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Effects of Aggregation on the Properties of Individual Conjugated Oligomers and Polymers Probed by Fluorescence Microscopy GIZELLE SHERWOOD, LINDA PETEANU, JURJEN WILDEMAN — The recent upsurge in use of conjugated polymers in photovoltaic devices and in displays drives the need for understanding how morphology affects important functional features such as emission and charge migration. Due to the inherent complexity of polymers, a parallel effort to ‘build-up’ understanding of their features *via* a detailed study of important electronic and photo-physical properties of oligomer aggregates is needed. These exhibit remarkably uniform spectral properties that defy analysis via standard exciton coupling models. Fluorescence microscopy is used to probe both variations in vibronic structure and emission lifetime between individual aggregates and trends in these properties as a function of aggregate size.

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