

# Koichi Kato

## List of Publications by Year in descending order

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92  
papers

3,946  
citations

136950  
32  
h-index

138484  
58  
g-index

94  
all docs

94  
docs citations

94  
times ranked

4377  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polymer surface with graft chains. Progress in Polymer Science, 2003, 28, 209-259.	24.7	589
2	Surface Modification of Polymers by Grafting. , 1998, , 1-39.		238
3	Surface Modification and Functionalization of Polytetrafluoroethylene Films. Macromolecules, 1996, 29, 6872-6879.	4.8	214
4	Introduction of functional groups onto the surface of polyethylene for protein immobilization. Biomaterials, 1993, 14, 817-822.	11.4	210
5	Combinatorial protein display for the cell-based screening of biomaterials that direct neural stem cell differentiation. Biomaterials, 2007, 28, 1048-1060.	11.4	159
6	In vitro hydroxyapatite deposition onto a film surface-grafted with organophosphate polymer. Journal of Biomedical Materials Research Part B, 1994, 28, 1365-1373.	3.1	101
7	Oriented immobilization of epidermal growth factor onto culture substrates for the selective expansion of neural stem cells. Biomaterials, 2007, 28, 3517-3529.	11.4	94
8	Drug permeation through temperature-sensitive membranes prepared from poly(vinylidene fluoride) with grafted poly(N-isopropylacrylamide) chains. Journal of Membrane Science, 2004, 243, 253-262.	8.2	87
9	Spatially and temporally controlled gene transfer by electroporation into adherent cells on plasmid DNA-loaded electrodes. Nucleic Acids Research, 2004, 32, e187-e187.	14.5	82
10	Layer-by-Layer Assembly of Poly(ethyleneimine) and Plasmid DNA onto Transparent Indium~Tin Oxide Electrodes for Temporally and Spatially Specific Gene Transfer. Langmuir, 2005, 21, 8360-8367.	3.5	80
11	Layer-by-layer assembly of cationic lipid and plasmid DNA onto gold surface for stent-assisted gene transfer. Biomaterials, 2006, 27, 3497-3504.	11.4	76
12	Glistening formation in an AcrySof lens initiated by spinodal decomposition of the polymer network by temperature change. Journal of Cataract and Refractive Surgery, 2001, 27, 1493-1498.	1.5	71
13	Deposition of a hydroxyapatite thin layer onto a polymer surface carrying grafted phosphate polymer chains. , 1996, 32, 687-691.		67
14	Trypsin immobilization on to polymer surface through grafted layer and its reaction with inhibitors. Biomaterials, 1993, 14, 763-769.	11.4	65
15	Immobilization of Histidine-Tagged Recombinant Proteins onto Micropatterned Surfaces for Cell-Based Functional Assays. Langmuir, 2005, 21, 7071-7075.	3.5	61
16	Hyaluronic acid hydrogel loaded with genetically-engineered brain-derived neurotrophic factor as a neural cell carrier. Biomaterials, 2009, 30, 4581-4589.	11.4	60
17	Parallel analysis of multiple surface markers expressed on rat neural stem cells using antibody microarrays. Biomaterials, 2005, 26, 4882-4891.	11.4	59
18	Enhanced proliferation of neural stem cells in a collagen hydrogel incorporating engineered epidermal growth factor. Biomaterials, 2011, 32, 4737-4743.	11.4	58

