

ADVANCED FUNCTIONAL MATERIALS

LIVE CELL IMAGING

Single particle tracking (SPT) of receptors in live cells is typically limited by the intermittency of the fluorescent probe's emission (blinking) or by motion of the receptor out of the imaging plane of the microscope. These limitations are overcome by J. A. Hollingsworth, J. H. Werner, and co-workers by integrating non-blinking 'giant' quantum dots (gQDs) for confocal-based 3D live cell SPT of the IgE Fc ϵ R1 allergen receptor. On page 4796, this allows an extended tracking duration compared to conventional core/shell blinking QDs, leading to observations of heterogeneous receptor diffusion occurring over time scales of minutes.

