

Tilo Pompe

List of Publications by Year in descending order

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Version: 2024-02-01

101
papers

3,210
citations

136885

32
h-index

175177

52
g-index

107
all docs

107
docs citations

107
times ranked

4051
citing authors

#	ARTICLE	IF	CITATIONS
1	Microfluidics-assisted synthesis and functionalization of monodisperse colloidal hydrogel particles for optomechanical biosensors. <i>Journal of Materials Chemistry B</i> , 2022, , .	2.9	3
2	Construction of a 3D brain extracellular matrix model to study the interaction between microglia and T cells in co-culture. <i>European Journal of Neuroscience</i> , 2021, 53, 4034-4050.	1.2	6
3	Fibronectin-functionalization of 3D collagen networks supports immune tolerance and inflammation suppression in human monocyte-derived macrophages. <i>Biomaterials</i> , 2021, 268, 120498.	5.7	16
4	Functional label-free assessment of fibroblast differentiation in 3D collagen-I-matrices using particle image velocimetry. <i>Biomaterials Science</i> , 2021, 9, 5917-5927.	2.6	3
5	Impact of binding mode of low-sulfated hyaluronan to 3D collagen matrices on its osteoinductive effect for human bone marrow stromal cells. <i>Biological Chemistry</i> , 2021, 402, 1465-1478.	1.2	2
6	Fibrillar biopolymer-based scaffolds to study macrophage-fibroblast crosstalk in wound repair. <i>Biological Chemistry</i> , 2021, 402, 1309-1324.	1.2	3
7	Biomimetic estrogen sensor based on soft colloidal probes. <i>Biosensors and Bioelectronics</i> , 2021, 192, 113506.	5.3	7
8	Stiffness Variation of 3D Collagen Networks by Surface Functionalization of Network Fibrils with Sulfonated Polymers. <i>Gels</i> , 2021, 7, 266.	2.1	1
9	Matrix Remodeling and Hyaluronan Production by Myofibroblasts and Cancer-Associated Fibroblasts in 3D Collagen Matrices. <i>Gels</i> , 2020, 6, 33.	2.1	23
10	Remodeling of Three-Dimensional Collagen I Matrices by Human Bone Marrow Stromal Cells during Osteogenic Differentiation <i>In Vitro</i> . <i>ACS Applied Bio Materials</i> , 2020, 3, 6967-6978.	2.3	10
11	Picomolar glyphosate sensitivity of an optical particle-based sensor utilizing biomimetic interaction principles. <i>Biosensors and Bioelectronics</i> , 2020, 165, 112262.	5.3	13
12	Biomimetic tissue models reveal the role of hyaluronan in melanoma proliferation and invasion. <i>Biomaterials Science</i> , 2020, 8, 1405-1417.	2.6	18
13	3D Scaffold-Based Macrophage Fibroblast Coculture Model Reveals IL-10 Dependence of Wound Resolution Phase. <i>Advanced Biology</i> , 2020, 4, e1900220.	3.0	23
14	Actin stress fiber dynamics in laterally confined cells. <i>Integrative Biology (United Kingdom)</i> , 2019, 11, 175-185.	0.6	5
15	Radial profile detection of multiple spherical particles in contact with interacting surfaces. <i>PLoS ONE</i> , 2019, 14, e0214815.	1.1	7
16	Surface Functionalization by Hydrophobin-EPSPS Fusion Protein Allows for the Fast and Simple Detection of Glyphosate. <i>Biosensors</i> , 2019, 9, 104.	2.3	7
17	Fibril bending stiffness of 3D collagen matrices instructs spreading and clustering of invasive and non-invasive breast cancer cells. <i>Biomaterials</i> , 2019, 193, 47-57.	5.7	71
18	Systems for localized release to mimic paracrine cell communication in vitro. <i>Journal of Controlled Release</i> , 2018, 278, 24-36.	4.8	9

