

# Thomas Schmidt

## List of Publications by Year in descending order

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Version: 2024-02-01

90  
papers

4,154  
citations

87843

38  
h-index

118793

62  
g-index

99  
all docs

99  
docs citations

99  
times ranked

5665  
citing authors

| #  | ARTICLE                                                                                                                                                                                      | IF  | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1  | A guide to mechanobiology: Where biology and physics meet. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2015, 1853, 3043-3052.                                           | 1.9 | 248       |
| 2  | Nanometric three-dimensional tracking of individual quantum dots in cells. <i>Applied Physics Letters</i> , 2007, 90, 053902.                                                                | 1.5 | 221       |
| 3  | Autofluorescent Proteins in Single-Molecule Research: Applications to Live Cell Imaging Microscopy. <i>Biophysical Journal</i> , 2001, 80, 2396-2408.                                        | 0.2 | 219       |
| 4  | Single-Molecule Imaging of L-Type Ca <sup>2+</sup> Channels in Live Cells. <i>Biophysical Journal</i> , 2001, 81, 2639-2646.                                                                 | 0.2 | 179       |
| 5  | Single-Molecule Imaging of the H-Ras Membrane-Anchor Reveals Domains in the Cytoplasmic Leaflet of the Cell Membrane. <i>Biophysical Journal</i> , 2004, 86, 609-616.                        | 0.2 | 140       |
| 6  | Two-photon excitation action cross-sections of the autofluorescent proteins. <i>Chemical Physics Letters</i> , 2001, 350, 71-77.                                                             | 1.2 | 122       |
| 7  | Membrane protein synthesis in cell-free systems: From bio-mimetic systems to bio-membranes. <i>FEBS Letters</i> , 2014, 588, 2774-2781.                                                      | 1.3 | 120       |
| 8  | Accurate Determination of Elastic Parameters for Multicomponent Membranes. <i>Physical Review Letters</i> , 2008, 100, 088101.                                                               | 2.9 | 116       |
| 9  | Single-molecule diffusion measurements of H-Ras at the plasma membrane of live cells reveal microdomain localization upon activation. <i>Journal of Cell Science</i> , 2005, 118, 1799-1809. | 1.2 | 109       |
| 10 | spFRET Using Alternating Excitation and FCS Reveals Progressive DNA Unwrapping in Nucleosomes. <i>Biophysical Journal</i> , 2009, 97, 195-204.                                               | 0.2 | 108       |
| 11 | Local Stoichiometries Determined by Counting Individual Molecules. <i>Analytical Chemistry</i> , 1996, 68, 4397-4401.                                                                        | 3.2 | 106       |
| 12 | Single-Pair FRET Microscopy Reveals Mononucleosome Dynamics. <i>Journal of Fluorescence</i> , 2007, 17, 785-795.                                                                             | 1.3 | 105       |
| 13 | Membrane heterogeneity – from lipid domains to curvature effects. <i>Soft Matter</i> , 2009, 5, 3174.                                                                                        | 1.2 | 92        |
| 14 | Hemidesmosomes modulate force generation via focal adhesions. <i>Journal of Cell Biology</i> , 2020, 219, .                                                                                  | 2.3 | 87        |
| 15 | In vivo plasma membrane organization: results of biophysical approaches. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2004, 1664, 119-131.                                          | 1.4 | 85        |
| 16 | The integrin expression profile modulates orientation and dynamics of force transmission at cell-matrix adhesions. <i>Journal of Cell Science</i> , 2015, 128, 1316-1326.                    | 1.2 | 82        |
| 17 | Particle Image Correlation Spectroscopy (PICS): Retrieving Nanometer-Scale Correlations from High-Density Single-Molecule Position Data. <i>Biophysical Journal</i> , 2007, 92, 613-621.     | 0.2 | 77        |
| 18 | Simultaneous dual-color and dual-polarization imaging of single molecules. <i>Applied Physics Letters</i> , 2000, 77, 4052-4054.                                                             | 1.5 | 76        |

