# Joachim Pius Spatz

List of Publications by Year
in descending order

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| 367 | 30,001 | 4960 84 | 6300 158 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 387 | 387 | 387 | 29871 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Environmental sensing through focal adhesions. Nature Reviews Molecular Cell Biology, 2009, 10, 21-33. | 37.0 | 2,205 |
| 2 | Extracellular-matrix tethering regulates stem-cell fate. Nature Materials, 2012, 11, 642-649. | 27.5 | 1,346 |
| 3 | Activation of Integrin Function by Nanopatterned Adhesive Interfaces. ChemPhysChem, 2004, 5, 383-388. | 2.1 | 1,093 |
| 4 | Cell Spreading and Focal Adhesion Dynamics Are Regulated by Spacing of Integrin Ligands. Biophysical Journal, 2007, 92, 2964-2974. | 0.5 | 840 |
| 5 | Connections between single-cell biomechanics and human disease states: gastrointestinal cancer and malaria. Acta Biomaterialia, 2005, 1, 15-30. | 8.3 | 748 |
| 6 | Ordered Deposition of Inorganic Clusters from Micellar Block Copolymer Films. Langmuir, 2000, 16, 407-415. | 3.5 | 594 |
| 7 | Impact of Order and Disorder in RGD Nanopatterns on Cell Adhesion. Nano Letters, 2009, 9, 1111-1116. | 9.1 | 501 |
| 8 | Block copolymer micelle nanolithography. Nanotechnology, 2003, 14, 1153-1160. | 2.6 | 492 |
| 9 | Oxidation-Resistant Gold-55 Clusters. Science, 2002, 297, 1533-1536. | 12.6 | 484 |
| 10 | A Comprehensive Evaluation of the Activity and Selectivity Profile of Ligands for RGD-binding Integrins. Scientific Reports, 2017, 7, 39805. | 3.3 | 425 |
| 11 | Substrate-induced lateral micro-phase separation of a diblock copolymer. Advanced Materials, 1996, 8, 513-517. | 21.0 | 383 |
| 12 | Stem cell migration and mechanotransduction on linear stiffness gradient hydrogels. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5647-5652. | 7.1 | 370 |
| 13 | Free fatty acid binding pocket in the locked structure of SARS-CoV-2 spike protein. Science, 2020, 370, 725-730. | 12.6 | 348 |
| 14 | Spectroscopy of single metallic nanoparticles using total internal reflection microscopy. Applied Physics Letters, 2000, 77, 2949-2951. | 3.3 | 346 |
| 15 | Lateral spacing of integrin ligands influences cell spreading and focal adhesion assembly. European Journal of Cell Biology, 2006, 85, 219-224. | 3.6 | 336 |
| 16 | A molecular mechanotransduction pathway regulates collective migration of epithelial cells. Nature Cell Biology, 2015, 17, 276-287. | 10.3 | 314 |
| 17 | Sequential bottom-up assembly of mechanically stabilized synthetic cells by microfluidics. Nature Materials, 2018, 17, 89-96. | 27.5 | 314 |
| 18 | Vinculin Regulates the Recruitment and Release of Core Focal Adhesion Proteins in a Force-Dependent Manner. Current Biology, 2013, 23, 271-281. | 3.9 | 310 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Exploiting Noncovalent Interactions in an Imineâ€Based Covalent Organic Framework for Quercetin Delivery. Advanced Materials, 2016, 28, 8749-8754. | 21.0 | 302 |
| 20 | Induction of Cell Polarization and Migration by a Gradient of Nanoscale Variations in Adhesive Ligand Spacing. Nano Letters, 2008, 8, 2063-2069. | 9.1 | 292 |
| 21 | Immobilized Chemokine Fields and Soluble Chemokine Gradients Cooperatively Shape Migration Patterns of Dendritic Cells. Immunity, 2010, 32, 703-713. | 14.3 | 282 |
