



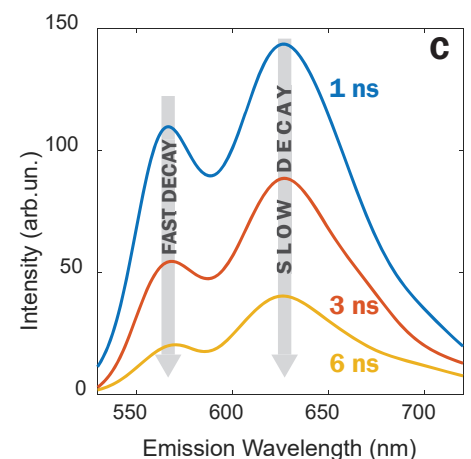
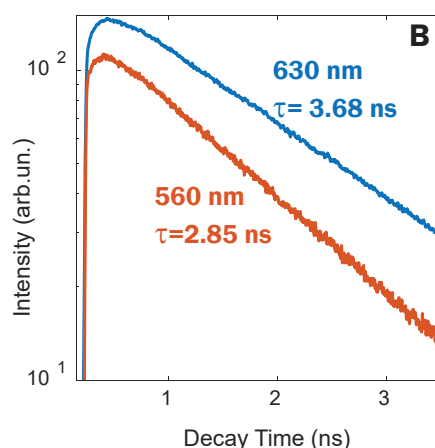
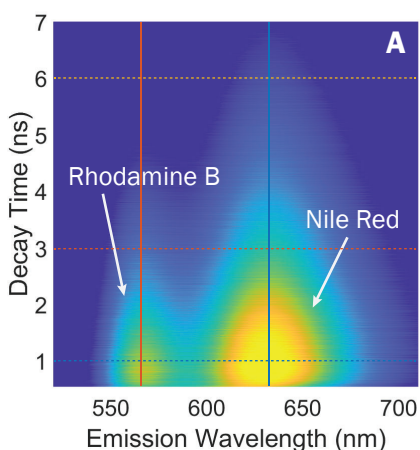
## TIME- AND FREQUENCY- RESOLVED FLUORESCENCE MADE EASY

Add GEMINI Interferometer in between the sample and the detector to easily retrieve the SPECTRUM of your signal.

### Key Benefits

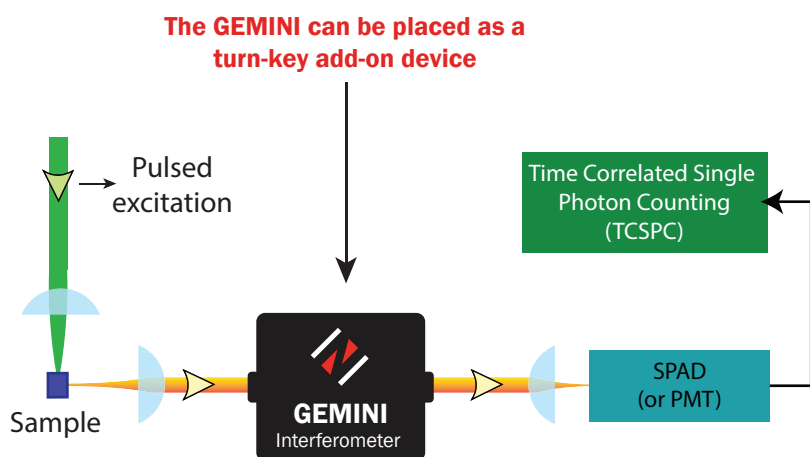
- High **throughput** that allows high sensitivities
- **User-friendly software**
- **Variable spectral resolution** (without affecting throughput)
- Exceptional **stability** and insensitive to vibrations
- **Compact, lightweight** and **turn-key**
- **Broadband** spectral coverage (UV to SWIR)
- **Compatible** with main commercial TCSPC cards