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19	Fibril growth kinetics link buffer conditions and topology of 3D collagen I networks. <i>Acta Biomaterialia</i> , 2018, 67, 206-214.	4.1	28
20	Alterations in Cell Mechanics by Actin Cytoskeletal Changes Correlate with Strain-Specific Rubella Virus Phenotypes for Cell Migration and Induction of Apoptosis. <i>Cells</i> , 2018, 7, 136.	1.8	26
21	Biomimetic tumor microenvironments based on collagen matrices. <i>Biomaterials Science</i> , 2018, 6, 2009-2024.	2.6	63
22	Covalent Binding of Maleic Anhydride Copolymer Monolayers to Polyacrylamide Hydrogels. <i>Macromolecular Chemistry and Physics</i> , 2018, 219, 1800206.	1.1	3
23	Instructing Human Macrophage Polarization by Stiffness and Glycosaminoglycan Functionalization in 3D Collagen Networks. <i>Advanced Healthcare Materials</i> , 2017, 6, 1600967.	3.9	124
24	Fibroblast fate regulation by time dependent TGF- β 1 and IL-10 stimulation in biomimetic 3D matrices. <i>Biomaterials Science</i> , 2017, 5, 1858-1867.	2.6	51
25	Molecular weight specific impact of soluble and immobilized hyaluronan on CD44 expressing melanoma cells in 3D collagen matrices. <i>Acta Biomaterialia</i> , 2017, 50, 259-270.	4.1	53
26	Quantitative label-free single cell tracking in 3D biomimetic matrices. <i>Scientific Reports</i> , 2017, 7, 14135.	1.6	19
27	Solvent-Assisted Micromolding of Biohybrid Hydrogels to Maintain Human Hematopoietic Stem and Progenitor Cells Ex Vivo. <i>Advanced Materials</i> , 2017, 29, 1703489.	11.1	21
28	Mimicking Paracrine TGF- β 1 Signals during Myofibroblast Differentiation in 3D Collagen Networks. <i>Scientific Reports</i> , 2017, 7, 5664.	1.6	21
29	Hydrogel Microparticles as Sensors for Specific Adhesion: Case Studies on Antibody Detection and Soil Release Polymers. <i>Gels</i> , 2017, 3, 31.	2.1	10
30	Matrix Growth Factor and Surface Ligand Presentation. , 2017, , 215-231.		2
31	Mimicking Tissue Boundaries by Sharp Multiparameter Matrix Interfaces. <i>Advanced Healthcare Materials</i> , 2016, 5, 1861-1867.	3.9	22
32	Tissue Boundaries: Mimicking Tissue Boundaries by Sharp Multiparameter Matrix Interfaces (Adv. Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.9	2
33	Distinguishing autocrine and paracrine signals in hematopoietic stem cell culture using a biofunctional microcavity platform. <i>Scientific Reports</i> , 2016, 6, 31951.	1.6	29
34	Short-range cytokine gradients to mimic paracrine cell interactions in vitro. <i>Journal of Controlled Release</i> , 2016, 224, 59-68.	4.8	12
35	Polymer hydrogel particles as biocompatible AFM probes to study CD44/hyaluronic acid interactions on cells. <i>Polymer</i> , 2016, 102, 342-349.	1.8	16
36	Distinct impacts of substrate elasticity and ligand affinity on traction force evolution. <i>Soft Matter</i> , 2016, 12, 272-280.	1.2	21

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37	Glycosaminoglycan functionalization of mechanically and topologically defined collagen I matrices. <i>Journal of Materials Chemistry B</i> , 2015, 3, 8902-8910.	2.9	31
38	The interplay of fibronectin functionalization and TGF- β 1 presence on fibroblast proliferation, differentiation and migration in 3D matrices. <i>Biomaterials Science</i> , 2015, 3, 1291-1301.	2.6	52
39	Space constraints govern fate of hematopoietic stem and progenitor cells in vitro. <i>Biomaterials</i> , 2015, 53, 709-715.	5.7	24
40	The phenotype of cancer cell invasion controlled by fibril diameter and pore size of 3D collagen networks. <i>Biomaterials</i> , 2015, 52, 367-375.	5.7	174
41	Quantification of protein-materials interaction by soft colloidal probe spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 3014-3018.	1.3	14
42	Cytoskeletal transition in patterned cells correlates with interfacial energy model. <i>Soft Matter</i> , 2014, 10, 2444-2452.	1.2	8
43	Specific Adhesion of Carbohydrate Hydrogel Particles in Competition with Multivalent Inhibitors Evaluated by AFM. <i>Langmuir</i> , 2014, 30, 6142-6150.	1.6	23
44	Elucidating functional heterogeneity in hematopoietic progenitor cells: A combined experimental and modeling approach. <i>Experimental Hematology</i> , 2014, 42, 826-837.e17.	0.2	6
45	Topologically defined composites of collagen types I and V as in vitro cell culture scaffolds. <i>Acta Biomaterialia</i> , 2014, 10, 2693-2702.	4.1	60
46	Quantification of stem cell / niche interactions by coupling in vivo imaging and in silico simulation. <i>Experimental Hematology</i> , 2013, 41, S31.	0.2	0
47	Dissipative interactions in cell-matrix adhesion. <i>Soft Matter</i> , 2013, 9, 6207.	1.2	24
48	Contactless Laser-Assisted Patterning of Surfaces for Bio-Adhesive Microarrays. <i>Biointerphases</i> , 2012, 7, 35.	0.6	8
49	Nanoscale characterization of cell receptors and binding sites on cell-derived extracellular matrices. <i>Ultramicroscopy</i> , 2012, 118, 44-52.	0.8	7
50	Polymeric Biomaterials for Stem Cell Bioengineering. <i>Macromolecular Rapid Communications</i> , 2012, 33, 1420-1431.	2.0	44
51	Structure and function of ECM-inspired composite collagen type I scaffolds. <i>Soft Matter</i> , 2012, 8, 10200.	1.2	51
52	Tailored Poly(2-oxazoline) Polymer Brushes to Control Protein Adsorption and Cell Adhesion. <i>Macromolecular Bioscience</i> , 2012, 12, 926-936.	2.1	153
53	On the symmetry of siblings: automated single-cell tracking to quantify the behavior of hematopoietic stem cells in a biomimetic setup. <i>Experimental Hematology</i> , 2012, 40, 119-130.e9.	0.2	36
54	The control of endothelial cell adhesion and migration by shear stress and matrix-substrate anchorage. <i>Biomaterials</i> , 2012, 33, 1959-1969.	5.7	28

