Theory and Applications of the Empirical Valence Bond Approach: From Physical Chemistry to Chemical Biology

Fernanda Duarte (Editor), Shina Caroline Lynn Kamerlin (Editor), Arieh Warshel (Foreword by)

Hardcover 978-1-119-24539-1  March 2017  £104.00
O-Book 978-1-119-24554-4  February 2017  Available on Wiley Online Library

DESCRIPTION

A comprehensive overview of current empirical valence bond (EVB) theory and applications, one of the most powerful tools for studying chemical processes in the condensed phase and in enzymes.

• Discusses the application of EVB models to a broad range of molecular systems of chemical and biological interest, including reaction dynamics, design of artificial catalysts, and the study of complex biological problems

• Edited by a rising star in the field of computational enzymology

• Foreword by Nobel laureate Arieh Warshel, who first developed the EVB approach

ABOUT THE AUTHOR

Lynn Kamerlin, Professor, Department of Cell and Molecular Biology, Uppsala University

Professor Kamerlin is a full Professor of Structural Biology at Uppsala University, as well as an ERC Starting Independent Researcher and a Wallenberg Academy Fellow. She is also the current Chair of the Young Academy of Europe (YAE). Her research interests span theoretical physical organic chemistry, phosphate and sulfate chemistry, the mechanisms of enzyme reactivity, specificity, promiscuity and catalysis, and computational directed evolution.
Fernanda Duarte, Department of Cell and Molecular Biology, Uppsala University

Dr Duarte is the Newton Fellow at University of Oxford, UK. In November 2015, she was awarded a £100,000 grant for research into Plagiarizing Proteins: In Silico Evolution of Catalysts for Selective Chemical Synthesis.

To purchase this product, please visit https://www.wiley.com/en-gb/9781119245391