Julien E Gautrot

List of Publications by Year
in descending order

93 papers	5,453 citations	136950 32 h-index	85541 71 g-index
101 all docs	101 docs citations	101 times ranked	8454 citing authors

#	Article	IF	Citations
1	Extracellular-matrix tethering regulates stem-cell fate. Nature Materials, 2012, 11, 642-649.	27.5	1,346
2	Surface-Initiated Polymer Brushes in the Biomedical Field: Applications in Membrane Science, Biosensing, Cell Culture, Regenerative Medicine and Antibacterial Coatings. Chemical Reviews, 2014, 114, 10976-11026.	47.7	499
3	Actin and serum response factor transduce physical cues from the microenvironment to regulate epidermal stem cell fate decisions. Nature Cell Biology, 2010, 12, 711-718.	10.3	414
4	Polymer Brushes Showing Nonâ€Fouling in Blood Plasma Challenge the Currently Accepted Design of Protein Resistant Surfaces. Macromolecular Rapid Communications, 2011, 32, 952-957.	3.9	184
5	The surface charge of anti-bacterial coatings alters motility and biofilm architecture. Biomaterials Science, 2013, 1, 589.	5.4	152
6	Cell sensing of physical properties at the nanoscale: Mechanisms and control of cell adhesion and phenotype. Acta Biomaterialia, 2016, 30, 26-48.	8.3	152
7	Cardiomyocytes Sense Matrix Rigidity through a Combination of Muscle and Non-muscle Myosin Contractions. Developmental Cell, 2018, 44, 326-336.e3.	7.0	101
8	Biofunctionalized Protein Resistant Oligo(ethylene glycol)-Derived Polymer Brushes as Selective Immobilization and Sensing Platforms. Biomacromolecules, 2009, 10, 2885-2894.	5.4	100
9	Exploiting the superior protein resistance of polymer brushes to control single cell adhesion and polarisation at the micron scale. Biomaterials, 2010, 31, 5030-5041.	11.4	99
10	Protein Nanosheet Mechanics Controls Cell Adhesion and Expansion on Low-Viscosity Liquids. Nano Letters, 2018, 18, 1946-1951.	9.1	93
11	The Nanoscale Geometrical Maturation of Focal Adhesions Controls Stem Cell Differentiation and Mechanotransduction. Nano Letters, 2014, 14, 3945-3952.	9.1	87
12	Recent advances in entropy-driven ring-opening polymerizations. Polymer Chemistry, 2011, 2, 791-799.	3.9	82
13	Main-Chain Bile Acid Based Degradable Elastomers Synthesized by Entropy-Driven Ring-Opening Metathesis Polymerization. Angewandte Chemie - International Edition, 2006, 45, 6872-6874.	13.8	74
14	Protein-Resistant NTA-Functionalized Polymer Brushes for Selective and Stable Immobilization of Histidine-Tagged Proteins. ACS Applied Materials & Interfaces, 2010, 2, 193-202.	8.0	71
15	Experimental evidence for carbonylâ€“Ï€ electron cloud interactions. New Journal of Chemistry, 2006, 30, 1801-1807.	2.8	70
16	Formation of Pickering Emulsions Using Ion-Specific Responsive Colloids. Langmuir, 2011, 27, 1251-1259.	3.5	65
17	Shape Memory Polymers Based on Naturally-Occurring Bile Acids. Macromolecules, 2009, 42, 7324-7331.	4.8	63
18	Adhesive ligand tether length affects the size and length of focal adhesions and influences cell spreading and attachment. Scientific Reports, 2016, 6, 34334.	3.3	59

