Kilho Eom

List of Publications by Year
in descending order

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79 papers	2,178 citations	186265 28 h-index	233421 45 g-index
82 all docs	82 docs citations	82 times ranked	2505 citing authors

#	Article	IF	Citations
1	Role of physique and physical fitness in the balance of Korean national snowboard athletes. Journal of Exercise Science and Fitness, 2021, 19, 1-7.	2.2	12
2	Conformational Changes of Protein Analyzed Based on Structural Perturbation Method. Multiscale Science and Engineering, 2021, 3, 62-66.	1.7	2
3	Different Aggregation Pathways and Structures for Aî²40 and Aî²42 Peptides. Biomolecules, 2021, 11, 198.	4.0	16
4	Sequence-dependent aggregation-prone conformations of islet amyloid polypeptide. Physical Chemistry Chemical Physics, 2021, 23, 22532-22542.	2.8	5
5	Ligand-binding alters the mechanical stability of muscle protein titin domains. Journal of Biomolecular Structure and Dynamics, 2020, 38, 4938-4946.	3.5	0
6	Computational Simulations of Nanomechanical Resonators for Understanding their Frequency Dynamics and Sensing Performances. Multiscale Science and Engineering, 2020, 2, 214-226.	1.7	1
7	Unfolding Pathway of Proteins Predicted by Elastic Network Model. Multiscale Science and Engineering, 2020, 2, 235-241.	1.7	1
8	Variable Membrane Dielectric Polarization Characteristic in Individual Live Cells. Journal of Physical Chemistry Letters, 2020, 11, 7197-7203.	4.6	7
9	Effect of Loading Device in the Mechanical Force-Driven Biomolecular Bond Rupture Mechanism. Multiscale Science and Engineering, 2020, 2, 252-256.	1.7	0
10	Literature Review on Fretting Wear and Contact Mechanics of Tribological Coatings. Coatings, 2019, 9, 501.	2.6	35
11	Atomic force microscopy-based cancer diagnosis by detecting cancer-specific biomolecules and cells. Biochimica Et Biophysica Acta: Reviews on Cancer, 2019, 1871, 367-378.	7.4	30
12	Computer Simulation of Protein Materials at Multiple Length Scales: From Single Proteins to Protein Assemblies. Multiscale Science and Engineering, 2019, 1, 1-25.	1.7	16
13	Metal ions affect the formation and stability of amyloid Î² aggregates at multiple length scales. Physical Chemistry Chemical Physics, 2018, 20, 8951-8961.	2.8	39
14	Correlation between the hierarchical structures and nanomechanical properties of amyloid fibrils. Nanotechnology, 2018, 29, 295701.	2.6	2
15	Stretchable, Transparent, and Stretch-Unresponsive Capacitive Touch Sensor Array with Selectively Patterned Silver Nanowires/Reduced Graphene Oxide Electrodes. ACS Applied Materials & Interfaces, 2017, 9, 18022-18030.	8.0	143
16	Dynamical response of multi-walled carbon nanotube resonators based on continuum mechanics modeling for mass sensing applications. Journal of Mechanical Science and Technology, 2017, 31, 2385-2391.	1.5	6
17	Mechanical Deformation Mechanisms and Properties of Prion Fibrils Probed by Atomistic Simulations. Nanoscale Research Letters, 2017, 12, 228.	5.7	6
18	Nature-Inspired Construction of Two-Dimensionally Self-Assembled Peptide on Pristine Graphene. Journal of Physical Chemistry Letters, 2017, 8, 3734-3739.	4.6	21

