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2017-05-09

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Chapter 1

Introduction

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Demos

2.1 Chemical formulae

H_2O, Sb_2O_3

H^+, CrO_4^{2-}, $[AgCl_2]^-$, Y^99^+, Y^{99+}

$Fe^{II}Fe^{III}2O_4$, $2\,H_2O$, $2\,H_2O$, $0.5\,H_2O$, $\frac{1}{2}\,H_2O$, $(_{1/2})H_2O$, $n\,H_2O$

$^{227}_{90}Th^+$, $^{2}27\ _{9}0\,Th^+$, $_{-1}^{0}n^-$, $_{-}^{0}1\,n^-$

H^3HO, H^3HO

$(NH_4)_2S$, $[\{(X_2)_3\}_2]^{3+}$

$H_2(aq)$, $CO_3^2-_{(aq)}$, $NaOH(aq,\infty)$

$OCO^{\cdot-}$, $NO^{(2\cdot)-}$

NO_x, `\sffamily\bfseries\ce{NO_x}`, Fe^{n+}, `\sffamily\bfseries\ce{Fe^n+}`

`\ce{\mu-Cl}`, `\ce{[Pt(\eta^2-C2H4)Cl3]-}`

$KCr(SO_4)_2 \cdot 12\,H_2O$, $KCr(SO_4)_{2.12}H_2O$, $KCr(SO_4)_2 * 12\,H_2O$

C_6H_5-CHO, $A-B=C\equiv D$, `\sffamily\bfseries\ce{A-B=C#D}`

$A-B=C\equiv D$, $A\_\_B-C$, $A=B=C=D$, $A\cdots B\cdots\cdots C$, $A\rightarrow B\leftarrow C$

2.2 Chemical equations

$A \longrightarrow B$

$A \longleftarrow B$

$A \longleftrightarrow B$

$A \longleftarrow -> B$

$A \rightleftharpoons B$

$A \rightleftharpoons B$

$A \leftharpoons B$

$A \xrightarrow{H_2O} B$

$A \xrightarrow[textbelow]{textabove} B$

$A \xrightarrow[x_i]{x} B$

$A \xrightarrow{x} B$

$A + B$

$A - B$

$A = B$

$A \pm B$

$SO_4^{2-} + Ba^{2+} \longrightarrow BaSO_4\downarrow$

$A\downarrow B\downarrow \longrightarrow B\uparrow B\uparrow$

$CH_4 + 2\left(O_2 + \frac{79}{2}N_2\right)$

$xNa(NH_4)HPO_4 \xrightarrow{\Delta} (NaPO_3)_x + xNH_3\uparrow + xH_2O$

$CO_2 + C \longrightarrow 2\,CO$

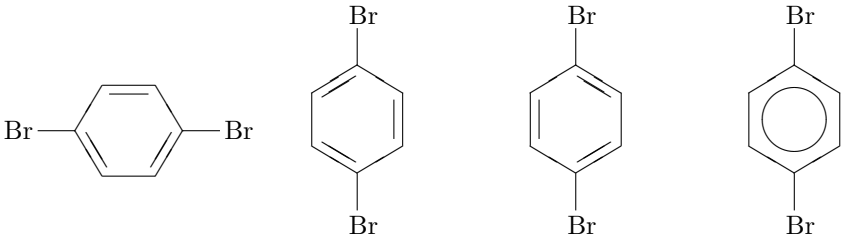
$Hg^{2+} \xrightarrow{I-} HgI_2 \xrightarrow{I-} [Hg^{II}I_4]^{2-}$

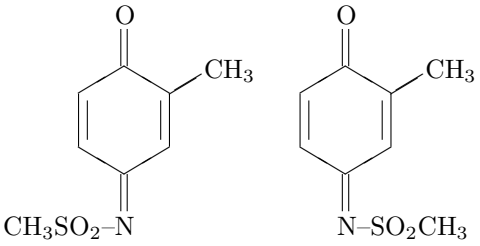
$Zn^{2+} \xrightarrow[+2\,H^+]{+2\,OH^-} Zn(OH)_2\downarrow \underset{+2\,H^+}{\overset{+2\,OH^-}{\rightleftharpoons}} [Zn(OH)_4]^{2-}$

