

Photophysics Seminar

Date: 2-3 pm Monday 1st February 2016

Room: JA5.06

DEPARTMENT OF PHYSICS



Phasor approach(es) to fluorescence

Phasor plots (plots of the Fourier sine transform vs. the Fourier cosine transform, for one or several angular frequencies) of both the fluorescence intensity decay and of the fluorescence spectrum (spectral phasor plot) are being increasingly used in studies of homogeneous and heterogeneous systems.¹ In this presentation, the phasor approach to fluorescence decays is presented and applied to monomer-excimer and TADF (thermally activated delayed fluorescence) systems. Spectral phasors are discussed in the contexts of monomer-excimer analysis² and fluorescence microscopy and compared with recently developed alternative methods.

[1] *Phasor plots of luminescence decay functions*

Berberan-Santos M N Chem. Phys. 449, 23-33, 2015

[2] *Phasor Representation of Monomer-Excimer Kinetics: General Results and Application to Pyrene*

Martelo L, Fedorov A, Berberan-Santos M N J. Phys. Chem. B, 119
15023-15029, 2015

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