| #  | ARTICLE                                                                                                                                                                                                 | IF  | CITATIONS |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Membrane-Mediated Interactions Measured Using Membrane Domains. <i>Biophysical Journal</i> , 2009, 96, 4906-4915.                                                                                       | 0.2 | 76        |
| 20 | Single-Molecule Diffusion Reveals Similar Mobility for the Lck, H-Ras, and K-Ras Membrane Anchors. <i>Biophysical Journal</i> , 2006, 91, 1090-1097.                                                    | 0.2 | 72        |
| 21 | Imaging Upconverting Polymersomes in Cancer Cells: Biocompatible Antioxidants Brighten Triplet-Triplet Annihilation Upconversion. <i>Small</i> , 2016, 12, 5579-5590.                                   | 5.2 | 66        |
| 22 | The Nanoscale Architecture of Force-Bearing Focal Adhesions. <i>Nano Letters</i> , 2014, 14, 4257-4262.                                                                                                 | 4.5 | 65        |
| 23 | Homogeneous Detection of Single Rolling Circle Replication Products. <i>Analytical Chemistry</i> , 2004, 76, 495-498.                                                                                   | 3.2 | 63        |
| 24 | Distinct functions for ERK1 and ERK2 in cell migration processes during zebrafish gastrulation. <i>Developmental Biology</i> , 2008, 319, 370-383.                                                      | 0.9 | 61        |
| 25 | Isoform-specific differences in rapid nucleocytoplasmic shuttling cause distinct subcellular distributions of 14-3-3 $\beta$ and 14-3-3 $\eta$ . <i>Journal of Cell Science</i> , 2004, 117, 1411-1420. | 1.2 | 59        |
| 26 | Role of c-MET Inhibitors in Overcoming Drug Resistance in Spheroid Models of Primary Human Pancreatic Cancer and Stellate Cells. <i>Cancers</i> , 2019, 11, 638.                                        | 1.7 | 57        |
| 27 | Quantitation of Glucocorticoid Receptor DNA-Binding Dynamics by Single-Molecule Microscopy and FRAP. <i>PLoS ONE</i> , 2014, 9, e90532.                                                                 | 1.1 | 55        |
| 28 | Mannan-Binding Lectin: Structure, Oligomerization, and Flexibility Studied by Atomic Force Microscopy. <i>Journal of Molecular Biology</i> , 2009, 391, 246-259.                                        | 2.0 | 54        |
| 29 | Single-Molecule Microscopy Reveals Membrane Microdomain Organization of Cells in a Living Vertebrate. <i>Biophysical Journal</i> , 2009, 97, 1206-1214.                                                 | 0.2 | 53        |
| 30 | Photothermal Correlation Spectroscopy of Gold Nanoparticles in Solution. <i>Journal of Physical Chemistry C</i> , 2009, 113, 11451-11457.                                                               | 1.5 | 51        |
| 31 | Detection of Individual Oligonucleotide Pairing by Single-Molecule Microscopy. <i>Analytical Chemistry</i> , 1999, 71, 279-283.                                                                         | 3.2 | 49        |
| 32 | The conformational state of hERG1 channels determines integrin association, downstream signaling, and cancer progression. <i>Science Signaling</i> , 2017, 10, .                                        | 1.6 | 49        |
| 33 | GFAP isoforms control intermediate filament network dynamics, cell morphology, and focal adhesions. <i>Cellular and Molecular Life Sciences</i> , 2016, 73, 4101-4120.                                  | 2.4 | 46        |
| 34 | Inhibition of cross-species CXCR4 signaling by the small molecule IT1t impairs triple negative breast cancer early metastases in zebrafish. <i>DMM Disease Models and Mechanisms</i> , 2016, 9, 141-53. | 1.2 | 45        |
| 35 | Cell-free synthesis of membrane proteins: Tailored cell models out of microsomes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2014, 1838, 1382-1388.                                          | 1.4 | 43        |
| 36 | A mechanopharmacology approach to overcome chemoresistance in pancreatic cancer. <i>Drug Resistance Updates</i> , 2017, 31, 43-51.                                                                      | 6.5 | 43        |