| 22 | Adaptive force transmission in amoeboid cell migration. Nature Cell Biology, 2009, 11, 1438-1443. | 10.3 | 267 |
| 23 | Different sensitivity of human endothelial cells, smooth muscle cells and fibroblasts to topography in the nanoâ€“micro range. Acta Biomaterialia, 2009, 5, 2460-2466. | 8.3 | 261 |
| 24 | Gold-Polypyrrole Core-Shell Particles in Diblock Copolymer Micelles. Advanced Materials, 1998, 10, 132-134. | 21.0 | 236 |
| 25 | Sphingosylphosphorylcholine regulates keratin network architecture and visco-elastic properties of human cancer cells. Nature Cell Biology, 2003, 5, 803-811. | 10.3 | 234 |
| 26 | MaxSynBio: Avenues Towards Creating Cells from the Bottom Up. Angewandte Chemie - International Edition, 2018, 57, 13382-13392. | 13.8 | 234 |
| 27 | Syndecan-4â€“dependent Rac1 regulation determines directional migration in response to the extracellular matrix. Journal of Cell Biology, 2007, 177, 527-538. | 5.2 | 221 |
| 28 | Two Characteristic Regimes in Frequency-Dependent Dynamic Reorientation of Fibroblasts on Cyclically Stretched Substrates. Biophysical Journal, 2008, 95, 3470-3478. | 0.5 | 221 |
| 29 | Micellar Nanoreactorsâ€”Preparation and Characterization of Hexagonally Ordered Arrays of Metallic Nanodots. Advanced Functional Materials, 2003, 13, 853-861. | 14.9 | 216 |
| 30 | Micellar Inorganic-Polymer Hybrid Systemsâ€”A Tool for Nanolithography. Advanced Materials, 1999, 11, 149-153. | 21.0 | 214 |
| 31 | Dissecting the molecular architecture of integrin adhesion sites by cryo-electron tomography. Nature Cell Biology, 2010, 12, 909-915. | 10.3 | 213 |
| 32 | Ion-Stabilized Block Copolymer Micelles:Â Film Formation and Intermicellar Interaction. Macromolecules, 1996, 29, 3220-3226. | 4.8 | 211 |
| 33 | Mastering Complexity: Towards Bottom-up Construction of Multifunctional Eukaryotic Synthetic Cells. Trends in Biotechnology, 2018, 36, 938-951. | 9.3 | 205 |
| 34 | Gold nanoparticles in micellar poly(styrene)-b-poly(ethylene oxide) filmsâ€”size and interparticle distance control in monoparticulate films. Advanced Materials, 1996, 8, 337-340. | 21.0 | 202 |
| 35 | Protein repellent properties of covalently attached PEG coatings on nanostructured SiO2-based interfaces. Biomaterials, 2007, 28, 4739-4747. | 11.4 | 199 |
| 36 | Solution Behavior of Poly(styrene)-block-poly(2-vinylpyridine) Micelles Containing Gold Nanoparticles. Macromolecules, 2000, 33, 4791-4798. | 4.8 | 192 |

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|---|---|---|---|
| 37 | Cell Adhesion Strength Is Controlled by Intermolecular Spacing of Adhesion Receptors. Biophysical Journal, 2010, 98, 543-551. | 0.5 | 187 |
| 38 | Controlled Arrangement of Supramolecular Metal Coordination Arrays on Surfaces. Angewandte Chemie - International Edition, 1999, 38, 2547-2550. | 13.8 | 183 |
| 39 | Fabrication of Oriented Nanoscopic Ceramic Lines from Cylindrical Micelles of an Organometallic Polyferrocene Block Copolymer. Journal of the American Chemical Society, 2001, 123, 3147-3148. | 13.7 | 167 |
| 40 | Cell interactions with hierarchically structured nano-patterned adhesive surfaces. Soft Matter, 2009, 5, 72-77. | 2.7 | 167 |
| 41 | Plasmodium Sporozoite Motility Is Modulated by the Turnover of Discrete Adhesion Sites. Cell Host and Microbe, 2009, 6, 551-562. | 11.0 | 163 |
