

FROM SINGLE CELL INJECTION
TO MATERIAL SCIENCES.

SELECTED FluidFM® PUBLICATIONS

MAIN PUBLICATION

- A. Meister, M. Gabi, P. Behr, P. Studer, J. Vörös, P. Niedermann, J. Bitterli, J. Polesel-Maris, M. Liley, H. Heinzmann & T. Zambelli. [FluidFM: Combining atomic force microscopy and nanofluidics in a universal liquid delivery system for single cell applications and beyond.](#) (2009) Nano Letters, 9(6), 2501–2507. doi:10.1021/nl901384x

7+

Ø IMPACT FACTOR

19+

TOPICS

6+

FIELDS

11+

APPLICATIONS

2016

- N. Helfricht, E. Doblhofer, J.F.L. Duval, T. Scheibel & G. Papastavrou. [Colloidal Properties of Recombinant Spider Silk Protein Particles.](#) The Journal of Physical Chemistry C, acs.jpcc.6b03957. doi:10.1021/acs.jpcc.6b03957
- Y. Lee, Y. Kim, D. Lee, D. Roy & J.W. Park. [Quantification of Fewer Than Ten Copies of a DNA Biomarker without Amplification or Labeling.](#) Journal of the American Chemical Society, jacs.6b02791. doi:10.1021/jacs.6b02791
- L. Jaatinen, E. Young, J. Hyttinen, J. Vörös, T. Zambelli & L. Demkó. [Quantifying the effect of electric current on cell adhesion studied by single-cell force spectroscopy.](#) Biointerphases, 11(1), 011004. doi:10.1116/1.4940214
- L. Hirt, S. Ihle, Z. Pan, L. Dorwling-Carter, A. Reiser, J.M. Wheeler, R. Spolenak, J. Vörös & T. Zambelli. [Template-Free 3D Microprinting of Metals Using a Force-Controlled Nanopipette for Layer-by-Layer Electrodeposition.](#) Advanced materials. doi:10.1002/adma.201504967
- J.S. McGrath, J. Quist, J.R.T. Seddon, S.C.S. Lai, S.G. Lemay & H.L. Bridle. [Deformability Assessment of Waterborne Protozoa Using a Microfluidic-Enabled Force Microscopy Probe.](#) PLoS one, 11(3), e0150438. doi:10.1371/journal.pone.0150438

2015

- P. Roder & C. Hille. [A Multifunctional Frontloading Approach for Repeated Recycling of a Pressure-Controlled AFM Micropipette.](#) PLOS ONE, 10(12), e0144157. doi:10.1371/journal.pone.0144157
- D. Ossola, L. Dorwling-Carter, H. Dermutz, P. Behr, J. Vörös & T. Zambelli. [Simultaneous Scanning Ion Conductance Microscopy and Atomic Force Microscopy with Microchanneled Cantilevers.](#) Physical Review Letters, 115(23), 238103. doi:10.1103/PhysRevLett.115.238103
- L. Hirt, R.R. Grüter, T. Berthelot, R. Cornut, J. Vörös & T. Zambelli. [Local surface modification via confined electrochemical deposition with FluidFM.](#) RSC Adv., 5(103), 84517–84522. doi:10.1039/C5RA07239E
- J. Geerlings, E. Sarajlic, E.J.W. Berenschot, R.G.P. Sanders, M.H. Siekman, L. Abelmann & N.R. Tas. [Electric field controlled nanoscale contactless deposition using a nanofluidic scanning probe.](#) Applied Physics Letters, 107(12), 123109. doi:10.1063/1.4931354
- D. Ossola, M.-Y. Amarouch, P. Behr, J. Vörös, H. Abriel & T. Zambelli. [Force-controlled patch clamp of beating cardiac cells.](#) (2015) Nano letters, 15(3), 1743–50. doi:10.1021/nl504438z
- E. Potthoff, D. Ossola, T. Zambelli & J.A. Vorholt. [Bacterial adhesion force quantification by fluidic force microscopy.](#) (2015) Nanoscale, 7(9), 4070–4079. doi:10.1039/c4nr06495j
- B.R. Simona, L. Hirt, L. Demkó, T. Zambelli, J. Vörös, M. Ehrbar & V. Milleret. [Density gradients at hydrogel interfaces for enhanced cell penetration.](#) (2015) Biomater. Sci. doi:10.1039/C4BM00416G
- R.R. Grüter, B. Dielacher, L. Hirt, J. Vörös & T. Zambelli. [Patterning gold nanoparticles in liquid environment with high ionic strength for local fabrication of up to 100 µm long metallic interconnections.](#) (2015) Nanotechnology, 26(17), 175301. doi:10.1088/0957-4484/26/17/175301

