

CURRICULUM VITAE

THOMAS SURREY

Senior Group Leader & ICREA Research Professor

Centre for Genomic Regulation (CRG)

Intracellular Self-Organization Laboratory

Quantitative Cell Biology Programme

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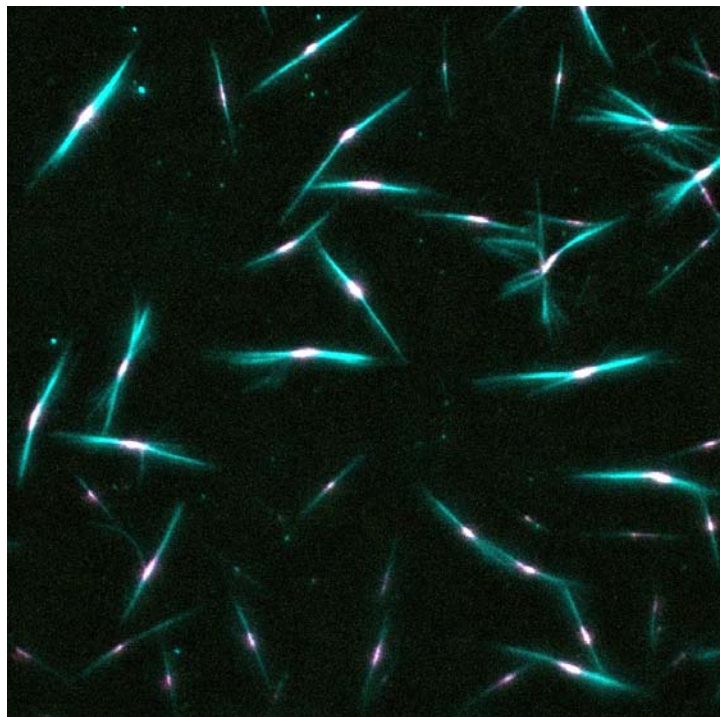
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Nationality: German

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I. ACADEMIC EDUCATION

- 1995 **University of Tübingen, Germany**
Faculty for Chemistry and Pharmacy
Doctorate (Dr rer nat in Biochemistry):
- 1990 - 1995 **Max-Planck-Institute for Biology, Tübingen, Germany**
Department of Membrane Biochemistry
Graduate student (with Fritz Jähnig)
- 1990 **University of Tübingen**
Faculty for Chemistry and Pharmacy
Diploma in Biochemistry
- 1984 - 1990 **University of Tübingen**
Institute for Physiological Chemistry
Undergraduate student

II. POSITIONS HELD

- since 2019 **Catalan Institution for Research and Advanced Studies, Barcelona, Spain**
Research Professor
- since 2019 **Centre for Genomic Regulation (CRG), Barcelona Spain**
Quantitative Cell Biology Programme
Senior Group Leader
- 2016 - 2021 **Kings College London, UK**
Honorary Professor
- 2015 - 2019 **The Francis Crick Institute, London, UK**
Senior Group Leader
- 2011 - 2022 **University College London, UK**
Honorary Professor
- 2011 - 2015 **Cancer Research UK (CRUK) - London Research Institute (LRI), UK**
Lincoln's Inn Fields Laboratories
Senior Group Leader
- 1998 - 2010 **European Molecular Biology Laboratory (EMBL) Heidelberg, Germany**
Cell Biology and Biophysics Unit
- 2006 Group Leader
- 2002 Team Leader
- 2001 Staff Scientist (with Eric Karsenti)
- 1998 Postdoc (with Eric Karsenti and Stan Leibler):
- 1995 - 1997 **Princeton University, USA**
Departments of Molecular Biology and Physics
Postdoc (with Stan Leibler)