| 42 | In vitro cancer cellâ€“ECM interactions inform in vivo cancer treatment. Advanced Drug Delivery Reviews, 2016, 97, 270-279. | 13.7 | 162 |
| 43 | Micro-Nanostructured Interfaces Fabricated by the Use of Inorganic Block Copolymer Micellar Monolayers as Negative Resist for Electron-Beam Lithography. Advanced Functional Materials, 2003, 13, 569-575. | 14.9 | 161 |
| 44 | Integrin-Linked Kinase Controls Microtubule Dynamics Required for Plasma Membrane Targeting of Caveolae. Developmental Cell, 2010, 19, 574-588. | 7.0 | 154 |
| 45 | A Polystyreneâ^'Oligothiopheneâ^'Polystyrene Triblock Copolymer. Journal of the American Chemical Society, 1998, 120, 2798-2804. | 13.7 | 150 |
| 46 | Impact of Local versus Global Ligand Density on Cellular Adhesion. Nano Letters, 2011, 11, 1469-1476. | 9.1 | 149 |
| 47 | Biomimetic Interfaces for High-Performance Optics in the Deep-UV Light Range. Nano Letters, 2008, 8, 1429-1433. | 9.1 | 146 |
| 48 | Mineralization of Gold Nanoparticles in a Block Copolymer Microemulsion. Chemistry - A European Journal, 1996, 2, 1552-1555. | 3.3 | 144 |
| 49 | Impact of Tumor Cell Cytoskeleton Organization on Invasiveness and Migration: A Microchannel-Based Approach. PLoS ONE, 2010, 5, e8726. | 2.5 | 142 |
| 50 | Bax monomers form dimer units in the membrane that further self-assemble into multiple oligomeric species. Nature Communications, 2015, 6, 8042. | 12.8 | 140 |
| 51 | Imaging material properties by resonant tapping-force microscopy: A model investigation. Physical Review B, 1996, 54, 8908-8912. | 3.2 | 136 |
| 52 | Forces affecting the substrate in resonant tapping force microscopy. Nanotechnology, 1995, 6, 40-44. | 2.6 | 134 |
| 53 | Mimicking Cellular Environments by Nanostructured Soft Interfaces. Nano Letters, 2007, 7, 1413-1418. | 9.1 | 130 |
| 54 | Switchable adhesive substrates: Revealing geometry dependence in collective cell behavior. Biomaterials, 2012, 33, 2409-2418. | 11.4 | 128 |

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| 55 | Nanoparticle Tension Probes Patterned at the Nanoscale: Impact of Integrin Clustering on Force Transmission. Nano Letters, 2014, 14, 5539-5546. | 9.1 | 124 |
| 56 | Mechanical interactions among followers determine the emergence of leaders in migrating epithelial cell collectives. Nature Communications, 2018, 9, 3469. | 12.8 | 124 |
| 57 | A Crucial Role for Primary Cilia in Cortical Morphogenesis. Journal of Neuroscience, 2008, 28, 12887-12900. | 3.6 | 119 |
| 58 | Synthesis of Quasiâ€Hexagonal Ordered Arrays of Metallic Nanoparticles with Tuneable Particle Size. Advanced Materials, 2008, 20, 2297-2302. | 21.0 | 118 |
| 59 | Nanopatterning by block copolymer micelle nanolithography and bioinspired applications. Biointerphases, 2011, 6, MR1-MR12. | 1.6 | 118 |
| 60 | Noble metal loaded block lonomers: micelle organization, adsorption of free chains and formation of thin films. Advanced Materials, 1995, 7, 731-735. | 21.0 | 116 |
| 61 | Cellular chemomechanics at interfaces: sensing, integration and response. Soft Matter, 2007, 3, 307. | 2.7 | 114 |
| 62 | Cooperativity in Adhesion Cluster Formation during Initial Cell Adhesion. Biophysical Journal, 2008, 95, 5424-5431. | 0.5 | 114 |
| 63 | One-Pot Assembly of Complex Giant Unilamellar Vesicle-Based Synthetic Cells. ACS Synthetic Biology, 2019, 8, 937-947. | 3.8 | 114 |
