The foregoing MO of Cp₂M sandwich compounds is a reference point for the bent metallocenes:

Focusing on the frontier $a_{1g}$ and $e_{2g}$ orbitals of the metallocene fragment... there is a rehybridization of the metal orbitals upon ring tilting,

A convenient view of the orbitals is in the $yz$ plane
Using this basis, let’s construct the MO diagram for Cp$_2$ZrCl$_2$. For clarity, the molecule will be rotated so that the line of sight is along the z-axis,

![MO diagram for Cp$_2$ZrCl$_2$](image-url)
This frontier orbital set sheds light on a variety of organometallic transformations. Consider the following:

\[
\text{Cp}_2\text{Ti} \rightarrow \text{Cp}_2\text{Ti}
\]

Build the MO diagram of the bis (ethylene) fragment:
Constructing the correlation diagram for the transformation (focusing on the HOMOs)

This MO diagram is effectively the one derived on pg CC 30.