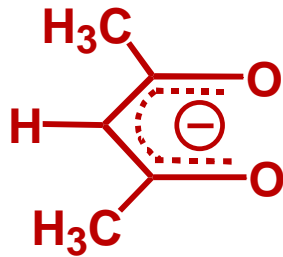
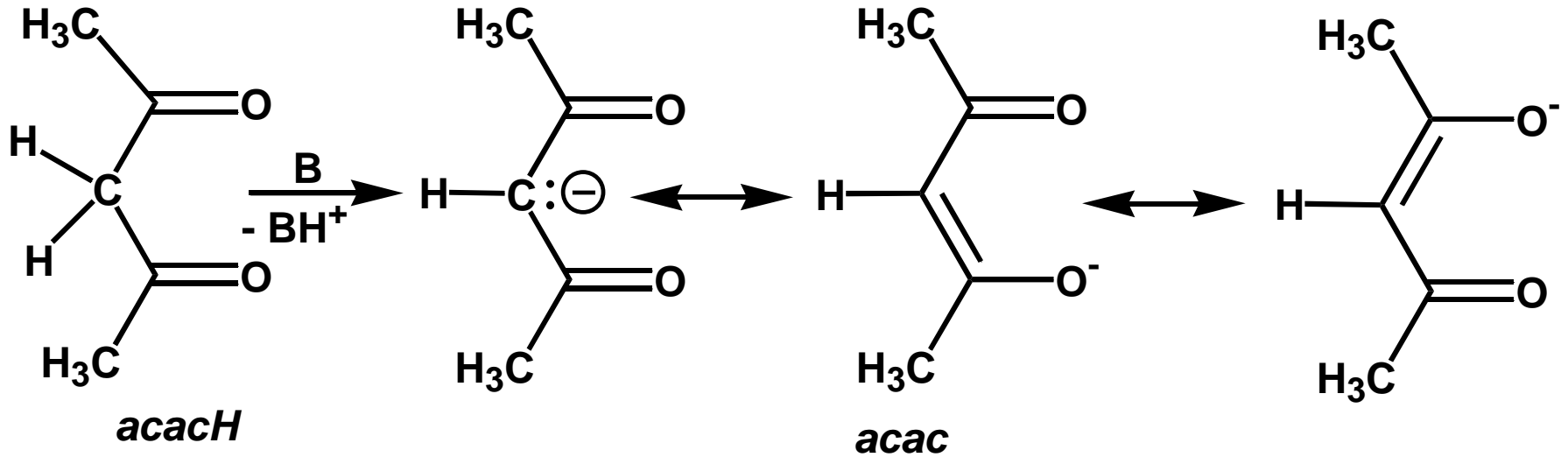


