

1. Record Nr.	UNINA9911020128103321
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Titolo	Silicon photonics : the state of the art / / Graham T. Reed
Pubbl/distr/stampa	Chichester, : Wiley, c2008
ISBN	9786612350108 9781282350106 1282350102 9780470994535 0470994533 9780470994528 0470994525
Descrizione fisica	1 online resource (354 p.)
Disciplina	621.38152
Soggetti	Optoelectronic devices Silicon - Optical properties Photonics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	SILICON PHOTONICS; Contents; Foreword; About the Editor; List of Contributors; Acknowledgements; 1 Introduction: The Opto-Electronic Integrated Circuit; 1.1 A Few Words About History; 1.2 The Possibilities for OEICs; 1.3 The Present Status of OEICs; 1.4 Silicon-based GeSn and SiGeSn Technology; 1.5 OEICs for the Near, Mid and Far Infrared; 1.6 Opto-Eletronic Integration with Ultimate CMOS and Post CMOS; 1.7 Nanophotonics Integrated with Nanoelectronics; 1.8 Conclusion; References; 2 Silicon Photonic Waveguides; 2.1 Introduction; 2.2 Planar Waveguides; 2.3 Rib Waveguides; 2.4 Strip Waveguides 2.5 Coupling to Small Silicon Waveguides2.6 Novel Silicon Waveguide Structures; 2.6.1 Free-standing Waveguides; 2.6.2 Hollow Waveguides; 2.7 Summary and Conclusions; References; 3 Silicon-based Photonic Crystal Structures: From Design to Realization; 3.1 Theory of Photonic Crystals and Photonic Bandgap Structures; 3.1.1 Analogy Between Photonic and Semiconductor Crystals; 3.1.2 Analyzing Photonic

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## Sommario/riassunto

Silicon photonics is currently a very active and progressive area of research, as silicon optical circuits have emerged as the replacement technology for copper-based circuits in communication and broadband networks. The demand for ever improving communications and computing performance continues, and this in turn means that photonic circuits are finding ever increasing application areas. This text provides an important and timely overview of the 'hot topics' in the field, covering the various aspects of the technology that form the research area of silicon photonics. With contributions from