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Abstract for an Invited Paper
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Theoretical methods for engineering protein structure and function

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Designing and engineering proteins provides ways to probe the determinants of folding, to facilitate their study, and to arrive at novel molecules, materials and nanostructures. Recent computational methods for identifying the properties of proteins consistent with a desired structure and function will be discussed. Computationally designed protein-based molecular systems will be presented, including proteins tailored to accommodate nonbiological cofactors and their novel functional properties.