## **Table of Contents**

Part I	Physics
	ses in Surface Physics. By T.B. Grimley
2. Dielectrics – the Frö	
	Gallagher, and B.K.P.Scaife
	ons in a Dielectric Sphere. By B. K. P. Scaife
5. Nonlinear Physics o	f Electronic and Optical Materials for Submicron Device
	W. Barrett (with 12 Figures)
	ristics of Electrons in Simple Nonparabolic Energy Bands
7. Breakdown of Invar	ants in Nonlinear Systems
	W.A. Lin (with 4 Figures)
	ting Electrons in Aperiodic Solids Figures)
	Basis of Thermodynamics with Phase Structure
	5 Figures)
	ol. By T. W. Barrett
	1-alkanols and Some Isomers
	n 7 Figures)
-	Time and Frequency Domains
	rith 13 Figures)
	nd the Problem of Microscopic Measurement. By L. Tisza 136
	hysics to Biology: the Forward Path of Theory with Herbert
Fromich. By G.J.H	yland146
Part II	Biophysics
15. On Davydov Solitor	as at 310 K. By A. C. Scott
16. Comparisons of Op	tical Absorption by Impurity Center and by Polarons in
17. The Vibrational Sol	ide. By J. A. Krumhansl (with 1 Figure)
	181
	e-coherence Length Excitations in the DNA Double Helix
By E. W. Prohofsky	(with 1 Figure)

ΙX

19. Far Infrared Spectra of Biomolecules. By J. B. Hasted (with 5 Figures)198
20. Spectral Dimensions of Paramagnetic Proteins
By H. J. Stapleton (with 11 Figures)
21. The Role of Chaos in Biological Systems. By F. Kaiser (with 5 Figures)
22. Non-Thermally Excited Modes and Free Energy Transduction in Proteins and
Biological Membranes. By D.B. Kell237
23. Herbert Fröhlich, and the New Biophysics of Cooperativity. By H. A. Pohl247
24. Opposite Long-range Interactions Between Normal and Malignant Cells
By W. Nagl and F. A. Popp (with 3 Figures)
25. Hopping Charge Carriers in Molecular Crystals and Biopolymers: the Fröhlich
Connection. By R. Pethig (with 3 Figures)257
26. Cellular Molecular Processes Driven by Cell-Generated AC Electric Field
By E. Del Giudice, S. Doglia, M. Milani, and G. Vitiello
27. Evidence for AC Fields from Living Biological Cells
By H. A. Pohl, W. T. Phillips, and J. K. Pollock (with 4 Figures)
28. On Morphogenesis in Living Systems. By F. W. Cummings (with 3 Figures) 287
29. Generalities: Living Systems and Dielectrics. By C.W. Smith303
30. Dielectric Spectroscopy, Dielectrophoresis and Field Interactions with
Biological Materials. By H. P. Schwan (with 4 Figures)317
31. Condensed Matter Physics and the Biology of the Future. By S. Rowlands328
Publications of H. Fröhlich from 1930–1985
<b>Subject Index</b>