

Contents

<i>Preface</i>	page vii
<i>Contributors</i>	ix
1 Design of Refractive and Diffractive Micro-optics <i>by H. P. Herzig</i>	1
2 Diffraction Theory of Microrelief Gratings <i>by J. Turunen</i>	31
3 Binary Optics Fabrication <i>by M. B. Stern</i>	53
4 Direct Writing of Continuous-relief Micro-optics <i>by M. T. Gale</i>	87
5 Refractive Lenslet Arrays <i>by M. C. Hutley</i>	127
6 Replication <i>by M. T. Gale</i>	153
7 Planar Integrated Free-space Optics <i>by J. Jahns</i>	179
8 Stacked Micro-optical Systems <i>by W. Singer and K. H. Brenner</i>	199
9 Laser Beam Shaping <i>by J. R. Leger</i>	223

Contents

10 Hybrid (Refractive/Diffractive) Optics 259
by G. P. Behrmann and J. N. Mait

11 Fourier Array Generators 293
by J. N. Mait

12 Polarization Transformation Properties of High Spatial Frequency Surface-relief Gratings and their Applications 325
by C. W. Haggans and R. K. Kostuk

Index 355

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library
ISBN 0-7484-0483-1 (cloth)

Library of Congress Cataloguing Publication Data are available

Cover design by Ian Wilkie

The book cover shows an array of refractive micro-lenses (pitch = 100 μm, focal length = 330 μm). The array has been fabricated by photolithography. Photographed by R. Völkel.

Typeset in Times by the University of Cambridge Press, Cambridge, England. Printed in Great Britain by the University Press, Cambridge.

Diffraction Theory of Microrelief Gratings
by J. Turner

Binary Optics Fabrication
by M. B. Stern

Direct Writing of Continuous-relief Micro-optics
by M. T. Gale

Refractive Lenslet Arrays
by M. C. Brady

Replication
by M. T. Gale

Planar Integrated Free-space Optics
by J. Jahns

Stacked Micro-optical Systems
by W. Singer and K. H. Brannack

Laser Beam Shaping
by J. R. Jasper