Satoru Kidoaki

List of Publications by Year
in descending order

98 papers	3,463 citations	186265 28 h-index	138484 58 g-index
105 all docs	105 docs citations	105 times ranked	4603 citing authors

#	Article	IF	Citations
1	Electrospun nano- to microfiber fabrics made of biodegradable copolyesters: structural characteristics, mechanical properties and cell adhesion potential. Biomaterials, 2005, 26, 3929-3939.	11.4	553
2	Mesoscopic spatial designs of nano- and microfiber meshes for tissue-engineering matrix and scaffold based on newly devised multilayering and mixing electrospinning techniques. Biomaterials, 2005, 26, 37-46.	11.4	512
3	Time-programmed dual release formulation by multilayered drug-loaded nanofiber meshes. Journal of Controlled Release, 2010, 143, 258-264.	9.9	235
4	Adhesion Forces of the Blood Plasma Proteins on Self-Assembled Monolayer Surfaces of Alkanethiolates with Different Functional Groups Measured by an Atomic Force Microscope. Langmuir, 1999, 15, 7639-7646.	3.5	202
5	Thermoresponsive Structural Change of a Poly(N-isopropylacrylamide) Graft Layer Measured with an Atomic Force Microscope. Langmuir, 2001, 17, 2402-2407.	3.5	150
6	Microelastic gradient gelatinous gels to induce cellular mechanotaxis. Journal of Biotechnology, 2008, 133, 225-230.	3.8	110
7	Self-organized nanostructures constructed with a single polymer chain. Chemical Physics Letters, 1996, 261, 527-533.	2.6	92
8	Structural features and mechanical properties ofin situ-bonded meshes of segmented polyurethane electrospun from mixed solvents. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2006, 76B, 219-229.	3.4	88
9	Elasticity boundary conditions required for cell mechanotaxis on microelastically-patterned gels. Biomaterials, 2011, 32, 2725-2733.	11.4	82
10	Poly(N-isopropylacrylamide) (PNIPAM)-grafted gelatin hydrogel surfaces: interrelationship between microscopic structure and mechanical property of surface regions and cell adhesiveness. Biomaterials, 2005, 26, 3105-3111.	11.4	80
11	Gene Transfer Mediated by Polyarginine Requires a Formation of Big Carrier-Complex of DNA Aggregate. Biochemical and Biophysical Research Communications, 1997, 231, 421-424.	2.1	73
12	Mechano-active scaffold design of small-diameter artificial graft made of electrospun segmented polyurethane fabrics. Journal of Biomedical Materials Research - Part A, 2005, 73A, 125-131.	4.0	72
13	Time-dependent complex formation of dendritic poly(L-lysine) with plasmid DNA and correlation with in vitro transfection efficiencies. Organic and Biomolecular Chemistry, 2003, 1, 1270-1273.	2.8	60
14	Reversible hydrogel formation driven by proteinâ€“peptideâ€“specific interaction and chondrocyte entrapment. Biomaterials, 2010, 31, 58-66.	11.4	55
15	Photocurable Biodegradable Liquid Copolymers:Â Synthesis of Acrylate-End-Capped Trimethylene Carbonate-Based Prepolymers, Photocuring, and Hydrolysis. Biomacromolecules, 2004, 5, 295-305.	5.4	54
16	Measurement of the Interaction Forces between Proteins and Iniferter-Based Graft-Polymerized Surfaces with an Atomic Force Microscope in Aqueous Media. Langmuir, 2001, 17, 1080-1087.	3.5	51
17	Competition between compaction of single chains and bundling of multiple chains in giant DNA molecules. Journal of Chemical Physics, 2004, 120, 4004-4011.	3.0	50
18	Mechanistic aspects of protein/material interactions probed by atomic force microscopy. Colloids and Surfaces B: Biointerfaces, 2002, 23, 153-163.	5.0	42

