

CONTENTS

STRUCTURAL CHARACTERIZATION OF MATERIALS BY USE OF ELECTRON MICROSCOPY AND SPECTROSCOPY, <i>Victor A. Phillips and Eric Lifshin</i>	1
DEVELOPMENT AND APPLICATION OF THEORETICAL TECHNIQUES TO PROBLEMS IN MATERIALS SCIENCE, <i>J. C. Phillips</i>	93
ANOMALOUS PROPERTIES OF THE VANADIUM OXIDES, <i>John B. Goodenough</i>	101
THE STRUCTURE OF DEFECTS IN SOLIDS, <i>J. H. Crawford, Jr., and L. M. Slifkin</i>	139
MODELS OF THE GEOMETRICAL, ELECTRONIC, AND VIBRONIC STRUCTURES OF IDEAL CLEAN SOLID SURFACES, <i>C. B. Duke</i>	165
SOLID-STATE PHASE TRANSFORMATIONS, <i>C. M. Wayman</i>	185
SOLUTION THERMODYNAMICS IN METALLIC AND CERAMIC SOLID SYSTEMS, <i>C. B. Alcock</i>	219
CRYSTAL GROWTH, <i>R. A. Laudise, J. R. Carruthers, and K. A. Jackson</i>	253
SOLID THIN FILMS, <i>E. Kay</i>	289
PHYSICS OF STRENGTHENING MECHANISMS IN CRYSTALLINE SOLIDS, <i>William D. Nix and Ricardo A. Menezes</i>	313
ELECTRONIC AND OPTICAL PHENOMENA IN SEMICONDUCTORS, <i>M. E. Jones and R. T. Bate</i>	347
CORROSION SCIENCE, 1970, <i>David A. Vermilyea</i>	373
AUTHOR INDEX	399
SUBJECT INDEX	411