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19	Enhancing the Photoluminescence Intensity of Conjugated Polycationic Polymers by Using Quantum Dots as Antiaggregation Reagents. Langmuir, 2006, 22, 4799-4803.	3.5	58
20	Responsive Polymer Brush Design and Emerging Applications for Nanotheranostics. Advanced Healthcare Materials, 2021, 10, e2000953.	7.6	56
21	High-sensitivity light-addressable potentiometric sensors using silicon on sapphire functionalized with self-assembled organic monolayers. Sensors and Actuators B: Chemical, 2015, 209, 230-236.	7.8	53
22	Shape-Induced Terminal Differentiation of Human Epidermal Stem Cells Requires p38 and Is Regulated by Histone Acetylation. PLoS ONE, 2011, 6, e27259.	2.5	52
23	Engineered cell-degradable poly(2-alkyl-2-oxazoline) hydrogel for epicardial placement of mesenchymal stem cells for myocardial repair. Biomaterials, 2021, 269, 120356.	11.4	50
24	Directing cell migration using micropatterned and dynamically adhesive polymer brushes. Acta Biomaterialia, 2014, 10, 2415-2422.	8.3	46
25	Decoupling geometrical and chemical cues directing epidermal stem cell fate on polymer brush-based cell micro-patterns. Integrative Biology (United Kingdom), 2013, 5, 899-910.	1.3	45
26	Ultrafast diffusion-controlled thiolâ€“ene based crosslinking of silicone elastomers with tailored mechanical properties for biomedical applications. Polymer Chemistry, 2016, 7, 5281-5293.	3.9	45
27	Mimicking normal tissue architecture and perturbation in cancer with engineered micro-epidermis. Biomaterials, 2012, 33, 5221-5229.	11.4	44
28	Stem Cell Expansion and Fate Decision on Liquid Substrates Are Regulated by Self-Assembled Nanosheets. ACS Nano, 2018, 12, 9206-9213.	14.6	44
29	High molecular weight bile acid and ricinoleic acid-based copolyesters via entropy-driven ring-opening metathesis polymerisation. Chemical Communications, 2008, , 1674.	4.1	41
30	Impact of the Molecular Environment on Thiolâ€“Ene Coupling For Biofunctionalization and Conjugation. Bioconjugate Chemistry, 2016, 27, 2111-2123.	3.6	39
31	Solution Conformation of Polymer Brushes Determines Their Interactions with DNA and Transfection Efficiency. Biomacromolecules, 2017, 18, 4121-4132.	5.4	36
32	Highly Stable RNA Capture by Dense Cationic Polymer Brushes for the Design of Cytocompatible, Serum-Stable SiRNA Delivery Vectors. Biomacromolecules, 2018, 19, 606-615.	5.4	36
33	Study of thiolâ€“ene chemistry on polymer brushes and application to surface patterning and protein adsorption. Polymer Chemistry, 2016, 7, 979-990.	3.9	35
34	Nanoengineered electrospun fibers and their biomedical applications: a review. Nanocomposites, 2021, 7, 1-34.	4.2	35
35	Impact of surface adhesion and sample heterogeneity on the multiscale mechanical characterisation of soft biomaterials. Scientific Reports, 2018, 8, 6780.	3.3	34
36	Biodegradable polymers based on bile acids and potential biomedical applications. Journal of Biomaterials Science, Polymer Edition, 2006, 17, 1123-1139.	3.5	32

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37	Nitrocellulose-stabilized silver nanoparticles as low conversion temperature precursors useful for inkjet printed electronics. Journal of Materials Chemistry, 2007, 17, 1725.	6.7	32
38	Macrocyclic bile acids: from molecular recognition to degradable biomaterial building blocks. Journal of Materials Chemistry, 2009, 19, 5705.	6.7	32
39	Biofunctionalized Patterned Polymer Brushes via Thiolâ€“Ene Coupling for the Control of Cell Adhesion and the Formation of Cell Arrays. Biomacromolecules, 2018, 19, 1445-1455.	5.4	31
40	Photoconfigurable, Cell-Remodelable Disulfide Cross-linked Hyaluronic Acid Hydrogels. Biomacromolecules, 2020, 21, 4663-4672.	5.4	31
41	Conductive surfaces with dynamic switching in response to temperature and salt. Journal of Materials Chemistry B, 2015, 3, 9285-9294.	5.8	30
42	Electrode specific electropolymerization of ethylenedioxythiophene: Injection enhancement in organic transistors. Applied Physics Letters, 2005, 87, 113501.	3.3	29
43	2,6-Diaryl-9,10-anthraquinones as models for electron-accepting polymers. New Journal of Chemistry, 2007, 31, 1585.	2.8	29
44	Peptide Cross-Linked Poly (Ethylene Glycol) Hydrogel Films as Biosensor Coatings for the Detection of Collagenase. Sensors, 2019, 19, 1677.	3.8	29
45	The culture of HaCaT cells on liquid substrates is mediated by a mechanically strong liquidâ€“liquid interface. Faraday Discussions, 2017, 204, 367-381.	3.2	28
46	â€œPolymer-polymer composites for the design of strong and tough degradable biomaterialsâ€• Materials Today Communications, 2016, 8, 53-63.	1.9	26
47	Physico-chemical characterization of Antheraea mylitta silk mats for wound healing applications. Scientific Reports, 2017, 7, 10344.	3.3	26
48	Tunable and processable shape memory composites based on degradable polymers. Polymer, 2017, 122, 323-331.	3.8	26
49	Differential integrin expression regulates cell sensing of the matrix nanoscale geometry. Acta Biomaterialia, 2017, 50, 280-292.	8.3	24
50	Conformational Dynamics and Responsiveness of Weak and Strong Polyelectrolyte Brushes: Atomistic Simulations of Poly(dimethyl aminoethyl methacrylate) and Poly(2-(methacryloyloxy)ethyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 217 Td	3.5	23
51	Impact of the multiscale viscoelasticity of quasi-2D self-assembled protein networks on stem cell expansion at liquid interfaces. Biomaterials, 2022, 284, 121494.	11.4	22
52	Synthesis and Characterization of Coreâ^'Shell Microspheres with Double Thermosensitivity. Langmuir, 2007, 23, 1047-1051.	3.5	21
53	Synthesis of electron-accepting polymers containing phenanthra-9,10-quinone units. Journal of Materials Chemistry, 2009, 19, 4148.	6.7	21
54	Comparative adhesion of chemically and physically crosslinked poly(acrylic acid)-based hydrogels to soft tissues. European Polymer Journal, 2021, 146, 110250.	5.4	21