| #  | ARTICLE                                                                                                                                                                                               | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | Protein Incorporation in Giant Lipid Vesicles under Physiological Conditions. <i>ChemBioChem</i> , 2010, 11, 175-179.                                                                                 | 1.3 | 42        |
| 38 | Imaging the lipid bilayer of giant unilamellar vesicles using red-to-blue light upconversion. <i>Chemical Communications</i> , 2015, 51, 9137-9140.                                                   | 2.2 | 41        |
| 39 | Bidirectional membrane tube dynamics driven by nonprocessive motors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 7993-7997.                   | 3.3 | 37        |
| 40 | Quantification of Biological Interactions with Particle Image Cross-Correlation Spectroscopy (PICCS). <i>Biophysical Journal</i> , 2011, 100, 1810-1818.                                              | 0.2 | 37        |
| 41 | The Activity of Kv 11.1 Potassium Channel Modulates F-Actin Organization During Cell Migration of Pancreatic Ductal Adenocarcinoma Cells. <i>Cancers</i> , 2019, 11, 135.                             | 1.7 | 37        |
| 42 | Water-Dispersible Silica-Coated Upconverting Liposomes: Can a Thin Silica Layer Protect TTA-UC against Oxygen Quenching?. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 322-334.         | 2.6 | 36        |
| 43 | Ligand-induced type II interleukin-4 receptor dimers are sustained by rapid re-association within plasma membrane microcompartments. <i>Nature Communications</i> , 2017, 8, 15976.                   | 5.8 | 34        |
| 44 | Holding it together: when cadherin meets cadherin. <i>Biophysical Journal</i> , 2021, 120, 4182-4192.                                                                                                 | 0.2 | 34        |
| 45 | Direct Observation of $\beta$ -Synuclein Amyloid Aggregates in Endocytic Vesicles of Neuroblastoma Cells. <i>PLoS ONE</i> , 2016, 11, e0153020.                                                       | 1.1 | 34        |
| 46 | Simultaneous atomic-force and two-photon fluorescence imaging of biological specimens in vivo. <i>Ultramicroscopy</i> , 2004, 99, 235-245.                                                            | 0.8 | 33        |
| 47 | A spatially restricted increase in receptor mobility is involved in directional sensing during <i>Dictyostelium discoideum</i> chemotaxis. <i>Journal of Cell Science</i> , 2008, 121, 1750-1757.     | 1.2 | 33        |
| 48 | Statistical Analysis of Single-Molecule Colocalization Assays. <i>Analytical Chemistry</i> , 2001, 73, 1100-1105.                                                                                     | 3.2 | 31        |
| 49 | Mechanical interplay between cell shape and actin cytoskeleton organization. <i>Soft Matter</i> , 2020, 16, 6328-6343.                                                                                | 1.2 | 30        |
| 50 | A sequence in the carboxy-terminus of the $\beta$ 1C subunit important for targeting, conductance and open probability of L-type Ca <sup>2+</sup> channels. <i>FEBS Letters</i> , 2000, 477, 161-169. | 1.3 | 27        |
| 51 | Quantification of GPCR internalization by single-molecule microscopy in living cells. <i>Integrative Biology (United Kingdom)</i> , 2011, 3, 675.                                                     | 0.6 | 26        |
| 52 | Nucleosome Immobilization Strategies for Single-Pair FRET Microscopy. <i>ChemPhysChem</i> , 2008, 9, 2002-2009.                                                                                       | 1.0 | 23        |
| 53 | High-Fidelity Protein Targeting into Membrane Lipid Microdomains in Living Cells. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 1311-1315.                                             | 7.2 | 22        |
| 54 | Sensitive detection of the redox state of copper proteins using fluorescence. <i>Journal of Biological Inorganic Chemistry</i> , 2005, 10, 683-687.                                                   | 1.1 | 20        |