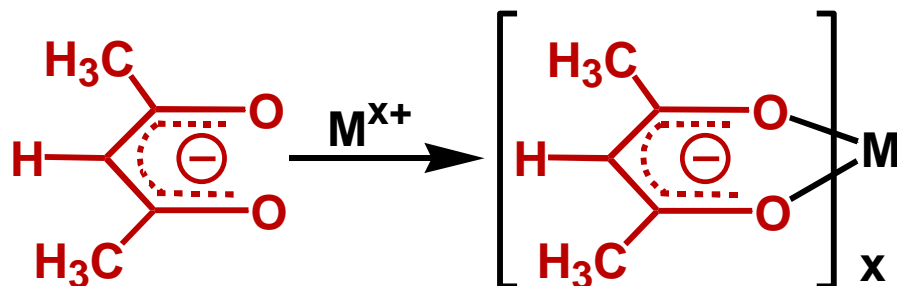
ESPERIENZA 1

Sintesi di acetilacetato complessi di metalli di transizione della prima serie

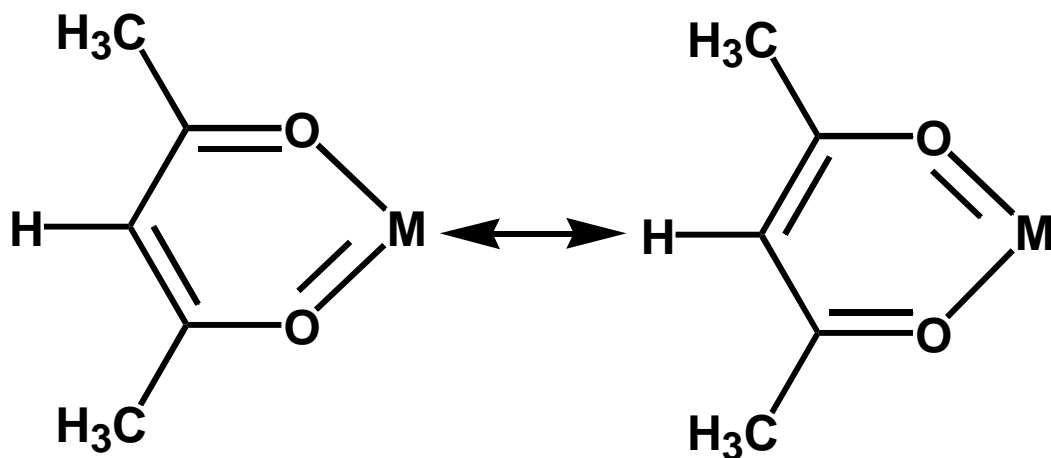
Il comportamento acido/base del 2,4-pentandione



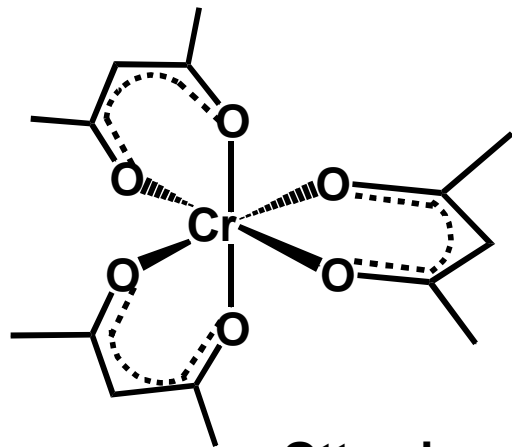
La **coordinazione** dello ione acetilacetonato ai metalli di transizione



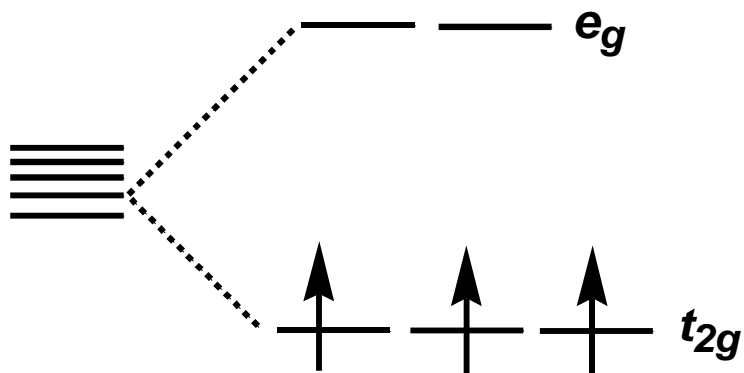
Altre **forme di risonanza** dovute alla coordinazione



