# S 9-4
# Enhancing Intermolecular Interactions Through Expansion of the $\pi-$Conjugated Framework

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The development of information and communications technologies such as laptop computers, cell phones and personal digital devices has transformed the way we live. Essential to the continuation of these technological advancements is the need for smaller, lighter, cheaper and more efficient electronic, optical and magnetic materials. Since the performance of electronic devices critically depends on the extent of molecular order (in addition to other factors), rational engineering of self-organizing molecular systems with multifunctional characteristics is one of the most attractive and active fields of current research. In pursuit of this goal, we develop molecular architectures in which conjugation is extended in multiple directions via a multidentate aromatic core. By utilizing the complementary and antagonistic interactions of rigid and flexible moieties, we aim to attain solid-state structures with elaborate networks of $\pi - \pi$ interactions in order to achieve high charge carrier mobilities. This presentation will focus on the synthesis and characterization of the materials currently being pursued in our lab.