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Nota di contenuto	Physics basis of organic semiconductor heterojunctions -- Basic concept of heterojunctions -- Theory of heterojunctions -- Energy band profiles of heterojunctions -- Basic properties of organic heterojunctions -- Brief description of organic heterojunction application in organic light-emitting diodes -- Electrical properties of organic semiconductor heterojunctions -- Current-voltage characteristics -- Capacitance-voltage characteristics -- Charge transport properties -- Charge generation properties -- Organic semiconductor heterojunctions as charge injector in organic light-emitting diodes -- Basic condition as charge injector -- As hole injector for high efficiency organic light-emitting diodes -- As electron injector for high efficiency organic light-emitting diodes.
Sommario/riassunto	This book systematically introduces the most important aspects of organic semiconductor heterojunctions, including the basic concepts and electrical properties. It comprehensively discusses the application

of organic semiconductor heterojunctions as charge injectors and charge generation layers in organic light-emitting diodes (OLEDs). Semiconductor heterojunctions are the basis for constructing high-performance optoelectronic devices. In recent decades, organic semiconductors have been increasingly used to fabricate heterojunction devices, especially in OLEDs, and the subject has attracted a great deal of attention and evoked many new phenomena and interpretations in the field. This important application is based on the low dielectric constant of organic semiconductors and the weak non-covalent electronic interactions between them, which means that they easily form accumulation heterojunctions. As we know, the accumulation-type space charge region is highly conductive, which is an important property for highly efficient charge generation in their application as charge injector and charge generation layer in OLEDs. This book serves as a valuable reference for researchers and as a textbook for graduate students focusing on the study and development of OLED for display and lighting.