

Contents

<i>Foreword</i>	vii
1 Basic Properties and Applications of ZnO <i>V. A. Coleman and C. Jagadish</i>	1
2 Doping and Defects in ZnO <i>David C. Look</i>	21
3 Synthesis and Characterization of Nitrogen-Doped ZnO Films Grown by MOCVD <i>Timothy J. Coutts, Xiaonan Li, Teresa M. Barnes, Brian M. Keyes, Craig L. Perkins, Sally E. Asher, S. B. Zhang, Su-Huai Wei and Sukit Limpijumnong</i>	43
4 Pulsed Laser Deposition of Zinc Oxide (ZnO) <i>Vinay Gupta and K. Sreenivas</i>	85
5 Optical Properties of ZnO and Related Alloys <i>Ü. Özgür and H. Morkoç</i>	175
6 Minority Carrier Transport in ZnO and Related Materials <i>O. Lopatiuk, A. Osinsky and L. Chernyak</i>	241
7 Contacts to ZnO <i>Jae-Hong Lim and Seong-Ju Park</i>	267
8 Ion Implantation into ZnO <i>S. O. Kucheyev and C. Jagadish</i>	285
9 Advances in Processing of ZnO <i>K. Ip, S. J. Pearton, D. P. Norton and F. Ren</i>	313
10 Novel Nanostructures and Nanodevices of ZnO <i>Zhong Lin Wang</i>	339
11 ZnO/ZnMgO Heterojunction FETs <i>Mitsuaki Yano, Kazuto Koike, Shigehiko Sasa and Masataka Inoue</i>	371

12	ZnO Thin-Film Transistors <i>R. L. Hoffman</i>	415
13	ZnO Piezoelectric Devices <i>Yicheng Lu, Nuri W. Emanetoglu and Ying Chen</i>	443
14	Gas, Chemical and Biological Sensing with ZnO <i>Young-Woo Heo, Fan Ren and David P. Norton</i>	491
15	ZnO-Based Light Emitters <i>Andrei Osinsky and Sergey Karpov</i>	525
16	Ferromagnetism in ZnO Doped with Transition Metal Ions <i>D. P. Norton, S. J. Pearton, J. M. Zavada, W. M. Chen and I. A. Buyanova</i>	555
	<i>Index</i>	577