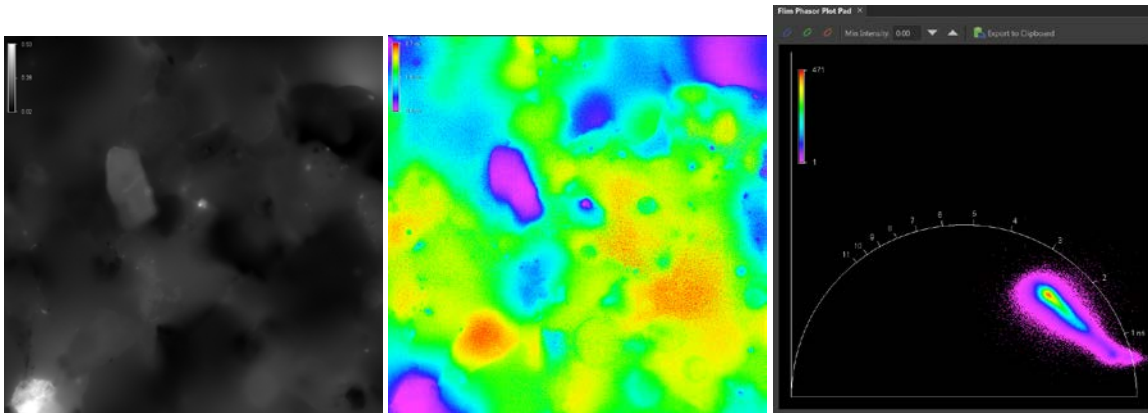


Frequency Domain FLIM Improvements and Applications

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Since the introduction of the first FD-FLIM pco.flim camera in 2014 the camera system has been applied to different areas, from FRET to endogenous fluorescence, from oxygen to pH measurement, from large technical applications in wind tunnels down to lightsheet microscopy. Thanks to feedback and own experiences the camera system and the controlling software has been improved. Currently the full integration in the NIS Elements software v5.11 has resulted in a significant improvement concerning calibration and dark field correction. The improvements in use and applicability will be shown and discussed.



From left to right: fluorescence image of a filter paper with a variety of dust and microplastic particles, phase angle based fluorescence lifetime distribution in the range of 0.6 ns – 2.7 ns, the corresponding phasor plot.

Further new results including investigation of micro plastics on lab filters (see above), pH measurements, oxygen measurements in marine environment, assistance for neuro surgery and rapid FD-FLIM measurements are shown to demonstrate the flexibility of the pco.flim camera system.

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