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CHEMISTRY

TOPIC :- Hydroacids of Halogen.

Hydroacid of Halogen are HF, HCl, HBr, HI. From F to Iodine size increases

therefore Bond length increases

from HF to HI. HF has shortest

Bond length where as HI has largest bond length. Bond length and bond energy

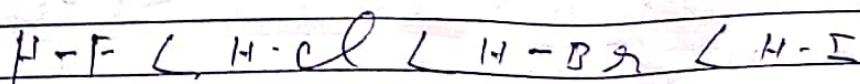
has inverse relation. Larger the bond length ~~weaker~~ ^{smaller} is bond energy and

greater is ionisation. on this very

fact HI is strongest acid where as

HF is weakest acid. Increasing order of acidic strength of hydro.

acids ^{are} as follows.



Oxidising Property of Halogen:

F₂ is strongest oxidising agent

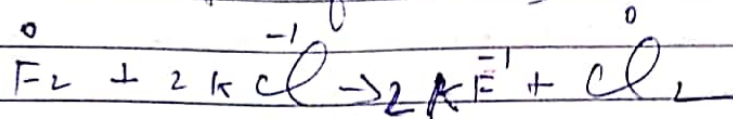
because its electronegativity value

is highest among halogen.

Iodine has lowest electronegativity

Value, therefore it is weakest oxidising agent. Since F_2 is strongest

oxidising agent therefore it oxidises other halogen from its solution



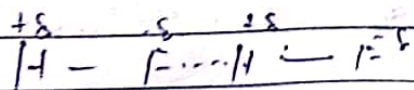
Oxidation no. of F_2 decreases 0 to -1 in terms of electron we may say that

F_2 is accepting electron and acts as an oxidising agent.

Nature & states of HF, HCl, HBr and HI

HF, HCl, HBr and HI are hydroacids of Halogen. Since size of "F" is

smallest therefore intermolecular Hydrogen Bonding is present and it exists in liquid form.



On the other hand size of Chlorine, Bromine and iodine is larger than F, therefore Hydrogen Bonding is not

present. Due to this reason HF is liquid where as HCl, HBr and HI are gas.