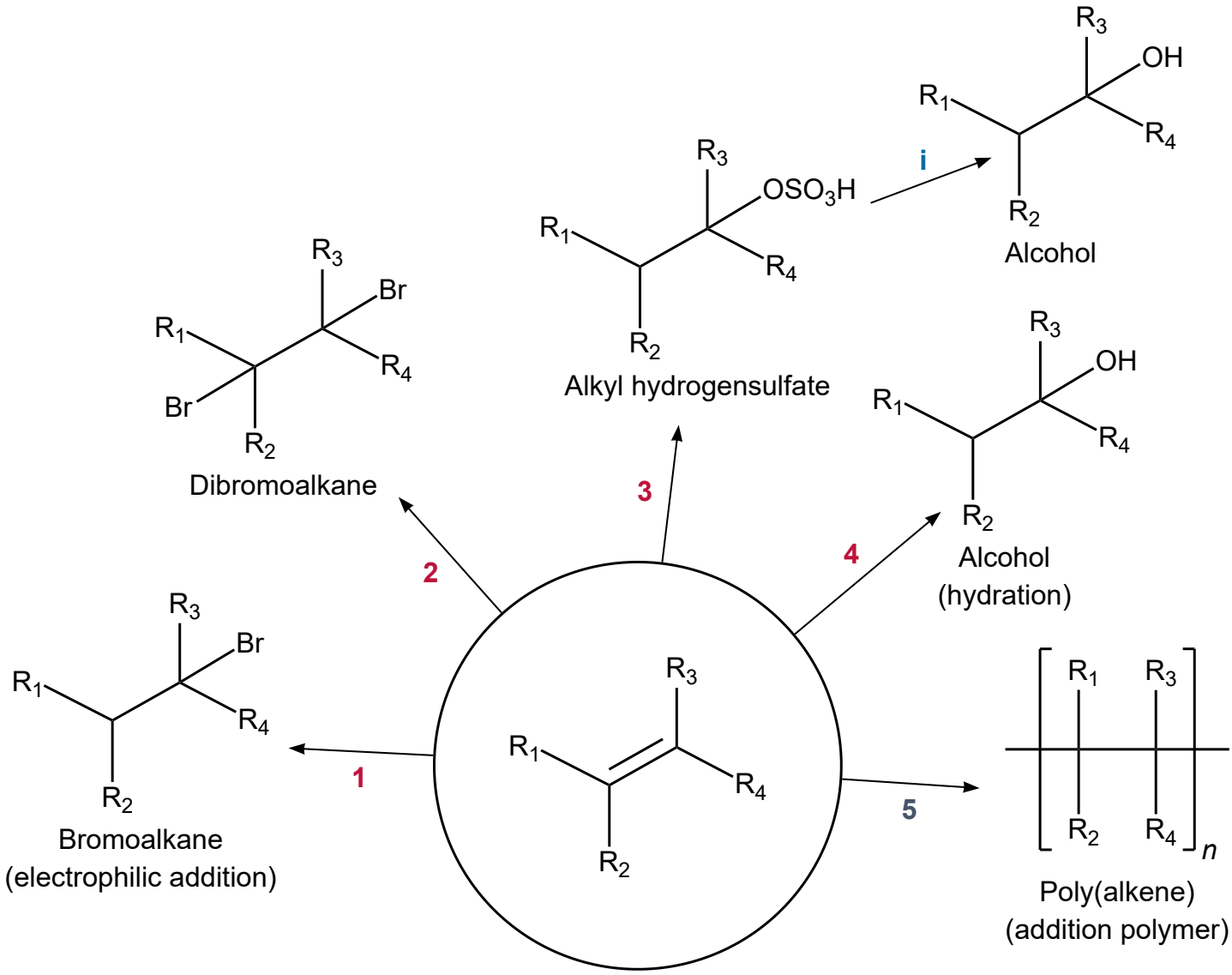
Alkenes Map

AQA A Level Chemistry · 3.3.4 Alkenes



1 **addition**: HBr, room temperature; major product from the more stable carbocation

2 **addition**: Br_2, room temperature; bromine water orange → colourless

3 **addition**: conc. H_2SO_4, room temperature
i **hydrolysis**: add water and warm

4 **addition**: steam, $H_2O(g)$, H_3PO_4 catalyst, 300 °C, 6–7 MPa

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

Test for C=C: bromine water turns from orange to colourless.
Major product: the H adds to the carbon with more H atoms, through the more stable carbocation.
Poly(alkene)s are unreactive (saturated, non-polar); PVC is made flexible with a plasticiser.

addition polymerisation hydrolysis

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