$K = \frac{[Hg^{2+}][Hg]}{[Hg_2^{2+}]}$

$K = \frac{[Hg^2+][Hg]}{[Hg2^2+]}$

2.3 Structural formulae

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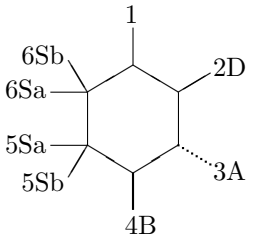
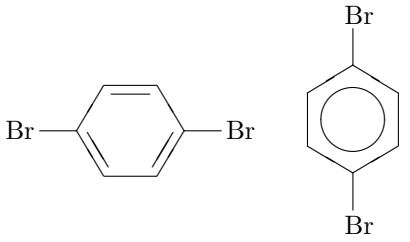
CH3
CH3SO2–N
O
CH3
N–SO2CH3


1
6Sb
2D
6Sa
5Sa
3A
5Sb
4B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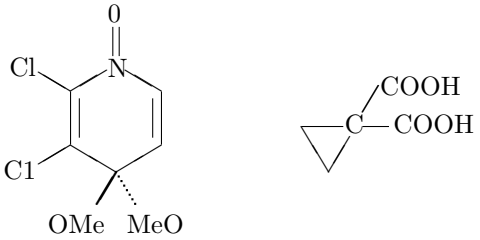
Br
Br
Br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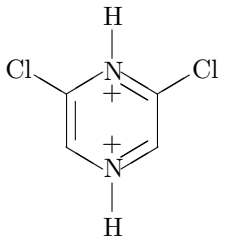
Cl
N
C1
OMe MeO
COOH
C
COOH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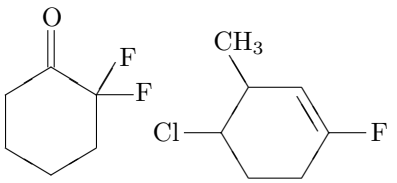
Cl
+
+
N
H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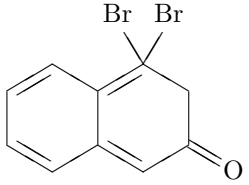
F
F
CH3
Cl
F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Br
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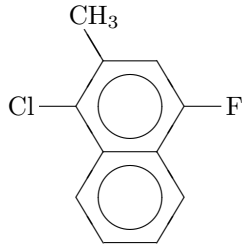
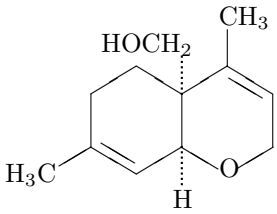
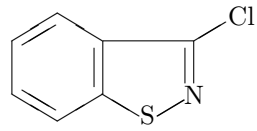

CH3
Cl
F


HOCH2
CH3
H3C
O
H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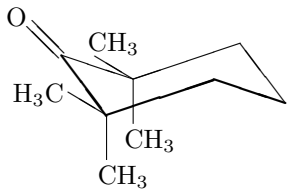
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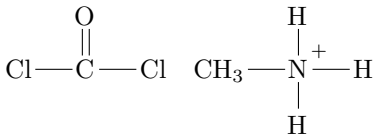
CH3
H3C
CH3
CH3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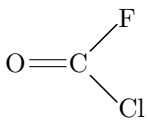
Cl
C
Cl
H
CH3
N
+
H
H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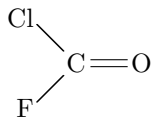
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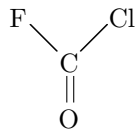
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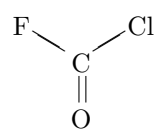
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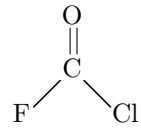
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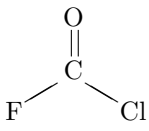
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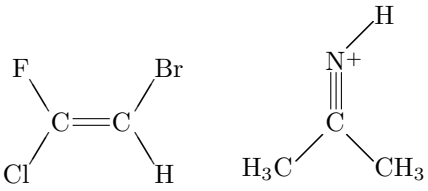
F
Br
C
C
Cl
H
H
N+
C
H3C
CH3

Bibliography