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| Soggetti | Polymers<br>Optical materials<br>Electronic materials<br>Lasers<br>Photonics<br>Materials science<br>Polymer Sciences<br>Optical and Electronic Materials<br>Optics, Lasers, Photonics, Optical Devices<br>Characterization and Evaluation of Materials |
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| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | General Introduction -- Polyarylether Hosts -- Blue/Yellow Electrophosphorescent Polymers Based on Polyarylether Hosts -- All-Phosphorescent Single-Component White Polymers -- Spiro-Linked Hyperbranched Architecture for Electrophosphorescent Polymers -- Conclusions and Outlook. |
| Sommario/riassunto | This thesis introduces a series of novel, non-conjugated polyarylether hosts that are not subject to the triplet-energy limitations of traditional conjugated polymer hosts. As a result of this major breakthrough, the |

long-standing problem of triplet energy back transfer has now been overcome, making it possible to design high-efficiency electrophosphorescent polymers (PhPs), especially the blue and all-phosphorescent white ones. In addition, the author proposes a spiro-linked hyperbranched architecture for PhPs to inhibit the undesired triplet energy back transfer process in low triplet-energy hosts. The work in this thesis provides vital new insights into the design of PhPs and has led to several publications in high-profile journals.