

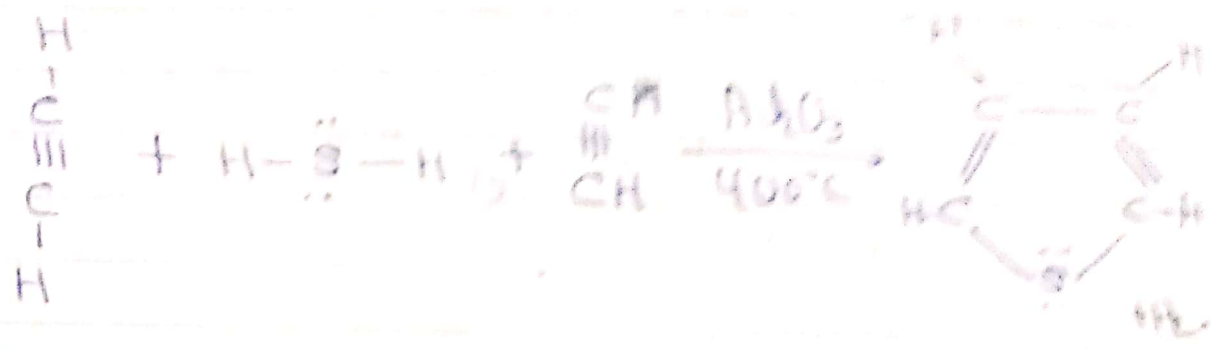
THIOPHENE C_4H_4S

(1) Isolation From coal tar

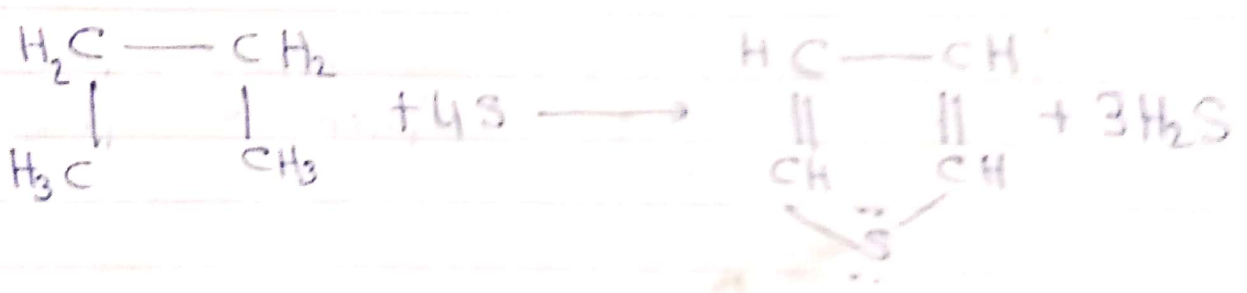
Light oil fraction of coal tar contains benzene along with thiophene. Thiophene is recovered from benzene when light oil is treated with cold concentrated H_2SO_4 . Thiophene sulphamic acid formed is readily soluble in water and is removed on extracting with water. Thiophene is recovered by steam distillation of thiophene sulphamic acid.

(2) Synthetic method -

(a) I_2 is prepared by passing a mixture of acetylene and hydrogen sulphide over heated Alumina and red hot tube.

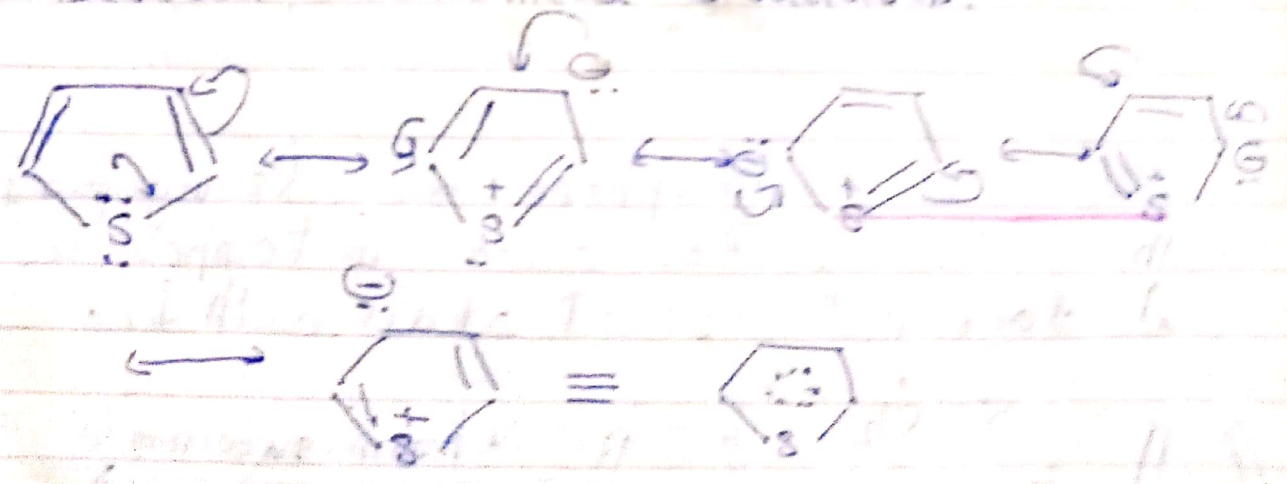


(b) I_2 is also prepared by heating n-butane with sulphur at high temperature.



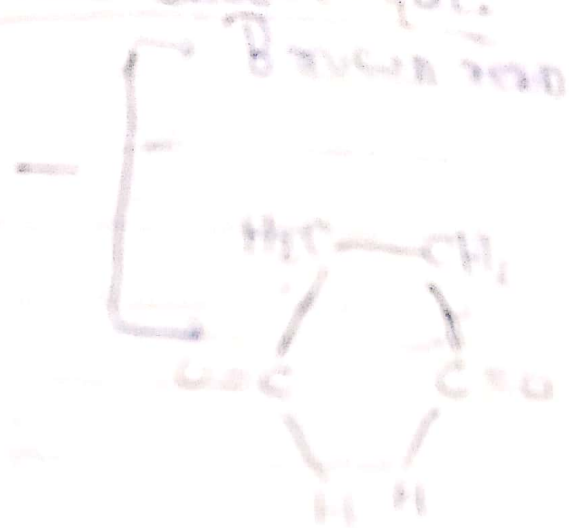
Properties -

Thiophene is a resonance hybrid of several canonical structures.



1) Basic Character -

Furan like pyrazole is a weak base. It forms unstable salts with mineral acids. These salts may either polymerize to produce Brown resin undergo hydrolysis to yield succinic dialdehyde.



Succinic dialdehyde