

Full List of Publications.

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- 49) Marín-González*, Vilhena*, Perez and Moreno-Herrero. **Proceedings of the National Academy of Sciences USA** 114(27), 7049-7054 (2017). doi: 10.1073/pnas.1705642114
Double stranded DNA and RNA under constant stretching forces: atomistic insights from microsecond-long molecular dynamics.
- 48) Fuentes-Pérez ME et al. **Scientific Reports** Feb 23; 7:43342. doi: 10.1038/srep43342 (2017).
TubZ filament assembly dynamics requires the flexible C-terminal tail.
- 47) Pastrana*, Carrasco* et al. **Nucleic Acids Research** 44(18), 8885-8896 Published Online Aug3 (2016).
Force and twist dependence of RepC nicking activity on torsionally-constrained DNA molecule
- 46) Ares et al. **Nanoscale** 8,11818-11826 (2016). (cover article)
High resolution atomic force microscopy of double-stranded RNA
- 45) Gilhooly et al. **Nucleic Acids Research** 44(6), 2727-2741 Published Online Jan 13 (2016).
Chi hotspots trigger a conformational change in the helicase-like domain of AddAB to activate homologous recombination
- 44) Gollnick et al. **Small** 11(11), 1273-1284 (2015) in press 14 NOV 2014, DOI: 10.1002/smll.201402686. (cover article)
Probing DNA Helicase Kinetics with Temperature-Controlled Magnetic Tweezers
- 43) Taylor*, Pastrana* et al. **Nucleic Acids Research** 43(2) 719-731 (2015) in press 8 JAN 2015, DOI: 10.1093/nar/gku1295.
Specific and non-specific interactions of ParB with DNA: implications for chromosome segregation
- 42) Torreira et al. **Structure** 23(1), 183-189, 6 JAN 2015.
Amyloidogenesis of Bacterial Prionoid RepA-WHI Recapitulates Dimer to Monomer Transitions of RepA in DNA Replication Initiation
- 41) Wegrzyn et al. **Nucleic Acids Research** 16 MAY 2014, 42(12), 7807-7818, DOI: 10.1093/nar/gku453.
Sequence-specific interactions of Rep proteins with ssDNA in the AT-rich region of the plasmid replication origin
- 40) Carrasco et al. **DNA repair** 20, 119-129 (2014) DOI: 10.1016/j.dnarep.2014.02.002. (cover article)
Single molecule approaches to monitor the recognition and resection of double-stranded DNA breaks during homologous recombination

- 39) N. Laohakunakorn, Gollnick et al. **Nano Letters** 13 (11), 5141-5146, DOI: 10.1021/nl402350a (2013).
A Landau-Squire Nanojet
- 38) C. Carrasco et al. **Proceedings of the National Academy of Sciences of the USA** 110 (28), E2562-2571 (2013).
On the Mechanism of Recombination Hotspot Sequence Scanning by a Bacterial Helicase-Nuclease
- 37) S. Hernández-Ainsa et al. **ACSnano** 7 (7), 6024-6031 (2013).
DNA Origami Nanopores for Controlling DNA Translocation
- 36) J. Camunas-Soler et al. **ACSnano** 7 (6), 5102-5114 (2013).
Electrostatic Binding and Hydrophobic Collapse of Peptide-Nucleic Acid Aggregates Quantified Using Force Spectroscopy
- 35) N.A.W. Bell et al. **Lab on a Chip** 13, 1859-1862 (2013)
Multiplexed ionic current sensing with glass nanopores
- 34) M.E. Fuentes-Perez et al. **Methods** 60, 113-121 (2013)
AFM volumetric methods for the characterization of proteins and nucleic acids
- 33) E. Herrero-Galán, et al. *Mechanical identities of RNA and DNA double helices unveiled at the single-molecule level. The Journal of the American Chemical Society* 135(1), 122-131 (2013).
- 32) F. Moreno-Herrero and J. Gomez-Herrero. *AFM: basic concepts in book Atomic Force Microscopy in Liquid. Biological Applications*, edited by Arturo M. Baró y Ronald G. Reifengerger. Editorial Wiley-VCH. 2012. Print ISBN: 978-3-527-32758-4.
- 31) M.E. Fuentes-Perez et al. **Biophysical Journal** 102, 839-848 (2012)
Using DNA as a fiducial marker to study SMC complex interactions with the Atomic Force Microscope
- 30) Yeeles JTP et al. **Molecular Cell** 42, 806-816, (2011)
Recombination hotspots and single-stranded DNA binding proteins couple DNA translocation to DNA unwinding by the AddAB helicase-nuclease
- 29) C. Carrasco and F. Moreno-Herrero, **Encyclopedia of Life Sciences** (15 April, 2011)
Magnetic Tweezers
- 28) S. Hormeno et al. **Biophysical Journal** 100(8), 1996-2005 (2011).
Mechanical Properties of High G•C-content DNA with A-type base-stacking
- 27) S. Hormeno et al. **Biophysical Journal** 100(8), 2006-2015 (2011).
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- 26) T. van der Heijden et al. **Nano Letters** 7(4), 1112 (2007).
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- 25) T. van der Heijden et al. **Nano Letters** 6(12), 3000-3002 (2006).
Comment on "Direct and real-time visualization of the disassembly of a single RecA-DNA-ATPγS complex using AFM imagin in fluid"
- 24) P.A. Wiggins et al. **Nature Nanotechnology** 1, 137-141 (2006).
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- 23) F. Moreno-Herrero et al. **Nucleic Acids Research** 34(10), 3057-3066 (2006).
Structural analysis of hyperperiodic DNA from Caenorhabditis elegans