| 64 | A Micellar Route to Ordered Arrays of Magnetic Nanoparticles: From Size-Selected Pure Cobalt Dots to Cobaltâ€“Cobalt Oxide Coreâ€“Shell Systems. Advanced Functional Materials, 2003, 13, 359-364. | 14.9 | 113 |
| 65 | T Cell Activation is Determined by the Number of Presented Antigens. Nano Letters, 2013, 13, 5619-5626. | 9.1 | 112 |
| 66 | Immune synapse formation determines interaction forces between T cells and antigen-presenting cells measured by atomic force microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17852-17857. | 7.1 | 109 |
| 67 | Nanomosaic Surfaces by Lateral Phase Separation of a Diblock Copolymer. Macromolecules, 1997, 30, 3874-3880. | 4.8 | 108 |
| 68 | Dynamic-SERS Optophysiology: A Nanosensor for Monitoring Cell Secretion Events. Nano Letters, 2016, 16, 3866-3871. | 9.1 | 107 |
| 69 | Cell adhesion and response to synthetic nanopatterned environments by steering receptor clustering and spatial location. HFSP Journal, 2008, 2, 276-285. | 2.5 | 106 |
| 70 | Reactive Ion Etching of Cylindrical Polyferrocenylsilane Block Copolymer Micelles: Fabrication of Ceramic Nanolines on Semiconducting Substrates. Advanced Functional Materials, 2003, 13, 271-276. | 14.9 | 105 |
| 71 | Force-induced cell polarisation is linked to RhoA-driven microtubule-independent focal-adhesion sliding. Journal of Cell Science, 2009, 122, 3644-3651. | 2.0 | 104 |
| 72 | Self-Assembly of Rodlike Hydrogen-Bonded Nanostructures. Journal of the American Chemical Society, 1999, 121, 7154-7155. | 13.7 | 103 |

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| 73 | Cellâ€“Extracellular Matrix Mechanobiology: Forceful Tools and Emerging Needs for Basic and Translational Research. Nano Letters, 2018, 18, 1-8. | 9.1 | 103 |
| 74 | Fine Tuning and Efficient T Cell Activation with Stimulatory aCD3 Nanoarrays. Nano Letters, 2013, 13, 5090-5097. | 9.1 | 102 |
| 75 | Myoblast morphology and organization on biochemically micro-patterned hydrogel coatings under cyclic mechanical strain. Biomaterials, 2010, 31, 250-258. | 11.4 | 101 |
| 76 | Molecular Engineering of Cellular Environments: Cell Adhesion to Nanoâ€Digital Surfaces. Methods in Cell Biology, 2007, 83, 89-111. | 1.1 | 98 |
| 77 | TMV nanorods with programmed longitudinal domains of differently addressable coat proteins. Nanoscale, 2013, 5, 3808. | 5.6 | 97 |
| 78 | Cyclic Tensile Strain Controls Cell Shape and Directs Actin Stress Fiber Formation and Focal Adhesion Alignment in Spreading Cells. PLoS ONE, 2013, 8, e77328. | 2.5 | 96 |
| 79 | Feasability study of wall shear stress imaging using microstructured surfaces with flexible micropillars. Experiments in Fluids, 2005, 39, 464-474. | 2.4 | 95 |
| 80 | Conjugation of Peptides to the Passivation Shell of Gold Nanoparticles for Targeting of Cell-Surface Receptors. ACS Nano, 2010, 4, 6617-6628. | 14.6 | 94 |
| 81 | Cellular Unbinding Forces of Initial Adhesion Processes on Nanopatterned Surfaces Probed with Magnetic Tweezers. Nano Letters, 2006, 6, 398-402. | 9.1 | 93 |
| 82 | Propagation of Mechanical Stress through the Actin Cytoskeleton toward Focal Adhesions: Model and Experiment. Biophysical Journal, 2008, 94, 1470-1482. | 0.5 | 92 |
| 83 | Impact of substrate elasticity on human hematopoietic stem and progenitor cell adhesion and motility. Journal of Cell Science, 2012, 125, 3765-75. | 2.0 | 90 |