III. RECOGNITION OF ACADEMIC EXCELLENCE

Awards

- 2021 **ASCB Fellow**, American Society of Cell Biology, USA
- 2020 **ERC Synergy Grant** (with Andrea Musacchio, MPI Dortmund, Germany & Francois Nédélec, University of Cambridge, UK)
- 2018 **Miller Professorship** at UC Berkeley, USA (autumn 2018)
- 2017 **Crick Surrey lab review: grade excellent** (chair: James Spudich, Stanford)
- 2016 **Whitman Center Fellow**, MBL, Woods Hole, USA
- 2015 **Hooke Medal** of the British Society of Cell Biology
- 2013 **ERC Advanced Grant**
- 2012 **EMBO member** (elected)

Invited Editorial Board Memberships

- Member of the Board of Reviewing Editors of 'Elife' (since 2016)
- Monitoring Editor for the ASCB journal 'Molecular Biology of the Cell' (since 2014)
- Advisory Editorial Board member for 'Cytoskeleton' (since 2019)
- Advisory Editorial Board member for 'Current Biology' (since 2014)
- Advisory Editorial Board member for 'EMBO Journal' (since 2011)

Invited Reviewing & Evaluation Activities (last 5 years)

- **Grant Awarding Bodies**
ANR (France), EMBO (European), ERC (European), Fondation Vaincre Alzheimer (France), FRM (France), Leverhulme Trust (UK), Minerva Weizmann (Israel/Germany)
- **Universities and Research Institutions**
Albert Einstein College of Medicine, NY (USA), Biozentrum Basel (Switzerland), Erasmus University Rotterdam (The Netherlands), IISER Pune (India), IMP Vienna (Austria), IRB Barcelona (Spain), IST Austria (Austria), LMB Cambridge (UK), Oxford University (UK), Princeton University (USA), University of Rennes (France), University College London (UK), University of Virginia (USA), University of Warwick, Coventry (UK)
- **International Journals**
Biochemistry, Cell, Cell Rep, Comms Bio, Curr Biol, Dev Cell, Elife, EMBO J, J Cell Biol, J Cell Sci, MBoC, Nat Cell Biol, Nat Comms, Nat Mat, Nat Rev Mol Cell Biol, Nat Struct Mol Biol, PNAS

Invited Speaker at International Conferences & Research Institutions (last 5 years):

In total ~25 invited seminars, examples:

- Keynote speaker, 'Mechanobiology across scales' conference, Nice, France (2024)
- Invited speaker, 2nd DivIDE Conference on mitotic spindle architecture, Barcelona, Spain (2023)
- 9th UIMP Summer School on Integrative Synthetic Biology, Santander, Spain (2023)
- Invited speaker, Lorentz meeting on Reconstituting Biology, Leiden, The Netherlands, (2022)

- Invited speaker, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany (2021, virtual)
- Invited speaker and chair, Biophysical Society Meeting, USA (2021, virtual)
- Invited speaker, University of Virginia, Charlottesville, VA, USA (2021, virtual)
- Keynote EMBO Microtubule Meeting, Heidelberg, Germany (2020, virtual)
- Keynote Gordon Research Conference Contractile & Motile Systems, Colby Sawyer College, NH, USA (2019)

Invited PhD Viva Examiner (since 2015)

University of Basel, Switzerland (2024), PSL Université Paris, France (2023), Leiden University (2023), Universitat Pompeu Fabra Barcelona, Spain (2023, 2022, 2021), Universitat de Barcelona, Spain (2021, 2020), Université Grenoble Alpes, France (2021), Université de Paris-Saclay, France (2021), Universidad Complutense de Madrid, Spain (2020), University of Zagreb, Croatia (2020), TU Delft, The Netherlands (2019), Wageningen University, The Netherlands (2017), Cambridge University, UK (2015), University College London, UK (2015)

Membership in Scientific Organizations

since 2012: European Molecular Biology Organization (EMBO)
since 2011: Biophysical Society
since 1997: American Society of Cell Biology (ASCB)

IV. ACADEMIC TEACHING

Course Lecturer (last 10 years)

2019/2023 Lecturer at the UIMP Summer School on Synthetic Biology, Santander, Spain
since 2020 Lecturer at the Annual CRG PhD Course
2011-2019 Lecturer at University College London for the CoMPLEX (2014-2019) and MRC-LMCB (2011-219) graduate programmes
2016 Lecturer at Birkbeck College London for the Wellcome Trust 'Molecular Machines' graduate programme
2015 Lecturer and Practical Instructor at the EMBO Practical Course 'Single Molecule and Single Cell Fluorescence Microscopy' at EMBL/Uni Heidelberg, Germany

