

# Novel Core Chromophores Based on Specific Chemical Structures and Their Effects

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## Abstract

The range of applications of organic functional compounds has rapidly expanded, with especially innovative uses discovered in the field of optoelectronics. Researchers have begun to report how the properties of organic functional compounds can be modified by varying their core and side groups. A key research area is thus the development of new core and side groups and the study of how they combine in organic functional compounds. Since the key factor that determines the final physical properties of materials is based on the core component and diverse organic compounds can be proposed based on the core, it is relatively more important in terms of novelty and performance to develop new core groups rather than developing new side groups.

In the recent, we reported new dual-core chromophore materials containing anthracene and pyrene that exhibit high photoluminescence (PL) efficiencies. A dual core derivative exhibited electroluminescence (EL) performances with about two times higher luminance efficiency (5.34cd/A) and two times longer lifetime than their single core counterparts. In this presentation, several kinds of novel core chromophores for OLED emitters will be discussed.

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