Electronic Supplementary Material (ESI) for RSC Advances.

Two-photon Absorption of Polyfluorene Aggregates Stabilized by Insulin Amyloid Fibrils

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Material

1. Polyfluorene derivative with polyethylene glycol side chains (PFO)

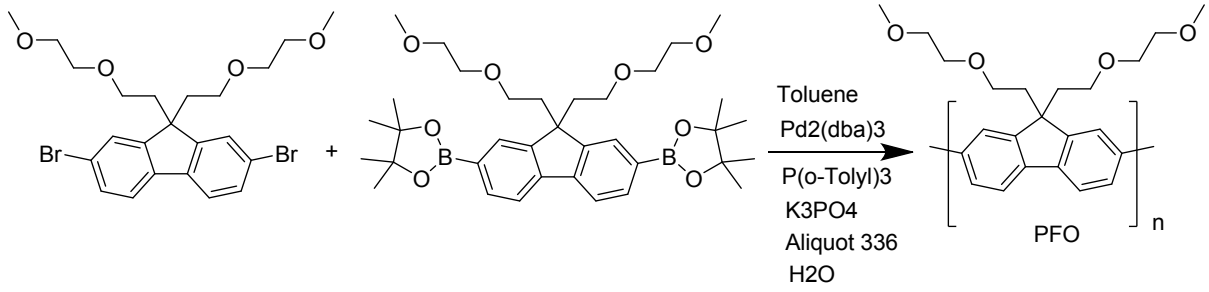

Figure S1. Synthesis of polyfluorene derivative (PFO)

^{1}H NMR (400 MHz, $CDCl_3$, δ): 7.8 (3H, m), 3.3 (9H, m), 2.9 (2H, broad singlet)

^{13}C NMR (100 MHz, $CDCl_3$, δ): 150.0, 140.6, 139.5, 126.7, 121.6, 120.3, 71.8, 70.0, 57.2, 59.0, 51.7, 40.0,

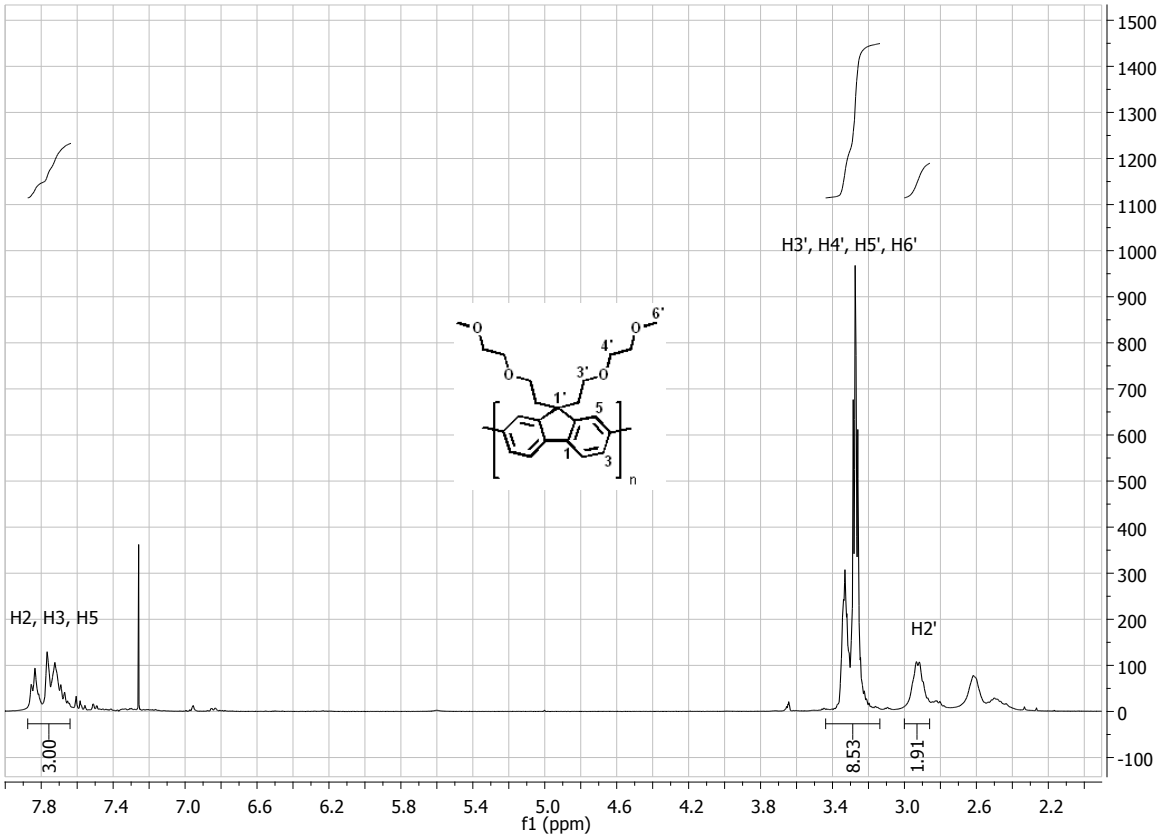

Figure S2. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of PFO.