Thesis Advisor, Post- and Undergraduate Sponsor

a. 16 PhD students (year of degree, university):

Zoë Geraghty (ongoing), Sabina Colombo (ongoing), Julia Grawenhoff (2024, UPF Barcelona), Gil Henkin (2022, University College London (UCL)), Christel Michel (2021, Kings College London), Tanja Consolati (2019, UCL), Jamie Rickman (2019, UCL), Jonathon Hannabus (2017, UCL), Rupam Jha (2017, UCL), Christian Duellberg (2014, UCL), Hella Baumann (2014, UCL), Martina Trokter (2011, University of Heidelberg), Christian Hentrich (2009, University of Heidelberg), Peter Bieling (2008, University of Heidelberg), Marianne Uteng (2008, University of Oslo), Julie Cahu (2007, Université Pierre et Marie Curie, Paris)

b. 20 Postdoctoral Associates Sponsored (current affiliation):

Kseniya Ustinova (ongoing), Claudia Brito (ongoing), Wei Xiang Chew (ongoing), Wei Ming Lim (ongoing), Juan Estévez-Gallego (PSI Villigen), Jayant Asthana (Sloane Kettering, New York), Johanna Roostalu (BioInnovation Institute, Copenhagen), Nic Cade (UCL London), Einat Schnur, (Medicines and Healthcare Products Regulatory Agency, London), Michael Juniper (Nikon UK), Todd Fallesen (The Francis Crick Institute, London), Franck Fourniol (Royal Society, London), Ivo Telley (IGC, Lisbon), Sebastian Maurer (Eppendorf, Hamburg), Emmanuel Boutant (Uni Strasbourg), Aurelien Olichon (Uni de la Réunion), Surajit Ghosh (IIT Jodhpur), Arne Seitz (EPFL Lausanne), Jan Vos (Bejo Zaden B.V., Harenkapsel), Henry Scheck (Sun Density, Rochester)

c. ~ 26 Diploma, Masters and Visiting Students Advised

V. EXTERNAL FUNDS AWARDED

External Grants:

2023: **Plan Estatal Grant** of the Spanish Ministry for Science and Innovation, 3 years, € 487,500

Title: Control of microtubule nucleation, stability and organization - a focus on minus ends (MTMinusReg)

2022: **AUGUR Grant** (SGR-Cat 2021) of the Generalitat de Catalunya, 3 years, € 40,000

2021: **ERC Synergy Grant** (H2020), 6 years, PI, € 4.58 Mio

Network coordinator: Andrea Musacchio, MPI Dortmund, Germany; partner: François Nédélec, University of Cambridge, UK (total award: € 10.61 Mio)

Title: Integration of the Biochemical and Mechanical Networks of Cell Division (BIOMEKANET).

2020: **Plan Estatal Grant** of the Spanish Ministry for Science and Innovation, 3 years, € 537,700

Title: Regulation of microtubule cytoskeleton dynamics and organization (MTCytoReg).

2016: **EU International Training Network** (ITN), 4 years, € 273,000

Network coordinator: Isabelle Vernos, CRG, Barcelona, Spain; total award: € 2.8 Mio

Title: A multi-disciplinary approach to cell division: From human oocyte to synthetic biology (DivIDe).

2013: **ERC Advanced Grant** (FP7), 5+1 years, € 2.49 Mio.

Title: Design principles of microtubule cytoskeleton architectures during cell division (Spindle Dynamics).

2010: **DFG**, 2 years, € 120,000.

Title: In vitro reconstitution of a minimal protein interaction network at microtubule ends that controls microtubule dynamics in vertebrates.

2008: **DFG**, 2 years, € 110,000.

Title: Molecular mechanism of the selective recognition of growing microtubule ends by vertebrate +TIPs.

2008: **HFSP**, 3+1 years, US\$ 300,000.

