Abstract
Polybenzobisazoles possess many exceptional electronic, optical and thermal properties and thus are ideally suited for diverse organic semiconducting applications, yet these materials have found limited utility due their lack of solubility in organic solvents. A promising approach for the synthesis of soluble organic semiconductors is the combination of the benzobisazole moiety with substituted aromatic rings. However, the harsh conditions required for the synthesis of benzobisazoles have prevented the synthesis of benzobisazoles bearing reactive handles. Typically, benzobisazoles are synthesized via condensation reactions, in acidic mediums at high temperatures. Recently, we have developed a mild approach for the synthesis of benzobisoxazoles resulting in several building blocks suitable for designing new polymers. The utility of these compounds for the synthesis of novel, solution processable polybenzobisazoles and the electronic and physical properties of these polymers will be presented.

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