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19	Protein adsorption onto ionic surfaces. Colloids and Surfaces B: Biointerfaces, 1995, 4, 221-230.	5.0	57
20	Optical and atomic force microscopy of an explanted AcrySof intraocular lens with glistenings. Journal of Cataract and Refractive Surgery, 2000, 26, 571-575.	1.5	56
21	Immobilization of DNA onto a polymer support and its potentiality as immunoadsorbent. Biotechnology and Bioengineering, 2000, 51, 581-590.	3.3	54
22	Surface graft polymerization of glycidyl methacrylate onto polyethylene and the adhesion with epoxy resin. Journal of Polymer Science Part A, 1995, 33, 2629-2638.	2.3	52
23	Cell orientation and regulation of cell-cell communication in human mesenchymal stem cells on different patterns of electrospun fibers. Biomedical Materials (Bristol), 2013, 8, 055002.	3.3	52
24	<i>In Vivo</i> Study on the Survival of Neural Stem Cells Transplanted into the Rat Brain with a Collagen Hydrogel That Incorporates Laminin-Derived Polypeptides. Bioconjugate Chemistry, 2013, 24, 1798-1804.	3.6	51
25	Ultrastructure of the interface between cultured osteoblasts and surface-modified polymer substrates. , 1997, 37, 29-36.		50
26	Synthesis of bioadhesive hydrogels from chitin derivatives. International Journal of Adhesion and Adhesives, 2001, 21, 227-232.	2.9	50
27	In situ hydroxyapatite crystallization for the formation of hydroxyapatite/polymer composites. Journal of Materials Science, 1997, 32, 5533-5543.	3.7	49
28	Micropatterned, self-assembled monolayers for fabrication of transfected cell microarrays. Biochimica Et Biophysica Acta - General Subjects, 2004, 1672, 138-147.	2.4	49
29	Histologic and mechanical evaluation for bone bonding of polymer surfaces grafted with a phosphate-containing polymer. , 1997, 37, 384-393.		48
30	Enhanced Survival of Neural Cells Embedded in Hydrogels Composed of Collagen and Laminin-Derived Cell Adhesive Peptide. Bioconjugate Chemistry, 2009, 20, 976-983.	3.6	44
31	Lysozyme loading and release from hydrogels carrying pendant phosphate groups. Journal of Biomaterials Science, Polymer Edition, 1998, 9, 43-53.	3.5	43
32	Antibody microarray for correlating cell phenotype with surface marker. Biomaterials, 2005, 26, 687-696.	11.4	40
33	Improvement of Neural Stem Cell Survival in Collagen Hydrogels by Incorporating Laminin-Derived Cell Adhesive Polypeptides. Bioconjugate Chemistry, 2012, 23, 212-221.	3.6	38
34	Effect of laser groove treatment on shear bond strength of resin-based luting agent to polyetheretherketone (PEEK). Journal of Prosthetic Research, 2019, 63, 52-57.	2.8	37
35	Peroxide generation and decomposition on polymer surface. Journal of Polymer Science Part A, 1995, 33, 323-330.	2.3	36
36	Antibody arrays for quantitative immunophenotyping. Biomaterials, 2007, 28, 1289-1297.	11.4	35

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37	Surface oxidation of cellulose fibers by vacuum ultraviolet irradiation. Journal of Polymer Science Part A, 1999, 37, 357-361.	2.3	33
38	Surface-Anchoring of Spontaneously Dimerized Epidermal Growth Factor for Highly Selective Expansion of Neural Stem Cells. Bioconjugate Chemistry, 2009, 20, 102-110.	3.6	32
39	Self-Assembling Chimeric Protein for the Construction of Biodegradable Hydrogels Capable of Interaction with Integrins Expressed on Neural Stem/Progenitor Cells. Biomacromolecules, 2008, 9, 1411-1416.	5.4	29
40	A thin carboxymethyl cellulose culture substrate for the cellulase-induced harvesting of an endothelial cell sheet. Journal of Biomaterials Science, Polymer Edition, 2005, 16, 1277-1291.	3.5	27
41	Monitoring neural stem cell differentiation using PEDOT/PSS based MEA. Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 4329-4333.	2.4	26
42	Studies on tumor-promoting activity of polyethylene: Inhibitory activity of metabolic cooperation on polyethylene surfaces is markedly decreased by surface modification with collagen but not with RGDS peptide. , 1997, 35, 391-397.		25
43	Essential role of structural integrity and firm attachment of surface-anchored epidermal growth factor in adherent culture of neural stem cells. Biomaterials, 2008, 29, 4403-4408.	11.4	25
44	Synthesis and characterization of stimuli-sensitive hydrogels having a different length of ethylene glycol chains carrying phosphate groups: loading and release of lysozyme. Journal of Biomaterials Science, Polymer Edition, 2004, 15, 1435-1446.	3.5	24
45	High-Throughput Immunophenotyping by Surface Plasmon Resonance Imaging. Analytical Chemistry, 2007, 79, 8616-8623.	6.5	24
46	Design of culture substrates for large-scale expansion of neural stem cells. Biomaterials, 2011, 32, 992-1001.	11.4	24
47	New development of carbonate apatite-chitosan scaffold based on lyophilization technique for bone tissue engineering. Dental Materials Journal, 2013, 32, 317-325.	1.8	24
48	Selective adsorption of proteins to their ligands covalently immobilized onto microfibers. Biotechnology and Bioengineering, 1995, 47, 557-566.	3.3	22
49	The interplay between surface micro-topography and -mechanics of type I collagen fibrils in air and aqueous media: An atomic force microscopy study. European Physical Journal E, 2001, 6, 7-14.	1.6	22
50	Novel Poly(N-isopropylacrylamide)-graft-poly(vinylidene fluoride) Copolymers for Temperature-Sensitive Microfiltration Membranes. Macromolecular Materials and Engineering, 2003, 288, 11-16.	3.6	22
51	Layer-by-layer assembly of small interfering RNA and poly(ethyleneimine) for substrate-mediated electroporation with high efficiency. Analytical and Bioanalytical Chemistry, 2010, 397, 571-578.	3.7	20
52	Array-based functional screening of growth factors toward optimizing neural stem cell microenvironments. Biomaterials, 2011, 32, 5015-5022.	11.4	20
53	Adsorption of Enantiomeric Poly(lactide)s on Surface-Grafted Poly(l-lactide). Langmuir, 2004, 20, 6748-6753.	3.5	19
54	Array-based functional screening for genes that regulate vascular endothelial differentiation of Flk1-positive progenitors derived from embryonic stem cells. Biochimica Et Biophysica Acta - General Subjects, 2007, 1770, 1085-1097.	2.4	19

