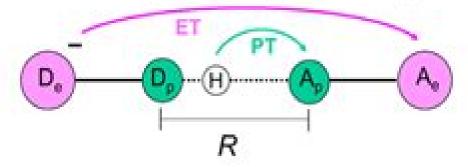
# Theory of Proton-Coupled Electron Transfer

Sharon Hammes-Schiffer Pennsylvania State University



Note: Much of this information, along with more details, additional rate constant expressions, and full references to the original papers, is available in the following JPC Feature Article:

Hammes-Schiffer and Soudackov, JPC B 112, 14108 (2008)

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# **Electron Transfer Volume 1**

J. A. McCleverty, T.J. Meyer

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Energy Research Abstracts ,1987 Comprehensive Coordination Chemistry II J. A. McCleverty, T.J. Meyer, 2003-12-03 Comprehensive Coordination Chemistry II CCC II is the sequel to what has become a classic in the field Comprehensive Coordination Chemistry published in 1987 CCC II builds on the first and surveys new developments authoritatively in over 200 newly comissioned chapters with an emphasis on current trends in biology materials science and other areas of contemporary scientific interest **Protein Electron Transfer** Dr Derek Bendall, 2020-07-24 This book is unique the factual content and ideas it expounds are only just beginning to be touched upon in standard texts Protein Electron Transfer is a major collaborative effort by leading experts and explores the molecular basis of the rapidly expan The Chemistry of the Actinide and Transactinide Elements (Set Vol.1-6) L.R. Morss, Norman M. Edelstein, Jean Fuger, 2010-10-21 The fourth edition of The Chemistry of the Actinide and Transactinide Elements comprises all chapters in volumes 1 through 5 of the third edition published in 2006 plus a new volume 6 To remain consistent with the plan of the first edition to provide a comprehensive and uniform treatment of the chemistry of the actinide and transactinide elements for both the nuclear technologist and the inorganic and physical chemist and to be consistent with the maturity of the field the fourth edition is organized in three parts The first group of chapters follows the format of the first and second editions with chapters on individual elements or groups of elements that describe and interpret their chemical properties A chapter on the chemical properties of the transactinide elements follows The second group chapters 15 26 summarizes and correlates physical and chemical properties that are in general unique to the actinide elements because most of these elements contain partially filled shells of 5f electrons whether present as isolated atoms or ions as metals as compounds or as ions in solution The third

group chapters 27 39 focuses on specialized topics that encompass contemporary fields related to actinides in the environment in the human body and in storage or wastes Two appendices at the end of volume 5 tabulate important nuclear properties of all actinide and transactinide isotopes Volume 6 Chapters 32 through 39 consists of new chapters that focus on actinide species in the environment actinide waste forms nuclear fuels analytical chemistry of plutonium actinide chalcogenide and hydrothermal synthesis of actinide compounds The subject and author indices and list of contributors encompass all six volumes Photosynthesis Bibliography volume 1 1966/1970 Zdenek Sesták, J. Catský, 2012-12-06 It is generally accepted that photosynthesis whereby solar is transformed into geobiochemical energy is one of the most important processes in the bio sphere When we realize that the human population most of which is starving wi I I double in 20 30 years and that photosynthesis is in practice the only source direct or indirect of food not only for men but for al I I iving beings its im portance becomes even plainer This fact was recognized from the outset of the International Biological Programme when photosynthesis was selected as one of the principal problems to be concentrated on The significance of the IBP in initiating a broader based ap proach and worldwide collaboration need not be emphasized here it is merely ne cessary to consider the rapid increase in the number of papers on photosynthesis since its inception It is of fundamental importance for scientists working on photosynthesis to get information on what has been done in recent years in this discipl ine Thus as complete as possible a bibl iography is badly needed. The complexity of this pro blem requires also that the progress of ecology chemistry and physics as far as they concern photosynthesis be followed Such a bib I iography covering at least the last ten years wi I I be indispensable for final synthesis of the results of the IBP photosynthetic programme Molecular Devices and Machines Vincenzo Balzani, Margherita Venturi, Alberto Credi, 2006-03-06 The miniaturization of bulky devices and machines is a process that confronts us on a daily basis However nanoscale machines with varied and novel characteristics may also result from the enlargement of extremely small building blocks namely individual molecules This bottom up approach to nanotechnology is already being pursued in information technology with many other branches about to follow Written by a team of experienced authors headed by Vincenzo Balzani one of the pioneers in the development of molecular machines Covers such diverse aspects as sensors memory components solar energy conversion biomolecules as molecular machines and much more Presented in a lucid style and didactically structured with both the expert and the newcomer in mind Includes a glossary of terms and numerous references to the recent literature Be among the first to explore the fascinating possibilities of this future oriented technology A must have for every chemist and materials scientist with an interest in nanotechnology Scientific and Technical Aerospace Reports, 1995 Lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the NASA Scientific and Technical Information Database **Mechanisms of Inorganic and Organometallic Reactions** M.V. Twigg, 2013-11-11 The purpose of this series is to provide a continuing critical review of the literature concerned with

mechanistic aspects of inorganic and organo metallic reactions in solution with coverage being complete in each volume The papers discussed are selected on the basis of relevance to the elucidation of reaction mechanisms and many include results of a nonkinetic nature when useful mechanistic information can be deduced The period of literature covered by this volume is July 1982 through December 1983 and in some instances papers not available for inclusion in the previous volume are also included Numerical results are usually reported in the units used by the original authors except where data from different papers are compared and conversion to common units is necessary. As in previous volumes material included covers the major areas of redox processes reactions of the nonmetallic elements reaction of inert and labile metal complexes and the reactions of organometallic compounds. While maintaining the space devoted to other areas that given to the nonmetallic elements has been increased. In recognition of the increasing importance of the determination of volumes of activation in understanding the mechanisms of both inorganic and organometallic reactions a special reference section giving tabulated LI V values has been included and this extensive compilation will be updated in future volumes

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