| 84 | Cobalt(III) as a Stable and Inert Mediator Ion between NTA and His6â€Tagged Proteins. Angewandte Chemie - International Edition, 2013, 52, 7593-7596. | 13.8 | 90 |
| 85 | Cancer Cells Invade Confined Microchannels via a Self-Directed Mesenchymal-to-Amoeboid Transition. Nano Letters, 2019, 19, 2280-2290. | 9.1 | 90 |
| 86 | Nanoscale Control of Surface Immobilized BMP-2: Toward a Quantitative Assessment of BMP-Mediated Signaling Events. Nano Letters, 2015, 15, 1526-1534. | 9.1 | 87 |
| 87 | Nanopatterned Adhesive, Stretchable Hydrogel to Control Ligand Spacing and Regulate Cell Spreading and Migration. ACS Nano, 2017, 11, 8282-8291. | 14.6 | 86 |
| 88 | Nanoporous Gold Films Created Using Templates Formed from Self-Assembled Structures of Inorganicâ€“Block Copolymer Micelles. Advanced Materials, 2003, 15, 829-831. | 21.0 | 84 |
| 89 | Chromatin Shapes the Mitotic Spindle. Cell, 2009, 138, 502-513. | 28.9 | 84 |
| 90 | Metastable Reverse Globular Micelles and Giant Micellar Wires from Block Copolymers. Angewandte Chemie International Edition in English, 1996, 35, 1510-1512. | 4.4 | 83 |

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| 91 | A Combined Topâ€“Down/Bottomâ€“Up Approach to the Microscopic Localization of Metallic Nanodots. Advanced Materials, 2002, 14, 1827-1832. | 21.0 | 83 |
| 92 | Tuning the orbital angular momentum in optical vortex beams. Optics Express, 2006, 14, 6604. | 3.4 | 83 |
| 93 | Mineralization of nanoparticles in block copolymer micelles. Current Opinion in Colloid and Interface Science, 1997, 2, 177-187. | 7.4 | 81 |
| 94 | Machine-Learning-Driven Surface-Enhanced Raman Scattering Optophysiology Reveals Multiplexed Metabolite Gradients Near Cells. ACS Nano, 2019, 13, 1403-1411. | 14.6 | 81 |
| 95 | Keratin 8 phosphorylation regulates keratin reorganization and migration of epithelial tumor cells. Journal of Cell Science, 2012, 125, 2148-2159. | 2.0 | 80 |
| 96 | Functionalizing Î±vÎ²3â€•or Î±5Î²1â€Selective Integrin Antagonists for Surface Coating: A Method To Discriminate Integrin Subtypes Inâ€…Vitro. Angewandte Chemie - International Edition, 2013, 52, 1572-1575. | 13.8 | 80 |
| 97 | Symmetry dependence of holograms for optical trapping. Optics Letters, 2005, 30, 2086. | 3.3 | 79 |
| 98 | Cell adhesion and polarisation on molecularly defined spacing gradient surfaces of cyclic RGDfK peptide patches. European Journal of Cell Biology, 2008, 87, 743-750. | 3.6 | 78 |
| 99 | Nanoscale and mechanical properties of the physiological cellâ€“ECM microenvironment. Experimental Cell Research, 2016, 343, 3-6. | 2.6 | 78 |
| 100 | Influence of Different ECM Mimetic Peptide Sequences Embedded in a Nonfouling Environment on the Specific Adhesion of Humanâ€Skin Keratinocytes and Fibroblasts on Deformable Substrates. Small, 2007, 3, 1023-1031. | 10.0 | 76 |
| 101 | Polymeric Substrates with Tunable Elasticity and Nanoscopically Controlled Biomolecule Presentation. Langmuir, 2010, 26, 15472-15480. | 3.5 | 75 |
| 102 | The role of integrin-linked kinase in the molecular architecture of focal adhesions. Journal of Cell Science, 2013, 126, 4099-107. | 2.0 | 75 |
| 103 | Lessons from nature: biomimetic subwavelength structures for highâ€performance optics. Laser and Photonics Reviews, 2012, 6, 641-659. | 8.7 | 74 |