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19	Reversible Monolayer/Spheroid Cell Culture Switching by UCST-Type Thermoresponsive Ureido Polymers. ACS Applied Materials & Interfaces, 2016, 8, 31524-31529.	8.0	41
20	Brain-stiffness-mimicking tilapia collagen gel promotes the induction of dorsal cortical neurons from human pluripotent stem cells. Scientific Reports, 2019, 9, 3068.	3.3	37
21	Manipulation of cell mechanotaxis by designing curvature of the elasticity boundary on hydrogel matrix. Biomaterials, 2015, 41, 45-52.	11.4	34
22	Multiscaling in a long semiflexible polymer chain in two dimensions. Journal of Chemical Physics, 2002, 116, 9926-9929.	3.0	33
23	Phosphorylcholine-endcapped oligomer and block co-oligomer and surface biological reactivity. Biomaterials, 2003, 24, 4517-4527.	11.4	32
24	Morphology and Adhesion Strength of Myoblast Cells on Photocurable Gelatin under Native and Non-native Micromechanical Environments. Journal of Physical Chemistry B, 2013, 117, 4081-4088.	2.6	31
25	High-resolution imaging of a cell-attached nanointerface using a gold-nanoparticle two-dimensional sheet. Scientific Reports, 2017, 7, 3720.	3.3	31
26	Cellular Durotaxis Revisited: Initial-Position-Dependent Determination of the Threshold Stiffness Gradient to Induce Durotaxis. Langmuir, 2019, 35, 7478-7486.	3.5	31
27	Folding and unfolding of a giant duplex-DNA in a mixed solution with polycations, polyanions and crowding neutral polymers. Biophysical Chemistry, 1999, 76, 133-143.	2.8	30
28	Smart hydrogels exhibiting UCST-type volume changes under physiologically relevant conditions. RSC Advances, 2014, 4, 52346-52348.	3.6	30
29	Increasing Elasticity through Changes in the Secondary Structure of Gelatin by Gelation in a Microsized Lipid Space. ACS Central Science, 2018, 4, 477-483.	11.3	29
30	General cellular durotaxis induced with cell-scale heterogeneity of matrix-elasticity. Biomaterials, 2020, 230, 119647.	11.4	29
31	Characterization of Novel Biodegradable Segmented Polyurethanes Prepared from Amino-Acid Based Diisocyanate. Macromolecular Symposia, 2005, 224, 207-218.	0.7	28
32	Formation of Nanoporous Fibers by the Selfâ€Assembly of a Pyromellitic Diimideâ€Based Macrocycle. Angewandte Chemie - International Edition, 2010, 49, 9676-9679.	13.8	27
33	Force Measurement for Antigenâ^'Antibody Interaction by Atomic Force Microscopy Using a Photograft-Polymer Spacer. Biomacromolecules, 2005, 6, 2776-2784.	5.4	25
34	Shape-engineered vascular endothelial cells: Nitric oxide production, cell elasticity, and actin cytoskeletal features. Journal of Biomedical Materials Research - Part A, 2007, 81A, 728-735.	4.0	25
35	Photocontrol of Cell Adhesion and Proliferation by a Photoinduced Cationic Polymer SurfaceÂ¶. Photochemistry and Photobiology, 2003, 77, 480.	2.5	24
36	Dynamic Force Spectroscopy of the Specific Interaction between the PDZ Domain and Its Recognition Peptides. Langmuir, 2007, 23, 2668-2673.	3.5	24

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37	Nanoscale elongating control of the selfâ€assembled protein filament with the cysteineâ€introduced building blocks. Protein Science, 2009, 18, 960-969.	7.6	24
38	Rigidity Matching between Cells and the Extracellular Matrix Leads to the Stabilization of Cardiac Conduction. Biophysical Journal, 2012, 102, 379-387.	0.5	24
39	Persistent random deformation model of cells crawling on a gel surface. Scientific Reports, 2018, 8, 5153.	3.3	24
40	Rectified Cell Migration on Saw-Like Micro-Elastically Patterned Hydrogels with Asymmetric Gradient Ratchet Teeth. PLoS ONE, 2013, 8, e78067.	2.5	23
41	Time-Dependent Migratory Behaviors in the Long-Term Studies of Fibroblast Durotaxis on a Hydrogel Substrate Fabricated with a Soft Band. Langmuir, 2014, 30, 6187-6196.	3.5	23
42	Shape-engineered fibroblasts: Cell elasticity and actin cytoskeletal features characterized by fluorescence and atomic force microscopy. Journal of Biomedical Materials Research - Part A, 2007, 81A, 803-810.	4.0	22
43	Cooperativity vs. Phase Transition in a Giant Single DNA Molecule. Journal of the American Chemical Society, 2000, 122, 9891-9896.	13.7	21
44	Relationship between Apical Membrane Elasticity and Stress Fiber Organization in Fibroblasts Analyzed by Fluorescence and Atomic Force Microscopy. Biomechanics and Modeling in Mechanobiology, 2006, 5, 263-272.	2.8	18
45	2D-DIGE Proteomic Analysis of Mesenchymal Stem Cell Cultured on the Elasticity-tunable Hydrogels. Cell Structure and Function, 2012, 37, 127-139.	1.1	15
46	Characterization of 3D matrix conditions for cancer cell migration with elasticity/porosity-independent tunable microfiber gels. Polymer Journal, 2020, 52, 333-344.	2.7	14
47	The folded state of long duplex-DNA chain reflects its solution history. Biophysical Journal, 1996, 71, 932-939.	0.5	13
48	Protein-protein interactions of the hyperthermophilic archaeon Pyrococcus horikoshii OT3. Genome Biology, 2005, 6, R98.	9.6	12
49	Substrate-dependent cellular behavior of Swiss 3T3 fibroblasts and activation of Rho family during adhesion and spreading processes. Journal of Biomedical Materials Research Part B, 2004, 68A, 314-324.	3.1	10
50	S/O-nanodispersion electrospun fiber mesh effective for sustained release of healthy plasmid DNA with the structural and functional integrity. Journal of Biomaterials Science, Polymer Edition, 2013, 24, 1277-1290.	3.5	10
51	Thermo-Switching of the Conformation of Genomic DNA in Solutions of Poly(N-isopropylacrylamide). Langmuir, 2010, 26, 2995-2998.	3.5	9
52	Frustrated differentiation of mesenchymal stem cells. Biophysical Reviews, 2019, 11, 377-382.	3.2	9
53	Characterization of complexes formed by mixing aqueous solutions of poly(2-ethyl-2-oxazoline) and poly(methacrylic acid) with a wide range ofÂconcentrations. Polymer, 2013, 54, 1896-1904.	3.8	7
54	Designing Elastic Modulus of Cell Culture Substrate to Regulate YAP and RUNX2 Localization for Controlling Differentiation of Human Mesenchymal Stem Cells. Analytical Sciences, 2021, 37, 447-451.	1.6	7

