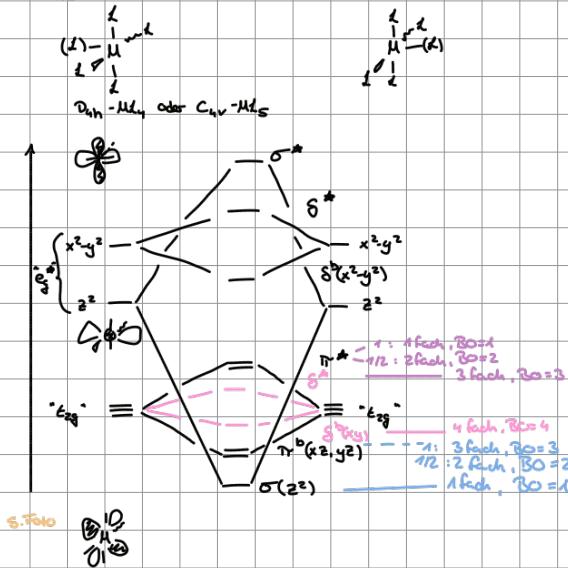


- M-M m: & ohne Brückenlig.
- Bindungsgröße kein Kriterium für M-M-Bdg.-ordnung

↪ MO-Theorie:



Orbitalkonfig.: $\sigma^b - \pi^b - \delta^b - \sigma^a - \pi^a - \delta^a (\sigma^2 y^2)$

$\begin{matrix} 2 \\ 2 \\ 4 \\ 6 \\ 8 \\ 10 \\ 12 \\ 14 \end{matrix}$

$\begin{matrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \\ 4 \\ 3 \\ 2 \\ 1 \end{matrix}$

$[\text{Ru}_2(\text{C}_2\text{O}_4)_6]^{2-}: (\sigma^b)^2 (\pi^b)^4 (\delta^b)^2$

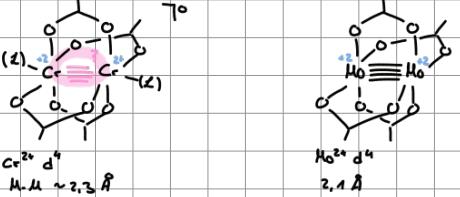
$d^6 = 2 = d^{12}$

Ru links: $(\sigma^b)^2 (\pi^b)^4 (\delta^b)^2 (\sigma^a)^2 (\pi^a)^2 (\delta^a)^2 \approx 30 = 2$

Ru rechts: $(\sigma^b)^2 (\pi^b)^4 (\delta^b)^2 (\sigma^a)^2 (\pi^a)^2 (\delta^a)^2$

$\left(\text{Cr}(\text{C}_2\text{O}_4)_6 \right)_2$

C = Alkalimetall-Mo-Komplex

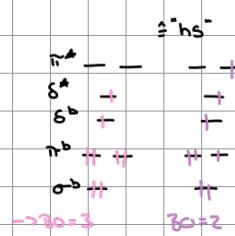


gestaffelt:

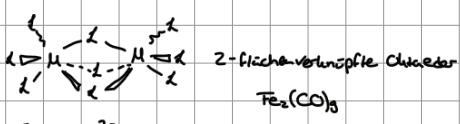
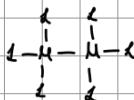


Boltzmann-Verteilung der Population des Orbitale

↪ C-Alkalimetall-Komplex



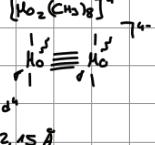
Weitere Fragmente:



$\text{He} = 1$



T^{4-}



$\text{M}-\text{M} = 3.12 \text{ \AA}$

↳ höhere Bdg.
"hs"

3.12 \AA



2.65 \AA

↳ niedrig.



2.41 \AA

↳ niedrig.

"ls"

Medizinische Anwendungen

$\text{M}\text{-Chelatkomplexe}$: - f^{3+} - Verb. (f^+)

f^{3+} - DOTA, f^+ - DTPA - Kontrastmittel

- Diagnostik \hookrightarrow MRT / MZI Kernspintomographie

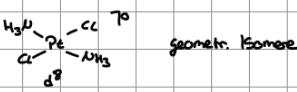
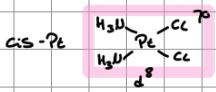
- ^{99m}Tc - Verb., γ -Emitter

- $^{99m}\text{Tc}(\text{ICEDU-R})_6$ - Herzmuskeldurchblutung

ICEDU-R = $-\text{CH}_2\text{C}(\text{H}_2)_2\text{O}\text{H}$ Cardiolite[®] / Miroline[®]

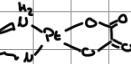
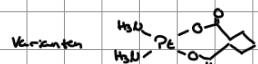
^{99m}Tc - Sestamibi

- Therapeutika - cis-Pt

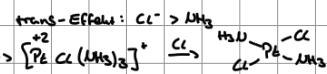
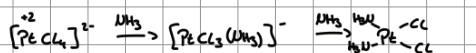


geometr. Isomere

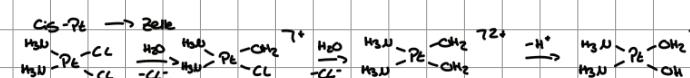
\hookrightarrow Zytostatikum
intravenös "chemotherapie"



Pt-N inert, h.v. stabil
Pt-Cl, Pt-O labil

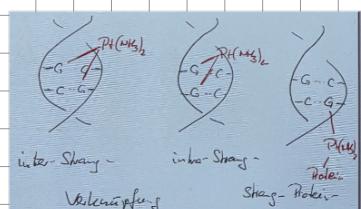


Wirkmech.



f: Zelle

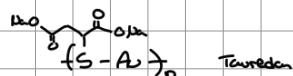
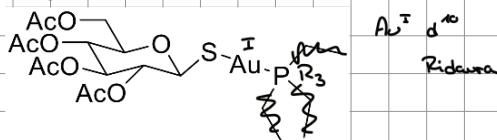
C: Cytoplasma



Anlagerung am DNA-Polymerion

\hookrightarrow DNA-Transkription & -Replikation wird verhindert \rightarrow Zelltod

- Au als Antirheumatika



Berliner Blau $[\text{Fe}(\text{CN})_6]^{4-}$ unges.

\hookrightarrow zur Detoxierung von Tc^{4+} , $^{137}\text{Cs}^+$

$\text{Na}_2[\text{Fe}(\text{CN})_6]\text{NO}_3$ Nitroprussiat, U.press

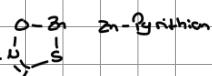
UO-Vasodilatator

\hookrightarrow NO-Freisetzung - Erschaffung der glatten Gefäßmuskulatur

\hookrightarrow Blutdrucksenkung bei akuten Herzinfarkten

K: - Verbindungen - als Antidepressiva

Zn-Verb. - ZnO in Salben, Antischuppenpräparate

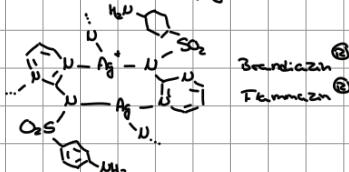


Ag^0/Ag^+ -Verb. - antimikrobiell

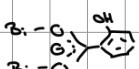
- in Brandsalben / -Kleister

- Ag-Verb. mit körpferner Freisetzung

\hookrightarrow Kolloidpolymer



Bi: - Salicylat



Bi: - 2D-Ketten-Netzwerk

Pepto Bismol

in USA als Antacidum



Gute aufgetragene Tropfen
Super Geschmack auch.