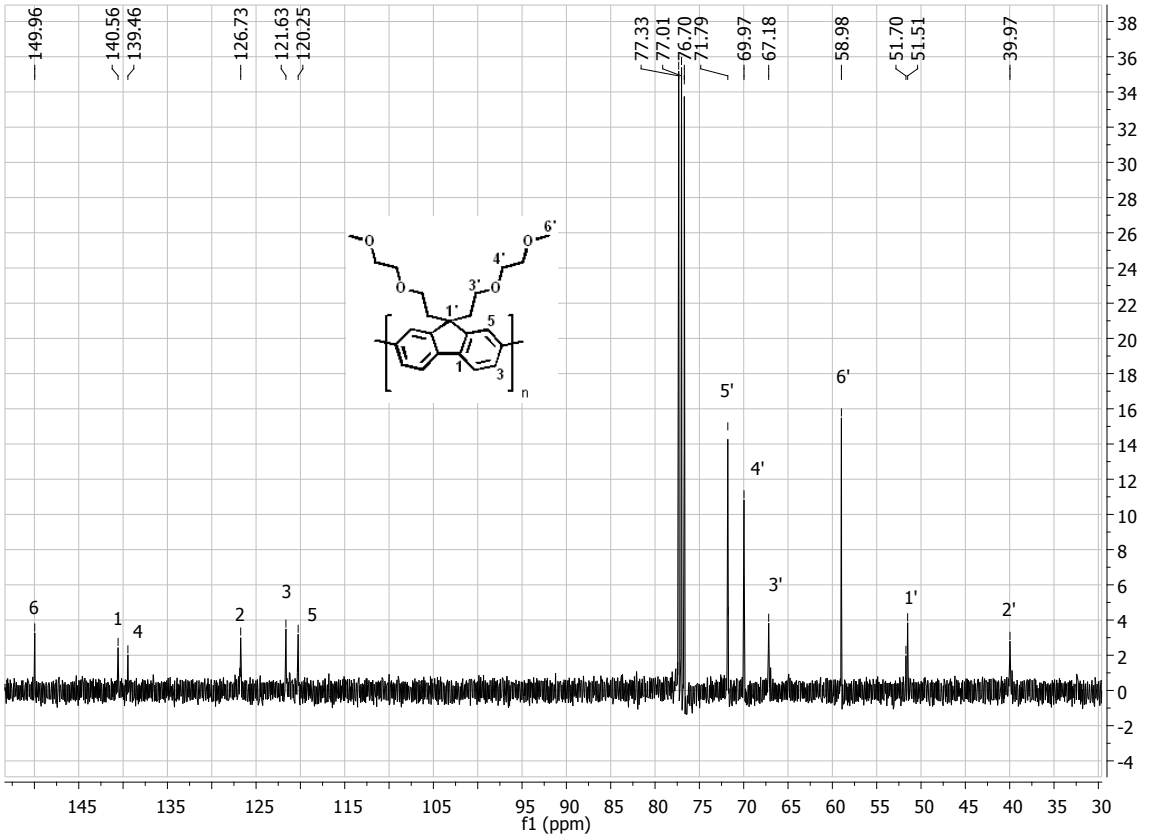

Figure S3. ^{13}C NMR spectrum (400 MHz, $CDCl_3$) of PFO.

2. Thioflavine T standard

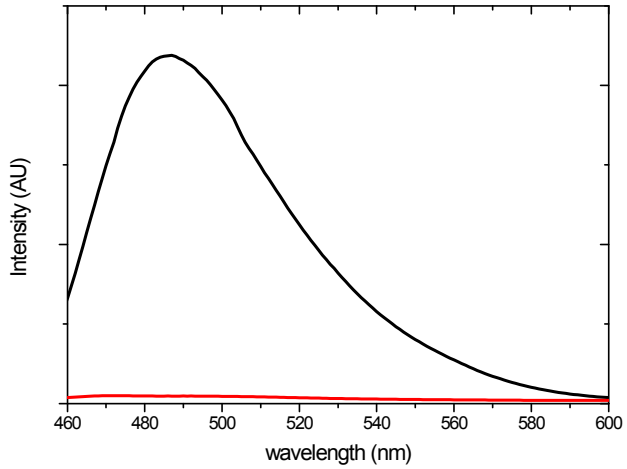

Fig S4. Emission of ThT T excited at 440 nm in presence of insulin fibrils (black solid) and insulin monomers (red solid)

3. Z-scan of PFO dissolved in ethanol and in mixture with acid water buffer (pH=2).

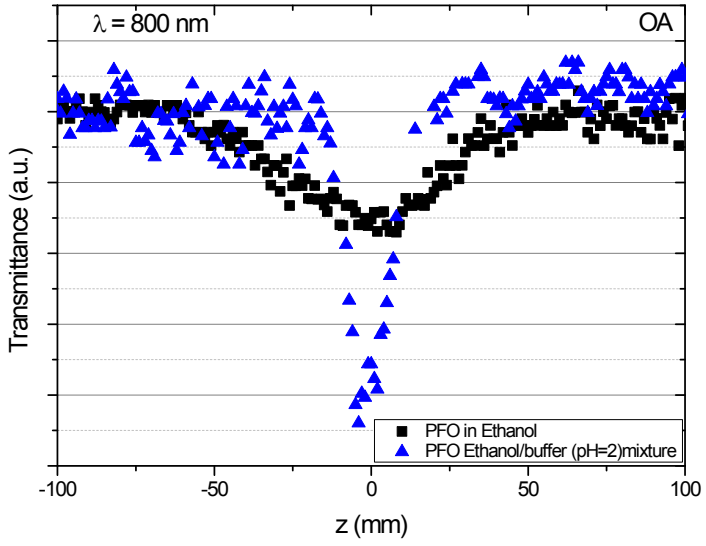

Fig. S5 Open-aperture Z-scan of aggregation PFO in ethanol/buffer mixture showing sample degradation (blue triangles) – exceedingly sharp dip in the OA trace at the focal plane position that cannot be fitted by standard Z-scan theory and stable PFO stock solution in ethanol for the sake of comparison (black squares).