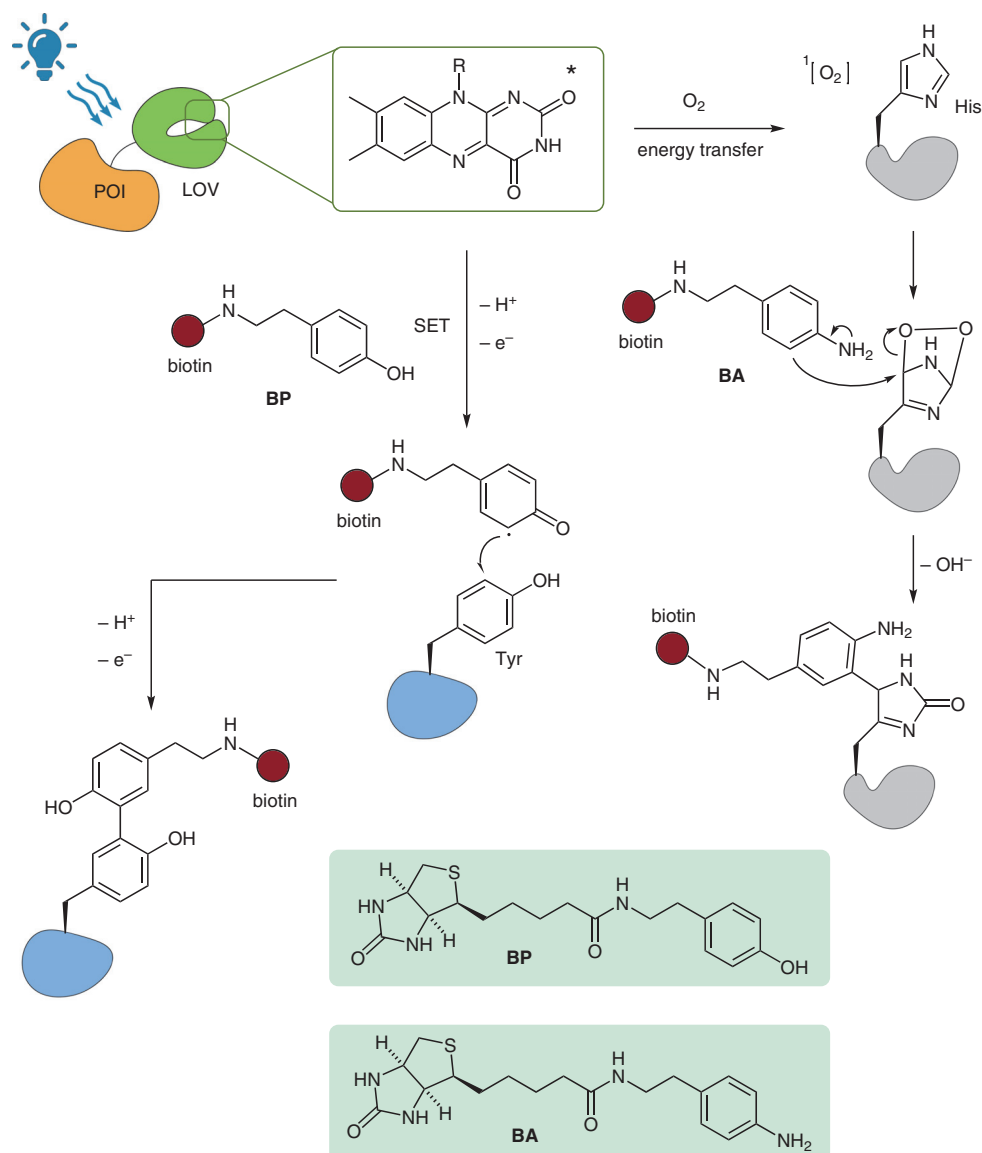


Photoproximity Labeling of Proteins



Significance: Identifying direct and indirect interactions of proteins is an emerging area of interest in research. Tools that can match the dynamic spatial and temporal environment of cells are needed. The authors report a genetically encoded approach that allows for localized photolabeling of proteins with a cell-permeable probe.

Comment: To achieve localized photolabeling, the authors fuse a Light-Oxygen-Voltage (LOV) domain containing a flavin molecule to their protein of interest (POI). This photoexcitable motif allows for the generation of singlet oxygen or SET to sensitize nearby amino acids or the small molecule probes **BA** and **BP**, allowing for their conjugation.