CONTENTS

NONADIABATIC INTERACTIONS BETWEEN POTENTIAL ENERGY SURFACES: THEORY AND APPLICATIONS

BYRON H. LENGSFIELD III*

Theoretical Atomic and Molecular Physics Group
Lawrence Livermore National Laboratory
Livermore, CA

and

DAVID R. YARKONY†

Department of Chemistry
The Johns Hopkins University
Baltimore, MD

CONTENTS

*Work at Lawrence Livermore National Laboratory was performed under the auspices of the U.S. Department of Energy under Contract # W-7405-Eng-48 and by the Air Force Astronautics Laboratory under Contract #6761-01.

†Supported in part by NSF Grant CHE-87-23020 and AFOSR Grant 90-0051.

State-Selected and State-to-State Ion–Molecule Reaction Dynamics, Part 2: Theory, Edited by Michael Baer and Cheuk-Yiu Ng. Advances in Chemical Physics Series, Vol. LXXXII.
ISBN 0-471-53263-0

DIABATIC POTENTIAL ENERGY SURFACES FOR CHARGE-TRANSFER PROCESSES

V. SIDIS

Laboratoire des Collisions Atomiques et Moléculaires, Université de Paris-Sud, ORSAY Cedex, France

CONTENTS

State-Selected and State-to-State Ion–Molecule Reaction Dynamics, Part 2: Theory, Edited by Michael Baer and Cheuk-Yiu Ng. Advances in Chemical Physics Series, Vol. LXXXII.
ISBN 0-471-53263-0

MODEL POTENTIAL ENERGY SURFACES FOR INELASTIC AND CHARGE-TRANSFER PROCESSES IN ION–MOLECULE COLLISIONS

F. A. GIANTURCO

Department of Chemistry, The University of Rome, Città Universitaria, Rome, Italy

F. SCHNEIDER

Central Institute for Physical Chemistry, Rudower Chaussee 5, Berlin, Germany

CONTENTS

State-Selected and State-to-State Ion–Molecule Reaction Dynamics, Part 2: Theory, Edited by Michael Baer and Cheuk-Yiu Ng. Advances in Chemical Physics Series, Vol. LXXXII.
ISBN 0-471-53263-0

QUANTUM-MECHANICAL TREATMENT FOR CHARGE-TRANSFER PROCESSES IN ION–MOLECULE COLLISIONS

MICHAEL BAER

Department of Physics and Applied Mathematics, Soreq Nuclear Research Center, Yavne, Israel

CONTENTS

State-Selected and State-to-State Ion–Molecule Reaction Dynamics, Part 2: Theory, Edited by Michael Baer and Cheuk-Yiu Ng. Advances in Chemical Physics Series, Vol. LXXXII.
ISBN 0-471-53263-0

SEMICLASSICAL APPROACH TO CHARGE-TRANSFER PROCESSES IN ION–MOLECULE COLLISIONS

HIROKI NAKAMURA

Division of Theoretical Studies, Institute for Molecular Science, Myodaiji, Okazaki, Japan

CONTENTS

State-Selected and State-to-State Ion–Molecule Reaction Dynamics, Part 2: Theory, Edited by Michael Baer and Cheuk-Yiu Ng. Advances in Chemical Physics Series, Vol. LXXXII.
ISBN 0-471-53263-0

THE SEMICLASSICAL TIME-DEPENDENT APPROACH TO CHARGE-TRANSFER PROCESSES

ERIC A. GISLASON

Department of Chemistry, University of Illinois at Chicago, Chicago, Illinois

GÉRARD PARLANT[a]

Department of Chemistry, The Johns Hopkins University, Baltimore, Maryland

MURIEL SIZUN

Laboratoire des Collisions Atomiques et Moleculaires,[b] Université de Paris-Sud, Orsay, France

CONTENTS

[a]Permanent address: Physico-Chimie des Rayonnements (UA 75, Associé au CNRS), Bâtiment 350, Université de Paris-Sud, 91405 Orsay Cedex, France.
[b]Unité associé au CNRS-No. 281.

State-Selected and State-to-State Ion–Molecule Reaction Dynamics, Part 2: Theory, Edited by Michael Baer and Cheuk-Yiu Ng. Advances in Chemical Physics Series, Vol. LXXXII.
ISBN 0-471-53263-0

THE CLASSICAL TRAJECTORY-SURFACE-HOPPING APPROACH TO CHARGE-TRANSFER PROCESSES

SALLY CHAPMAN

Department of Chemistry
Barnard College, Columbia University
New York, NY

CONTENTS

State-Selected and State-to-State Ion–Molecule Reaction Dynamics, Part 2: Theory, Edited by Michael Baer and Cheuk-Yiu Ng. Advances in Chemical Physics Series, Vol. LXXXII.
ISBN 0-471-53263-0

STATISTICAL ASPECTS OF ION–MOLECULE REACTIONS

JÜRGEN TROE

Institut für Physikalische Chemie, Universität Göttingen, Göttingen, Germany

CONTENTS