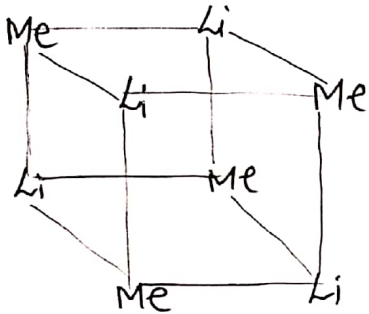
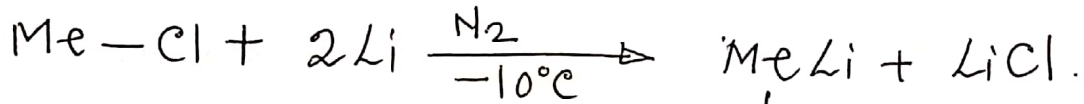
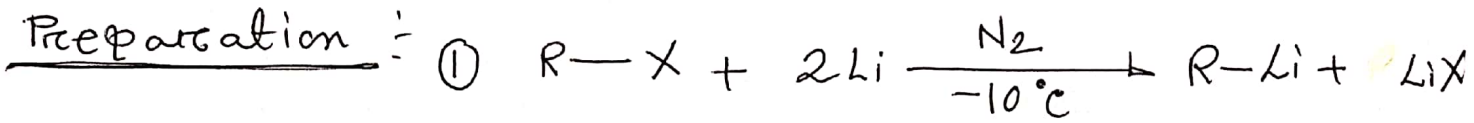


Organolithium compounds

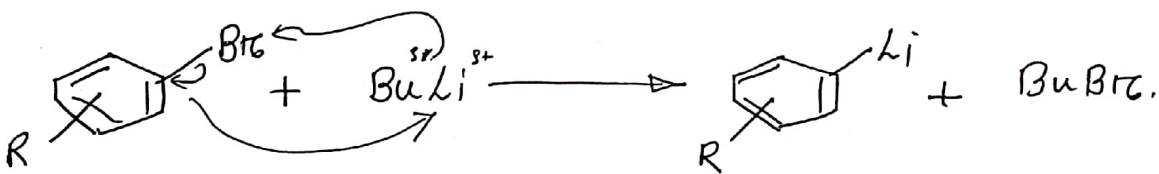


↓  
it exist has tetramer  
like  $(MeLi)_4$ .

Cubic crystal

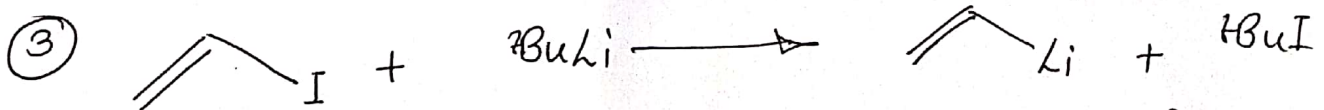
Aryl lithium can't be easily prepared by the above method as the lithium metal doesn't properly react with aryl halide.

These are prepared by following methods



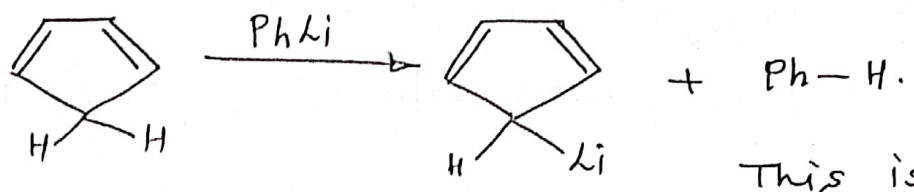
[Known as Halogen-Metal Exchange rxn]

Similar case with vinyl halide.



(Halogen metal Exchange rxn)

4

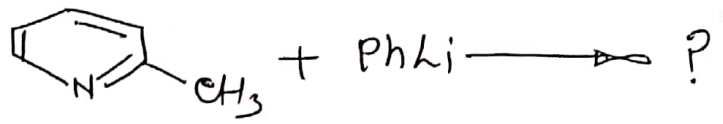


(Metallation reaction)

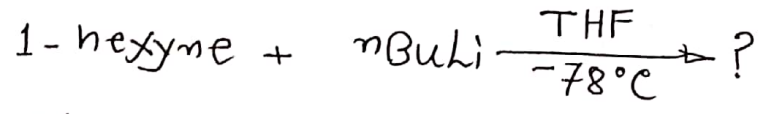
This is suitable for the preparation of lithium derivatives of

Comparatively acidic hydrocarbon.

H.W



H.W



5



Properties of organolithium compounds

- ① Because of strong polarisation of  $\overset{\ominus}{\text{C}}-\overset{\oplus}{\text{Li}}$  bond and small size of lithium atom, most of the organolithium compounds exist as dimer, tetramer or even with higher aggregates.  $(\text{RLi})_n$ .
- ② These are colourless liquid or low melting solid.
- ③ These are more reactive than GR.
- ④ These are soluble in ether or in hydrocarbon solvent.

\* Organolithium compounds should be prepared completely under moisture free condition, because it reacts with  $\text{H-OH}$  and form hydrocarbon.

