

Publications of Prof. Dr. Roland Netz

1. “Rotational friction of a semiflexible polymer far from equilibrium”
Hirofumi Wada and Roland R. Netz
Europhysics Letters, submitted (2009)
2. “Hydrodynamics of Spiroplasma bacterial motility”
Hirofumi Wada and Roland R. Netz
Physical Review E, submitted (2009)
3. “Stretching and compression of single flexible and semiflexible polymers in shear flow”
Christian Sendner and Roland R. Netz
Europhysics Letters, submitted (2009)
4. “Interfacial water at hydrophobic and hydrophilic surfaces: slip, viscosity and diffusion”
Christian Sendner, Dominik Horinek, Lyderic Bocquet and Roland R. Netz
Langmuir, submitted (2009)
5. “Nano-roughness and scale-dependent rigidity of the air/water interface”
Felix Sedlmeier, Dominik Horinek, and Roland R. Netz
Physical Review Letters, submitted (2009)
6. “Ion specific correlations in bulk and at biointerfaces”
Immanuel Kalcher, Dominik Horinek, Roland R. Netz and Joachim Dzubiella
J. Phys. Condens. Matter, in press (2009)
7. “Internal friction and non-equilibrium unfolding of polymeric globules”
Alfredo Alexander-Katz, Hirofumi Wada and Roland R. Netz
Physical Review Letters, in press (2009)
8. “Nonlinear Response of Grafted Semiflexible Polymers in Shear Flow”
Yong Woon Kim, V. Lobaskin, C. Gutsche, F. Kremer, Philip Pincus and Roland R. Netz
Macromolecules, in press (2009)
9. “Rational design of ion force fields based on thermodynamic solvation properties”
Dominik Horinek, Shavkat I. Mamatkulov, Roland R. Netz
Journal of Chemical Physics **130**, 124507 (2009)
10. “Effective screening length and quasi-universality for the restricted primitive model of an electrolyte solution”
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11. “End-monomer Dynamics in Semiflexible Polymers”
Michael Hinczewski, Xaver Schlagberger, Michael Rubinstein, Oleg Krichevsky, and Roland R. Netz
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12. “Water slippage versus contact angle: a quasi-universal relationship”
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13. “Water at polar and nonpolar solid walls ”
Felix Sedlmeier, Jiri Janecek, Christian Sendner, Lyderic Bocquet, Roland R. Netz, and Dominik Horinek
Biointerphases **3**, FC23 (2008)
14. “Salt-Induced Counterion Mobility Anomaly in Polyelectrolyte Electrophoresis”
Sebastian Fischer, Ali Naji, and Roland R. Netz
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15. “Polypeptide friction and adhesion on hydrophobic and hydrophilic surfaces: A molecular dynamics case study”
A. Serr, Dominik Horinek and Roland R. Netz
Journal of the American Chemical Society **130**, 12408 (2008)
16. “ Anomalous birefringence and polarizability saturation of charged elastic rods: field-strength, salt and finite-concentration effects ”
Xaver Schlagberger and Roland R. Netz
Europhysics Letters **83**, 36003 (2008)
17. “Impact of loop statistics on the thermodynamics of RNA folding”
Thomas Einert, Paul Naeger, Henri Orland, and Roland R. Netz
Physical Review Letters **101**, 048103 (2008)
18. “ Discrete elastic model for stretching-induced flagellar polymorphs”
Hirofumi Wada and Roland R. Netz
Europhysics Letters **82**, 28001 (2008)
19. “Dynamics and instabilities of collapsed polymers in shear flow”
Alfredo Alexander-Katz and Roland R. Netz
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20. “Specific Ion Adsorption and Surface Forces in Colloid Science ”
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22. “Shear-induced repulsion of a semiflexible polymer from a wall”
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23. “Peptide adsorption on a hydrophobic surface results from an interplay of solvation, surface and intrapeptide forces”
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24. “Anomalous sedimentation of self-avoiding flexible polymers”
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25. “Forces between air bubbles in electrolyte solution ”
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29. “Stretching helical nano-springs at finite temperature”
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30. “Ground state structure and interactions between dimeric 2D Wigner crystals”
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31. “Shear-induced unfolding triggers adhesion of von Willebrand factor fibers”
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33. “Specific ion effects in physicochemical and biological systems: Simulations, theory and experiments”
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35. "Hydrodynamic lift of a moving nano-rod at a wall"
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36. "Interfacial Water at Hydrophobic and Hydrophilic Surfaces: Depletion versus Adsorption"
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37. "Model for Self-Propulsive Helical Filaments: Kink-Pair Propagation"
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Manoel Manghi, Xaver Schlagberger, and Roland R. Netz
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43. "Theoretical Approaches to Neutral and Charged Polymer Brushes"
Ali Naji, Christian Seidel and Roland R. Netz
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44. "Probing surfaces with single-polymer atomic force microscope experiments"
C. Friedsam, H.E. Gaub, and Roland R. Netz
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45. "Dissimilar Kinetic Behavior of Electrically Manipulated Single- and Double-Stranded DNA Tethered to a Gold Surface"
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54. "Diffusion of a Single Semiflexible Charged Polymer"
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