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55	FluidTracks. Informatik Aktuell, 2012, , 57-62.	0.4	1
56	Weakly Coupled Lipid Bilayer Membranes on Multistimuli-Responsive Poly(<i>N</i> -isopropylacrylamide) Copolymer Cushions. Langmuir, 2011, 27, 513-516.	1.6	13
57	Friction-Controlled Traction Force in Cell Adhesion. Biophysical Journal, 2011, 101, 1863-1870.	0.2	35
58	Enzyme Immobilization on Reactive Polymer Films. Methods in Molecular Biology, 2011, 751, 465-476.	0.4	14
59	The impact of heparin intercalation at specific binding sites in telopeptide-free collagen type I fibrils. Biomaterials, 2011, 32, 7444-7453.	5.7	31
60	Extracellular Matrix Functionalized Microcavities to Control Hematopoietic Stem and Progenitor Cell Fate. Macromolecular Bioscience, 2011, 11, 739-747.	2.1	40
61	A new approach to biofunctionalisation and micropatterning of multi-well plates. Biomaterials, 2010, 31, 8802-8809.	5.7	10
62	Immobilization of growth factors on solid supports for the modulation of stem cell fate. Nature Protocols, 2010, 5, 1042-1050.	5.5	50
63	Controlled enhancement of transmembrane enzyme activity in polymer cushioned supported bilayer membranes. Soft Matter, 2010, 6, 5382.	1.2	33
64	Tuneable swelling of thermo- and pH-responsive copolymer films. Soft Matter, 2010, 6, 937.	1.2	14
65	Sulfated glyco-block copolymers with specific receptor and growth factor binding to support cell adhesion and proliferation. Biomaterials, 2009, 30, 1026-1035.	5.7	21
66	The impact of primary and secondary ligand coupling on extracellular matrix characteristics and formation of endothelial capillaries. Biomaterials, 2009, 30, 35-44.	5.7	12
67	Hematopoietic stem and progenitor cells in adhesive microcavities. Integrative Biology (United Tj ETQq1 1 0.784314 rgBT / Overlock 0,6 58	0.6	58
68	Dissecting the Impact of Matrix Anchorage and Elasticity in Cell Adhesion. Biophysical Journal, 2009, 97, 2154-2163.	0.2	38
69	Biomimetic microcavities based on poly(dimethylsiloxane) elastomers. Soft Matter, 2009, 5, 3505.	1.2	11
70	Structural polymorphism of collagen type I heparin cofibrils. Soft Matter, 2009, 5, 3461.	1.2	9
71	Electrostatic stretching of grafted maleic acid copolymer chains. EXPRESS Polymer Letters, 2009, 3, 33-38.	1.1	3
72	Sulfated cellulose thin films with antithrombin affinity. EXPRESS Polymer Letters, 2009, 3, 733-742.	1.1	4

