

# Photon- and electron-induced modification of coordination pattern in arene ruthenium complexes

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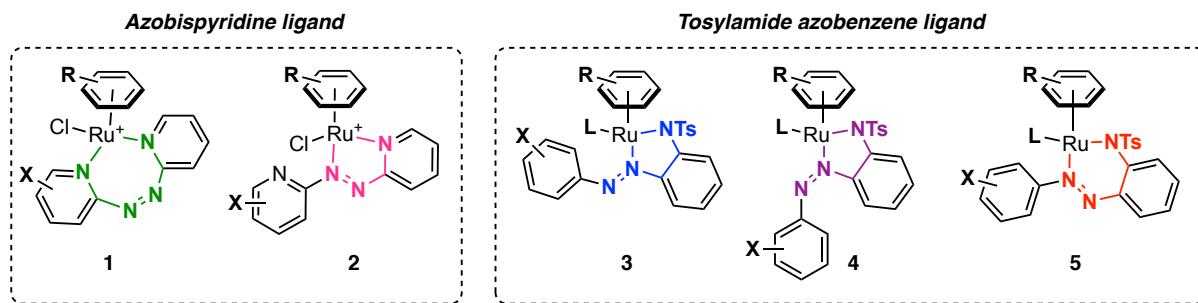
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Arene ruthenium complexes of type **1–5**, containing azobispyridine or tosylamide azobenzene ligands, were shown to exhibit various coordination patterns depending on the steric and electronic nature of **R**, **X** and **L** groups (Fig. 1).<sup>1,2,3</sup>

In response to light or electrochemical stimuli, many of them undergo isomerization at the N=N bond of azobenzene core associated with a modification of coordination pattern or de-coordination of ligand **L** from the metal center.



**Figure 1.** General structure of two families of azobenzene-derived ruthenium complexes.

An overview of the synthesis and properties of such families of complexes will be presented, emphasizing latest results related to stimulation with photons and/or electrons, and perspectives towards initiation of catalytic activity.

[1] C. Deo, N. Bogliotti, R. Métivier, P. Retailleau, J. Xie, *Organometallics* **2015**, *34*, 5775–5784.

[2] C. Deo, N. Bogliotti, P. Retailleau, J. Xie, *Organometallics* **2016**, *35*, 2694–2700.

[3] J. Long, D. Kumar, C. Deo, P. Retailleau, G. V. Dubacheva, G. Royal, J. Xie, N. Bogliotti, *Chem. Eur. J.* **2021**, *27*, 9563–9570.