How can we visualize amyloid aggregation at nanometer resolution with minimum perturbation over extended time periods?

• Amyloid aggregates are signatures of neurodegenerative disorders such as Alzheimer’s disease.

• Transient Amyloid Binding (TAB) super-resolution microscopy resolves amyloid structures by using the standard probe, Thioflavin T (ThT), without the need for covalent modification or immunostaining of amyloids (below).

Spontaneous binding and corresponding bursts of ThT fluorescence on amyloids are used to reconstruct super-resolution images of native amyloid structures (above).

TAB imaging can capture the dynamics of amyloid structures, such as remodeling due to epigallocatechin gallate (EGCG), with ~minute temporal resolution over hours to days (left).

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