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73	Spatio-temporal Analysis of Unstained Cells In-vitro. Informatik Aktuell, 2009, , 292-296.	0.4	0
74	Heparin intercalation into reconstituted collagen I fibrils: Impact on growth kinetics and morphology. Biomaterials, 2008, 29, 1-14.	5.7	82
75	Functional immobilization of signaling proteins enables control of stem cell fate. Nature Methods, 2008, 5, 645-650.	9.0	190
76	Supported Lipid Bilayers on Spacious and pH-Responsive Polymer Cushions with Varied Hydrophilicity. Journal of Physical Chemistry B, 2008, 112, 6373-6378.	1.2	41
77	Sulfated Glycopolymer Thin Filmsâ€”Preparation, Characterization, and Biological Activity. Macromolecular Bioscience, 2007, 7, 195-200.	2.1	4
78	Engineered matrix coatings to modulate the adhesion of CD133+ human hematopoietic progenitor cells. Biomaterials, 2007, 28, 836-843.	5.7	66
79	Non-contact printing of proteins on reactive polymer surfaces: a novel route towards structured and graded cell culture carriers. Microfluidics and Nanofluidics, 2007, 3, 629-633.	1.0	7
80	Surface modification of poly(hydroxybutyrate) films to control cellâ€™matrix adhesion. Biomaterials, 2007, 28, 28-37.	5.7	105
81	Modeling of pattern development during fibronectin nanofibril formation. Biointerphases, 2006, 1, 93-97.	0.6	8
82	Benzamidine-based coatings: Implication of inhibitor structure on the inhibition of coagulation enzymes in solution and in vitro hemocompatibility assessment. Biointerphases, 2006, 1, 146-155.	0.6	7
83	Modulating Extracellular Matrix at Interfaces of Polymeric Materials. Advances in Polymer Science, 2006, , 63-93.	0.4	36
84	Fibronectin at Polymer Surfaces with Graduated Characteristics. , 2006, , 175-198.		4
85	Fibronectin Displacement at Polymer Surfaces. Langmuir, 2005, 21, 4571-4577.	1.6	52
86	Functional Films of Maleic Anhydride Copolymers under Physiological Conditions. Macromolecular Bioscience, 2005, 5, 890-895.	2.1	49
87	Fibronectin fibril pattern displays the force balance of cellâ€™matrix adhesion. European Biophysics Journal, 2005, 34, 1049-1056.	1.2	31
88	Nanoscale Features of Fibronectin Fibrillogenesis Depend on Protein-Substrate Interaction and Cytoskeleton Structure. Biophysical Journal, 2005, 88, 527-534.	0.2	37
89	Quantitative analysis of fibronectin fibrillogenesis by endothelial cells on biomaterials. Journal of Physics Condensed Matter, 2004, 16, S2421-S2426.	0.7	4
90	Modulated Fibronectin Anchorage at Polymer Substrates Controls Angiogenesis. Tissue Engineering, 2004, 10, 841-848.	4.9	42

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91	Control of fibronectin displacement on polymer substrates to influence endothelial cell behaviour. Journal of Materials Science: Materials in Medicine, 2004, 15, 387-390.	1.7	18
92	Comparison of flow cytometry and laser scanning cytometry for the analysis of CD34+hematopoietic stem cells. , 2004, 57A, 100-107.		9
93	In vitro blood compatibility of polymeric biomaterials through covalent immobilization of an amidine derivative. Biomaterials, 2004, 25, 3493-3501.	5.7	45
94	In Vitro Reconstitution of Fibrillar Collagen Type I Assemblies at Reactive Polymer Surfaces. Biomacromolecules, 2004, 5, 1340-1350.	2.6	61
95	Dynamic Alterations of Fibronectin Layers on Copolymer Substrates with Graded Physicochemical Characteristics. Langmuir, 2004, 20, 2928-2933.	1.6	41
96	Fibronectin anchorage to polymer substrates controls the initial phase of endothelial cell adhesion. Journal of Biomedical Materials Research - Part A, 2003, 67A, 647-657.	2.1	59
97	Quantitative analysis of immobilized proteins and protein mixtures by amino acid analysis. Journal of Chromatography A, 2003, 1005, 113-122.	1.8	46
98	Maleic Anhydride CopolymersA Versatile Platform for Molecular Biosurface Engineering. Biomacromolecules, 2003, 4, 1072-1079.	2.6	223
99	Liquid microstructures at solid interfaces. Journal of Physics Condensed Matter, 2000, 12, 57-74.	0.7	28
100	Nanometer resolution of liquid surface topography by scanning force microscopy. Journal of Adhesion Science and Technology, 1999, 13, 1071-1083.	1.4	20
101	Imaging Soft Surfaces by SFM. , 0, , 201-219.		0