Network coordinator: Carsten Janke, Institut Curie, France; total award: US\$ 1.2 Mio.

Title: Deciphering the microtubule code.

2007: **DFG**, 2+2 years, € 140,000.

Title: Recombinant llama antibodies as sensors and inhibitors of intracellular protein activities during cell division.

2005: **EU STREP (FP6)** 'Active Biomimetics', 2+1 years, € 128,000.

Network coordinator: Reinhard Lipowsky, MPI for Colloids and Interfaces, Potsdam, Germany; total award: € 2.4 Mio.

Title: Active biomimetic materials.

2005: **EU Marie Curie Research Training Network (FP6)** "Spindle Dynamics", 3 years, € 383,000.

Network coordinator: Thomas Surrey, EMBL, Germany; total award: € 2.4 Mio.

Title: Understanding the dynamics of cell division.

2003: **DFG**, 2 years, € 107,000.

Title: Motor proteins involved in mitotic spindle assembly: biochemistry of regulation and biophysics of collective mechanics.

2003: **DFG**, 2 years, € 107,000.

Title: Motor proteins involved in mitotic spindle assembly: biochemistry of regulation and biophysics of collective mechanics.

2002: **Volkswagen Foundation**, 3 years, € 311,000.

Title: Regulation of motor protein activities monitored by single molecule fluorescence microscopy.

Early Career Fellowships

1996: postdoc fellowship - Physics Department of Princeton University, 1 year.

1995: DFG postdoc fellowship, 1.5 years.

VI. MANAGEMENT EXPERIENCE

Co-organizer of international conferences (last 15 years):

- 3rd Dynamic Cell Conference of the British Biochemical Society and the British Society for Cell Biology, Manchester, UK (2018)
- Circle Meeting on Biological Physics 2018, London, UK (2018)
- 1st and 2nd CNRS Jacques Monod Conference on the Actin and Microtubule Cytoskeleton, Marine Biology Laboratory, Roscoff, France (2015, 2017)
- Crick Biophysics Symposium (2015)
- ASCB Annual Meeting Program Committee Member (2013)
- 1st and 2nd EMBO Conference on Microtubule Structure, Regulation and

Functions, ATC, Heidelberg (2010, 2012)

Home institution committee member (last 10 years):

- CRG Graduate Committee (Chair)
- Barcelona Institute of Science and Technology (BIST) Academic Working Group
- CRG External Seminar Committee
- PRBB Microfabrication Workgroup
- Crick Research Degrees Committee
- Crick Image Processing Work Group
- Crick Chemical Biology Work Group
- LRI Graduate Student Advisory Committee

VII. COLLABORATORS:

Current:

- **Andrea Musacchio**, Max-Planck-Institute for Molecular Physiology, Dortmund, Germany
- **François Nédélec**, Sainsbury Laboratory, University of Cambridge, UK
- **Oscar Llorca**, CNIO Madrid, Spain
- **Eva Nogales**, UC Berkeley, USA
- **Michel Steinmetz**, Paul Scherrer Institute, Villigen, Switzerland
- **Isabelle Vernos**, CRG Barcelona, Spain

Recent (last 10 years):

- **Philipp Kukura**, University of Oxford, UK
- **Alessandro Costa**, The Francis Crick Institute, London, UK
- **Rebecca Heald**, UC Berkeley, USA
- **Benoit Gigant**, CNRS, Gif-sur-Yvette, France
- **Joachim Spatz**, MPI Stuttgart, Germany
- **Gunnar Pruessner**, Imperial College, London, UK
- **Takashi Toda**, London Research Institute, UK
- **Lewis Griffin**, University College London, UK
- **Tarun Kapoor**, Rockefeller, New York, USA

XII. LIST OF PUBLICATIONS

Peer-Reviewed Research Articles:

Brito C, Serna M, Guerra P, Llorca O, Surrey T. Transition of human γ -tubulin ring complex into a closed conformation during microtubule nucleation. *Science* 383, 870-876 (2024).