| #  | ARTICLE                                                                                                                                                                                 | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Photothermal Detection of Individual Gold Nanoparticles: Perspectives for High-Throughput Screening. <i>ChemPhysChem</i> , 2008, 9, 1761-1766.                                          | 1.0 | 20        |
| 56 | Membrane lysis by gramicidin S visualized in red blood cells and giant vesicles. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2010, 1798, 2033-2039.                           | 1.4 | 20        |
| 57 | Androgen receptor complexes probe DNA for recognition sequences by short random interactions. <i>Journal of Cell Science</i> , 2014, 127, 1406-16.                                      | 1.2 | 18        |
| 58 | Cytoskeletal Anisotropy Controls Geometry and Forces of Adherent Cells. <i>Physical Review Letters</i> , 2018, 121, 178101.                                                             | 2.9 | 17        |
| 59 | Mobility of G proteins is heterogeneous and polarized during chemotaxis. <i>Journal of Cell Science</i> , 2010, 123, 2922-2930.                                                         | 1.2 | 16        |
| 60 | Quantifying cellular forces and biomechanical properties by correlative micropillar traction force and Brillouin microscopy. <i>Biomedical Optics Express</i> , 2019, 10, 2202.         | 1.5 | 16        |
| 61 | Membrane Mediated Sorting. <i>Physical Review Letters</i> , 2010, 104, 198102.                                                                                                          | 2.9 | 14        |
| 62 | The Oxidation State of a Protein Observed Molecule-by-Molecule. <i>ChemPhysChem</i> , 2005, 6, 1381-1386.                                                                               | 1.0 | 13        |
| 63 | Microsecond Single-Molecule Tracking ( $\mu$ sSMT). <i>Biophysical Journal</i> , 2011, 100, L19-L21.                                                                                    | 0.2 | 13        |
| 64 | Single-Molecule Imaging Technique to Study the Dynamic Regulation of GPCR Function at the Plasma Membrane. <i>Methods in Enzymology</i> , 2013, 521, 47-67.                             | 0.4 | 12        |
| 65 | Simultaneous wide-field imaging and spectroscopy of localized fluorophores. <i>Optics Letters</i> , 2004, 29, 727.                                                                      | 1.7 | 11        |
| 66 | Nonprocessive Motor Dynamics at the Microtubule Membrane Tube Interface. <i>Biophysical Journal</i> , 2010, 98, 93-100.                                                                 | 0.2 | 10        |
| 67 | Robust assessment of protein complex formation in vivo via single-molecule intensity distributions of autofluorescent proteins. <i>Journal of Biomedical Optics</i> , 2011, 16, 076016. | 1.4 | 10        |
| 68 | Visualization of HRas Domains in the Plasma Membrane of Fibroblasts. <i>Biophysical Journal</i> , 2015, 108, 1870-1877.                                                                 | 0.2 | 8         |
| 69 | Repetitive switching between DNA binding modes enables target finding by the glucocorticoid receptor. <i>Journal of Cell Science</i> , 2019, 132, .                                     | 1.2 | 8         |
| 70 | Asymmetric Elastic Properties of <i>Dictyostelium discoideum</i> in Relation to Chemotaxis. <i>Langmuir</i> , 2007, 23, 9352-9357.                                                      | 1.6 | 7         |
| 71 | Fibronectin Patches as Anchoring Points for Force Sensing and Transmission in Human Induced Pluripotent Stem Cell-Derived Pericytes. <i>Stem Cell Reports</i> , 2020, 14, 1107-1122.    | 2.3 | 7         |
| 72 | Hypergravity affects cell traction forces of fibroblasts. <i>Biophysical Journal</i> , 2021, 120, 773-780.                                                                              | 0.2 | 7         |