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19	Blood Droplet-Based Cancer Diagnosis via Proteolytic Activity Measurement in Cancer Progression. Theranostics, 2017, 7, 2878-2887.	10.0	12
20	Finite-size effect on the dynamic and sensing performances of graphene resonators: the role of edge stress. Beilstein Journal of Nanotechnology, 2016, 7, 685-696.	2.8	5
21	Nanoscale Biological Materials. Journal of Nanomaterials, 2016, 2016, 1-2.	2.7	0
22	Nanomechanical Characterization of Amyloid Fibrils Using Single-Molecule Experiments and Computational Simulations. Journal of Nanomaterials, 2016, 2016, 1-16.	2.7	10
23	Mechanical Mass-Spring Model for Understanding Globular Motion of Proteins. Journal of Mechanics, 2016, 32, 123-129.	1.4	0
24	Measurement and analysis of the kinetic friction coefficient of AISI 52100 and ceramic balls on cold-rolled high strength steel. International Journal of Surface Science and Engineering, 2016, 10, 353.	0.4	1
25	Biaxial Dielectrophoresis Force Spectroscopy: A Stoichiometric Approach for Examining Intermolecular Weak Binding Interactions. ACS Nano, 2016, 10, 4011-4019.	14.6	21
26	Nanomechanical behaviors and properties of amyloid fibrils. Multiscale and Multiphysics Mechanics, 2016, 1, 53-64.	0.3	3
27	Nanomechanical Deformation Behavior of Amyloid Fibrils. Biophysical Journal, 2015, 108, 488a.	0.5	0
28	Self-assembled amyloid fibrils with controllable conformational heterogeneity. Scientific Reports, 2015, 5, 16220.	3.3	32
29	Î²-sheet-like formation during the mechanical unfolding of prion protein. Journal of Chemical Physics, 2015, 143, 125101.	3.0	15
30	The Role of Binding Site on the Mechanical Unfolding Mechanism of Ubiquitin. Scientific Reports, 2015, 5, 8757.	3.3	9
31	Morphology and mechanical properties of multi-stranded amyloid fibrils probed by atomistic and coarse-grained simulations. Physical Biology, 2015, 12, 066021.	1.8	13
32	Mechanical deformation mechanisms and properties of amyloid fibrils. Physical Chemistry Chemical Physics, 2015, 17, 1379-1389.	2.8	41
33	Fabrication of piezoelectric thick films for development of micromechanical cantilevers. Journal of Mechanical Science and Technology, 2015, 29, 3351-3356.	1.5	2
34	Role of Sequence and Structural Polymorphism on the Mechanical Properties of Amyloid Fibrils. PLoS ONE, 2014, 9, e88502.	2.5	51
35	Carbon Nanotube-Patterned Surface-Based Recognition of Carcinoembryonic Antigens in Tumor Cells for Cancer Diagnosis. Journal of Physical Chemistry Letters, 2013, 4, 1126-1130.	4.6	14
36	Controllable viscoelastic behavior of vertically aligned carbon nanotube arrays. Carbon, 2013, 65, 305-314.	10.3	20

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37	Relationship between disease-specific structures of amyloid fibrils and their mechanical properties. Applied Physics Letters, 2013, 102, .	3.3	29
38	Mapping the surface charge distribution of amyloid fibril. Applied Physics Letters, 2012, 101, 043703.	3.3	57
39	Loading device effect on protein unfolding mechanics. Journal of Chemical Physics, 2012, 137, 025102.	3.0	9
40	Nanomechanical actuation driven by light-induced DNA fuel. Chemical Communications, 2012, 48, 955-957.	4.1	19
41	Microfluidic Multifunctional Probe Array Dielectrophoretic Force Spectroscopy with Wide Loading Rates. ACS Nano, 2012, 6, 8665-8673.	14.6	32
42	Nonlinear vibration behavior of graphene resonators and their applications in sensitive mass detection. Nanoscale Research Letters, 2012, 7, 499.	5.7	49
43	Nanomechanical characterization of chemical interaction between gold nanoparticles and chemical functional groups. Nanoscale Research Letters, 2012, 7, 608.	5.7	25
44	Aptamer-functionalized nano-pattern based on carbon nanotube for sensitive, selective protein detection. Journal of Materials Chemistry, 2012, 22, 23348.	6.7	36
45	Water-stable single-walled carbon nanotubes coated by pyrenyl polyethylene glycol for fluorescence imaging and photothermal therapy. Biochip Journal, 2012, 6, 396-403.	4.9	15
46	InnenrÃ¼cktitelbild: Real-Time Quantitative Monitoring of Specific Peptide Cleavage by a Proteinase for Cancer Diagnosis (Angew. Chem. 24/2012). Angewandte Chemie, 2012, 124, 6119-6119.	2.0	0
47	Realâ€Time Quantitative Monitoring of Specific Peptide Cleavage by a Proteinase for Cancer Diagnosis. Angewandte Chemie - International Edition, 2012, 51, 5837-5841.	13.8	28
48	Inside Back Cover: Real-Time Quantitative Monitoring of Specific Peptide Cleavage by a Proteinase for Cancer Diagnosis (Angew. Chem. Int. Ed. 24/2012). Angewandte Chemie - International Edition, 2012, 51, 6015-6015.	13.8	0
49	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
50	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
51	Finite size effect on nanomechanical mass detection: the role of surface elasticity. Nanotechnology, 2011, 22, 265502.	2.6	26
52	Single-Molecule Recognition of Biomolecular Interaction via Kelvin Probe Force Microscopy. ACS Nano, 2011, 5, 6981-6990.	14.6	59
53	Nanomechanical Motion of Microcantilevers Driven by Ion-Induced DNA Conformational Transitions. BioNanoScience, 2011, 1, 117-122.	3.5	1
54	Mechanical Characterization of Amyloid Fibrils Using Coarseâ€Grained Normal Mode Analysis. Advanced Functional Materials, 2011, 21, 3454-3463.	14.9	56