Distanze di legame a due a due **uguali**: M-O, C-O, C-C



Ottaedro, d^3



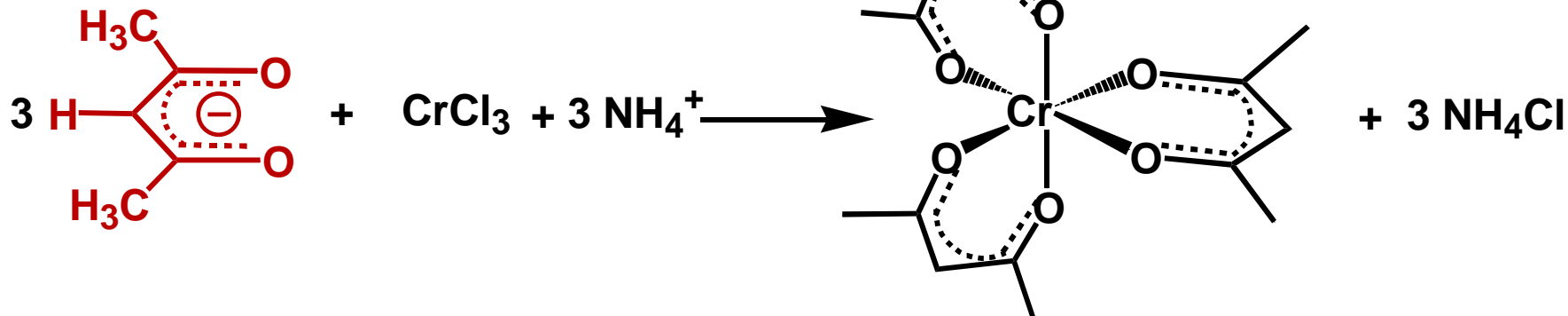
paramagnetico

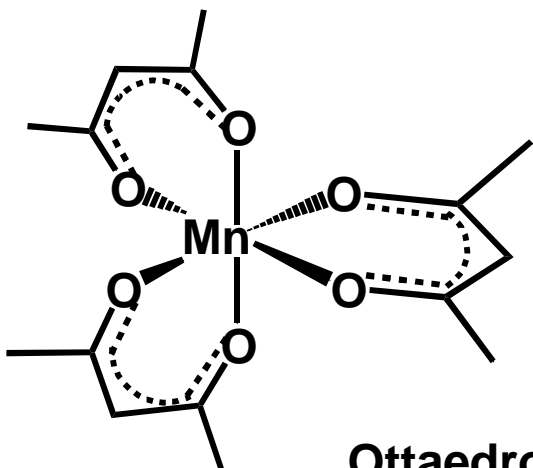
Sintesi di $[\text{Cr}(\text{acac})_3]$

Idrolisi dell'urea



Sintesi del complesso



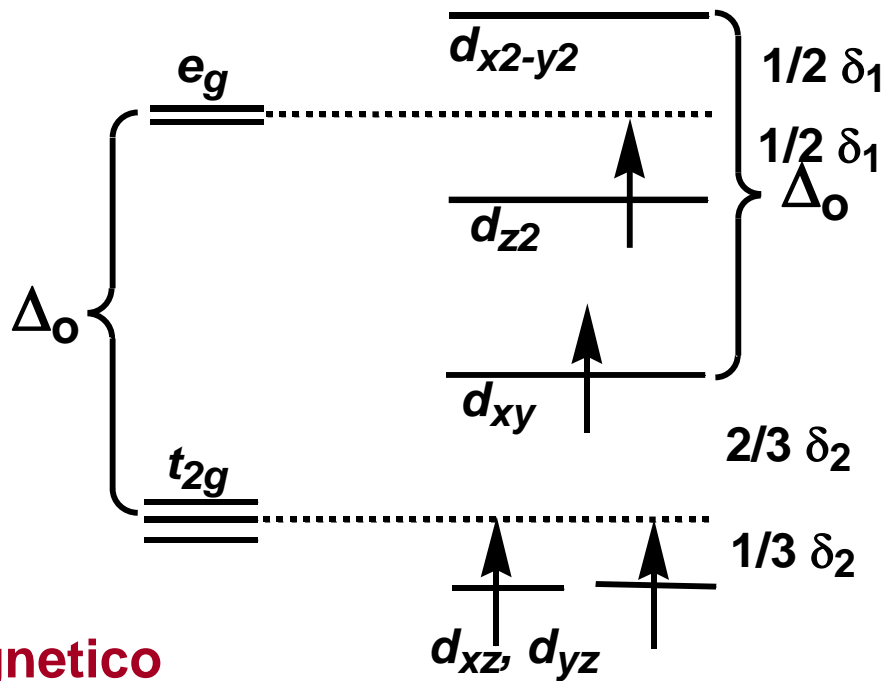
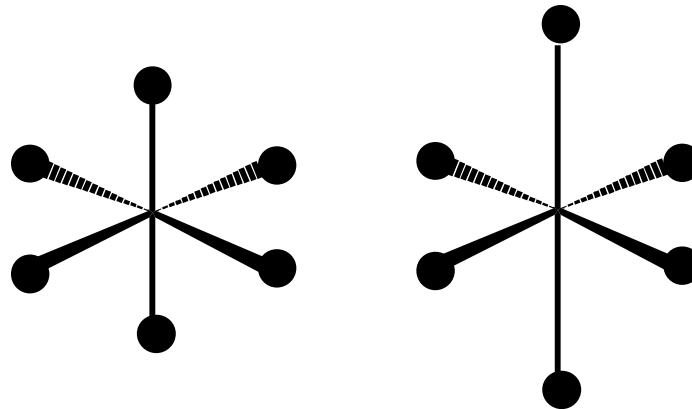


