

Using FLIM with confidence and minimal user interaction

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Abstract

Fluorescence Lifetime Imaging (FLIM) has become more attractive in recent years as it offers increased specificity in many assays as well as the possibility of multiplexing the read out of many markers with a small number of detectors.

Here we present how FLIM modalities are implemented in Luminosa, the new single-photon counting confocal microscope by PicoQuant. Thanks to a dynamic binning format and GPU-based algorithms FLIM images of 1024x1024 can be analysed in a few seconds. The FLIM analysis workflow suggests the best fitting model based on statistical arguments and requires minimal user interaction making these modalities become accessible to new users who can then confidently start working with FLIM and incorporate it into their research toolbox combining the strengths of phasor plots with decay fitting.

