

Highly Aromatic Polymer Architectures Designed for Optoelectronic Applications

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Highly aromatic polymers usually exhibit the advantages of high thermal and mechanical stability, but also the disadvantages of limited solubility and processability. Introducing branching can solve this limitation allowing to combine excellent material properties with the requirements for integration of these materials into application. In organic electronic devices specifically designed highly aromatic polymers are of high interest on one hand in the area of dielectrics and packaging of devices, but on the other hand also as functional materials with special electronic and optical properties. In this report, we will show several examples how significant progress can be made in the development of solution processable organic devices of high performance by controlling the architecture in highly aromatic polymers.

Keywords : Aromatic polymers, branched polymer architecture, optoelectronic application, dielectrics, photoluminescence