Scrofani J, Ruhnnow F, Chew WX, Normanno D, Nedelec F, Surrey T, Vernos I. Branched microtubule nucleation and dynein transport organize RanGTP asters in *Xenopus laevis* egg extract. *Mol Biol Cell* 35, ar12 (2024).

Henkin G, Brito C, Thomas C, Surrey T. The minus-end depolymerase KIF2A drives flux-like treadmilling of γ TuRC-uncapped microtubules. *J Cell Biol* 222, e202304020 (2023).

- Ustinova K, Ruhnaw F, Gili M, [Surrey T](#). Microtubule binding of the human augmin complex is directly controlled by importins and Ran-GTP. *J Cell Sci* 136, jcs261096 (2023).
- Chew WX, Henkin G, Nédélec F, [Surrey T](#). Effects of microtubule length and crowding on active microtubule network organization. *iScience* 26, 109063 (2023).
- Henkin G, Chew WX, Nédélec F, [Surrey T](#). Cross-linker design determines microtubule network organization by opposing motors. *Proc Natl Acad Sci U S A* 119, e2206398119 (2022).
- LaFrance BJ, Roostalu J, Henkin G, Greber BJ, Zhang R, Normanno D, McCollum CO, [Surrey T](#), Nogales E. Structural transitions in the GTP cap visualized by cryo-electron microscopy of catalytically inactive microtubules. *Proc Natl Acad Sci U S A* 119, e2114994119 (2022).
- Asthana J, Cade NI, Normanno D, Lim WM, [Surrey T](#). Gradual compaction of the central spindle decreases its dynamicity in PRC1 and EB1 gene-edited cells. *Life Sci Alliance* 4, e202101222 (2021).
- Fineberg A, [Surrey T](#), Kukura P. Quantifying the Monomer-Dimer Equilibrium of Tubulin with Mass Photometry. *J Mol Biol* 432, 6168-6172 (2020).
- Consolati T, Locke J, Roostalu J, Chen ZA, Gannon J, Asthana J, Lim WM, Martino F, Cvetkovic MA, Rappsilber J, Costa A, [Surrey T](#). Microtubule nucleation properties of single human γ TuRCs explained by their cryo-EM structure. *Dev Cell* 53, 603-617 (2020).
- Roostalu J, Thomas C, Cade NI, Kunzelmann S, Taylor IA, [Surrey T](#). The speed of GTP hydrolysis determines GTP cap size and controls microtubule stability. *Elife* e51992 (2020).
- Hannabuss J, Ramirez ML, Cade NI, Fourniol FJ, Nédélec F & [Surrey T](#). Self-organization of minimal anaphase spindle midzone bundles. *Curr Biol* 29, 2120-2130 (2019).
- Rickman J, Nédélec F, [Surrey T](#). Effects of spatial dimensionality and steric interactions on microtubule-motor self-organization. *Phys Biol*. 16, 046004 (2019).
- Campanacci V, Urvoas A, Consolati T, Cantos-Fernandes S, Aumont-Nicaise M, Valerio-Lepiniec M, [Surrey T](#), Minard P, Gigant B. Selection and Characterization of Artificial Proteins Targeting the Tubulin α Subunit. *Structure*, 27, 497-506 (2019).
- Roostalu J, Rickman J, Thomas C, Nédélec F, [Surrey T](#). Determinants of Polar versus Nematic Organization in Networks of Dynamic Microtubules and Mitotic Motors. *Cell* 175, 796-808 (2018).
- Juniper M, Weiss M, Platzman I, Spatz SP, [Surrey T](#). Spherical network contraction forms microtubule asters in confinement. *Soft Matter* 14, 901-909 (2018).
- Zhang R, Roostalu J, [Surrey T](#), Nogales E. Structural Insight into TPX2-Stimulated Microtubule Assembly. *Elife* 6, e30959 (2017).
- Fallesen T, Roostalu J, Duellberg, C, Pruessner G, [Surrey T](#). Ensembles of bidirectional kinesin Cin8 produce additive forces in both directions of movement. *Biophys J* 113, 2055-2067 (2017).