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55	Avoiding tensional equilibrium in cells migrating on a matrix with cell-scale stiffness-heterogeneity. Biomaterials, 2021, 274, 120860.	11.4	7
56	Hierarchical Development of Motile Polarity in Durotactic Cells Just Crossing an Elasticity Boundary. Cell Structure and Function, 2020, 45, 33-43.	1.1	6
57	LSPR-mediated high axial-resolution fluorescence imaging on a silver nanoparticle sheet. PLoS ONE, 2017, 12, e0189708.	2.5	6
58	Cationic Comb-type Copolymers Do Not Cause Collapse but Shrinkage of DNA Molecules. Chemistry Letters, 2011, 40, 250-251.	1.3	5
59	Redox gene expression of adipose-derived stem cells in response to soft hydrogel. Turkish Journal of Biology, 2015, 39, 682-691.	0.8	5
60	High Axial and Lateral Resolutions on Self-Assembled Gold Nanoparticle Metasurfaces for Live-Cell Imaging. ACS Applied Nano Materials, 2020, 3, 11135-11142.	5.0	5
61	Mechanisms of endothelial cell coverage by pericytes: computational modelling of cell wrapping and<i>in vitro</i>experiments. Journal of the Royal Society Interface, 2020, 17, 20190739.	3.4	5
62	Interaction of Double-Stranded T4 DNA with Cationic Gel of Poly(diallyldimethylammonium chloride). Biomacromolecules, 2003, 4, 32-37.	5.4	4
63	Mechanics in Cell Adhesion and Motility on the Elastic Substrates. Journal of Biomechanical Science and Engineering, 2010, 5, 218-228.	0.3	4
64	Fabrication of Elasticity-Tunable Gelatinous Gel for Mesenchymal Stem Cell Culture. Methods in Molecular Biology, 2016, 1416, 425-441.	0.9	3
65	Fabrication of Gold Microwires by Drying Gold Nanorods Suspensions. Advanced Materials Interfaces, 2017, 4, 1601125.	3.7	3
66	Lipid Membrane Effect on the Elasticity of Gelatin Microgel Prepared inside Lipid Microdroplets. Nihon Reoroji Gakkaishi, 2019, 47, 55-59.	1.0	3
67	Cationic Comb-Type Copolymer Excludes Intercalating Dye from DNA Without Inducing DNA Condensation. Current Nanoscience, 2014, 10, 185-188.	1.2	3
68	Frustrated Differentiation of Mesenchymal Stem Cell Cultured on Microelastically-Patterned Photocurable Gelatinous Gels. Biophysical Journal, 2012, 102, 716a.	0.5	2
69	Precise design of microwrinkles through the independent regulation of elasticity on the surface and in the bulk of soft hydrogels. Polymer Journal, 2020, 52, 515-522.	2.7	2
70	Development of Time-Programmed, Dual-Release System Using Multilayered Fiber Mesh Sheet by Sequential Electrospinning. Journal of Robotics and Mechatronics, 2010, 22, 579-586.	1.0	2
71	Mechanobiology of cell and tissue engineering and multi-scaled process engineering. , 0, , .		1
72	Photocontrol of Cell Adhesion and Proliferation by a Photoinduced Cationic Polymer Surface Â¶. Photochemistry and Photobiology, 2003, 77, 480-486.	2.5	1