Ottaedro, d^4

Distorsioni per effetto Jahn-Teller:

Allungamento: 2 Mn-O 2.12 Å;
4 Mn-O 1.93 Å;

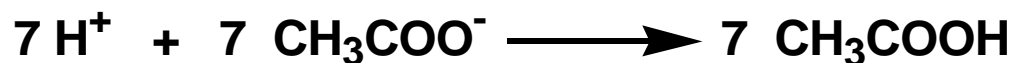
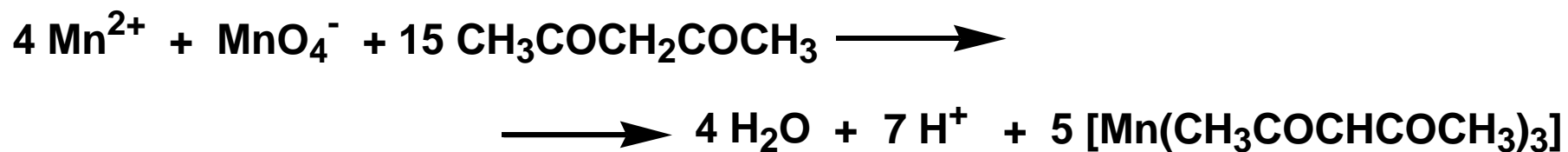
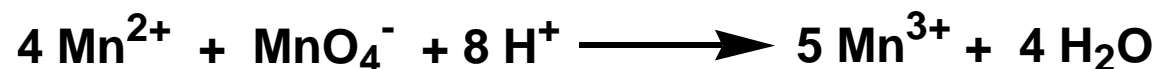
Compressione: 2 Mn-O 1.95 Å;
4 Mn-O 2.00 Å.

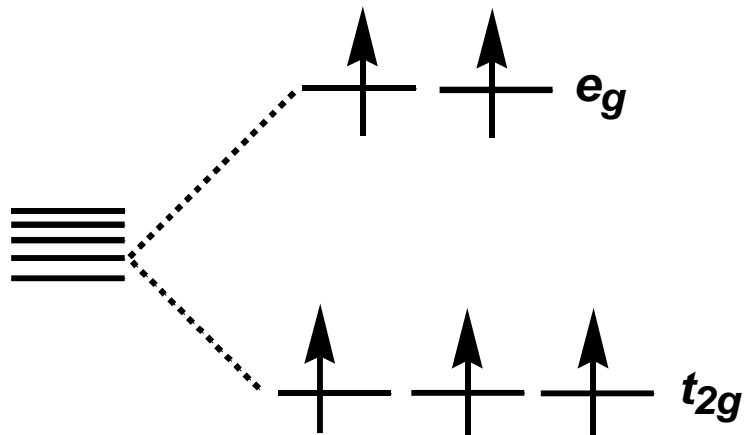
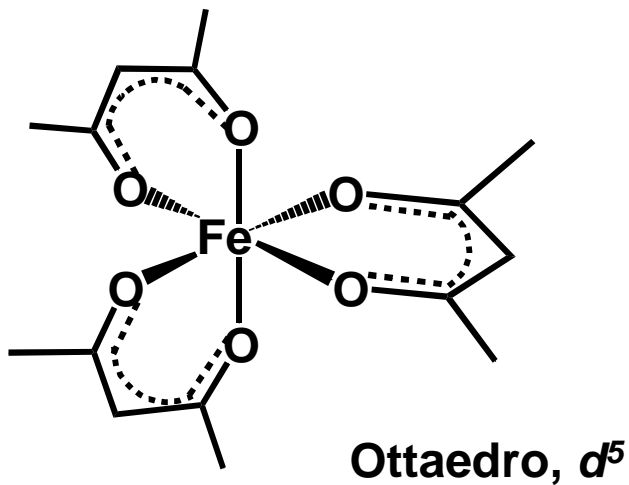