- Jha R, Roostalu J, Trokter M, [Surrey T](#). Combinatorial regulation of the balance between dynein microtubule end accumulation and directed motility. *EMBO J* 36, 3387-3404 (2017).
- Matsuo Y, Maurer SP, [Surrey T](#), Toda T. Purification and characterization of the fission yeast Ndc80 complex. *Protein Expr Purif* 135, 61-69 (2017).
- Rickman J, Duellberg C, Cade NI, Griffin, LD, [Surrey T](#). Steady state EB cap size fluctuations are determined by stochastic microtubule growth and maturation. *Proc Natl Acad Sci U S A* 114, 3427-3432 (2017).
- Matsuo Y, Maurer SP, Yukawa M, Zakian S, Singleton MR, [Surrey T](#), Toda T. An unconventional interaction between Dis1/TOG and Mal3/EB1 promotes the fidelity of chromosome segregation. *J Cell Sci* 129, 4592-4606 (2016).
- Duellberg C, Cade NI, [Surrey T](#). Microtubule ageing probed by microfluidics-assisted tubulin washout. *Mol Biol Cell* 27, 3563-3573 (2016).
- Duellberg C, Cade NI, Holmes D, [Surrey T](#). The size of the EB cap determines instantaneous microtubule stability. *Elife* 5, e13470 (2016).
- Ti SC, Pamula MC, Howes SC, Duellberg C, Cade NI, Kleiner RE, Forth S, [Surrey T](#), Nogales E, Kapoor TM. Mutations in Human Tubulin Proximal to the Kinesin-Binding Site Alter Dynamic Instability at Microtubule Plus- and Minus-Ends. *Dev Cell* 37, 72-84 (2016).
- Roostalu J, Cade NI, [Surrey T](#). Complementary activities of TPX2 and chTOG constitute an efficient importin-regulated microtubule nucleation module. *Nat Cell Biol* 17, 1422-1434 (2015).
- Bohner G, Gustafsson N, Cade NI, Maurer SP, Griffin LD, [Surrey T](#). Important factors determining the nanoscale tracking precision of dynamic microtubule ends. *J Microsc* 261, 67-78 (2015).
- Janiesch JW, Weiss M, Kannenberg G, Hannabuss J, [Surrey T](#), Platzman I, Spatz JP. Key factors for stable retention of fluorophores and labeled biomolecules in droplet-based microfluidics. *Anal Chem* 87, 2063-7 (2015).
- Duellberg C, Trokter M, Jha R, Sen I, Steinmetz MO, [Surrey T](#). Reconstitution of a hierarchical +TIP interaction network controlling microtubule end tracking of the human dynein complex. *Nat Cell Biol* 16, 804-11 (2014).
- Baumann H & [Surrey T](#). Motor-mediated cortical versus astral microtubule organization in lipid-monolayered droplets. *J Biol Chem* 289, 22524-35 (2014).
- Maurer SP, Cade NI, Bohner G, Gustafsson N, Boutant E, [Surrey T](#). EB1 accelerates two conformational transitions important for microtubule maturation and dynamics. *Curr Biol* 24, 372-84 (2014).
- Ghosh S, Hentrich C, [Surrey T](#). Micropattern-Controlled Local Microtubule Nucleation, Transport, and Mesoscale Organization. *ACS Chem Biol* 8, 673-8 (2013).
- Trokter M, Mücke N, [Surrey T](#). Reconstitution of the human cytoplasmic dynein complex. *Proc Natl Acad Sci U S A* 109, 20895-900 (2012).

Gropeanu RA, Baumann H, Ritz S, Mailänder V, [Surrey T](#), Del Campo A. Phototriggerable 2',7-caged Paclitaxel. *PLoS One* 7, e43657 (2012).

Pecqueur L, Duellberg C, Dreier B, Jiang Q, Wang C, Plückthun A, [Surrey T](#), Gigant B, Knossow M. A designed ankyrin repeat protein selected to bind to tubulin caps the microtubule plus end. *Proc Natl Acad Sci U S A* 109, 12011-6 (2012)

Telley IA, Gáspár I, Ephrussi A, [Surrey T](#). Aster migration determines the length scale of nuclear separation in the Drosophila syncytial embryo. *J Cell Biol.* 197, 887-95 (2012).

