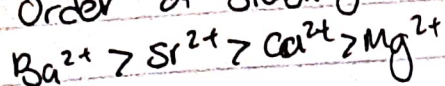


Thermal stability of Gr 2 :

1. Carbonates & Nitrates

- Down the group, polarising power decreases because the Gr 2 cations increase in ionic radius down the group. The greater the polarisation, the more distorted the anion is; causing it to weaken the C-O bond.

→ Order of stability -



II Solubility of Gr 2 hydroxides & sulphates:

- Radius of cation increases down the group → charge density decreases.

- Attraction of cation to water decreases, $\Delta H_{\text{hyd}}^{\circ}$ becomes less exothermic.

- $\Delta H_{\text{att}}^{\circ}$ decreases, $\Delta H_{\text{hyd}}^{\circ}$ decreases, hence $\Delta H_{\text{sol}}^{\circ}$ decreases; getting less exothermic.

→ Solubility of Hydroxide increases & Sulphate decrease down the group.

Preview from Notesale.co.uk
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