

Publications

Peer-Reviewed Research Articles

19. "A modern ionotropic glutamate receptor with a potassium-selectivity signature sequence"
H. Janovjak, G. Sandoz & E.Y. Isacoff
Nature Communications (2011) 2: 232.
 18. "A light-gated, potassium-selective glutamate receptor for the optical inhibition of neuronal firing"
H. Janovjak, S. Szobota, C. Wyart, D. Trauner & E.Y. Isacoff
Nature Neuroscience (2010) 13: 1027-1032.
 17. "Periodic forces trigger a complex mechanical response in ubiquitin"
P. Szymczyk & **H. Janovjak**
Journal of Molecular Biology (2009) 390: 443-456 (with frontcover).
 16. "Fully automated single-molecule force spectroscopy for screening applications"
J. Struckmeier, R. Wahl, M. Leuschner, J. Nunes, **H. Janovjak**, U. Geisler, G. Hofmann,
T. Jähnke & D.J. Müller
Nanotechnology (2008) 19: 384020.
 15. "Digital force-feedback for protein unfolding experiments using atomic force microscopy"
C.A. Bippes, **H. Janovjak**, A. Kedrov & D.J. Müller
Nanotechnology (2007) 18: 044022.
 14. "Transmembrane helices have rough energy surfaces"
H. Janovjak, H. Knaus & D.J. Müller
Journal of the American Chemical Society (2007) 129: 246-247.
 13. "Free energy of membrane protein unfolding derived from single-molecule force measurements"
J. Preiner, **H. Janovjak**, C. Rankl, H. Knaus, D.A. Cisneros, A. Kedrov, F. Kienberger, D.J. Müller
& P. Hinterdorfer
Biophysical Journal (2007) 93: 930-937.
 12. "Pulling single bacteriorhodopsin out of a membrane: Comparison of simulation and experiment"
M. Cieplak, S. Filipek, **H. Janovjak** & K.A. Krzysko
Biochimica et Biophysica Acta (2006) 1758: 537-544 (with frontcover).
 11. "Bacteriorhodopsin folds into the membrane against an external force"
M. Kessler, K.E. Gottschalk, **H. Janovjak**, D.J. Müller & H.E. Gaub
Journal of Molecular Biology (2006) 357: 644-654.
 10. "Observing folding pathways and kinetics of a single sodium-proton antiporter from *E. coli*"
A. Kedrov, **H. Janovjak**, C. Ziegler, W. Kühlbrandt & D.J. Müller
Journal of Molecular Biology (2006) 355: 2-8.
 9. "Direct measurement of single-molecule visco-elasticity in atomic force microscopy force-extension experiments"
C.A. Bippes, A.D.L. Humphris, M. Stark, D.J. Müller & **H. Janovjak**
European Biophysics Journal (2006) 35: 287-292.
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8. "Complex stability of single proteins explored by forced unfolding experiments"
H. Janovjak, K.T. Sapra & D.J. Müller
Biophysical Journal (2005) 88: 37-39.
7. "Molecular force modulation spectroscopy revealing the dynamic response of single bacteriorhodopsins"
H. Janovjak, D.J. Müller & A.D.L. Humphris
Biophysical Journal (2005) 88: 1423-1431.
6. "Automated alignment and pattern recognition of single-molecule force spectroscopy data"
M. Kuhn, **H. Janovjak**, M. Hubain & D.J. Müller
Journal of Microscopy (2005) 218: 125-132.
5. "Hydrodynamic effects in fast AFM single molecule force measurements"
H. Janovjak, J. Struckmeier & D.J. Müller
European Biophysics Journal (2005) 34: 91-96.
4. "Probing the energy landscape of the membrane protein bacteriorhodopsin"
H. Janovjak, J. Struckmeier, M. Hubain, M. Kessler, A. Kedrov & D.J. Müller
Structure (2004) 12: 871-879 (with frontcover).
3. "Controlled unfolding and refolding of a single sodium/proton antiporter using atomic force microscopy"
A. Kedrov, C. Ziegler, **H. Janovjak**, W. Kühlbrandt & D.J. Müller
Journal of Molecular Biology (2004) 340: 1143-1152.
2. "Unfolding pathways of native bacteriorhodopsin depend on temperature"
H. Janovjak, M. Kessler, D. Oesterhelt, H.E. Gaub & D.J. Müller
EMBO Journal (2003) 22: 5220-5229.
1. "Processing of gene expression data generated by quantitative real-time RT-PCR"
P.Y. Müller, **H. Janovjak**, A.R. Miserez & Z. Dobbie
Biotechniques (2002) 32: 1372-1380.

Peer-Reviewed Review Articles

5. "Pharmacology of ionotropic glutamate receptors: A structural perspective"
P. Stawski, **H. Janovjak** & D. Trauner
Bioorganic & Medicinal Chemistry (2010) 18: 7759-7772 (with frontcover).
4. "From valleys to ridges: Exploring the energy landscape of single membrane proteins"
H. Janovjak, K.T. Sapra, A. Kedrov & D.J. Müller
ChemPhysChem (2008) 9: 954-966.
3. "Deciphering molecular interactions of native membrane proteins by single-molecule force spectroscopy"
A. Kedrov, **H. Janovjak**, K.T. Sapra & D.J. Müller
Annual Review of Biophysics and Biomolecular Structure (2007) 36: 233-260.
2. "Imaging and detecting molecular interactions of single membrane proteins"
H. Janovjak, A. Kedrov, D. Cisneros, K.T. Sapra, J. Struckmeier & D.J. Müller
Neurobiology of Aging (2006) 27: 546-561.
1. "Observing structure, function and assembly of single proteins by AFM"
D.J. Müller, **H. Janovjak**, T. Lehto, L. Kuerschner & K. Anderson
Progress in Biophysics and Molecular Biology (2002) 79: 1-43.

Book Chapters

4. "Structure-based design of light-controlled proteins"
H. Janovjak & E.Y. Isacoff
In *Photosensitive Molecules for Controlling Biological Function* (2011, J. Chambers & R.H. Kramer, Editors) Humana Press, Totowa, NJ / Springer Verlag GmbH, Heidelberg.
 3. "Single-molecule microscopy and force spectroscopy of membrane proteins"
A. Engel, **H. Janovjak**, D. Fotiadis, A. Kedrov, D. Cisneros & D.J. Müller
In *Single Molecules and Nanotechnology* (2008, Springer Series in Biophysics Vol. 12, R. Rigler & H. Vogel, Editors) Springer Verlag GmbH, Heidelberg.
 2. "Rastersondenmikroskopie"
H. Janovjak & D.J. Müller
In *Bioanalytik* (2006, 2nd Edition, F. Lottspeich & H. Zorbas, Editors) Spektrum Akademischer Verlag, Heidelberg.
 1. "Atomic force microscopy"
H. Janovjak, R. K. Sawhney, M. Stark & D.J. Müller
In *Techniques in Microscopy for Biomedical Applications* (2006, Manuals in Biomedical Research, H. Dokland, D.W. Huttmacher & M.M. Ng, Editors) World Scientific Publishing Company, Singapore.
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