Maurer SP, Fourniol FJ, Bohner G, Moores CA, [Surrey T](#). EBs recognize a nucleotide-dependent structural cap at growing microtubule ends. *Cell* 149, 371-82 (2012).

Maurer SP, Bieling P, Cope J, Hoenger A, [Surrey T](#). GTPgammaS microtubules mimic the growing microtubule end structure recognized by end-binding proteins (EBs). *Proc Natl Acad Sci U S A* 108, 3988-93 (2011).

Roostalu J, Hentrich C, Bieling P, Telley IA, Schiebel E, [Surrey T](#). Directional Switching of the Kinesin Cin8 Through Motor Coupling. *Science* 332, 94-9 (2011).

Bieling P, Telley IA, [Surrey T](#). A minimal midzone protein module controls formation and length of antiparallel microtubule overlaps. *Cell* 142, 420-32 (2010).

Hentrich C, [Surrey T](#). Microtubule organization by the antagonistic mitotic motors kinesin-5 and kinesin-14. *J Cell Biol* 189, 465-480 (2010).

Bieling P, Kronja I, [Surrey T](#). Microtubule motility on reconstituted meiotic chromatin. *Curr Biol* 20, 763-69 (2010).

Churrua F, Fousteris M, Ishikawa Y, von Wantoch Rekowski M, Hounsou C, [Surrey T](#), Gianni A. A Novel Approach to Indoloditerpenes by Nazarov Photocyclization: Synthesis and Biological Investigations of Terpendole E Analogues. *Org Lett* 12, 2096-9 (2010)

Bhagawati M, Ghosh S, Reichel A, Froehner K, [Surrey T](#), Piehler J. Organization of motor proteins into functional micropatterns fabricated by a photoinduced Fenton reaction. *Angew Chem* 48, 9188-91 (2009).

Telley IA, Bieling P, [Surrey T](#). Obstacles reduce the processivity of Kinesin-1 in a minimal in vitro system and in cell extract. *Biophys J* 96, 3341-53 (2009).

Cahu J, [Surrey T](#). Motile microtubule crosslinkers require distinct dynamic properties for correct functioning during spindle organization. *J Cell Sci* 122, 1295-300 (2009).

Blümmel J, Cahu J, Sandblad L, Schmitz C, [Surrey T](#), Spatz J. Motor protein driven microtubule transport on gold particle nanopatterns. *Biophys Rev Lett* 4,153-162 (2009).

Bieling P, Kandels-Lewis S, Telley IA, van Dijk J, Janke C, [Surrey T](#). CLIP-170 tracks microtubule ends by dynamically recognizing composite EB1/tubulin binding sites. *J Cell Biol* 183,1223-33 (2008).

Sung HH, Telley IA, Papadaki P, Ephrussi A, [Surrey T](#), Rørth P. Drosophila ensconsin promotes productive recruitment of Kinesin-1 to microtubules. *Dev Cell* 15, 866-76 (2008).

Cahu J, Olichon A, Hentrich C, Schek H, Drinjakovic J, Zhang C, Doherty-Kirby A, Lajoie G, Surrey T. Phosphorylation by Cdk1 increases the affinity of Eg5 for microtubules in vitro and in Xenopus egg extract spindles. **PLoS One** 3, e3936 (2008).

Bieling P, Telley IA, Piehler J, Surrey T. Processive kinesins require loose mechanical coupling for efficient collective motility. **EMBO Rep.** 9, 1121-7 (2008).

Uteng M, Hentrich C, Miura K, Bieling P, Surrey T. Poleward transport of the mitotic motor Eg5 by dynein/dynactin in Xenopus egg extract spindles. **J Cell Biol** 182, 715-26 (2008).

Espeut J, Gausson A, Bieling P, Morin V, Prieto S, Fesquet D, Surrey T, Abrieu A. Phosphorylation relieves autoinhibition of the kinetochore motor Cenp-E. **Mol Cell** 29, 637-43 (2008).

