

Sungsoo Na

List of Publications by Year in descending order

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85
papers

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citations

430442

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all docs

85
docs citations

85
times ranked

1024
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanical Characterization of Amyloid Fibrils Using Coarse-Grained Normal Mode Analysis. <i>Advanced Functional Materials</i> , 2011, 21, 3454-3463.	7.8	56
2	Role of Sequence and Structural Polymorphism on the Mechanical Properties of Amyloid Fibrils. <i>PLoS ONE</i> , 2014, 9, e88502.	1.1	51
3	Metal ions affect the formation and stability of amyloid β^2 aggregates at multiple length scales. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 8951-8961.	1.3	39
4	Coarse-graining of protein structures for the normal mode studies. <i>Journal of Computational Chemistry</i> , 2007, 28, 1400-1410.	1.5	37
5	Artificial spider silk is smart like natural one: having humidity-sensitive shape memory with superior recovery stress. <i>Materials Chemistry Frontiers</i> , 2019, 3, 2472-2482.	3.2	34
6	Ultra-sensitive direct detection of silver ions via Kelvin probe force microscopy. <i>Biosensors and Bioelectronics</i> , 2014, 60, 299-304.	5.3	33
7	High-sensitivity detection of silver ions using oligonucleotide-immobilized oscillator. <i>Biosensors and Bioelectronics</i> , 2013, 41, 471-476.	5.3	31
8	Target switching catalytic hairpin assembly and gold nanoparticle colorimetric for EGFR mutant detection. <i>Sensors and Actuators B: Chemical</i> , 2018, 261, 497-504.	4.0	30
9	Relationship between disease-specific structures of amyloid fibrils and their mechanical properties. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	29
10	Detection of Silver Ions Using Dielectrophoretic Tweezers-Based Force Spectroscopy. <i>Analytical Chemistry</i> , 2016, 88, 10867-10875.	3.2	28
11	Double amplified colorimetric detection of DNA using gold nanoparticles, enzymes and a catalytic hairpin assembly. <i>Mikrochimica Acta</i> , 2019, 186, 34.	2.5	27
12	Dynamic aeroelastic response and active control of composite thin-walled beam structures in compressible flow. <i>Journal of Sound and Vibration</i> , 2011, 330, 4998-5013.	2.1	26
13	Mechanical behavior comparison of spider and silkworm silks using molecular dynamics at atomic scale. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 4814-4821.	1.3	26
14	The bond survival time variation of polymorphic amyloid fibrils in the mechanical insight. <i>Chemical Physics Letters</i> , 2014, 600, 68-72.	1.2	23
15	Mesoscopic model for mechanical characterization of biological protein materials. <i>Journal of Computational Chemistry</i> , 2009, 30, 873-880.	1.5	21
16	Label-free and high-sensitive detection of Kirsten rat sarcoma viral oncogene homolog and epidermal growth factor receptor mutation using Kelvin probe force microscopy. <i>Biosensors and Bioelectronics</i> , 2017, 87, 222-228.	5.3	21
17	Multimodal label-free detection and discrimination for small molecules using a nanoporous resonator. <i>Nature Communications</i> , 2014, 5, 3456.	5.8	19
18	Relationship between structural composition and material properties of polymorphic hIAPP fibrils. <i>Biophysical Chemistry</i> , 2015, 199, 1-8.	1.5	19

