



SOFT MATTER DAY

organized by the Institute for Experimental Physics I



LIST OF POSTERS

- Photothermal detection of single gold nanoparticles in living fibroblasts
Alice Abend, Romy Schachoff, Frank Cichos
- Thermo-osmotic flow in thin films
Andreas P. Bregulla, Alois Würger, Katrin Günther, Michael Mertig, Frank Cichos
- Hot Brownian motion at short time scales
Alexander Fischer, Markus Selmke, Frank Cichos
- Resonances from thermal waves using photothermal deflection microscopy
André Heber, Markus Selmke, Frank Cichos
- Photothermal detection and correlation spectroscopy of single gold nanoparticles in living cells
Romy Schachoff, Alice Abend, Frank Cichos
- Crystallization vs. fibrillation – Aggregation behavior of hybrid molecules of synthetic and biological polymers
Juliane Adler, Holger A. Scheidt, Martin Krüger, Daniel Huster
- Investigation of the structure and dynamics of the APP TMD with solid state NMR
Hannes Heinel, Daniel Huster, Alexander Vogel
- Does the tail wag the dog? – Cholesterol's aliphatic side chain structure modulates membrane properties
Holger A. Scheidt, Thomas Meyer, Jörg Nikolaus, Dong Jae Baek, Ivan Haralampiev, Robert Bittman, Peter Müller, Andreas Herrmann, Daniel Huster
- Computer simulations of semi flexible polymers
Johannes Bock, Wolfhard Janke
- Computer simulations of Poly(3-hexylthiophene)
Jonathan Gross, Momchil Ivanov, Wolfhard Janke
- Knots as stable order parameter for semiflexible polymers
Martin Marenz, Wolfhard Janke
- Driven DNA: Does a dynamic transition exist in the thermodynamic limit?
Ravinder Kumar, Sanjay Kumar, Wolfhard Janke
- Aggregation in spherical confinement
Marco Müller, Johannes Zierenberg, Martin Marenz, Philipp Schierz, Wolfhard Janke

- Comparability of microcanonical data sampled by Molecular Dynamics and Monte Carlo simulations
Philipp Schierz, Johannes Zierenberg, Wolfhard Janke
- Self-assembly of hierarchically ordered structures in DNA nanotube systems
Martin Glaser, Jörg Schnauß, Teresa Tschirner, Sebastian Schmidt, Maximilian Moebius-Winkler, Josef Käs, David Smith
- Composite networks of actin and intermediate filaments
Tom Golde, Martin Glaser, Carsten Schuldt, Jörg Schnauß, Tina Händler, Harald Herrmann, Josef A. Käs
- Cellular adhesion and formation of cell boundaries
 Steve Pawlizak, Anatolf Fritsch, Steffen Grosser, Linda Oswald, Dave Ahrens, Tobias Thalheim, Josef A. Käs
- Reptation in semiflexible polymer networks
Tina Händler, Martin Glaser, Tom Golde, Jörg Schnauß, Carsten Schuldt, David M. Smith, Josef A. Käs
- Cellular jamming, invasive behavior and streaming in cancerous and non-cancerous cell layers
Paul Heine, Steffen Grosser, Jürgen Lippoldt, Linda Oswald, Josef A. Käs
- Simulation of cervical tumor spreading in pelvic region
Hans Kubitschke, Benjamin Wolf, Michael Höckel, Josef Käs
- Plasma membrane softening in cancer cells
Jürgen Lippoldt, Chris Händel, Till Möhn, Thobias Kiesling, Sebastian Schmidt, Lars-Christian Horn, Susanne Briest, Michael Höckel, Josef A. Käs
- Correlation of adhesive and viscoelastic tumor markers
Erik W. Morawetz, Susanne Briest, Lars C. Horn, Michael Höckel, Josef A. Käs
- Persistence length strongly contributes to network mechanics of entangled semiflexible filaments
Carsten Schuldt, Jörg Schnauß, Tina Händler, Martin Glaser, Jessica Lorenz, Tom Golde, Josef A. Käs, David M. Smith
- Lamellipodial force generation dependance on FMNL formins
Markus Sommerfeld, Tobias Thalheim, Klemens Rottner, Josef A. Käs
- Complex thermorheology of living cells
Enrico Warmt, Sebastian Schmidt, Tobias Kießling, Josef A. Käs
- Molecular dynamics, charge transport and mesoscopic structure in polymeric ionic liquids
Falk Frenzel, A. Markus Anton, Wolfgang H. Binder, Friedrich Kremer
- Rapid force spectroscopy: theory and applications
Jakob Tómas Bullerjahn, Sebastian Sturm, Klaus Kroy