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55	Plasma treatment of polyaniline films: Effect on the intrinsic oxidation states. <i>Journal of Materials Research</i> , 1996, 11, 1570-1573.	2.6	18
56	Preparation of DNA-immobilized immunoadsorbent for treatment of systemic lupus erythematosus. <i>Journal of Biomaterials Science, Polymer Edition</i> , 1999, 10, 341-350.	3.5	17
57	XPS Characterization of Surface Functionalized Electroactive Polymers. <i>Surface and Interface Analysis</i> , 1996, 24, 597-604.	1.8	16
58	Collagen immobilization onto the surface of artificial hair for improving the tissue adhesion. <i>Journal of Adhesion Science and Technology</i> , 2000, 14, 635-650.	2.6	15
59	Fabrication of Cell-Based Arrays Using Micropatterned Alkanethiol Monolayers for the Parallel Silencing of Specific Genes by Small Interfering RNA. <i>Bioconjugate Chemistry</i> , 2006, 17, 1404-1410.	3.6	15
60	Ultrastructural Study on the Specific Binding of Genetically Engineered Epidermal Growth Factor to Type I Collagen Fibrils. <i>Bioconjugate Chemistry</i> , 2007, 18, 2137-2143.	3.6	15
61	Formation of chemical bonds on zirconia surfaces with acidic functional monomers. <i>Journal of Oral Science</i> , 2018, 60, 187-193.	1.7	15
62	Electroporation microarray for parallel transfer of small interfering RNA into mammalian cells. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 392, 1309-1316.	3.7	14
63	Effect of the Structure of Bone Morphogenetic Protein Carriers on Ectopic Bone Regeneration. <i>Tissue Engineering</i> , 1996, 2, 315-326.	4.6	13
64	Differentiation of mouse-induced pluripotent stem cells into dental epithelial-like cells in the absence of added serum. <i>In Vitro Cellular and Developmental Biology - Animal</i> , 2019, 55, 130-137.	1.5	13
65	Wnt3a promotes differentiation of human bone marrow-derived mesenchymal stem cells into cementoblast-like cells. <i>In Vitro Cellular and Developmental Biology - Animal</i> , 2018, 54, 468-476.	1.5	12
66	Influence of alkyl chain length on calcium phosphate deposition onto titanium surfaces modified with alkylphosphonic acid monolayers. <i>Journal of Biomedical Materials Research - Part A</i> , 2013, 101A, 2267-2272.	4.0	11
67	Seeding of mesenchymal stem cells into inner part of interconnected porous biodegradable scaffold by a new method with a filter paper. <i>Dental Materials Journal</i> , 2015, 34, 78-85.	1.8	11
68	Optimization of surface-immobilized extracellular matrices for the proliferation of neural progenitor cells derived from induced pluripotent stem cells. <i>Biotechnology and Bioengineering</i> , 2015, 112, 2388-2396.	3.3	11
69	Molecular level analyses of mechanical properties of PTFE sterilized by Co-60 $\gamma$ -ray irradiation for clinical use. <i>Radiation Physics and Chemistry</i> , 2017, 139, 126-131.	2.8	11
70	Enhancement of calcification by osteoblasts cultured on hydroxyapatite surfaces with adsorbed inorganic polyphosphate. <i>In Vitro Cellular and Developmental Biology - Animal</i> , 2018, 54, 449-457.	1.5	11
71	Multifunctional Chimeric Proteins for the Sequential Regulation of Neural Stem Cell Differentiation. <i>Bioconjugate Chemistry</i> , 2008, 19, 516-524.	3.6	10
72	Selective and rapid expansion of human neural progenitor cells on substrates with terminally anchored growth factors. <i>Biomaterials</i> , 2013, 34, 6008-6014.	11.4	10