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55	Long term expansion profile of mesenchymal stromal cells at protein nanosheet-stabilised bioemulsions for next generation cell culture microcarriers. Materials Today Bio, 2021, 12, 100159.	5.5	21
56	Poly(dibenzo[a,c]phenazine-2,7-diyl)s â€“ Synthesis and characterisation of a new family of electron-accepting conjugated polymers. Polymer, 2007, 48, 7065-7077.	3.8	20
57	Biofunctionalization of PEGylated Microcapsules for Exclusive Binding to Protein Substrates. Biomacromolecules, 2014, 15, 2555-2562.	5.4	20
58	Fabrication and Characterization of Conductive Conjugated Polymerâ€Coated Antheraea mylitta Silk Fibroin Fibers for Biomedical Applications. Macromolecular Bioscience, 2017, 17, 1600443.	4.1	20
59	Surface-Initiated Poly(oligo(2-alkyl-2-oxazoline)methacrylate) Brushes. Langmuir, 2018, 34, 10019-10027.	3.5	20
60	Polymers containing inâ€chain quinone moieties: synthesis and properties. Polymer International, 2009, 58, 261-266.	3.1	19
61	Shape memory properties of main chain bile acids polymers. Polymer, 2010, 51, 22-25.	3.8	19
62	Core-independent approach for polymer brush-functionalised nanomaterials with a fluorescent tag for RNA delivery. Chemical Communications, 2019, 55, 14166-14169.	4.1	18
63	Modulation of Thiolâ€“Ene Coupling by the Molecular Environment of Polymer Backbones for Hydrogel Formation and Cell Encapsulation. ACS Applied Bio Materials, 2020, 3, 6497-6509.	4.6	18
64	Peptide Cross-Linked Poly(2-oxazoline) as a Sensor Material for the Detection of Proteases with a Quartz Crystal Microbalance. Biomacromolecules, 2019, 20, 2506-2514.	5.4	17
65	A Kinetic Model of Oligonucleotideâ€“Brush Interactions for the Rational Design of Gene Delivery Vectors. Biomacromolecules, 2019, 20, 2218-2229.	5.4	16
66	Contractile myosin rings and cofilin-mediated actin disassembly orchestrate ECM nanotopography sensing. Biomaterials, 2020, 232, 119683.	11.4	15
67	Preparation and thermo-responsive light diffraction behaviors of soft polymerized crystalline colloidal arrays. Soft Matter, 2007, 3, 571-579.	2.7	13
68	Island brushes to control adhesion of water in oil droplets on planar surfaces. Soft Matter, 2011, 7, 7013.	2.7	13
69	Chondroitin-4-Sulfate: A Bioactive Macromolecule to Foster Vascular Healing around Stent-Grafts after Endovascular Aneurysm Repair. Macromolecular Bioscience, 2007, 7, 746-752.	4.1	12
70	The physico-chemistry of adhesions of protein resistant and weak polyelectrolyte brushes to cells and tissues. Soft Matter, 2020, 16, 505-522.	2.7	12
71	Extreme reversal in mechanical anisotropy in liquid-liquid interfaces reinforced with self-assembled protein nanosheets. Journal of Colloid and Interface Science, 2021, 594, 650-657.	9.4	11
72	Molar mass of main-chain bile acid-based oligo-esters measured by SEC, MALDI-TOF spectrometry and NMR spectroscopy: A comparative study. Analytica Chimica Acta, 2007, 581, 281-286.	5.4	10