paramagnetico

Sintesi di $[\text{Mn}(\text{acac})_3]$

Sintesi del complesso

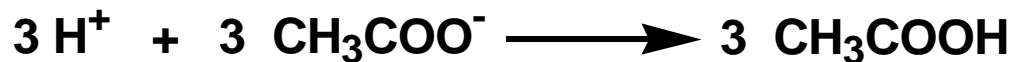
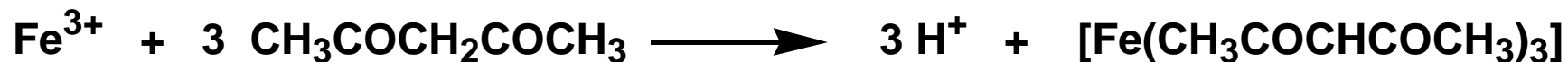


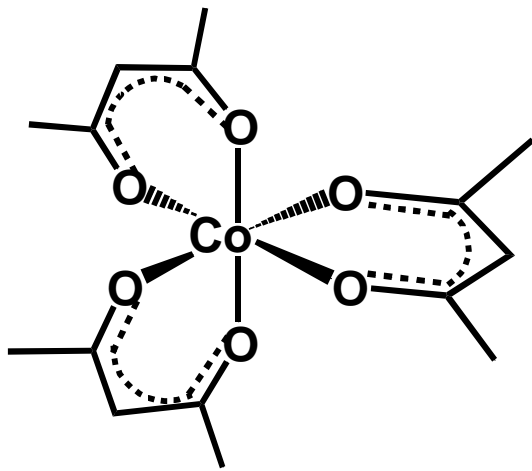


paramagnetico

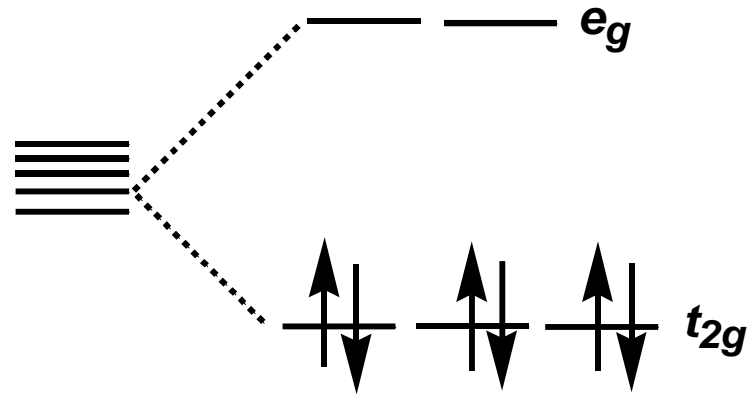
Sintesi di $[\text{Fe}(\text{acac})_3]$

Sintesi del complesso





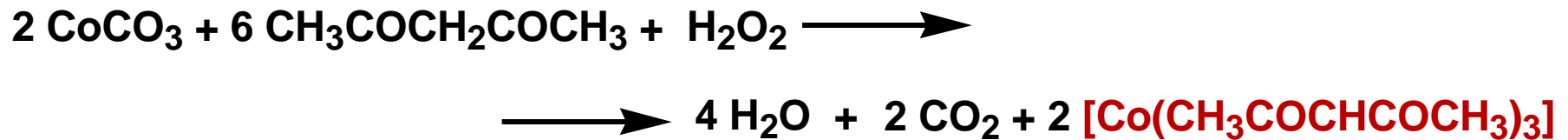
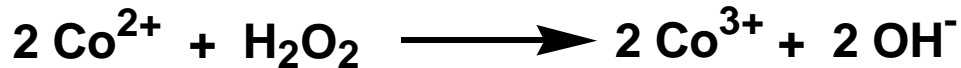
Ottaedro, d^6