- 22) F. Moreno-Herrero et al. **Nucleic Acids Research** 33(18), 5945-5953 (2005).
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- 21) F. Moreno-Herrero et al. **Nature** 437 (7057), 440-443 (2005).
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- 20) F. Moreno-Herrero et al. **Biophysical Journal** 88(1), 381A-381A Part 2 Suppl. S. (2005).
The interaction between Vaccinia topoisomerase IB and DNA studied with the atomic force microscope
- 19) J.A. Abels et al. **Biophysical Journal** 88(1), 570A Part 2 Suppl. S. (2005).
Single-molecule measurements of the persistence length of double-stranded RNA
- 18) J.A. Abels et al. **Biophysical Journal** 88(4), 2737-2744 (2005).
Single molecule measurements of the persistence length of double-stranded RNA
- 17) M. Diaz-Hernandez et al. **Journal of Neuroscience** 24(42), 9361-9371 (2004).
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- 16) F. Moreno-Herrero et al. **European Polymer Journal** 40(5), 927-932 (2004).
Jumping mode atomic force microscopy obtains reproducible images of Alzheimer paired helical filaments in liquids
- 15) F. Moreno-Herrero et al. **Physical Review E** 69, 031915 (2004).
Jumping Mode Scanning Force Microscopy: a tool for precise force control and high-resolution imaging in liquids
- 14) F. Moreno-Herrero et al. **Biophysical Journal** 86, 517-525 (2004).
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- 13) F. Moreno-Herrero et al. **Ultramicroscopy** 96, 167-174 (2003).
DNA height in Scanning Force Microscopy
- 12) F. Moreno-Herrero et al. **Applied Surface Science** 210, 22-26, (2003).
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- 11) F. Moreno-Herrero et al. **Nanotechnology** 14 (2), 128-133, (2003).
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- 10) F. Moreno-Herrero et al. **Applied Physics Letters** 81, 2620 (2002).
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- 9) C. Gómez-Navarro*, F. Moreno-Herrero* et al. **Proceedings of the National Academy of Sciences USA** 99 (13), 8484-8487 (2002).
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- 7) T.de la Cera et al. **Journal of Molecular Biology** 319, 703-714 (2002).
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- 6) C.Gómez-Navarro et al. **Phantoms Newsletters** 4, 4-6 (2002).
DNA, the miracle molecule
- 5) F. Moreno-Herrero et al. **Journal of Alzheimer's Disease** 3, 443-451 (2001).
Characterization by atomic force microscopy of tau polymers assembled in Alzheimer's disease
- 4) F. Moreno-Herrero et al. **Biochemical and Biophysical Research Communications** 280, 151-157 (2001).
Imaging and mapping protein-binding sites on DNA regulatory regions with atomic force microscopy
- 3) P.J.de Pablo et al. **Physical Review. Letters** 85 (23), 4992-4995 (2000).
Absence of dc-conductivity in lambda DNA
- 2) F. Moreno-Herrero et al. **Surface Science** 453, 152-158 (2000).
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- 1) F. Moreno-Herrero et al. **FEBS Letters** 459, 427-432 (1999).
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