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	Nota di contenuto	CONTENTS; About the authors; Preface; 1 The past and present; 1.1 Milestones inphotovoltaic technology; 1.2 Evolutionof the PV market; 1.3 Overview of photo voltaiccell operation; 1.4 Other junctiontypes; 1.5 Sources of further information2 Device physics of silicon solar cells2.1Introduction; 2.2 Semiconductor device equations; 2.3 The p-n junction model of Shockley;2.4 Real diode characteristics; 2.5 Numericalsolar cell modelling; 3.1 Introduction3.2 Main cell types3.3 Optical design of cells; 3.4 Surface recombination losses and their reduction; 3.5 Bulk recombination losses and their reduction; 3.6 Design and fabrication of the metal contacts; 3.7 Conclusions; 4 Crystalline silicon solar cells; 4.1 Overview

	4.5 Cell costs ; 4.6 ; 4.7 Silicon-supported thin film	4.3 Substrate 4.4 Cell processing Opportunities for improvement s ; 4.8 hous silicon solar cells	;
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	Growth and microstructure	; 5.5 Solar cells	
	; 5.6 Solar cell structures	; 5.7 PV modules	
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	; 5.10 Environmental issues the future 6.1 Introduction	; 5.11 Challenges ; 6 Cadmium telluride solar cells	
Sommario/riassunto	Photovoltaic cells provide clean, reversible electrical power from the sun. Made from semiconductors, they are durable, silent in operation and free of polluting emissions. In this book, experts from all sectors of the PV community - materials scientists, physicists, production engineers, economists and environmentalists - give their critical appraisals of where the technology is now and what its prospects are. <i>Sample Chapter(s)</i> chapter 2.1: Introduction (306 KB) br>Chapter 2.2: Semiconductor device equations (121 KB) br>Chapter 2.3: The p-n junction model of Shockley (1,017 KB) br		tion ors are.