diamagnetico

Sintesi di $[\text{Co}(\text{acac})_3]$

Sintesi del complesso



Da bilanciare



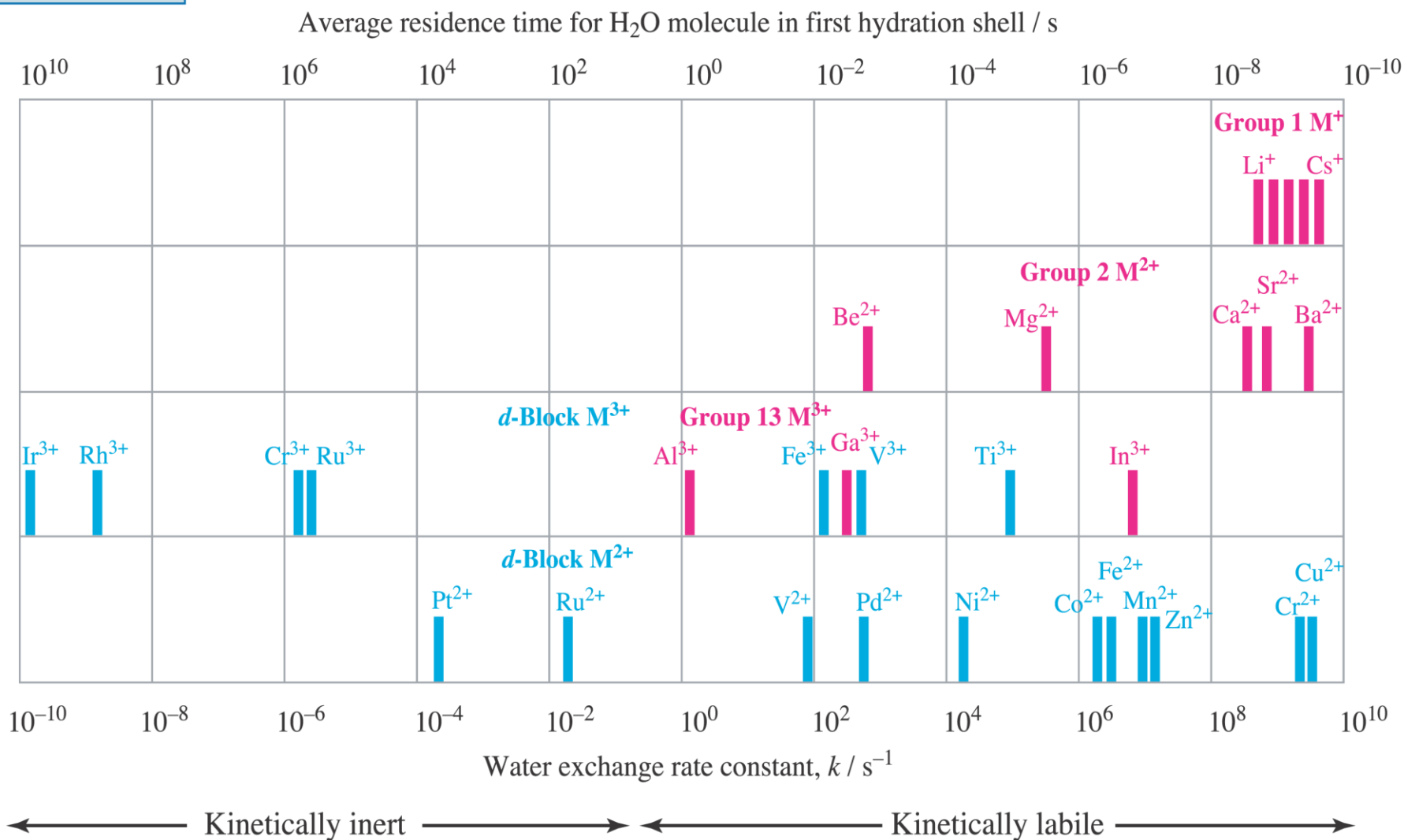
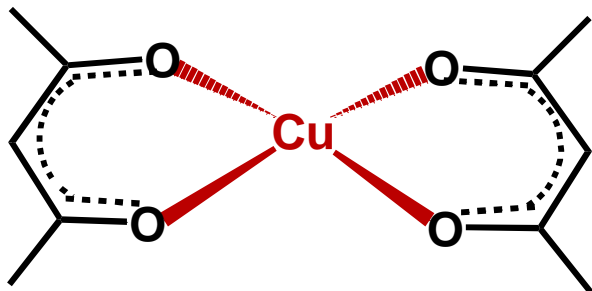
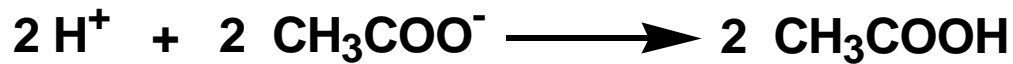