### Measurement Example

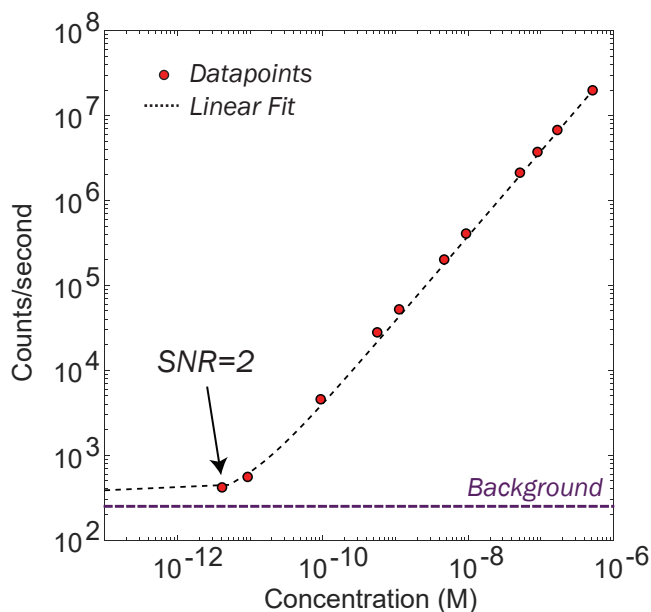


**A:** Fluorescence Map of a sample (mixture of Rhodamine B + Nile Red in Ethanol) as a function of Emission Wavelength and Decay Time. **B:** Dynamics corresponding to vertical cuts in (A). **C:** Spectra corresponding to horizontal cuts in (A).

# Time- and frequency-resolved fluorescence with a single-pixel detector and a TCSPC module



## Sensitivity Test



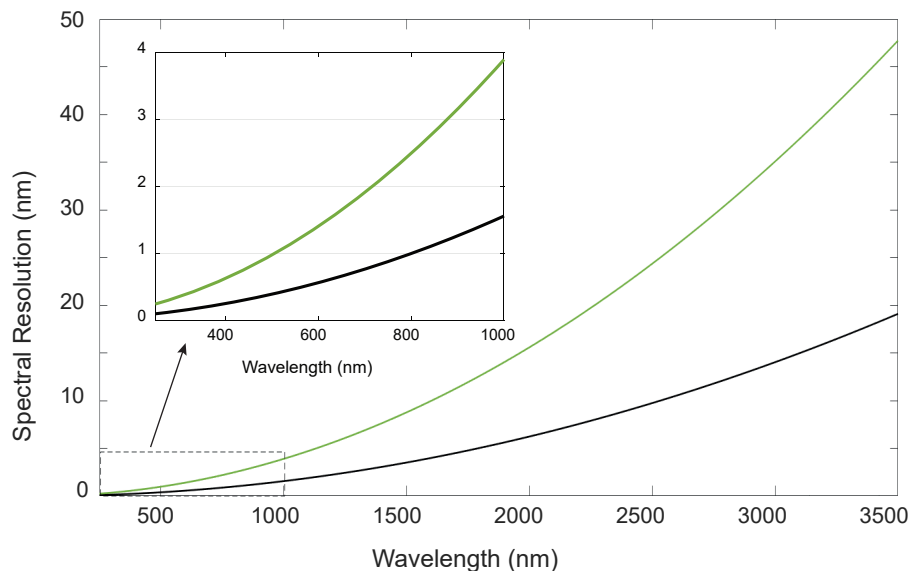
Measurements at different concentrations of the sample have been performed (red dots).

The outstanding sensitivity of the system enables to reach **picoMolar concentrations**.

Excitation Power: 275  $\mu$ W @ 532 nm wavelength

Sample: Mixture of Rhodamine B and Nile Red in Ethanol

## Spectral Resolution



## Other Applications

- Interferometry
- Generation of pulse pairs
- GEMINI IN DETECTION PATH
- Time- and frequency- resolved fluorescence
- Pump-probe spectroscopy
- Coherent Raman spectroscopy

### GEMINI IN EXCITATION PATH

- Fluorescence Excitation-Emission Map
- Characterization of single molecules

Perri et al., Opt. Express 26, 2270-2279 (2018)