

Diversity Oriented Synthesis of Functional Dyes Initiated

by Pd- and Cu-Catalysis

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Multi-component and domino reactions are efficient and effective methods in rapid diversity-oriented syntheses of heterocycles. In particular, transition metal catalyzed multi-component sequences have recently gained a considerable interest. Based upon transition metal catalyzed entries to ynones, diynones, and enones and sequentially Pd-catalyzed processes we have opened new avenues to one-pot syntheses of numerous classes of heterocyclic frameworks. Among functional p-electron systems selected luminescent heterocycles are readily accessible by these methodologies in a modular fashion. They display peculiar photophysical properties, such as aggregation induced emission, pronounced emission solvochromicity, and photoinduced charge separation in DSSC.

