

TEUBNER-TEXTE zur Physik Band 27

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Integrated Optics and Micro-Optics  
with Polymers

# TEUBNER-TEXTE zur Physik

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This regular series includes the presentation of recent research developments of strong interest as well as comprehensive treatments of important selected topics of physics. One of the aims is to make new results of research available to graduate students and younger scientists, and moreover to all people who like to widen their scope and inform themselves about new developments and trends.

A larger part of physics and applications of physics and also its application in neighbouring sciences such as chemistry, biology and technology is covered. Examples for typical topics are: Statistical physics, physics of condensed matter, interaction of light with matter, mesoscopic physics, physics of surfaces and interfaces, laser physics, nonlinear processes and selforganization, ultrafast dynamics, chemical and biological physics, quantum measuring devices with ultimately high resolution and sensitivity, and finally applications of physics in interdisciplinary fields.

# Integrated Optics and Micro-Optics with Polymers

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## **Preface**

The present book is the account of a workshop on Integrated Optics and Micro-Optics with Polymers held in spring 1992 at Mainz and organized by IMM Institute of Microtechnology GmbH, the Max Planck Institute of Polymer Research, and the Institute of Applied Physics of Friedrich Schiller University at Jena.

The field of Integrated Optics and Micro-Optics with Polymers is receiving growing interest from multiple sides. Among the important reasons are the potential of tailoring materials for a specific application, the easy and cheap availability of those materials, and the possibilities of mass fabrication with plastics. Accordingly, materials researchers, microtechnologists, process engineers, and device builders are active in this field. Their interest is fed from prospective applications of integrated or micro-optical devices and systems in telecommunication, sensors, optical switching and routing, and, in a more distant future, optical processing.

The workshop succeeded to bring together more than 130 experimentalists and theorists, physicists and chemists, device developers and users, materials researchers and process engineers, as well as polymer scientists and those dealing with anorganic materials, coming from industry, research institutes, and universities.

The successful organization of a workshop needs a lot of volunteers and money. It is our pleasure to thank CIBA VISION, Aschaffenburg, for their financial contribution. Special thanks go to Dr. H. Freimuth, IMM, for his share in the organization. Last, but not least, we are grateful to those colleagues who accepted to serve as a referee, and to the publisher for providing the means of publishing the contributions to the workshop in this prestigious series.

We wish this book a widespread distribution.

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