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Bio

BIO

Samsuzzoha Modal is a Research Associate at SLAC National Accelerator Laboratory and a Ph.D. chemist specializing in advanced microscopy and biophysical chemistry. His research integrates protein engineering, structural biology, and quantitative imaging to understand how protein organization across length scales regulates biological activity, and to translate these mechanistic insights into therapeutic and diagnostic approaches.

Samsuzzoha earned his Ph.D. at the Tata Institute of Fundamental Research (Mumbai, India), where he developed chemical tools to image signaling phospholipid dynamics in live biological systems. He then completed postdoctoral training at the University of Pennsylvania (Philadelphia), building in vitro reconstitution models to study the molecular basis of membrane trafficking. Since 2023 at SLAC, he has been combining X#ray crystallography, small#angle X#ray scattering, and advanced optical methods to uncover design principles for quantum biosensing tools and to support structure#guided small#molecule therapeutic development.

A committed educator and mentor, Samsuzzoha has taught bioanalytical chemistry and led diverse student teams, emphasizing inclusive, hands#on training, reproducible data practices, and translational problem#solving.

Google Scholar: https://scholar.google.com/citations?user=VKSKBp4AAAAJ&hl=en