

# SYNTHESIS AND APPLICATIONS OF DITHIADIAZOCANES

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Saturated heterocyclic compounds containing two heteroatoms are privileged scaffolds for various pharmaceuticals. Among them, *S,N*-heterocyclic molecular scaffolds appear to be useful in designing potent antipsychotic (e.g. Quetiapine), antiarrhythmic (e.g. Diltiazem), anti-tumor (e.g. Prinomastat) and other biologically active agents [1]. Therefore, they remain to be important synthetic targets.

A collection of valuable (un)substituted *N*-protected cyclic eight-membered *C*<sub>2</sub>-symmetric sulfenamides, 1,5,2,6-dithiadiazocanes, has been prepared in few steps from cheap and affordable starting materials. The synthetic utility of these ambipolar derivatives was demonstrated in a variety of synthetic transformations affording different *S,N*-heterocycles of pharmaceutical relevance (Fig.1).

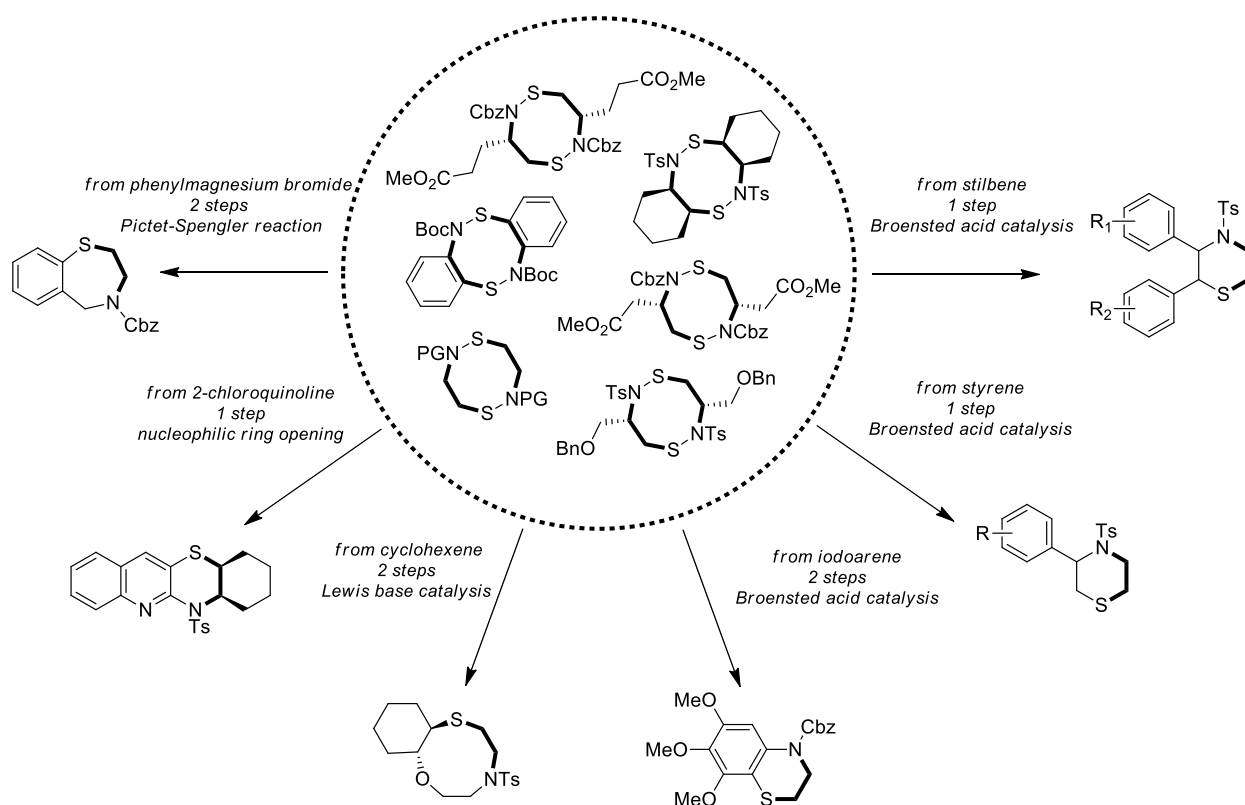


Fig. 1. 1,5,2,6-Dithiadiazocanes and some products available from them.

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[1] R. Fringuelli, L. Milanese, F. Schiaffela, Role of 1,4-Benzothiazine Derivatives in Medicinal Chemistry, Mini-Reviews in Medicinal Chemistry 5, 1061 (2005).