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Fluorescence Correlation Spectroscopy: A Powerful Tool to Study Dynamic Processes on a Single-Molecule Level

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Abstract: Fluorescence Correlation Spectroscopy (FCS) allows the spatial, temporal and spectral resolution of single particles or an ensemble of molecules, and has made it possible to study processes that otherwise are obscured in the average properties of the system. Extremely rare events, as well as fast chemical and diffusion driven processes, can be investigated, and the reactions of molecules can be followed in time. For the optical detection of fluorescence-tagged molecules, FCS uses the typical confocal setup of a laser scanning microscope.

Key Words: [Fluorescence correlation spectroscopy](#), [Dynamic processes](#), [Single molecule level](#)

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