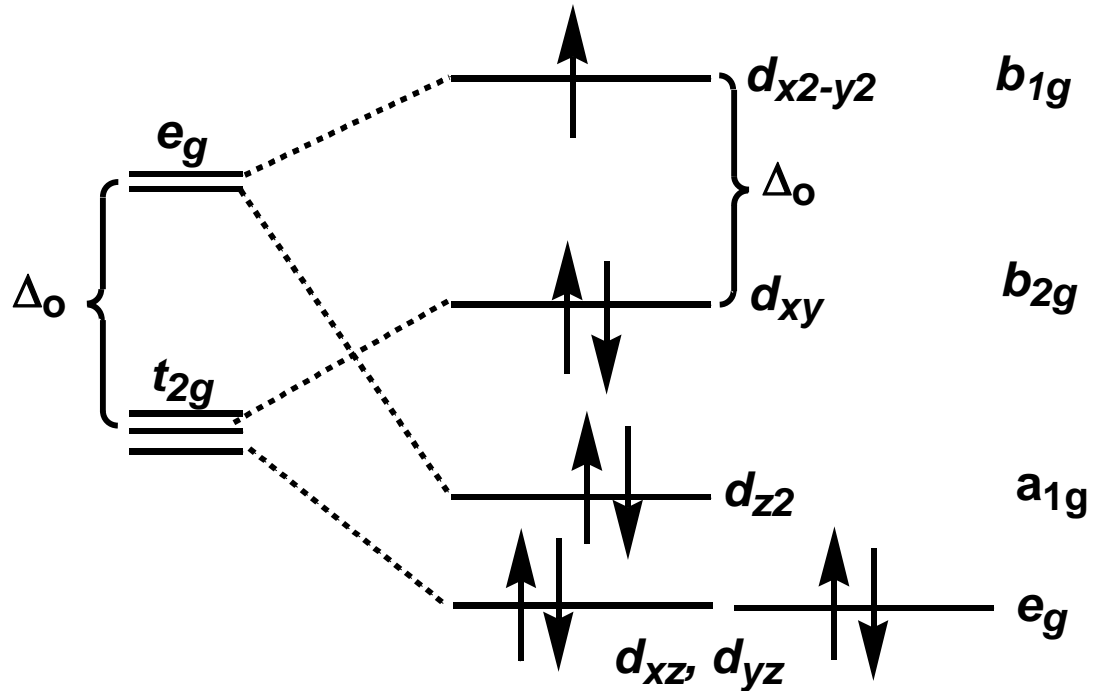
Fig. 26.1 Water exchange rate constants and average residence times for water molecules in the first coordination sphere of aquated metal ions at 298 K. Group 1, 2 and 13 metal ions are shown in pink, and *d*-block metal ions in blue. [Based on S.F. Lincoln (2005) *Helv. Chim. Acta*, vol. 88, p. 523 (Figure 1).]

Sintesi di [Cu(acac)₂]

Sintesi del complesso



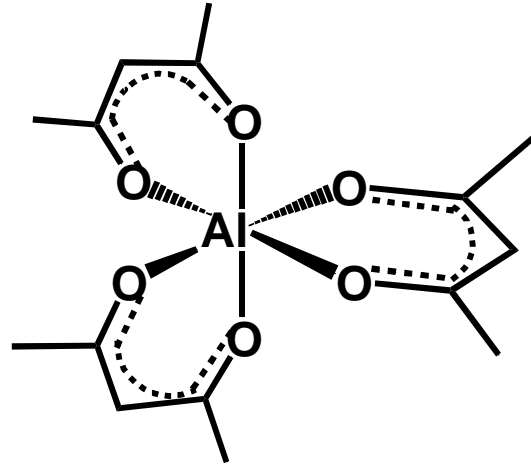
planare quadrato, d^9



paramagnetico

Sintesi di $[Al(acac)_3]$

Sintesi del complesso



ottaedro, **no elettroni *d***

diamagnetico