

Preface

The term *Transport Phenomena* is used to describe processes in which mass, momentum, energy, and entropy move about in matter. *Advances in Transport Phenomena* provide state-of-the-art expositions of major advances by theoretical, numerical, and experimental studies from a molecular, microscopic, mesoscopic, macroscopic, or megascopic point of view across the spectrum of transport phenomena, from scientific enquiries to practical applications. The annual review series intends to fill the information gap between regularly published journals and university-level textbooks by providing in-depth review articles over a broader scope than in journals. The authoritative articles, contributed by internationally leading scientists and practitioners, establish the state of the art, disseminate the latest research discoveries, serve as a central source of reference for fundamentals and applications of transport phenomena, and provide potential textbooks to senior undergraduate and graduate students.

The series covers mass transfer, fluid mechanics, heat transfer, and thermodynamics. The 2011 volume contains three articles on the microfluidic fabrication of vesicles, the dielectrophoresis field-flow fractionation for continuous-flow separation of particles and cells in microfluidic device, and the thermodynamic analysis and optimization design of heat exchanger, respectively. The editorial board expresses its appreciation to the contributing authors and reviewers who have maintained the standard associated with *Advances in Transport Phenomena*. We also would like to acknowledge the efforts of the staff at Springer who have made the professional and attractive presentation of the volume.

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