

Supporting Information

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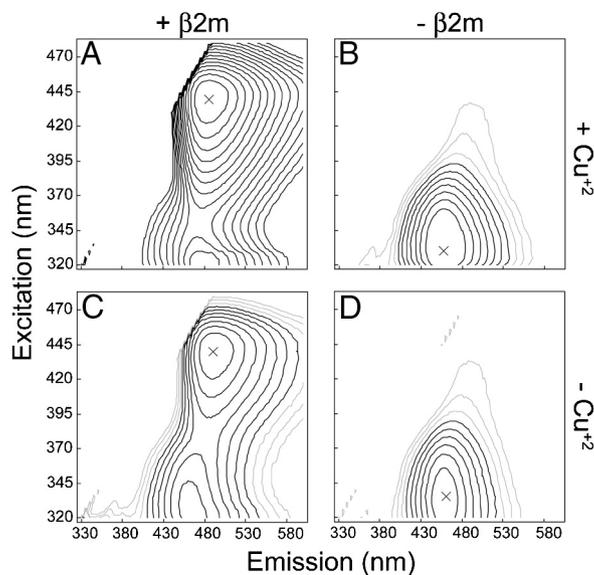


Fig. S1. Spectroscopic properties of ThT in the presence and absence of $\beta 2m$. These are 2D representations of excitation and emission spectra for $\pm 100 \mu M \beta 2m$ and $\pm 200 \mu M Cu^{2+}$. Contour levels in all panels are drawn in decreasing intervals of 10^c , where $c = -0.1, -0.2, -0.3, \dots$, relative to the maximum intensity of the hexamer ($+\beta 2m + Cu^{2+}$). All contours with $c < -1$ are drawn in gray. Samples additionally contained $100 \mu M$ ThT, $200 mM$ potassium acetate and $25 mM$ MOPS at pH 7.4 and $25^\circ C$. $10 mM$ EDTA was added to all $-Cu^{2+}$ samples.

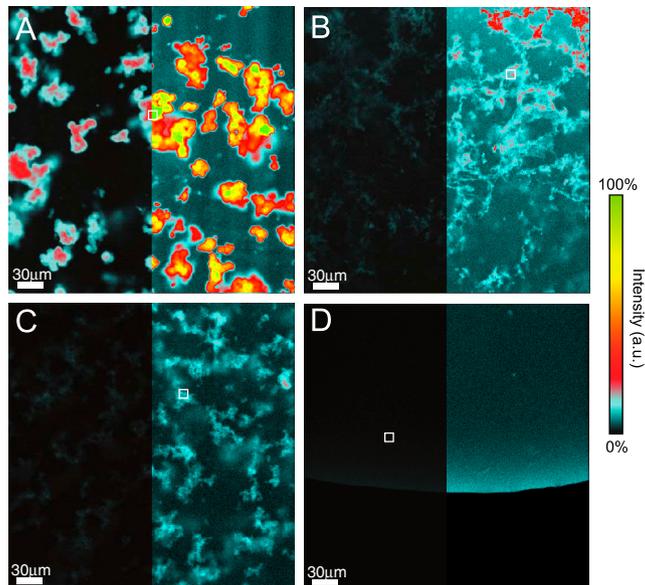


Fig. S2. Visualization of ThT in aggregates. False-color fluorescence images collected using blue ($440 nm$) excitation. (A) Amyloid fibers derived from human islet amyloid polypeptide (identical to image in Fig. 1B so as to facilitate comparison with Fig. S2 B–D). (B) Avidin-crosslinked membrane Nanodiscs containing 5% biotinylated lipids. (C) Avidin-crosslinked aggregates of biotin-labeled bovine serum albumin. (D) A droplet of a nonamyloidogenic sequence variant of islet amyloid polypeptide from rat in the same buffer as A. The right half of each image has had contrast increased for clarity. Ratiometric measures use signal integrated across the areas indicated with a white box. Ratios were computed using the same areas on images collected using $340 nm$ excitation. These ratios are ~ 15 , ~ 6 , ~ 6 , and ~ 5 for A–D, respectively. Note that background regions in Fig. 1C–D also yield a ratio of ~ 6 , indicating that this represents the instrumental response for ratiometric-based assessments at these wavelengths.

