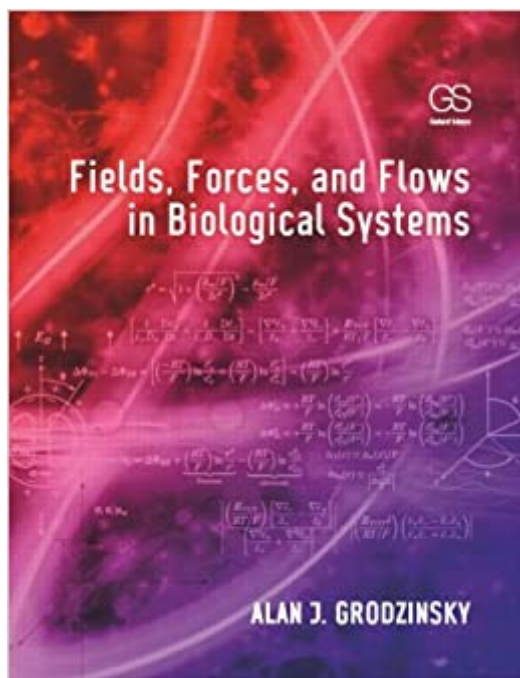


The book was found

# Fields, Forces, And Flows In Biological Systems



## Synopsis

Fields, Forces, and Flows in Biological Systems describes the fundamental driving forces for mass transport, electric current, and fluid flow as they apply to the biology and biophysics of molecules, cells, tissues, and organs. Basic mathematical and engineering tools are presented in the context of biology and physiology. The chapters are structured in a framework that moves across length scales from molecules to membranes to tissues. Examples throughout the text deal with applications involving specific biological tissues, cells, and macromolecules. In addition, a variety of applications focus on sensors, actuators, diagnostics, and microphysical measurement devices (e.g., bioMEMs/NEMs microfluidic devices) in which transport and electrokinetic interactions are critical. This textbook is written for advanced undergraduate and graduate students in biological and biomedical engineering and will be a valuable resource for interdisciplinary researchers including biophysicists, physical chemists, materials scientists, and chemical, electrical, and mechanical engineers seeking a common language on the subject.

## Book Information

Hardcover: 308 pages

Publisher: Garland Science; 1 edition (March 8, 2011)

Language: English

ISBN-10: 0815342128

ISBN-13: 978-0815342120

Product Dimensions: 8.4 x 0.6 x 11.2 inches

Shipping Weight: 2 pounds (View shipping rates and policies)

Average Customer Review: 4.1 out of 5 stars 2 customer reviews

Best Sellers Rank: #709,115 in Books (See Top 100 in Books) #62 in [Books > Engineering &](#)

[Transportation > Engineering > Chemical > Unit Operations & Transport Phenomena](#) #121

[in Books > Textbooks > Medicine & Health Sciences > Medicine > Biotechnology](#) #146

[in Books > Science & Math > Biological Sciences > Biophysics](#)

## Customer Reviews

Dr. Alan Grodzinsky is Professor of Electrical, Mechanical, and Biological Engineering and Director of the Center for Biomedical Engineering at MIT. He graduated in electrical engineering from MIT in 1971, obtaining a doctorate three years later under the supervision of James Melcher, with a thesis on membrane electromechanics. Dr. Grodzinsky's research currently centers on the synthesis of electrical, mechanical, and chemical processes in tissue remodeling and repair. He is the

President-Elect of the Orthopedic Research Society and has served as Chairman of the Gordon Research Conference on Bioengineering and Orthopaedic Science, President of the International Cartilage Repair Society, and Chairman of the Advisory Board for the Cleveland Clinic's Department of Biomedical Engineering. Dr. Grodzinsky has received the Goodwin Medal (MIT), an NIH Merit Award, the Kappa Delta Award from the American Academy of Orthopedic Surgeons, and was a Founding Fellow of the American Institute of Medical and Biological Engineering.

Great book with a lousy title. Good for biophysics of electrolytes.

book looks good, but not good enough to understand what is going on. I Received the book is good condition.

[Download to continue reading...](#)

Fields, Forces, and Flows in Biological Systems Crystals: The Ultimate Guide To: Energy Fields, Auras, Chakras and Emotional Healing (Aura, Healing Stones, Crystal Energy, Crystal Healing, Energy Fields, Emotional Healing, Gemstone) Mrs. Fields Cookie Book: 100 Recipes from the Kitchen of Mrs. Fields Fields Virology (Knipe, Fields Virology)-2 Volume Set Minds on Physics: Fundamental Forces and Fields, Activities and Reader Men, Ideas, and Tanks: British Military Thought and Armoured Forces, 1903-1939 (War, Armed Forces, and Society) Rikugun: Guide to Japanese Ground Forces 1937-1945: Volume 1: Tactical Organization of Imperial Japanese Army & Navy Ground Forces Sword of Scandinavia Armed Forces Handbook: The Military History of Denmark, Norway, Iceland, Sweden, Finland (Armed Forces Handbooks) Sinister Forces;The Manson Secret: A Grimoire of American Political Witchcraft: 3 (Sinister Forces: A Grimoire of American Political Witchcraft (Paperback)) Biological Effects and Dosimetry of Static and ELF Electromagnetic Fields (Basic Life Sciences) Modeling Dynamic Biological Systems (Modeling Dynamic Systems) Handbook of Biological Effects of Electromagnetic Fields CRC Handbook of Biological Effects of Electromagnetic Fields U.S. Armed Forces Nuclear, Biological And Chemical Survival Manual Measuring and Monitoring Biological Diversity. Standard Methods for Amphibians (Biological Diversity Handbook) Contracts and Deals in Islamic Finance: A User's Guide to Cash Flows, Balance Sheets, and Capital Structures (Wiley Finance) Contracts and Deals in Islamic Finance: A User's Guide to Cash Flows, Balance Sheets, and Capital Structures (Wiley Finance) Heat, Bearings, and Lubrication: Engineering Analysis of Thermally Coupled Shear Flows and Elastic Solid Boundaries Passive Solar Architecture: Heating, Cooling, Ventilation, Daylighting and More Using Natural Flows River Flows in You and Other Eloquent Songs for Solo Piano

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)