical Chemistry B, 2008, 112, 8744-8747.	2.6	5
70	Rapid self-association of highly amyloidogenic H-fragments of insulin: Experiment and molecular dynamics simulations. International Journal of Biological Macromolecules, 2020, 150, 894-903.	7.5	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. Langmuir, 2022, 38, 7024-7034.	3.5	5
72	Mellitate: A multivalent anion with extreme charge density causes rapid aggregation and misfolding of wild type lysozyme at neutral pH. PLoS ONE, 2017, 12, e0187328.	2.5	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. International Journal of Molecular Sciences, 2021, 22, 12325.	4.1	4
74	Pressure tuning of insulin aggregation pathways. High Pressure Research, 2004, 24, 511-516.	1.2	3
75	Molecules of Congo red caught hopping between insulin fibrils: a chiroptical probe of the dyeâ€"amyloid binding dynamics. RSC Advances, 2016, 6, 97331-97337.	3.6	3
76	Effects of terminal capping on the fibrillation of short (L-Glu)n peptides. Colloids and Surfaces B: Biointerfaces, 2017, 159, 861-868.	5.0	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. Journal of Materials Chemistry C, 0, , .	5.5	1
80	DMSO Induced Breaking up of Insulin Fibrils Monitored by Vibrational Circular Dichroism. Biophysical Journal, 2015, 108, 387a.	0.5	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. International Journal of Biological Macromolecules, 2020, 162, 866-872.	7.5	0
82	Biopolymer. Recent Advances in High-Pressure Infrared Spectroscopic Studies on Proteins.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2000, 10, 95-100.	0.0	0