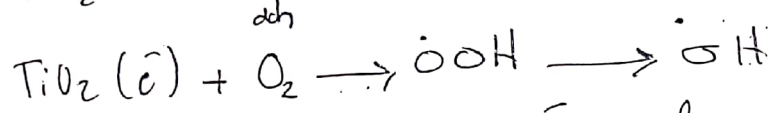
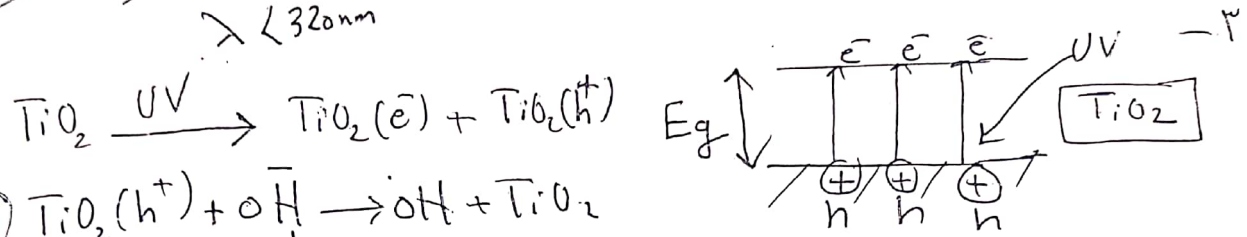
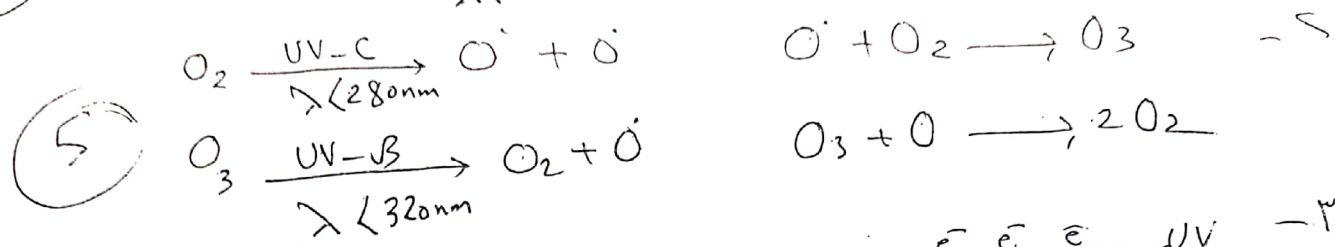
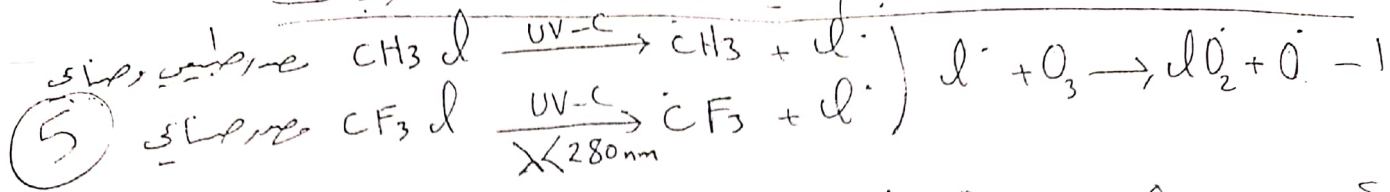


الضوء المرئي (50 درجة) - ضوء 5 درجات

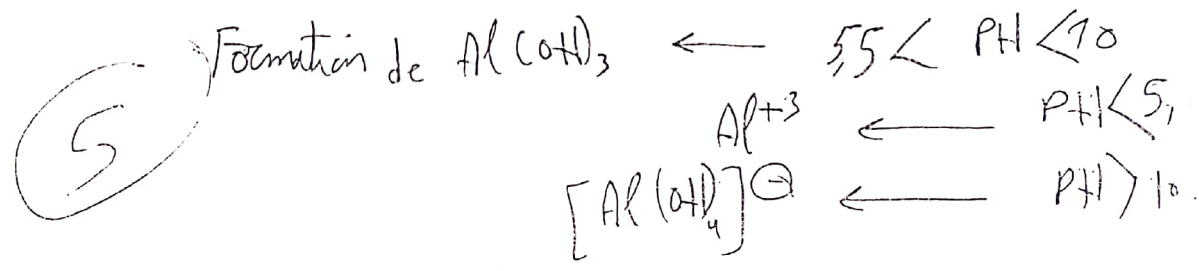
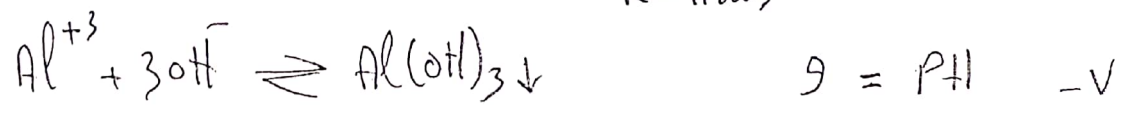
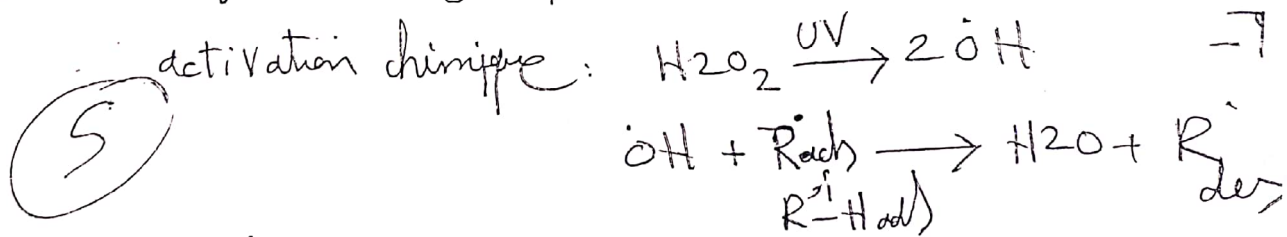


