

Enhancing high-throughput detection of protein nanocrystals

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One of the primary bottlenecks in biomolecular crystallography remains identifying conditions in which a biomolecule will crystallize. Recent advances in serial femtosecond crystallography (SFX) have only increased the need for better methods to identify and characterize protein nanocrystals, which present unique challenges. The development of Second Order Nonlinear Imaging of Chiral Crystals (SONICC) combined with UV-Two Photon Excited Fluorescence (UV-TPEF) has enabled high-throughput methods to identify crystals. Here we present new innovations in protein nanocrystal detection, including enhancements of the capabilities of the SONICC system (up to five times greater signal detection) due to a new photomultiplier detector that Formulatrix has implemented.