

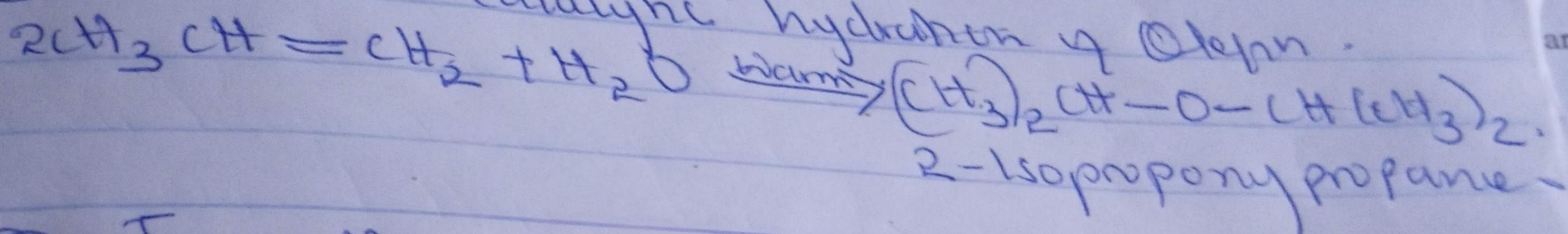
alkyl radicals larger than four carbon atoms, the reverse is true.

② Reactivity

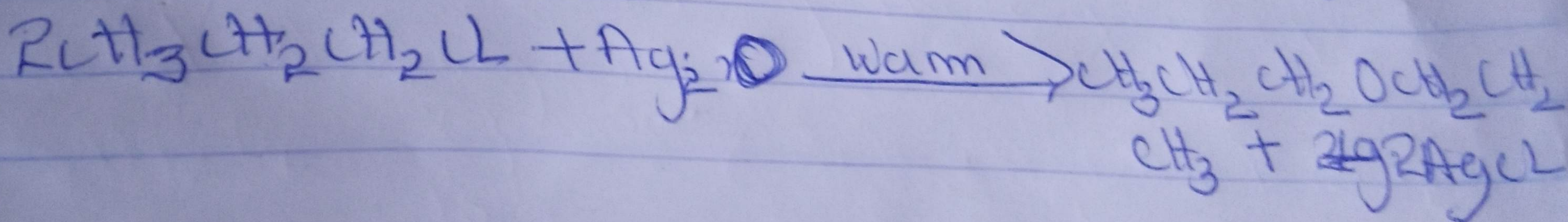
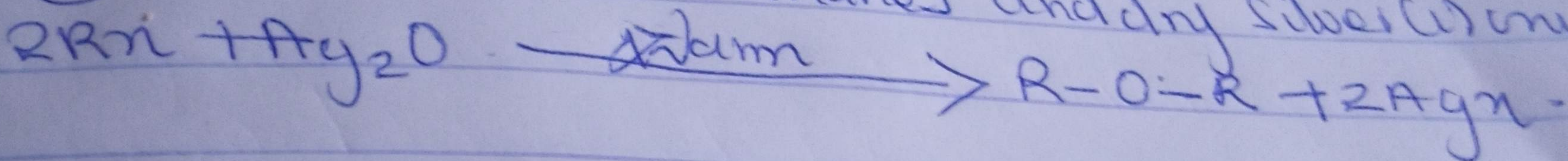
Ethers are inert at moderate temperature. Their inertness at moderate temperatures leads to their wide use as reaction media.

③ Methods of Preparing Ethers

(i) Controlled Catalytic Hydrogenation of Olefin.



(ii) From Haloalkanes and dry silver oxide.



④ Ethylene oxide is used in preparation of nonionic emulsifying agents, plastics, plasticizers and several synthetic textiles.

⑤ Ethylene oxide is used as a gaseous sterilizing agent.

⑥ Ethylene oxide is used as an intermediate in the hydrolytic manufacture of ethylene glycol glycol.

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MBS
Assignment in Ethers

- (a) CH_3OCH_3 - Methoxymethane -
- (b) $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ - Ethoxyethane -
- (c) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{O}$ - Butoxymethane -
- (d) $\text{CH}_3\text{CH}_2\text{OCH}_3$ - Methoxyethane -
- (e) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_3$ - Ethoxypropane -

(2) (a) Physical States -

At room temperature ethers are colourless, neutral liquids with pleasant odours.

(b) Solubility

Ethers are less soluble in water than are the corresponding alcohols.

(c) Density: Most of the simple ethers are less dense than water, although the density increases with increasing relative molecular mass and some of the aromatic ethers are in fact denser than water.

(d)

Boiling Point

Low molecular mass ethers have a lower boiling point than the corresponding alcohols but those ethers containing