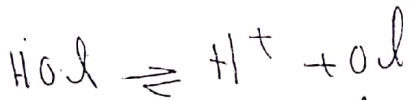
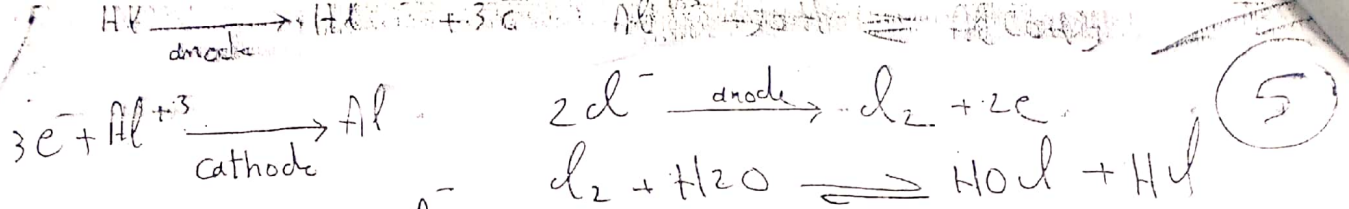
- adsorption tous les composés sur la surface de TiO_2 - 2
- Irradiation par UV la surface de TiO_2

- ⑤ - Formation $(h^+, \bar{e})$ qui forme $\dot{OH}$
- Dégradation le composé organique $R-H + \underset{ads}{\dot{OH}} \rightarrow \underset{ads}{R} + \underset{ads}{H_2O}$ - 3

⑤ Traitement de l'eau - Traitement de l'air - 4

La synthèse organique





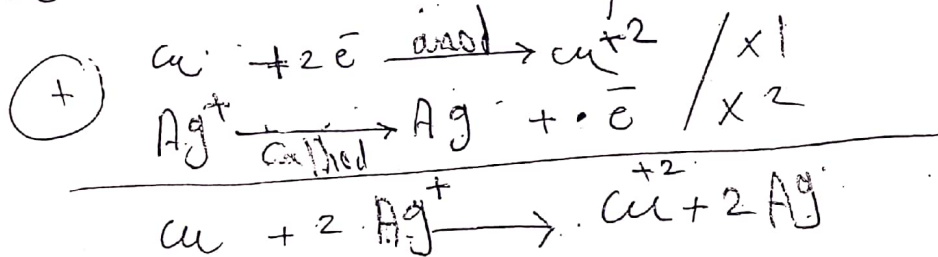
plus cher $O_3 > Cl_2$ / Efficacité $O_3 > Cl_2$
 cancérogène $CHCl_3 \leftarrow Cl_2$ / stabilité $O_3 < Cl_2$
 cancérogène $BrO_3^- \leftarrow O_3$

- adsorption des Matières organiques
- adsorption des métaux lourds
- Diminuer le TOC avant la désinfection de l'eau

$\frac{1}{2} Cl_2 + H_2O \rightleftharpoons HOCl + H^+ + Cl^-$

plus polaire $\leftarrow$ (plus soluble dans l'eau) $nitro \rightleftharpoons K_s < K_s$
 non polaire $\leftarrow$ (moins soluble dans les solvants organique) $chloro \rightleftharpoons K_{ow} > K_{ow}$

