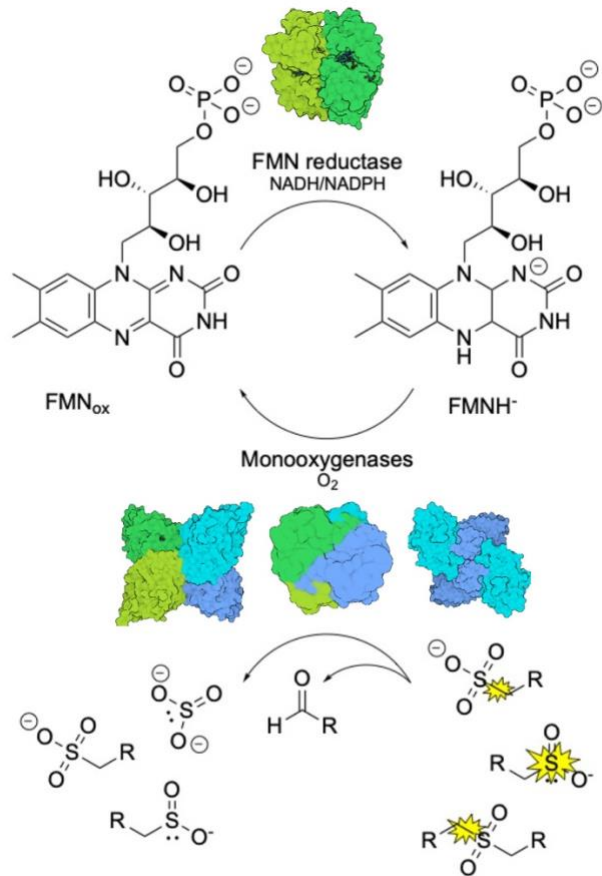


TC-FMO overview in bacterial organosulfur utilization



This diagram denotes the TC-FMO reaction cycle, in which a NAD(P)H-dependent reductase is responsible for reducing FMN. The reduced FMN is then transferred to and used by the monooxygenase to activate molecular oxygen to catalyze sulfur-carbon bond cleavage in a variety of organosulfur molecules, including alkanesulfonates and dialkylsulfones. Additional monooxygenases catalyze sulfur-oxygen bond formation, such as in the case of alkanesulfonates.