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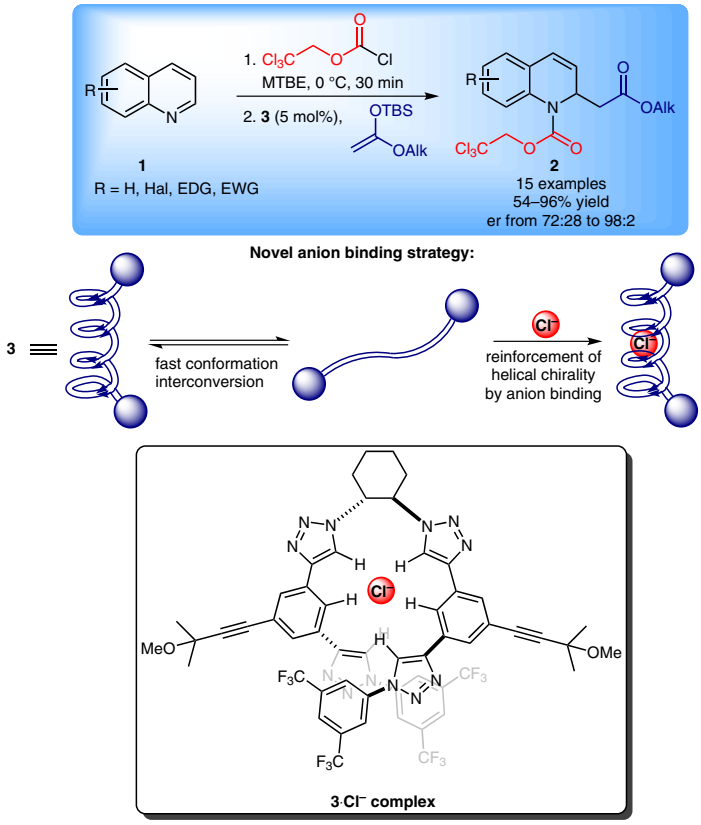
Chiral Helical Oligotriazoles: New Class of Anion-Binding Catalysts for the Asymmetric Dearomatization of Electron-Deficient *N*-Heteroarenes
J. Am. Chem. Soc **2014**, *136*, 13999–14002.

Novel Oligomeric Helical Chiral Catalysts for Asymmetric Dearomatization



Significance: García Mancheño and co-workers report a novel class of helical chiral tetrazole-based oligomers for anion-binding catalysis. After screening different motifs, their best catalyst (**3**) was successfully employed in the asymmetric dearomatization of quinolines **1** to afford products **2** in good yields and with good to excellent enantioselectivities. NMR titration experiments suggest the presence of a cooperative H-bonding network, which binds the chloride anion, accommodated inside the helical cavity.

Comment: The authors developed a novel class of catalysts with comparable binding properties to well-developed thiourea-based organocatalysts (see Review below). They propose a fast conformational interconversion of structure **3** in the absence of the halogen (low stereocontrol). However, upon coordination to the anion, the helical chirality is reinforced, thus enabling highly enantioselective transformations such as the reported dearomatization of quinolines.

Review: M. S. Taylor, E. N. Jacobsen *Angew. Chem. Int. Ed.* **2006**, *45*, 1520–1543.

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Synfacts 2014, 10(12), 1321 Published online: 18.11.2014
DOI: 10.1055/s-0034-1379446; **Reg-No.:** B11114SF

Category
Organo- and Biocatalysis

Key words
anion-binding catalysis
heteroarenes
helical chirality