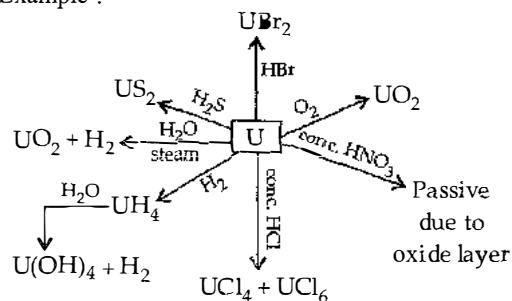


Example :



Comparison of Lanthanoids and Actinoids

Some significant similarities and differences between lanthanoids and actinoids are observed. These can be described as follows:

• Similarities

- Both lanthanoids and actinoids involve filling of f -orbitals.
- Both exhibit common oxidation state of +3.
- Both are electropositive and very reactive.
- Both exhibit magnetic and spectral properties.
- Lanthanoids exhibit lanthanoid contraction and actinoids exhibit actinoid contraction.

• Differences

	Lanthanoids	Actinoids
1.	They show +2 and +4; oxidation states in few cases besides +3.	They show higher oxidation state of +4, +5, +6 and +7 besides +3.
2.	Except promethium, they are non-radioactive.	All actinoids are radioactive.
3.	They do not form oxoions.	They form oxo-ions like UO_2^{2+} , PuO_2^{2+} , UO^+ , etc.
4.	The compounds of lanthanoids are less basic.	Actinoid compounds are more basic.
5.	They have less tendency of complex formation.	They have greater tendency of complex formation.