## Redissolving of metal hydroxides

## I what is redissolve?

- precipitate dissolve when excess reactant is used : further reactions

	All H level + NaoH cago All H level + NaoH cago	# 级 + NHs(aq) - NH3 = NH4++0	Add drop by drop until in excess
limited	$A ^{3+} + 3OH^{-} \rightarrow A (OH)_3$ $Zn^{2+} + 2OH^{-} \rightarrow Zn(OH)_2$ $Pb^{2+} + 2OH^{-} \rightarrow Pb(OH)_2$ (2) forms white ppt	$ZN^{2+} + 2OH^{-} \Rightarrow Zn(OH)_{2}$ @forms white ppt $Cu^{2+} + 2OH^{-} \Rightarrow Cu(OH)_{2}$ @forms <u>blue</u> ppt	
excess	$A1(OH)_3 + OH^- \rightarrow A1(OH)_4^-$ $Zn(OH)_2 + 2OH^- \rightarrow Zn(OH)_4^2^-$ 3 then dissolve $Pb(OH)_2 + 2OH^- \rightarrow Pb(OH)_4^2^-$ 3 again	$Zn(OH)_2 + 4NH_3 \rightarrow Zn(NH_3)_4^{2+} + 2OH^-$ 3 then dissinguin Cu(OH)_2 + 4NH_3 -> Cu(NH_3)_4^{2+} + 2OH^- 3 orgain Graph Gra	olve

## 2 Distinguishing tests

- 大部分问题也不会用到 redissove 的方法
  - > eg. Zn(NO3)2, Pb(NO3)2
    - -> Add HClago, Pb2+ +2Cl -> PbClz
- 用 redissolve 的例题
  - > eg. Zn(0H)2, A1(0H)3
    - -> Add both solids into NH3 (ag) respectively.
    - → AI(OH)3 does not dissolve, Zn(OH)2 dissolves.
    - $\rightarrow$  ZN(OH)<sub>2</sub> + 4NH<sub>3</sub>  $\rightarrow$  ZN(NH<sub>3</sub>)<sub>4</sub><sup>2†</sup> + 2OH<sup>-</sup>