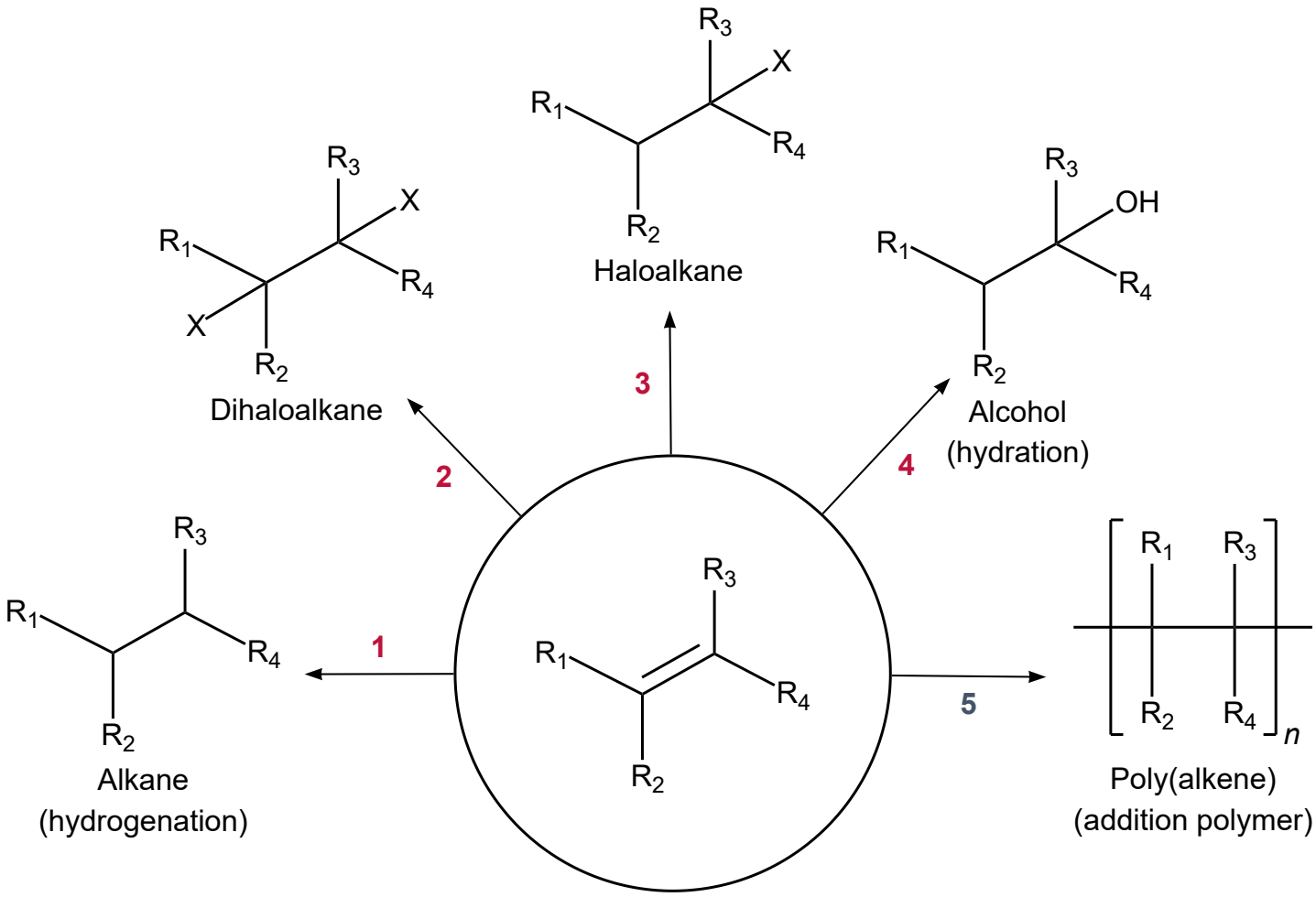
Alkenes Map

OCR A Level Chemistry A · 4.1.3 Alkenes



1 addition: H_2(g), Ni catalyst, about 150 °C

2 addition: Br_2 or Cl_2, room temperature; bromine turns orange → colourless

3 addition: HBr, HCl or HI, room temperature; major product by Markownikoff's rule

4 addition: steam, H_2O(g), H_3PO_4 catalyst, about 300 °C, 60 atm

5 polymerisation: alkene or substituted alkene, high pressure and heat with an initiator, or a catalyst

Test for C=C: bromine decolourises (orange -> colourless).
Waste polymers: combustion for energy, feedstock recycling, removal of HCl from burning PVC.

addition polymerisation

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