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19	Robust aeroelastic instability suppression of an advanced wing with model uncertainty in subsonic compressible flow field. <i>Aerospace Science and Technology</i> , 2013, 25, 242-252.	2.5	18
20	A highly sensitive, direct and label-free technique for Hg ²⁺ detection using Kelvin probe force microscopy. <i>Nanotechnology</i> , 2015, 26, 305501.	1.3	18
21	In-situ and highly sensitive detection of epidermal growth factor receptor mutation using nano-porous quartz crystal microbalance. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 1927-1932.	0.7	16
22	Highly sensitive and selective detection of single-nucleotide polymorphisms using gold nanoparticle MutS enzymes and a micro cantilever resonator. <i>Talanta</i> , 2019, 205, 120154.	2.9	16
23	Influence of Aromatic Residues on the Material Characteristics of A β 2 Amyloid Protofibrils at the Atomic Scale. <i>ChemPhysChem</i> , 2015, 16, 2403-2414.	1.0	15
24	Sliding mode robust control of supersonic three degrees-of-freedom airfoils. <i>International Journal of Control, Automation and Systems</i> , 2010, 8, 279-288.	1.6	14
25	Dynamic response of coupled shaft torsion and blade bending in rotor blade system. <i>Journal of Mechanical Science and Technology</i> , 2013, 27, 2585-2597.	0.7	14
26	End Capping Alters the Structural Characteristics and Mechanical Properties of Transthyretin (105 β 115) Amyloid Protofibrils. <i>ChemPhysChem</i> , 2016, 17, 425-432.	1.0	14
27	Conformational changes of A β 2 (1 β 42) monomers in different solvents. <i>Journal of Molecular Graphics and Modelling</i> , 2016, 65, 8-14.	1.3	14
28	The molecular mechanism of conformational changes of the triplet prion fibrils for pH. <i>RSC Advances</i> , 2015, 5, 49263-49269.	1.7	13
29	Morphology and mechanical properties of multi-stranded amyloid fibrils probed by atomistic and coarse-grained simulations. <i>Physical Biology</i> , 2015, 12, 066021.	0.8	13
30	The effect of structural heterogeneity on the conformation and stability of A β 2 τ mixtures. <i>RSC Advances</i> , 2016, 6, 52236-52247.	1.7	13
31	Detection and discrimination of single nucleotide polymorphisms by exploiting metal ion-mediated DNA duplex. <i>Sensors and Actuators B: Chemical</i> , 2020, 305, 127493.	4.0	13
32	Spider silk with weaker bonding resulting in higher strength and toughness through progressive unfolding and load transfer. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 108, 103773.	1.5	13
33	Synergistic enhanced rolling circle amplification based on mutS and radical polymerization for single-point mutation DNA detection. <i>Biosensors and Bioelectronics</i> , 2022, 210, 114295.	5.3	13
34	Cofilin reduces the mechanical properties of actin filaments: approach with coarse-grained methods. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 8148-8158.	1.3	12
35	Effects of lysine residues on structural characteristics and stability of tau proteins. <i>Biochemical and Biophysical Research Communications</i> , 2015, 466, 486-492.	1.0	12
36	Ultra-sensitive in situ detection of silver ions using a quartz crystal microbalance. <i>New Journal of Chemistry</i> , 2015, 39, 8028-8034.	1.4	12

