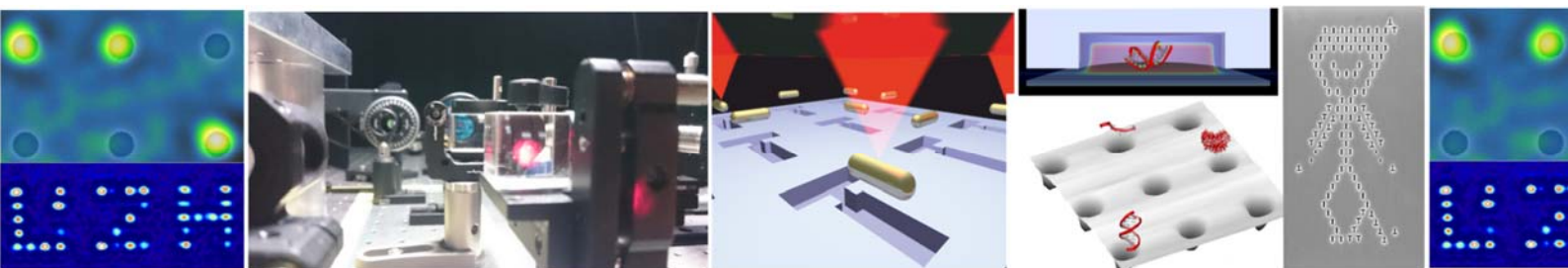


## PhD positions at the University of Zurich

Join the excitement in an

*emerging area of single molecule measurement*



Our lab has recently developed the ability to trap molecular-scale entities in solution, e.g., biological macromolecules such as proteins and DNA, without the use of external forces (*Nature*, 2010; *Nature Nanotechnology*, 2012; *Nature Nanotechnology*, 2017). Our "field-free" trap now enables us to study and measure the physical properties of macromolecules such as their electrical charge, size and conformation with unprecedented precision, in real time.

We are currently expanding our activities and are looking for bright, highly motivated students with a strong background in physics, biophysics, or physical chemistry, and a keen interest in experimental work to join us in studying exciting new problems in this emerging area of single molecule measurement. Our experimental approach mainly involves optical imaging and spectroscopy and nanofabrication. We also work on the theory and simulation side of our measurements, which entails Brownian Dynamics simulations and numerical mean-field electrostatics calculations.

Your application consisting of a cover letter (explaining your background and motivation), CV including contact information for your references, and publication record (if applicable) should be emailed as a single PDF file to [madhavi.krishnan@uzh.ch](mailto:madhavi.krishnan@uzh.ch)

Visit our website at <http://krishnanlab.uzh.ch> and get in touch if you're interested.

### **Prior work**

Ruggeri *et al.*, *Nature Nanotechnology* 12 (2017) 488-495

Myers, Celebrano & Krishnan, *Nature Nanotechnology* 10 (2015) 886-891

Mojarad & Krishnan, *Nature Nanotechnology* 7 (2012) 448-452

Krishnan *et al.*, *Nature* 467 (2010) 692-69

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