| #  | ARTICLE                                                                                                                                                                                                                                                     | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | CXCR4 signaling is controlled by immobilization at the plasma membrane. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2016, 1863, 607-616.                                                                                               | 1.9 | 5         |
| 74 | Substrate rigidity modulates traction forces and stoichiometry of cell-matrix adhesions. <i>Journal of Chemical Physics</i> , 2022, 156, 085101.                                                                                                            | 1.2 | 5         |
| 75 | Quantitative Imaging of Morphogen Gradients in <i>Drosophila</i> Imaginal Discs. <i>Cold Spring Harbor Protocols</i> , 2013, 2013, pdb.top074237.                                                                                                           | 0.2 | 4         |
| 76 | Characterization of cell-induced astigmatism in high-resolution imaging. <i>Biomedical Optics Express</i> , 2022, 13, 464.                                                                                                                                  | 1.5 | 4         |
| 77 | Screening crystallisation conditions using fluorescence correlation spectroscopy. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2002, 58, 1536-1541.                                                                                | 2.5 | 3         |
| 78 | Single-Molecule Analysis of Biomembranes. , 2009, , 19-42.                                                                                                                                                                                                  |     | 3         |
| 79 | Kinesin Recycling in Stationary Membrane Tubes. <i>Biophysical Journal</i> , 2010, 99, 1835-1841.                                                                                                                                                           | 0.2 | 3         |
| 80 | Depth-of-Focus Correction in Single-Molecule Data Allows Analysis of 3D Diffusion of the Glucocorticoid Receptor in the Nucleus. <i>PLoS ONE</i> , 2015, 10, e0141080.                                                                                      | 1.1 | 3         |
| 81 | The Tracking of Individual Molecules in Cells and Tissues. , 0, , 25-42.                                                                                                                                                                                    |     | 2         |
| 82 | Probing Structure and Dynamics of the Cell Membrane with Single Fluorescent Proteins. <i>Springer Series on Fluorescence</i> , 2011, , 185-212.                                                                                                             | 0.8 | 2         |
| 83 | Single-Molecule Imaging of Cellular Signaling. <i>Springer Series in Biophysics</i> , 2008, , 107-129.                                                                                                                                                      | 0.4 | 2         |
| 84 | Single Cell Micro-Pillar-Based Characterization of Endothelial and Fibroblast Cell Mechanics. <i>Micro</i> , 2021, 1, 242-249.                                                                                                                              | 0.9 | 2         |
| 85 | Impact of neurite alignment on organelle motion. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20210617.                                                                                                                                        | 1.5 | 2         |
| 86 | Analysis of the H-Ras mobility pattern <i>in vivo</i> shows cellular heterogeneity inside epidermal tissue. <i>DMM Disease Models and Mechanisms</i> , 2022, 15, .                                                                                          | 1.2 | 2         |
| 87 | Abstract 4040: $\beta$ 1 integrins are potential regulators of chemoresistance through modulation of biomechanical cues in pancreatic cancer. , 2018, , .                                                                                                   |     | 1         |
| 88 | S2D04 Single-molecule imaging for the study of biological membranes. <i>Seibutsu Butsuri</i> , 2001, 41, S13.                                                                                                                                               | 0.0 | 0         |
| 89 | Abstract 175: Mechanical transduction mediated by Integrin-ILK dependent actin dynamics drives stem-plasticity leading experimental metastatic colonization of prostate cancer leading experimental metastatic colonization of prostate cancer. , 2018, , . |     | 0         |
| 90 | Abstract 183: HERG1 potassium channels perturb the $\beta$ 1 integrins mediated force transduction machinery in pancreatic cancer. , 2018, , .                                                                                                              |     | 0         |