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73	Characterization of the Frustrated Differentiation of Mesenchymal Stem Cells Induced by Normadic Migration Between Stiff and Soft Region of Gel Matrix. Biophysical Journal, 2017, 112, 436a.	0.5	1
74	Stiffness-optimized drug-loaded matrix for selective capture and elimination of cancer cells. Journal of Drug Delivery Science and Technology, 2020, 55, 101414.	3.0	1
75	Adhesive-ligand-independent cell-shaping controlled by the lateral deformability of a condensed polymer matrix. Polymer Journal, 2022, 54, 211-222.	2.7	1
76	Transient Nascent Adhesion at the Initial Stage of Cell Adhesion Visualized on a Plasmonic Metasurface. Advanced NanoBiomed Research, 2022, 2, 2100100.	3.6	1
77	Application of Fluorescence Microscopy for the Single Molecular Observation of Giant Duplex DNA Chain.. Kobunshi, 1997, 46, 252-254.	0.0	0
78	Characterization of the cellular biomechanlcal responses caused on microprocessed substrates: effect of micropatterned cell adhesiveness and microelasticity gradient. , 2006, , .		0
79	Vectorial control of cell movement by the design of microelasticity distribution of biomaterial surface. , 2008, , .		0
80	3P-191 Development of micropatterned elastic surface to induce frustrated cellular migration(The) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.1	0
81	1P-159 Determination of the elasticity-gradient condition to induce cell mechanotaxis and its application for induction of the frustration movement(Cell biology, The 47th Annual Meeting of the) Tj ETQq1 1 0.784314 rgBT /Over	0.1	0
82	1P-160 Long-ranged rectification of cell movement on the asymmetric elastic-gradient gels(Cell) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3	0.1	0
83	1P224 Analysis of traction force dynamics in cell adhesion interface on the microelastic gradient gels(Cell biology,The 48th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2010, 50, S58-S59.	0.1	0
84	3P207 Spatio-temporal Pattern of Fibroblasts on Multi-Rigid Surfaces(Cell biology,The 48th Annual) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.1	0
85	1SB1030 "Mechanobio-materials" : design of micropatterned elastic gels to control cell mechanotaxis and motility-related functions(1SB Emerging MechanoBiology,The 48th Annual Meeting of the) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.1	0
86	1P229 Mechanical control of gene transfection efficiency on the well-defined elastic field of cell culture substrate(Cell biology,The 48th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2010, 50, S59-S60.	0.1	0
87	1P225 Long distance rectification of cell movement on the asymmetric elastic-gradient gels(Cell) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.1	0
88	Development of Micropatterned Elastic Gelatinous gels to Control Cell Mechanotaxis. Biophysical Journal, 2010, 98, 729a.	0.5	0
89	3J1124 Rigidity-matching between cell and extracellular matrix leads to stabilization of cardiac conduction(3J Bioengineering 1,The 49th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2011, 51, S141.	0.1	0
90	Detection of prion protein oligomers by single molecule fluorescence imaging. Neuropathology, 2013, 33, 1-6.	1.2	0

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91	Manipulation of Cell Movement by Designing Microelasticity Gradient Field of Cell Culture Substrate. Seibutsu Butsuri, 2017, 57, 135-139.	0.1	0
92	ãƒŠãƒŽãƒ»ãƒžã‚¯ãƒãƒ•ã‚¡ã‚ãƒãƒ¼ãƒ¡ãƒƒã‚·ãƒ¥ãƒ†ã‚¯ãƒŽãƒã‚¸ãƒ¼ :Âé›»ç•Œç´¡ç³¸æ³•ã®ç”Ÿä½“æææ–™è¨è¨ˆã¸ã®å¿œç”¨. Seikei-Kakou, 2	0.0	0
93	Elastic Interface to Manipulate Cell Motility and Functions. Hyomen Kagaku, 2010, 31, 307-312.	0.0	0
94	1C31 Study on cell migration pattern associated with difference in substrate stiffness. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2015, 2015.27, 115-116.	0.0	0
95	GS8-5 REDOX GENE EXPRESSION OF ADIPOSE-DERIVED STEM CELLS IN RESPONSE TO SOFT HYDROGEL(GS8:) Tj ETQq1 1 0.784314 rg Emerging Science and Technology in Biomechanics, 2015, 2015.8, 202.	0.0	0
96	GS1-3 TRACTION FORCE MICROSCOPY OF MESENCHYMAL STEM CELLS IN MODE OF FRUSTRATED DIFFERENTIATION(GS1: Cell and Tissue Biomechanics I). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 118.	0.0	0
97	1D33 Live imaging of paxillin in durotactic migrating cells on the micro-elastically patterned hydrogels. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2016, 2016.28, _1D33-1_-_1D33-4_.	0.0	0
98	Designing Culture Substrate for Controlling Mesenchymal Stem Cell Differentiation. Seibutsu Butsuri, 2021, 61, 389-391.	0.1	0