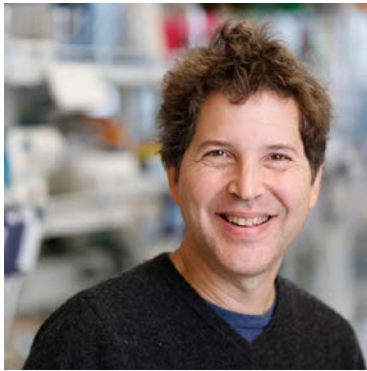# David Baker

De Novo Design of Protein Nanomaterials

I will discuss recent advances in de novo design of protein nanomaterials, including the design of self-assembling closed structures with cyclic, dihedral, tetrahedral, octahedral and icosahedral point group symmetries, self-assembling 1D nanowires, and 2D hexagonal lattices. I will discuss the functionalization of these nanomaterials and the incorporation of interfaces which allow precise interaction with inorganic crystal lattices.

_____

David Baker is the Director of the Institute for Protein Design, Investigator of the Howard Hughes Medical Institute, Professor of Biochemistry, and adjunct professor of Genome Sciences, Bioengineering, Chemical Engineering, Computer Science, and Physics at the University of Washington.

He received his Ph.D. degree in biochemistry with Randy Schekman at the University of California, Berkeley and did postdoctoral work in biophysics with David Agard at UCSF.

His research group is focused on the prediction and design of macromolecular structures, interactions and functions. Dr. Baker received young investigator awards from the National Science Foundation and the Beckman Foundation, and the Packard Foundation fellowship in Science and Engineering. He has also received the Irving Sigal Young Investigator Award from the Protein Society and the Overton Prize from the International Society of Computational Biology. He is a recipient of the Feynman Prize from the Foresight Institute, the AAAS Newcomb Cleveland prize, the Sackler prize in biophysics, and the Centenary award from the Biochemical society. He is a member of the National Academy of Sciences and the American Academy of Sciences.