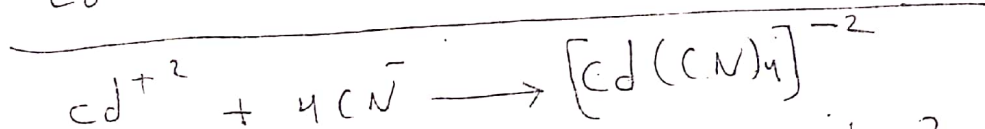
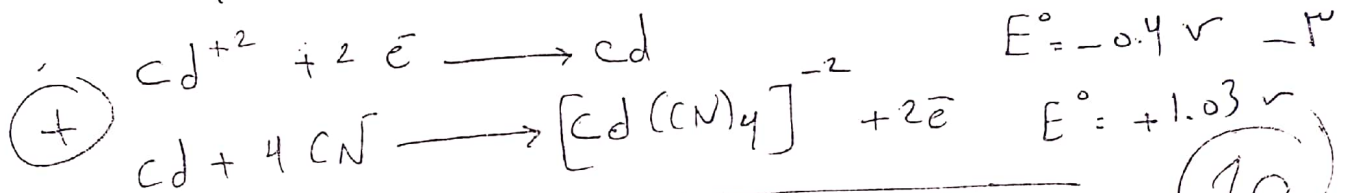
Le chlorobenzène est plus toxique que nitrobenzène



$E_c^\circ = E_{Ag^+/Ag}^\circ - E_{Cu^{+2}/Cu}^\circ = +0.8 - (+0.34) = +0.46V$

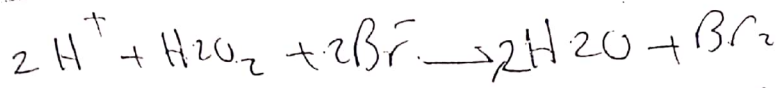
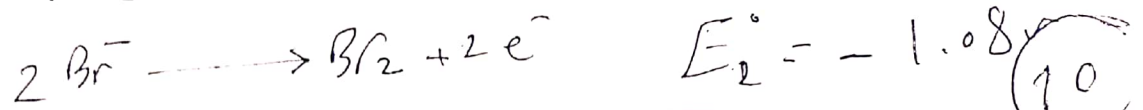
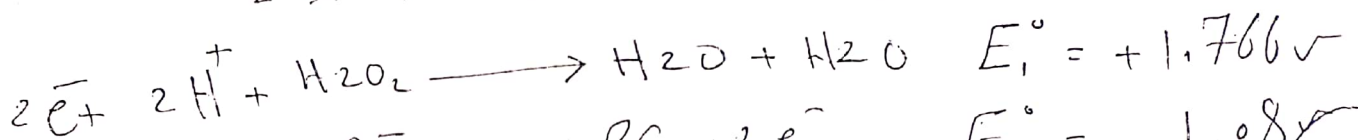
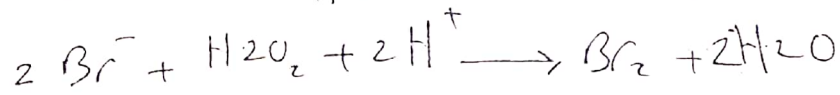
$\Delta G^\circ = -n F E_c^\circ = - (2 \times 1) \times 96500 \times 0.46 = -89300 J$

$K_{eq} = 10^{\frac{n E_c^\circ}{0.059}} = 10^{\frac{2 \times 1 \times 0.46}{0.059}} = 10^{15.5}$



$E_c^\circ = E_1^\circ + E_2^\circ = -0.4 + 1.03 = +0.63V$

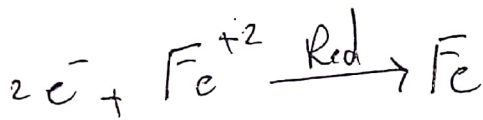
$$K_{eq} = 10^{\frac{2 \times 0.059}{0.059}} = 10^{\frac{2 \times 0.059}{0.059}} = 10^{21.35}$$



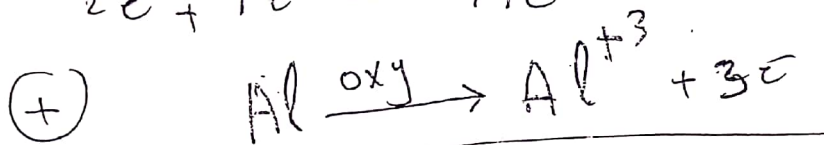
$$E_{cell}^\circ = E_1^\circ + E_2^\circ = 1.766 + (-1.08) = +0.686 V$$

Le metal qui protege le fer est

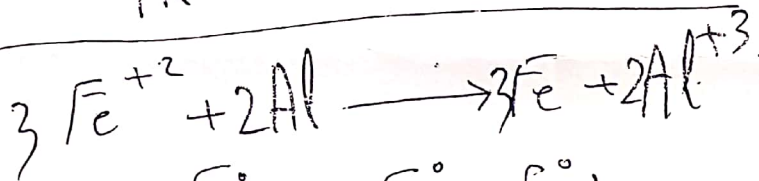
$$E_{Fe} > E_{Al}$$



$$E_1^\circ = -0.44 V$$



$$E_2^\circ = -1.67 V$$



$$E_{cell}^\circ = E_{cath}^\circ - E_{anod}^\circ = -0.44 - (-1.67) = +1.23 V$$

Al $\Leftarrow$ $E_{cell}^\circ > 0$ محب الحديد من التآكل وهو الذي يتآكل

- انتقل سلم التصحيح -

د. فادي المارديني

محل أول / 2024 - 2025