

Peri-Functionalized Tetraazaperylenes: A New Class of Strong Emitters

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The interest in the chemistry surrounding polycyclic aromatic compounds has experienced a revival as the result of the use of functional dyes as electronic materials, primarily due to the tunability of their photophysical and redox properties¹. Among the plethora of published compounds, tetraazaperylene derivatives have distinguished themselves from other highly emissive and redox active functional dyes, because of their capability of having their peri and bay positions independently modified via nucleophilic substitutions and/or metal catalyzed coupling reactions¹. This has led to the development of fluorophore systems such as octaazaperopyrene (OAPPs)² and octaazaperopyrenedioxides (OAPPDOs)³; in both cases limited structural variability has had a significant impact on the electronic structures of these compounds^{2,3}.

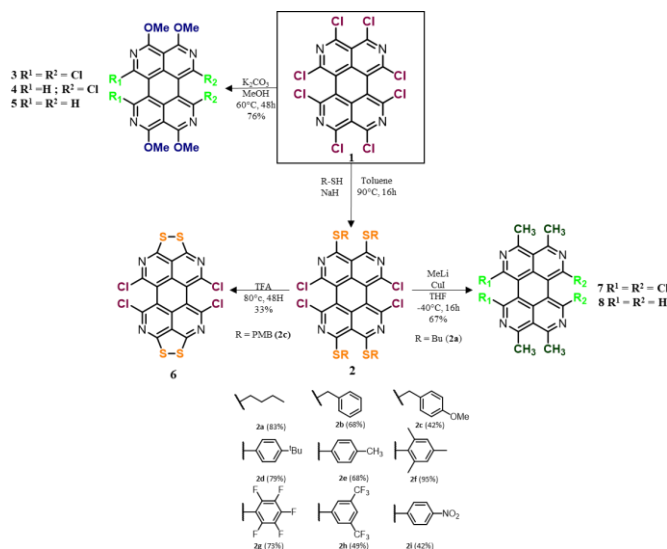


Figure 1. Derivatives of octachlorotetraazaperylene

References

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- (2) T. Wesp, T. Bruckhoff, J. Petry, H. Wadepohl, L. H. Gade, *Chem. Eur. J.* **2022**, *28*, e202200129.
- (3) T. Wesp, T. Bruckhoff, H. Wadepohl, L. H. Gade, *Chem. Eur. J.* **2022**, *28*, e202201706.