News from the community

- **29.04.20** Protein folding and dynamics Webinar-Series.
- **14.04.20** Bioimage Data Analysis. New Expanded version of a nice open-source introduction.
- **14.04.20** De novo design of protein logic gates. Fundamental enzymology work. Chen et al. describe the design of logic gates that can regulate protein association. The gates were built from small, designed proteins that all have a similar structure but where one module can be designed to interact specifically with another module. Using monomers and covalently connected monomers as inputs and encoding specificity through designed hydrogen-bond networks allowed the construction of two-input or three-input gates based on competitive binding.
- **31.03.20** FRET community has a new advisory board, FRET community. Happy that Dr. Marcelle König , a senior scientist in PicoQuant was elected.
- **31.03.20** Extremely helpful reference paper about confocal microscopy. Tutorial: guidance for quantitative confocal microscopy. Available as a poster here.
- **29.01.20** Beautiful biophysical study by Andrea Soranno and colleagues, showing how aromatic residues in prion-like protein domains determine liquid-liquid phase behavior in cells. As part of a multipronged experimental and computational strategy to unravel the phase behavior of the heterogeneous nuclear ribonucleoprotein A1, they performed FCS measurements with PicoQuant's MicroTime 200 microscope to probe the mobility of proteins inside and outside of droplets. Valence and patterning of aromatic residues determine the phase behavior of prion-like domains
- **29.01.20** Exciting work combining FLIM-FRET and STED microscopy in vivo using a newly developed FRET pair! This combination enables the study of protein interactions in sub-diffraction structures. Also impressive, they use PicoQuant's 6th MicroTime 200 microscope, built in 2004, for performing this cutting-edge research. The in vivo mechanics of the magnetotactic backbone as revealed by correlative FLIM-FRET and STED microscopy
- **24.10.19** New publication DNA mechanotechnology reveals that integrin receptors apply pN forces in podosomes on fluid substrates introducing the approach of **Molecular Tension-Fluorescence Lifetime Imaging Microscopy (MT-FLIM)**
- **24.10.19** Open Access Book on Bioimage Data Analysis Workflows by Springer.]
- **04.09.19** FRET.community website is online. The **FRET community serves as a hub** for joint scientific efforts in the field of Förster resonance energy. Note also that recently smFRET.org by T.Ha group was also released.
- **03.09.19** Nice **FRET Review** published FRET as a biomolecular research tool — understanding its potential while avoiding pitfalls

Copyright of this document belongs to PicoQuant GmbH. No parts of it may be reproduced, translated or transferred to third parties without written permission of PicoQuant GmbH. All information given here is reliable to our best knowledge. However, no responsibility is assumed for possible inaccuraciesor omissions. Specifi cations and external appearances are subject to change without notice.

PicoQuant GmbH
Rudower Chaussee 29 (IGZ)
12489 Berlin
Germany

P +49-(0)30-1208820-89
F +49-(0)30-1208820-90
info@picoquant.com
www.picoquant.com