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37	A technique for highly sensitive detection of mercury ions using DNA-functionalized gold nanoparticles and resonators based on a resonance frequency shift. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 799-804.	0.7	12
38	Large Protein Dynamics Described by Hierarchical-Component Mode Synthesis. <i>Journal of Chemical Theory and Computation</i> , 2009, 5, 1931-1939.	2.3	11
39	Highly sensitive detection of self-aggregated single-walled carbon nanotubes using a DNA-immobilized resonator. <i>Chemical Communications</i> , 2013, 49, 8635.	2.2	11
40	Modeling and vibration feedback control of rotating tapered composite thin-walled blade. <i>Journal of Mechanical Science and Technology</i> , 2003, 17, 380-390.	0.4	10
41	Steered molecular dynamics analysis of the role of cofilin in increasing the flexibility of actin filaments. <i>Biophysical Chemistry</i> , 2016, 218, 27-35.	1.5	10
42	Effects of the Hydrophobicity of Key Residues on the Characteristics and Stability of Glucose Oxidase on a Graphene Surface. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 1899-1908.	2.6	10
43	Sodium chloride's effect on self-assembly of diphenylalanine bilayer. <i>Journal of Computational Chemistry</i> , 2016, 37, 1839-1846.	1.5	9
44	Highly sensitive detection of silver ions using a silver-specific DNA based nano-porous micro-resonator. <i>New Journal of Chemistry</i> , 2017, 41, 1840-1845.	1.4	9
45	Mechanical features of various silkworm crystalline considering hydration effect via molecular dynamics simulations. <i>Journal of Biomolecular Structure and Dynamics</i> , 2018, 36, 1360-1368.	2.0	9
46	Mechanically inferior constituents in spider silk result in mechanically superior fibres by adaptation to harsh hydration conditions: a molecular dynamics study. <i>Journal of the Royal Society Interface</i> , 2018, 15, 20180305.	1.5	9
47	Dynamic Response Control of Rotating Composite Booms Under Solar Radiation. <i>Journal of Thermal Stresses</i> , 2008, 32, 21-40.	1.1	8
48	Noise reduction of a high-speed printing system using optimized gears based on Taguchi's method. <i>Journal of Mechanical Science and Technology</i> , 2010, 24, 2383-2393.	0.7	8
49	A microcantilever-based silver ion sensor using DNA-functionalized gold nanoparticles as a mass amplifier. <i>Nanotechnology</i> , 2017, 28, 245501.	1.3	8
50	Direct Yaw Moment Control with 4WD Torque-Vectoring for Vehicle Handling Stability and Agility. <i>International Journal of Automotive Technology</i> , 2022, 23, 555-565.	0.7	8
51	Comparative study on vibration control methodologies applied to adaptive thin-walled anisotropic cantilevers. <i>European Journal of Mechanics, A/Solids</i> , 2005, 24, 661-675.	2.1	7
52	Robust state estimation based on sliding mode observer for aeroelastic system. <i>Journal of Mechanical Science and Technology</i> , 2005, 19, 540-548.	0.7	7
53	Characterizing Structural Stability of Amyloid Motif Fibrils Mediated by Water Molecules. <i>ChemPhysChem</i> , 2017, 18, 817-827.	1.0	7
54	Nano-fishnet formation of silk controlled by Arginine density. <i>Acta Biomaterialia</i> , 2021, 128, 201-208.	4.1	7

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55	Domain decomposition-based structural condensation of large protein structures for understanding their conformational dynamics. <i>Journal of Computational Chemistry</i> , 2011, 32, 161-169.	1.5	6
56	Label-free detection of zinc oxide nanowire using a graphene wrapping method. <i>Biosensors and Bioelectronics</i> , 2015, 68, 481-486.	5.3	6
57	The Formation Mechanism of Segmented Ring-Shaped A β Oligomers and Protofibrils. <i>ACS Chemical Neuroscience</i> , 2019, 10, 3830-3838.	1.7	6
58	Aeroelastic response of an airfoil-flap system exposed to time-dependent disturbances. <i>Journal of Mechanical Science and Technology</i> , 2004, 18, 560-572.	0.4	5
59	Dynamic Response Analysis of Rotating Functionally Graded Thin-Walled Blades Exposed to Steady Temperature and External Excitation. <i>Journal of Thermal Stresses</i> , 2009, 32, 209-225.	1.1	5
60	Ultra-sensitive detection of zinc oxide nanowires using a quartz crystal microbalance and phosphoric acid DNA. <i>Nanotechnology</i> , 2016, 27, 365501.	1.3	5
61	Bioinspired Micro Glue Threads Fabricated by Liquid Bridge-to-Solidification as an Effective Sensing Platform. <i>ACS Sensors</i> , 2020, 5, 1977-1986.	4.0	5
62	Dynamic response analysis of rotating composite-VEM thin-walled beams incorporating viscoelastic materials in the time domain. <i>Journal of Mechanical Science and Technology</i> , 2006, 20, 1139-1148.	0.7	4
63	Identification of tail binding effect of kinesin-1 using an elastic network model. <i>Biomechanics and Modeling in Mechanobiology</i> , 2015, 14, 1107-1117.	1.4	4
64	Effects of End-Terminal Capping on Transthyretin (105-115) Amyloid Protofibrils Using Steered Molecular Dynamics. <i>Journal of Nanomaterials</i> , 2016, 2016, 1-10.	1.5	4
65	Predicting the self-assembly film structure of class II hydrophobin NC2 and estimating its structural characteristics. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 195, 111269.	2.5	4
66	Modeling of a hybrid passive damping system. <i>Journal of Mechanical Science and Technology</i> , 2005, 19, 127-135.	0.7	3
67	Modified mechanical mass-spring model of biomolecules for understanding dynamics of proteins. <i>Journal of Mechanical Science and Technology</i> , 2008, 22, 506-513.	0.7	3
68	Understanding structural characteristics of out-of-register hIAPP amyloid proteins via molecular dynamics. <i>RSC Advances</i> , 2016, 6, 77666-77672.	1.7	3
69	Capping effects on polymorphic A β 16-21 amyloids depend on their size: A molecular dynamics simulation study. <i>Biophysical Chemistry</i> , 2018, 232, 1-11.	1.5	3
70	Investigation of the role hydrophobin monomer loops using hybrid models via molecular dynamics simulation. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019, 173, 128-138.	2.5	3
71	Enhancement of electrode performance through surface modification using carbon nanotubes and porous gold nanostructures. <i>Nanotechnology</i> , 2021, 32, 505502.	1.3	3
72	In situ and fast detection of single-walled carbon nanotubes by using DNA mediated aggregation method and quartz crystal microbalance. <i>Journal of Applied Physics</i> , 2015, 118, 034510.	1.1	2