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73	A Collagen-Binding Mimetic of Neural Cell Adhesion Molecule. <i>Bioconjugate Chemistry</i> , 2008, 19, 1119-1123.	3.6	7
74	Prolonged durability of electroporation microarrays as a result of addition of saccharides to nucleic acids. <i>Analytical and Bioanalytical Chemistry</i> , 2009, 393, 607-614.	3.7	7
75	Oriented immobilization of basic fibroblast growth factor: Bioengineered surface design for the expansion of human mesenchymal stromal cells. <i>Scientific Reports</i> , 2020, 10, 8762.	3.3	7
76	Antibody Arrays for Quality Control of Mesenchymal Stem Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 16828-16836.	8.0	6
77	Epidermal growth factor-immobilized surfaces for the selective expansion of neural progenitor cells derived from induced pluripotent stem cells. <i>Biotechnology and Bioengineering</i> , 2020, 117, 2741-2748.	3.3	5
78	Use of microarrays in transfection of mammalian cells with dicer-digested small interfering RNAs. <i>Analytical Biochemistry</i> , 2008, 374, 417-422.	2.4	4
79	Surface-Displayed Antibodies as a Tool for Simultaneously Controlling the Arrangement and Morphology of Multiple Cell Types with Microscale Precision. <i>ACS Applied Materials &amp; Interfaces</i> , 2009, 1, 53-55.	8.0	4
80	Design of Biointerfaces for Regenerative Medicine. <i>Advances in Polymer Science</i> , 2011, , 167-200.	0.8	4
81	Mucoadhesion of polyamphoteric hydrogels synthesized from acrylic acid and N,N-dimethylaminopropyl acrylamide. <i>International Journal of Adhesion and Adhesives</i> , 2021, 104, 102746.	2.9	4
82	Evaluation of a peptide motif designed for protein tethering to polymer surfaces. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2021, 32, 76-92.	3.5	2
83	Enhancement of intercellular interaction between iPSC-derived neural progenitor cells and activated endothelial cells using cell surface modification with functional oligopeptides. <i>Biomaterials Science</i> , 2022, 10, 925-938.	5.4	2
84	Slipperiness of Water Droplets on Polymer Surfaces : Effects of Surface Morphology and Surface Free Energy. <i>Journal of the Japan Society of Colour Material</i> , 2000, 73, 485-488.	0.1	1
85	Biodental engineering. <i>Journal of Oral Biosciences</i> , 2015, 57, 80-85.	2.2	1
86	Synthesis of Functional Tertiary Lymphoid Organs. , 2016, , 151-169.		1
87	Histologic and mechanical evaluation for bone bonding of polymer surfaces grafted with a phosphate-containing polymer. <i>Journal of Biomedical Materials Research Part B</i> , 1997, 37, 384-393.	3.1	1
88	High-Throughput Analyses of Gene Functions on a Cell Chip by Electroporation. <i>Methods in Molecular Biology</i> , 2011, 706, 181-190.	0.9	1
89	Engineering of Artificial Lymph Node. , 2016, , 181-200.		1
90	Optimization of culture conditions for the efficient differentiation of mouse-induced pluripotent stem cells into dental epithelial-like cells. <i>In Vitro Cellular and Developmental Biology - Animal</i> , 2020, 56, 816-824.	1.5	0

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91	Quantitative Cell Subset Analysis Using Antibody Microarrays. ACS Applied Bio Materials, 2021, 4, 7673-7681.	4.6	0
92	High-throughput Cytometry Using Antibody Arrays. , 2008, , .		0