- Inelasticity in biopolymers, cells and cellular aggregates
Constantin Huster, Lars Wolff, Matti Gralka, Klaus Kroy
- Viscoelastic response of stiff polymer solutions
Marc Lämmel, Klaus Kroy
- Generalized Langevin equation for many probes in nonequilibrium environment
Stefano Steffenoni, Gianmaria Falasco, Klaus Kroy
- Influence of small GTPase RAC1 on mechanical properties and cell motility in collagen matrices
 Tom Kunschmann, Jeremy Perez, Stefanie Puder, Tony Fischer, Claudia Tanja Mierke
- Cell migration in collagen gels
Steffen Grosser, Frank Sauer, Josef A. Käs, Claudia Tanja Mierke
- Integrin-linked kinase regulates cellular mechanics facilitating the motility in 3D extracellular matrices
 Tom Kunschmann, Stefanie Puder, Tony Fischer, Jeremy Perez, Nils Wilharm, Claudia Tanja Mierke
- Biomimetic biosensors – protein adsorption and cell-matrix interaction measurements by soft colloidal probes
Steve Martin, Stephan Schmidt, Ulf Anderegg, Tilo Pompe
- Dynamics of actin stress fiber patterns in constrained cell
Andreas Müller, Tilo Pompe
- Combination of layer-by-layer microcarriers and DNA origami
Florian Engert, Ralf Seidel, Uta Reibetanz
- Single molecule studies of type II and type III restriction enzymes/DNA interaction
Jasmina Dikic, Georgij Kostiuk, Virginijus Siksnys, Mark Szczelkun, Ralf Seidel
- Single-molecule insight into DNA end resection during eukaryotic dsDNA break repair
Kristina Kasaciunaite, Cosimo Pinto, Maryna Levikova, Petr Cejka, Ralf Seidel
- DNA nanostructures as mechanical nanotools
Dominik Kauert, Ralf Seidel
- Quantitative understanding of R-loop formation on protospacers bearing single mismatches
Marius Rutkauskas, Tomas Sinkunas, Virginijus Siksnys, Ralf Seidel
- Membrane-spanning DNA channel with ion selectivity
Ahmed Sayed, Ralf Seidel
- Nano-electronic components built from DNA templates
Jingjing Ye, Seham Helmi, Ralf Seidel
- Synthetic actin cross-linkers for control of cell dynamics
Jessica S. Lorenz, Jörg Schnauß, Martin Glaser, Martin Sajfutdinow, Carsten Schuldt, Ines Neundorf, Josef A. Käs, David M. Smith

- DNA nanostructures as multivalent carriers for peptides
Christin Möser, Jessica S. Lorenz, Maik Herbig, Oliver Otto, Jochen Guck, Frank Bier, David M. Smith
- Role of enabled surface diffusion in ordering DNA Origamis on surfaces
Chamberlin C. Obasi, Martin Sajfutdinow, Stephan Schilling, David M. Smith
- Elucidating the assembly of brick-based DNA nanostructures
Martin Sajfutdinow, Christoph Schneider, Aleks Reinhardt, Daan Frenkel, David M. Smith
- Construction of a multifunctional DNA-based carrier system for miRNA-155 knock-down in human myeloid leukemia
Alexander Spaeth, David M. Smith
- Measurements of contractile cell forces with a bending cantilever setup
Philine Hietschold, Uta Allenstein, Josef Käs, Stefan Mayr, Mareike Zink
- Investigating retina mechanics with a self-designed tissue stretcher
Kantida Juncheed, Andreas Reichenbach, Stefan Mayr, Mareike Zink