Record Nr. UNINA9910830805503321

Titolo E-paper displays / / edited by Bo Ru Yang

Pubbl/distr/stampa Hoboken, NJ:,: John Wiley & Sons, Inc.,, 2022

ISBN 1-119-74562-4

1-119-74559-4

Edizione [First edition.]

Descrizione fisica 1 online resource (318 pages)

Collana Wiley SID Series in Display Technology

Disciplina 004.56

Soggetti Electronic paper

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Nota di bibliografia Includes bibliographical references and index.

Sommario/riassunto

"This book aims to provide an update to some of the most exciting new areas in electronic paper technology. In this introductory chapter, we aim to focus primarily on electrophoretic displays (EPDs), and how they became synonymous with electronic paper. The story starts in the early 1970's, with the proposal and first demonstration of the use of the electrophoretic movement of charged particles to make an optical effect. After a period of intense effort, the technology was mostly abandoned, only to be resurrected by a startup company, E Ink. Several key, and somewhat improbable, inventions had to be made in order to develop a technology competitive to the dominant liquid crystal technology. Finally, the right application and ecosystem, the Amazon Kindle electronic book, was necessary to cement commercial success. The field of reflective displays is very rich. The many other chapters in this book, and recent reviews [1,2] provide a wealth of resources for understanding the many technologies that have been developed in the quest to achieve a paper-like display. In this chapter, we will examine the following: a description of print-on-paper, and how the optics of real paper compare with potential electronic paper competitors, hierarchical summary of the different technical approaches for reflective displays, and a detailed look at the historical development of electrophoretic displays, starting with the invention the technology and ending at the introduction of the Amazon Kindle. Looking at the

various developments in the context of its times, the EPD story offers some lessons in what it takes for a technology to transition from the laboratory to commercial success"--