

**Bioenergetics
and linear nonequilibrium
thermodynamics**

Harvard books in biophysics
number 3

**Bioenergetics
and linear nonequilibrium
thermodynamics**

the steady state

S. Roy Caplan and Alvin Essig

Harvard University Press
Cambridge, Massachusetts, and London, England 1983

Copyright © 1983 by the President and Fellows of Harvard College
All rights reserved
Printed in the United States of America
10 9 8 7 6 5 4 3 2 1

This book is printed on acid-free paper, and its binding materials have
been chosen for strength and durability.

Library of Congress Cataloging in Publication Data

Caplan, S. Roy.

Bioenergetics and linear nonequilibrium thermodynamics.

(Harvard books in biophysics; no. 3)

Bibliography: p.

Includes index.

1. Bioenergetics. 2. Thermodynamics. I. Essig,
Alvin. II. Title. III. Title: Linear nonequilibrium
thermodynamics : the steady state. IV. Title: Non-
equilibrium thermodynamics : the steady state.

V. Series.

QH510.C36 1983 574.19'121 82-12083
ISBN 0-674-07352-5

Anyone writing in this area cannot but be aware of the tremendous debt owed to the late Professor Aharon Katzir-Katchalsky, whose tragic death in 1972 deprived the biophysical community of one of its most creative and inspiring figures