| 104 | Combined Effects of PEG Hydrogel Elasticity and Cell-Adhesive Coating on Fibroblast Adhesion and Persistent Migration. Biomacromolecules, 2014, 15, 195-205. | 5.4 | 74 |
| 105 | Integrin-Assisted T-Cell Activation on Nanostructured Hydrogels. Nano Letters, 2017, 17, 6110-6116. | 9.1 | 74 |
| 106 | 4D Printing of Shape Memory Polymers: From Macro to Micro. Advanced Functional Materials, 2022, 32, . | 14.9 | 73 |
| 107 | Stem Cell Mechanosensation on Gelatin Methacryloyl (GelMA) Stiffness Gradient Hydrogels. Annals of Biomedical Engineering, 2020, 48, 893-902. | 2.5 | 72 |
| 108 | Membrane-Grafted Hyaluronan Films:Â A Well-Defined Model System of Glycoconjugate Cell Coats. Journal of the American Chemical Society, 2007, 129, 5306-5307. | 13.7 | 70 |

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| 109 | Ultrathin Diblock Copolymer/Titanium Laminatesâ€"A Tool for Nanolithography. Advanced Materials, 1998, 10, 849-852. | 21.0 | 69 |
| 110 | Nanopattern of Diblock Copolymers Selectively Adsorbed on a Plane Surface. Langmuir, 1999, 15, 7290-7298. | 3.5 | 69 |
| 111 | The significance of integrin ligand nanopatterning on lipid raft clustering in hematopoietic stem cells. Biomaterials, 2012, 33, 3107-3118. | 11.4 | 69 |
| 112 | Ultraviolet-emitting ZnO nanowhiskers prepared by a vapor transport process on prestructured surfaces with self-assembled polymers. Journal of Applied Physics, 2003, 93, 6252-6257. | 2.5 | 68 |
| 113 | The effect of molar mass and degree of hydroxyethylation on the controlled shielding and deshielding of hydroxyethyl starch-coated polyplexes. Biomaterials, 2013, 34, 2530-2538. | 11.4 | 68 |
| 114 | Controlled Mineralization and Assembly of Hydrolysis-Based Nanoparticles in Organic Solvents Combining Polymer Micelles and Microwave Techniques. Advanced Materials, 1998, 10, 473-475. | 21.0 | 67 |
| 115 | Biselectivity of isoDGR Peptides for Fibronectin Binding Integrin Subtypes Î±5Î²1 and Î±vÎ²6: Conformational Control through Flanking Amino Acids. Journal of Medicinal Chemistry, 2013, 56, 1509-1519. | 6.4 | 67 |
| 116 | Genome Function and Nuclear Architecture: From Gene Expression to Nanoscience. Genome Research, 2003, 13, 1029-1041. | 5.5 | 66 |
| 117 | BMPâ€2 Signaling and Mechanotransduction Synergize to Drive Osteogenic Differentiation via YAP/TAZ. Advanced Science, 2020, 7, 1902931. | 11.2 | 66 |
| 118 | Division and Regrowth of Phaseâ€Separated Giant Unilamellar Vesicles**. Angewandte Chemie - International Edition, 2021, 60, 10661-10669. | 13.8 | 66 |
| 119 | Benzyl Alcohol and Block Copolymer Micellar Lithography: A Versatile Route to Assembling Gold and in Situ Generated Titania Nanoparticles into Uniform Binary Nanoarrays. ACS Nano, 2011, 5, 6355-6364. | 14.6 | 65 |
| 120 | Polarizing cytoskeletal tension to induce leader cell formation during collective cell migration. Biointerphases, 2013, 8, 32. | 1.6 | 64 |
| 121 | Cobalt Cross-Linked Redox-Responsive PEG Hydrogels: From Viscoelastic Liquids to Elastic Solids. Macromolecules, 2016, 49, 4229-4235. | 4.8 | 63 |
| 122 | Charge-controlled microfluidic formation of lipid-based single- and multicompartment systems. Lab on A Chip, 2018, 18, 2665-2674. | 6.0 | 63 |