Garaicoechea L, Olichon A, Marcoppido G, Wigdorovitz A, Mozgovoij M, Saif L, Surrey T, Parreño V. Llama derived VHH against rotavirus VP6 protein possess broad neutralizing activity in vitro and in mice. **J Virol** 82, 9753-64 (2008).

Bieling P, Laan L, Schek H, Munteanu EL, Sandblad L, Dogterom M, Brunner D, Surrey T. Reconstitution of a microtubule plus-end tracking system in vitro. **Nature** 450, 1100-5 (2007).

Olichon A, Surrey T. Selection of genetically encoded fluorescent single domain antibodies engineered for efficient expression in Escherichia coli. **J Biol Chem** 282, 36314-20 (2007).

Blümmel J, Perschmann N, Aydin D, Drinjakovic J, Surrey T, Lopez-Garcia M, Kessler H, Spatz JP. Protein repellent properties of covalently attached PEG coatings on nanostructured SiO₂-based interfaces. **Biomaterials** 28, 4739-47 (2007).

Pampaloni F, Lattanzi G, Jonás A, Surrey T, Frey E, Florin EL. Elastic properties of grafted microtubules. **Proc Natl Acad Sci USA** 103, 10248-53 (2006).

Seitz A, Surrey T. Motility of single kinesins on crowded microtubules visualized using quantum dots. **EMBO J** 25, 267-277 (2006).

Christodoulou A, Lederer CW, Surrey T, Vernos I, Santama N. Motor protein KIFC5A interacts with Nubp1 and Nubp2, and is implicated in the regulation of centrosome duplication. **J Cell Sci** 119, 2035-47 (2006)

Roos W, Ulmer J, Gräter S, Surrey T, Spatz JP. Microtubule gliding and cross-linked microtubule networks on micropillar interfaces. **Nano Lett.** 5, 2630-2634 (2005).

Gartner M, Sunder-Plassmann N, Seiler J, Utz M, Vernos I, Surrey T, Giannis A. Development and biological evaluation of potent and specific inhibitors of mitotic kinesin Eg5. **ChemBioChem.** 6,1173-77 (2005).

Sunder-Plassmann N, Sarli V, Gartner M, Utz M, Seiler J, Huemmer S, Mayer TU, Surrey T, Giannis A. Synthesis and biological evaluation of new tetrahydro- β -carboline as inhibitors of the mitotic kinesin Eg5. **Bioorg Med Chem** 13, 6094-111 (2005).

Cappelletti G, Surrey T, Maci R. The parkinsonism producing neurotoxin MPP⁺ affects microtubule dynamics by acting as a destabilising factor. **FEBS Lett** 579, 4781-6 (2005).

Bringmann H, Skiniotis G, Spilker A, Kandels-Lewis S, Vernos I, Surrey T. A kinesin-like motor inhibits microtubule dynamic instability. **Science** 303,1519-22 (2004).

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Surrey T[#], Nédélec F[#], Leibler S, Karsenti E. Physical properties determining self-organization of motors and microtubules. **Science** 292, 1167-71 (2001).

Nédélec F, Surrey T, Maggs AC. Dynamic concentration of motor proteins in microtubule arrays. **Phys Rev Lett** 86, 3192-5 (2001).

Döring K[#], Surrey T[#], Grünewald S, John E, Jähnig F. Enhanced internal dynamics of a membrane transport protein during substrate translocation. **Protein Sci** 9, 2246-50 (2009).

Döring K, Surrey T, Nollert P, Jähnig F. Effects of ligand binding on the internal dynamics of maltose-binding protein. **Eur. J. Biochemistry** 266, 477-83 (1999).

Surrey T[#], Elowitz MB[#], Wolf PE, Yang F, Nédélec F, Shokat K, Leibler S. Chromophore-assisted light inactivation and self-organization of microtubules and motors. **Proc Natl Acad Sci USA** 95, 4293-8 (1998).

Nédélec F, Surrey T, Maggs A, Leibler S. Self-organization of microtubules and motors. **Nature** 389, 305-7 (1997).

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