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55	Domain decompositionâ€based structural condensation of large protein structures for understanding their conformational dynamics. Journal of Computational Chemistry, 2011, 32, 161-169.	3.3	6
56	Nanomechanical resonators and their applications in biological/chemical detection: Nanomechanics principles. Physics Reports, 2011, 503, 115-163.	25.6	389
57	Electrochemical Nanopatterning on Copper Surface Using an AFM Cantilever Tip. Materials Research Society Symposia Proceedings, 2011, 1298, 245.	0.1	0
58	Mechanical Properties of Silicon Nanowires. Nanoscale Research Letters, 2010, 5, 211-216.	5.7	103
59	Coarse-Grained Elastic Models of Protein Structures for Understanding Their Mechanics and Dynamics. Journal of Computational and Theoretical Nanoscience, 2010, 7, 1210-1226.	0.4	20
60	Nanomechanical In Situ Monitoring of Proteolysis of Peptide by Cathepsin B. PLoS ONE, 2009, 4, e6248.	2.5	26
61	Nanomechanical mass detection using nonlinear oscillations. Applied Physics Letters, 2009, 95, 203104.	3.3	64
62	Calculations of the resonant response of carbon nanotubes to binding of DNA. Journal Physics D: Applied Physics, 2009, 42, 145408.	2.8	16
63	Multiscale network model for large protein dynamics. Journal of Chemical Physics, 2009, 131, 245106.	3.0	11
64	Experimental and Computational Characterization of Biological Liquid Crystals: A Review of Single-Molecule Bioassays. International Journal of Molecular Sciences, 2009, 10, 4009-4032.	4.1	15
65	Mesoscopic model for mechanical characterization of biological protein materials. Journal of Computational Chemistry, 2009, 30, 873-880.	3.3	21
66	Hierarchical Reduction Method of Protein Structures for Understanding Protein Dynamics. Biophysical Journal, 2009, 96, 404a.	0.5	0
67	Large Protein Dynamics Described by Hierarchical-Component Mode Synthesis. Journal of Chemical Theory and Computation, 2009, 5, 1931-1939.	5.3	11
68	Modified mechanical mass-spring model of biomolecules for understanding dynamics of proteins. Journal of Mechanical Science and Technology, 2008, 22, 506-513.	1.5	3
69	In Situ Detection of Live Cancer Cells by Using Bioprobes Based on Au Nanoparticles. Langmuir, 2008, 24, 12112-12115.	3.5	38
70	Micromechanical observation of the kinetics of biomolecular interactions. Applied Physics Letters, 2008, 93, .	3.3	37
71	In situ real-time monitoring of biomolecular interactions based on resonating microcantilevers immersed in a viscous fluid. Applied Physics Letters, 2007, 90, 223903.	3.3	65
72	Dynamical response of nanomechanical resonators to biomolecular interactions. Physical Review B, 2007, 76, .	3.2	33

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73	Coarse-graining of protein structures for the normal mode studies. Journal of Computational Chemistry, 2007, 28, 1400-1410.	3.3	37
74	Nanomechanical microcantilever operated in vibration modes with use of RNA aptamer as receptor molecules for label-free detection of HCV helicase. Biosensors and Bioelectronics, 2007, 23, 459-465.	10.1	57
75	Detection of the Au thin-layer in the Hz per picogram regime based on the microcantilevers. Sensors and Actuators A: Physical, 2007, 135, 857-862.	4.1	29
76	Fabrication of stabilized piezoelectric thick film for silicon-based MEMS device. Applied Physics A: Materials Science and Processing, 2007, 88, 627-632.	2.3	10
77	Dominant surface stress driven by biomolecular interactions in the dynamical response of nanomechanical microcantilevers. Applied Physics Letters, 2006, 89, 173905.	3.3	70
78	Theoretical studies of the kinetics of mechanical unfolding of cross-linked polymer chains and their implications for single-molecule pulling experiments. Physical Review E, 2005, 71, 021904.	2.1	29
79	Relationship between the Mechanical Properties and Topology of Cross-Linked Polymer Molecules:Â Parallel Strands Maximize the Strength of Model Polymers and Protein Domains. Journal of Physical Chemistry B, 2003, 107, 8730-8733.	2.6	45