| 123 | Ultrathin Coatings from Isocyanate-Terminated Star PEG Prepolymers:â€‰ Layer Formation and Characterization. Langmuir, 2005, 21, 1991-1999. | 3.5 | 61 |
| 124 | High-precision steering of multiple holographic optical traps. Optics Express, 2005, 13, 8678. | 3.4 | 60 |
| 125 | Integrin reconstituted in GUVs: A biomimetic system to study initial steps of cell spreading. Biochimica Et Biophysica Acta - Biomembranes, 2009, 1788, 2291-2300. | 2.6 | 60 |
| 126 | Synthesis of Nanostructured and Biofunctionalized Water-in-Oil Droplets as Tools for Homing T Cells. Journal of the American Chemical Society, 2013, 135, 3339-3342. | 13.7 | 59 |

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|---|---|---|---|
| 127 | Mechanical Response Analysis and Power Generation by Single-Cell Stretching. ChemPhysChem, 2005, 6, 663-670. | 2.1 | 57 |
| 128 | Environmental Constraints Guide Migration of Malaria Parasites during Transmission. PLoS Pathogens, 2011, 7, e1002080. | 4.7 | 57 |
| 129 | Interface Immobilization Chemistry of cRGDâ€based Peptides Regulates Integrin Mediated Cell Adhesion. Advanced Functional Materials, 2014, 24, 943-956. | 14.9 | 57 |
| 130 | Volume Adaptation Controls Stem Cell Mechanotransduction. ACS Applied Materials & Interfaces, 2019, 11, 45520-45530. | 8.0 | 57 |
| 131 | Site-specific presentation of single recombinant proteins in defined nanoarrays. Biointerphases, 2007, 2, 44-48. | 1.6 | 56 |
| 132 | Assembly of Multilayer Arrays of Viral Nanoparticles via Biospecific Recognition: A Quartz Crystal Microbalance with Dissipation Monitoring Study. Biomacromolecules, 2008, 9, 456-462. | 5.4 | 56 |
| 133 | Hydrogel Micropillars with Integrin Selective Peptidomimetic Functionalized Nanopatterned Tops: A New Tool for the Measurement of Cell Traction Forces Transmitted through Î±<sub>v</sub>Î²<sub>3</sub>â€•or Î±<sub>5</sub>Î²<sub>1</sub>â€‐Integrins. Advanced Materials, 2013, 25, 5869-5874. | 21.0 | 54 |
| 134 | Orderâ^'Disorder Transition in Surface-Induced Nanopattern of Diblock Copolymer Films. Macromolecules, 2000, 33, 150-157. | 4.8 | 53 |
| 135 | Quantification and Reactivity of Functional Groups in the Ligand Shell of PEGylated Gold Nanoparticles via a Fluorescence-Based Assay. Langmuir, 2009, 25, 7910-7917. | 3.5 | 53 |
| 136 | A Molecular Toolkit for the Functionalization of Titaniumâ€Based Biomaterials That Selectively Control Integrinâ€Mediated Cell Adhesion. Chemistry - A European Journal, 2013, 19, 9218-9223. | 3.3 | 53 |
| 137 | Tapping Scanning Force Microscopy in AirTheory and Experiment. Langmuir, 1997, 13, 4699-4703. | 3.5 | 52 |
| 138 | Force-induced fibronectin fibrillogenesis in vitro. Soft Matter, 2008, 4, 1998. | 2.7 | 52 |
| 139 | Technique of Surface Modification of a Cell-Adhesion-Resistant Hydrogel by a Cell-Adhesion-Available Inorganic Microarray. Biomacromolecules, 2008, 9, 2569-2572. | 5.4 | 52 |
| 140 | Can Bottom-Up Synthetic Biology Generate Advanced Drug-Delivery Systems?. Trends in Biotechnology, 2021, 39, 445-459. | 9.3 | 52 |
| 141 | On the Adsorption Behavior of Biotin-Binding Proteins on Gold and Silica. Langmuir, 2010, 26, 1029-1034. | 3.5 | 51 |
| 142 | Adhesion Maturation of Neutrophils on Nanoscopically Presented Platelet Glycoprotein Ibα. ACS Nano, 2013, 7, 9984-9996. | 14.6 | 51 |
| 143 | Microtubule Gliding and Cross-Linked Microtubule Networks on Micropillar Interfaces. Nano Letters, 2005, 5, 2630-2634. | 9.1 | 50 |