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73	Biophysical characterization of cofilin-induced extensionâ€‘torsion coupling in actin filaments. Journal of Biomechanics, 2016, 49, 1831-1835.	0.9	2
74	Highly sensitive, direct and real-time detection of silver nanowires by using a quartz crystal microbalance. Nanotechnology, 2016, 27, 475506.	1.3	2
75	A method for highly sensitive detection of silver nanoparticles using a micro-resonator and DNA assisted conjugation. Journal of Mechanical Science and Technology, 2020, 34, 1675-1681.	0.7	2
76	Novel Detection Method for Circulating EGFR Tumor DNA Using Gravitationally Condensed Gold Nanoparticles and Catalytic Walker DNA. Materials, 2022, 15, 3301.	1.3	2
77	Structural analysis of oligomeric and protofibrillar A β amyloid pair structures considering F20L mutation effects using molecular dynamics simulations. Proteins: Structure, Function and Bioinformatics, 2017, 85, 580-592.	1.5	1
78	Loading-device effects on the protein-unfolding mechanisms using molecular-dynamic simulations. Journal of Molecular Graphics and Modelling, 2018, 81, 162-167.	1.3	1
79	Internal interaction changes within the mutation of SLC26A4 STAS domain. Chemical Physics Letters, 2018, 710, 226-233.	1.2	1
80	Lengthâ€‘Dependent Manifestation of Vibration Modes Regulates a Specific Intermediate Morphology of A β 17â€‘42 in Different Environments. ChemPhysChem, 2018, 19, 1643-1654.	1.0	1
81	Impact of solvent on silk materials. , 2016, , .		0
82	Mechanical and vibrational characterization of amyloid-like HET-s nanosheets based on the skewed plate theory. Physical Chemistry Chemical Physics, 2017, 19, 11492-11501.	1.3	0
83	Analysis of Sensitivity for Chassis Design Parameters on X-wind Stability. Transactions of the Korean Society of Automotive Engineers, 2021, 29, 569-588.	0.1	0
84	BC-KR-3 The Study of Unfolding Mechanics for Ubiquitin Using Brownian Dynamic Simulation. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _BC-KR-3-1-_BC-KR-3-2.	0.0	0
85	BC-KR-5 Coarse-Grained Computational Mechanics for Protein Dynamics. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _BC-KR-5-1-_BC-KR-5-2.	0.0	0