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73	Failure mechanisms in denture adhesives. Dental Materials, 2016, 32, 615-623.	3.5	10
74	A drug eluting poly(trimethylene carbonate)/poly(lactic acid)-reinforced nanocomposite for the functional delivery of osteogenic molecules. International Journal of Nanomedicine, 2018, Volume 13, 5701-5718.	6.7	10
75	Functionalization of electrospun PLA fibers using amphiphilic block copolymers for use in carboxy-methyl-cellulose hydrogel composites. Nanocomposites, 2020, 6, 85-98.	4.2	10
76	Competitive binding and molecular crowding regulate the cytoplasmic interactome of non-viral polymeric gene delivery vectors. Nature Communications, 2021, 12, 6445.	12.8	10
77	Ultrafast Photo-Crosslinking of Thiolâ€“Norbornene Opaque Silicone Elastomer Nanocomposites in Air. ACS Applied Polymer Materials, 2021, 3, 5373-5385.	4.4	9
78	Multi-Scale Analysis of the Composition, Structure, and Function of Decellularized Extracellular Matrix for Human Skin and Wound Healing Models. Biomolecules, 2022, 12, 837.	4.0	9
79	Design of an Integrated Microvascularized Human Skin-on-a-Chip Tissue Equivalent Model. Frontiers in Bioengineering and Biotechnology, 0, 10, .	4.1	8
80	Hyaluronan (HA) Immobilized on Surfaces via Self-Assembled Monolayers of HA-Binding Peptide Modulates Endothelial Cell Spreading and Migration through Focal Adhesion. ACS Applied Materials & Interfaces, 2021, 13, 25792-25804.	8.0	7
81	Cationic polymer brush-coated bioglass nanoparticles for the design of bioresorbable RNA delivery vectors. European Polymer Journal, 2021, 156, 110593.	5.4	7
82	Hydrophobic and hydrophilic effects on water structuring and adhesion in denture adhesives. Journal of Biomedical Materials Research - Part A, 2018, 106, 1355-1362.	4.0	6
83	Modes of adsorption of polyelectrolytes to model substrates of hydroxyapatite. Journal of Colloid and Interface Science, 2019, 543, 237-246.	9.4	5
84	Precise positioning of enzymes within hierarchical polymer nanostructures for switchable bioelectrocatalysis. Biosensors and Bioelectronics, 2021, 179, 113045.	10.1	5
85	Highly Stretchable Conductive Covalent Coacervate Gels for Electronic Skin. Biomacromolecules, 2022, 23, 1423-1432.	5.4	5
86	Protein Ligand Nanopattern Size Selects for Cellular Adhesion via Hemidesmosomes over Focal Adhesions. Small Methods, 2022, 6, e2200152.	8.6	5
87	The RAPIDOS projectâ€”European and Chinese collaborative research on biomaterials. Journal of Orthopaedic Translation, 2015, 3, 78-84.	3.9	3
88	Hydration dependent mechanical performance of denture adhesive hydrogels. Dental Materials, 2018, 34, 1440-1448.	3.5	3
89	Collagenase Biosensor Based on the Degradation of Peptide Cross-Linked Poly(Ethylene Glycol) Hydrogel Films. Proceedings (mdpi), 2018, 2, .	0.2	2
90	A Photoaddressable Liquid Crystalline Phase Transition in Graphene Oxide Nanocomposites. Advanced Functional Materials, 2019, 29, 1900738.	14.9	2

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91	Novel Crosslinking System for Poly-Chloroprene Rubber to Enable Recyclability and Introduce Self-Healing. Polymers, 2021, 13, 3347.	4.5	2
92	Preparing macromolecular systems on surfaces: general discussion. Faraday Discussions, 2017, 204, 395-418.	3.2	0
93	Photoâ€Responsive Graphene: A Photoaddressable Liquid Crystalline Phase Transition in Graphene Oxide Nanocomposites (Adv. Funct. Mater. 24/2019). Advanced Functional Materials, 2019, 29, 1970165.	14.9	0