Naphthalenes by Microwave-Assisted Dehydrogenative Diels–Alder Reaction

Significance: In research ranging from pharmaceuticals to organic dyes, functionalized naphthalenes play an important role as building blocks. In this paper, a microwave-assisted intramolecular dehydrogenative Diels–Alder reaction (IMDA) is reported providing access to a series of functionalized naphthalenes in excellent yields.

Comment: The authors utilize an intermolecular styrenyl dehydrogenative Diels–Alder reaction to access substituted naphthalenes that complements other synthetic strategies. The methodology shows tolerance to various functionalities on the alkyne. Furthermore, chloro substituents on the aromatic unit allow for the preparation of naphthalenes, which can be further functionalized by palladium-catalyzed cross-couplings, as the authors demonstrated in the synthesis of the novel fluorescent dye 8.