Anna Tarakanova

List of Publications by Year
in descending order

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25 papers	1,171 citations	471509 17 h-index	580821 25 g-index
25 all docs	25 docs citations	25 times ranked	1477 citing authors

#	Article	IF	Citations
1	Nonlinear material behaviour of spider silk yields robust webs. Nature, 2012, 482, 72-76.	27.8	383
2	Spider dragline silk as torsional actuator driven by humidity. Science Advances, 2019, 5, eaau9183.	10.3	108
3	Design of Multistimuli Responsive Hydrogels Using Integrated Modeling and Genetically Engineered Silkâ€“Elastinâ€Like Proteins. Advanced Functional Materials, 2016, 26, 4113-4123.	14.9	83
4	Tropoelastin and Elastin Assembly. Frontiers in Bioengineering and Biotechnology, 2021, 9, 643110.	4.1	71
5	A Materiomics Approach to Spider Silk: Protein Molecules to Webs. Jom, 2012, 64, 214-225.	1.9	58
6	Computational smart polymer design based on elastin protein mutability. Biomaterials, 2017, 127, 49-60.	11.4	49
7	Synergistic Integration of Experimental and Simulation Approaches for the de Novo Design of Silk-Based Materials. Accounts of Chemical Research, 2017, 50, 866-876.	15.6	45
8	Subtle balance of tropoelastin molecular shape and flexibility regulates dynamics and hierarchical assembly. Science Advances, 2016, 2, e1501145.	10.3	43
9	Multiscale Modeling of Silk and Silkâ€Based Biomaterialsâ€”A Review. Macromolecular Bioscience, 2019, 19, e1800253.	4.1	40
10	Multiscale modeling of keratin, collagen, elastin and related human diseases: Perspectives from atomistic to coarse-grained molecular dynamics simulations. Extreme Mechanics Letters, 2018, 20, 112-124.	4.1	39
11	Molecular model of human tropoelastin and implications of associated mutations. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7338-7343.	7.1	35
12	DSResSol: A Sequence-Based Solubility Predictor Created with Dilated Squeeze Excitation Residual Networks. International Journal of Molecular Sciences, 2021, 22, 13555.	4.1	35
13	Fabrication and Characterization of Recombinant Silkâ€Elastinâ€Likeâ€Protein (SELP) Fiber. Macromolecular Bioscience, 2018, 18, e1800265.	4.1	26
14	Unraveling the molecular mechanisms of thermo-responsive properties of silk-elastin-like proteins by integrating multiscale modeling and experiment. Journal of Materials Chemistry B, 2018, 6, 3727-3734.	5.8	21
15	Modeling and Experiment Reveal Structure and Nanomechanics across the Inverse Temperature Transition in B. mori Silk-Elastin-like Protein Polymers. ACS Biomaterials Science and Engineering, 2017, 3, 2889-2899.	5.2	20
16	Tropoelastin is a Flexible Molecule that Retains its Canonical Shape. Macromolecular Bioscience, 2019, 19, 1800250.	4.1	19
17	Molecular modeling of protein materials: case study of elastin. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 063001.	2.0	18
18	Transglutaminase-Mediated Cross-Linking of Tropoelastin to Fibrillin Stabilises the Elastin Precursor Prior to Elastic Fibre Assembly. Journal of Molecular Biology, 2020, 432, 5736-5751.	4.2	17

#	Article	IF	Citations
19	Modeling coronavirus spike protein dynamics: implications for immunogenicity and immune escape. Biophysical Journal, 2021, 120, 5592-5618.	0.5	17
20	The Order-Disorder Continuum: Linking Predictions of Protein Structure and Disorder through Molecular Simulation. Scientific Reports, 2020, 10, 2068.	3.3	13
21	Allysine modifications perturb tropoelastin structure and mobility on a local and global scale. Matrix Biology Plus, 2019, 2, 100002.	3.5	12
22	Cartilage and collagen mechanics under large-strain shear within in vivo and at supraphysiogical temperatures. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103595.	3.1	8
23	Molecular Design of Soluble Zein Protein Sequences. Biophysical Journal, 2020, 118, 45a.	0.5	4
24	Fuzzy binding model of molecular interactions between tropoelastin and integrin alphaVbeta3. Biophysical Journal, 2021, 120, 3138-3151.	0.5	4
25	Changes in elastin structure and extensibility induced by hypercalcemia and hyperglycemia. Acta Biomaterialia, 2023, 163, 131-145.	8.3	3