2014

- O. Guillaume-Gentil, E. Potthoff, D. Ossola, C. M. Franz, T. Zambelli & J. A. Vorholt. **Force-controlled manipulation of single cells: From AFM to FluidFM.** (2014) Trends in Biotechnology. Elsevier Ltd. doi:10.1016/j.tibtech.2014.04.008
- H. Dermutz, R. R. Grüter, A. M. Truong, L. Demkó, J. Vörös & T. Zambelli. **Local polymer replacement for neuron patterning and in situ neurite guidance.** (2014) Langmuir : the ACS journal of surfaces and colloids, 30(23), 7037–46. doi:10.1021/la5012692
- E. Potthoff, D. Franco, V. D'Alessandro, C. Starck, V. Falk, T. Zambelli, J. A. Vorholt, D. Poulikakos & A. Ferrari. **Toward a rational design of surface textures promoting endothelialization.** (2014) Nano Letters, 14(2), 1069–1079. doi:10.1021/nl4047398
- O. Guillaume-Gentil, T. Zambelli & J. A. Vorholt. **Isolation of single mammalian cells from adherent cultures by fluidic force microscopy.** (2014) Lab on a chip, 14(2), 402–14. doi:10.1039/c3lc51174j
- J. Geerlings, E. Sarajlic, J. W. Berenschot, R. G. P. Sanders, L. Abelmann & N. R. Tas. **Electrospray deposition from AFM probes with nanoscale apertures.** (2014) In MEMS 2014 (pp. 100–103). San Francisco: IEEE. Retrieved from http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6765583

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- P. Schön, J. Geerlings, N. Tas & E. Sarajlic. **AFM Cantilever with in Situ Renewable Mercury Microelectrode.** (2013) Analytical chemistry, 85(19), 8937–42. doi:10.1021/ac400521p
- P. Stiefel, T. Zambelli & J. A. Vorholt. **Isolation of optically targeted single bacteria by application of fluidic force microscopy to aerobic anoxygenic phototrophs from the phyllosphere.** (2013) Applied and Environmental Microbiology, 79(16), 4895–4905. doi:10.1128/AEM.01087-13
- P. Dörig, D. Ossola, A. M. Truong, M. Graf, F. Stauffer, J. Vörös & T. Zambelli. **Exchangeable colloidal AFM probes for the quantification of irreversible and long-term interactions.** (2013) Biophysical Journal, 105(2), 463–472. doi:10.1016/j.bpj.2013.06.002
- R. R. Grüter, J. Vörös & T. Zambelli. **FluidFM as a lithography tool in liquid: spatially controlled deposition of fluorescent nanoparticles.** (2013) Nanoscale, 5(3), 1097–104. doi:10.1039/c2nr33214k

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- P. Stiefel, F. I. Schmidt, P. Dörig, P. Behr, T. Zambelli, J. A. Vorholt & J. Mercer. **Cooperative vaccinia infection demonstrated at the single-cell level using FluidFM.** (2012) Nano Letters, 12(8), 4219–4227. doi:10.1021/nl3018109

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- A. Meister, J. Polesel-Maris, P. Niedermann, J. Przybylska, P. Studer, M. Gabi, P. Behr, T. Zambelli, M. Liley, J. Vörös & H. Heinzelmann. **Nanoscale dispensing in liquid environment of streptavidin on a biotin-functionalized surface using hollow atomic force microscopy probes.** (2009) Microelectronic Engineering, 86(4-6), 1481–1484. doi:10.1016/j.mee.2008.10.025
- A. Meister, M. Gabi, P. Behr, P. Studer, J. Vörös, P. Niedermann, J. Bitterli, J. Polesel-Maris, M. Liley, H. Heinzelmann & T. Zambelli. **FluidFM: Combining atomic force microscopy and nanofluidics in an universal liquid delivery system for single cell applications and beyond.** (2009) Nano Letters, 9(6), 2501–2507. doi:10.1021/nl901384x

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