| 144 | Dynamic kinesin-1 clustering on microtubules due to mutually attractive interactions. Physical Biology, 2008, 5, 046004. | 1.8 | 50 |

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| 145 | Substrate engagement of integrins Î±5Î²1 and Î±vÎ²3 is necessary, but not sufficient, for high directional persistence in migration on fibronectin. Scientific Reports, 2016, 6, 23258. | 3.3 | 50 |
| 146 | Ligand Diffusion Enables Forceâ€Independent Cell Adhesion via Activating Î±5Î²1 Integrin and Initiating Rac and RhoA Signaling. Advanced Materials, 2020, 32, e2002566. | 21.0 | 50 |
| 147 | A unique profilin-actin interface is important for malaria parasite motility. PLoS Pathogens, 2017, 13, e1006412. | 4.7 | 50 |
| 148 | Early Keratinocyte Differentiation on Micropillar Interfaces. Nano Letters, 2007, 7, 287-294. | 9.1 | 49 |
| 149 | Microâ€Nanostructured Protein Arrays: A Tool for Geometrically Controlled Ligand Presentation. Small, 2009, 5, 1014-1018. | 10.0 | 49 |
| 150 | Block copolymer micelle nanolithography on non-conductive substrates. New Journal of Physics, 2004, 6, 101-101. | 2.9 | 48 |
| 151 | Contact Line Motion on Nanorough Surfaces: A Thermally Activated Process. Journal of the American Chemical Society, 2013, 135, 7159-7171. | 13.7 | 48 |
| 152 | Controllable ligand spacing stimulates cellular mechanotransduction and promotes stem cell osteogenic differentiation on soft hydrogels. Biomaterials, 2021, 268, 120543. | 11.4 | 48 |
| 153 | Cell Shape Normalization, Dendrite Orientation, and Melanin Production of Normal and Genetically Altered (Haploinsufficient NF1)â€Melanocytes by Microstructured Substrate Interactions. ChemPhysChem, 2004, 5, 85-92. | 2.1 | 47 |
| 154 | Regulation of integrin and growth factor signaling in biomaterials for osteodifferentiation. Beilstein Journal of Organic Chemistry, 2015, 11, 773-783. | 2.2 | 47 |
| 155 | Coupling of Retrograde Flow to Force Production During Malaria Parasite Migration. ACS Nano, 2016, 10, 2091-2102. | 14.6 | 47 |
| 156 | Cyclic Stretch Induces Cell Reorientation on Substrates by Destabilizing Catch Bonds in Focal Adhesions. PLoS ONE, 2012, 7, e48346. | 2.5 | 46 |
| 157 | Ageâ€Dependent Changes in Microscale Stiffness and Mechanoresponses of Cells. Small, 2011, 7, 1480-1487. | 10.0 | 45 |
| 158 | Auâ€“Ag Hybrid Nanoparticle Patterns of Tunable Size and Density on Glass and Polymeric Supports. Langmuir, 2012, 28, 1562-1568. | 3.5 | 45 |
| 159 | Microfluidic production and characterization of biofunctionalized giant unilamellar vesicles for targeted intracellular cargo delivery. Biomaterials, 2021, 264, 120203. | 11.4 | 45 |
| 160 | Photocleavable linker for the patterning of bioactive molecules. Scientific Reports, 2016, 5, 18309. | 3.3 | 44 |
| 161 | Primary cilia are critical for Sonic hedgehog-mediated dopaminergic neurogenesis in the embryonic midbrain. Developmental Biology, 2016, 409, 55-71. | 2.0 | 44 |
| 162 | Actin Fusion Proteins Alter the Dynamics of Mechanically Induced Cytoskeleton Rearrangement. PLoS ONE, 2011, 6, e22941. | 2.5 | 44 |

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| 163 | CCL21-loaded 3D hydrogels for T cell expansion and differentiation. Biomaterials, 2020, 259, 120313. | 11.4 | 43 |
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