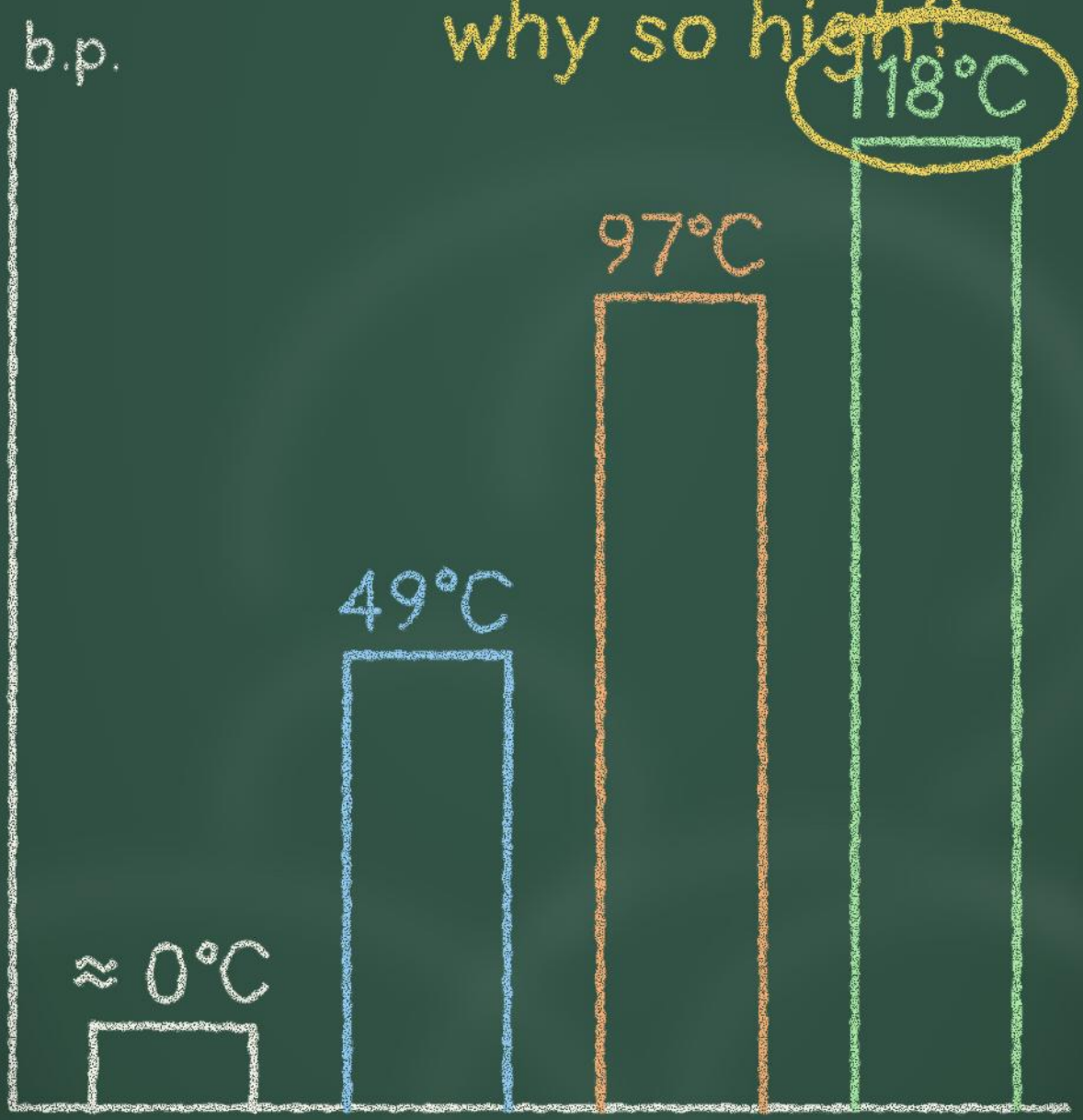
PrayogX · Chemistry

PRAYOGX

Why Acids Boil So High

all M ≈ 60 g/mol

why so high?

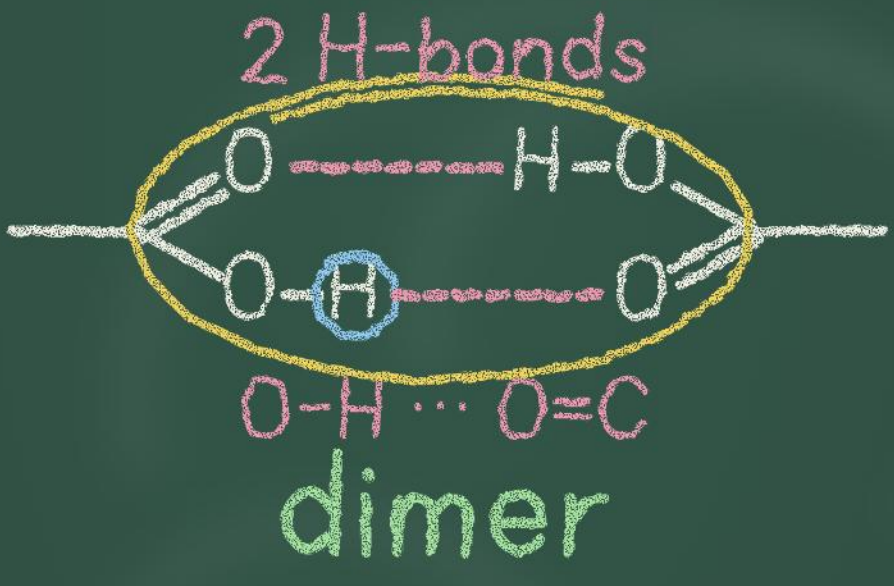


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Why Acids Boil So High

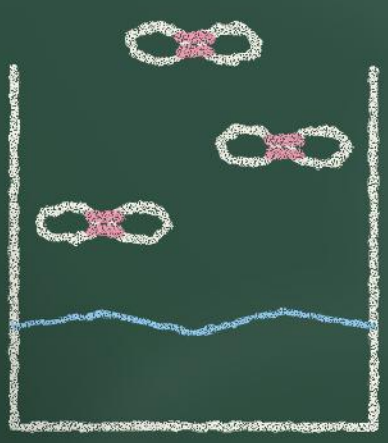
hydrogen bonding



dimer

alcohols: H-bond too, but weaker

acids: stronger, more extensive



vapour:
still dimers

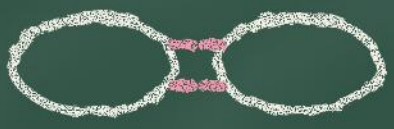
more energy
to boil

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Why Acids Boil So High

acetic acid in benzene



true M = 60

↓

measured M ≈ 120

× 2: abnormal molar mass

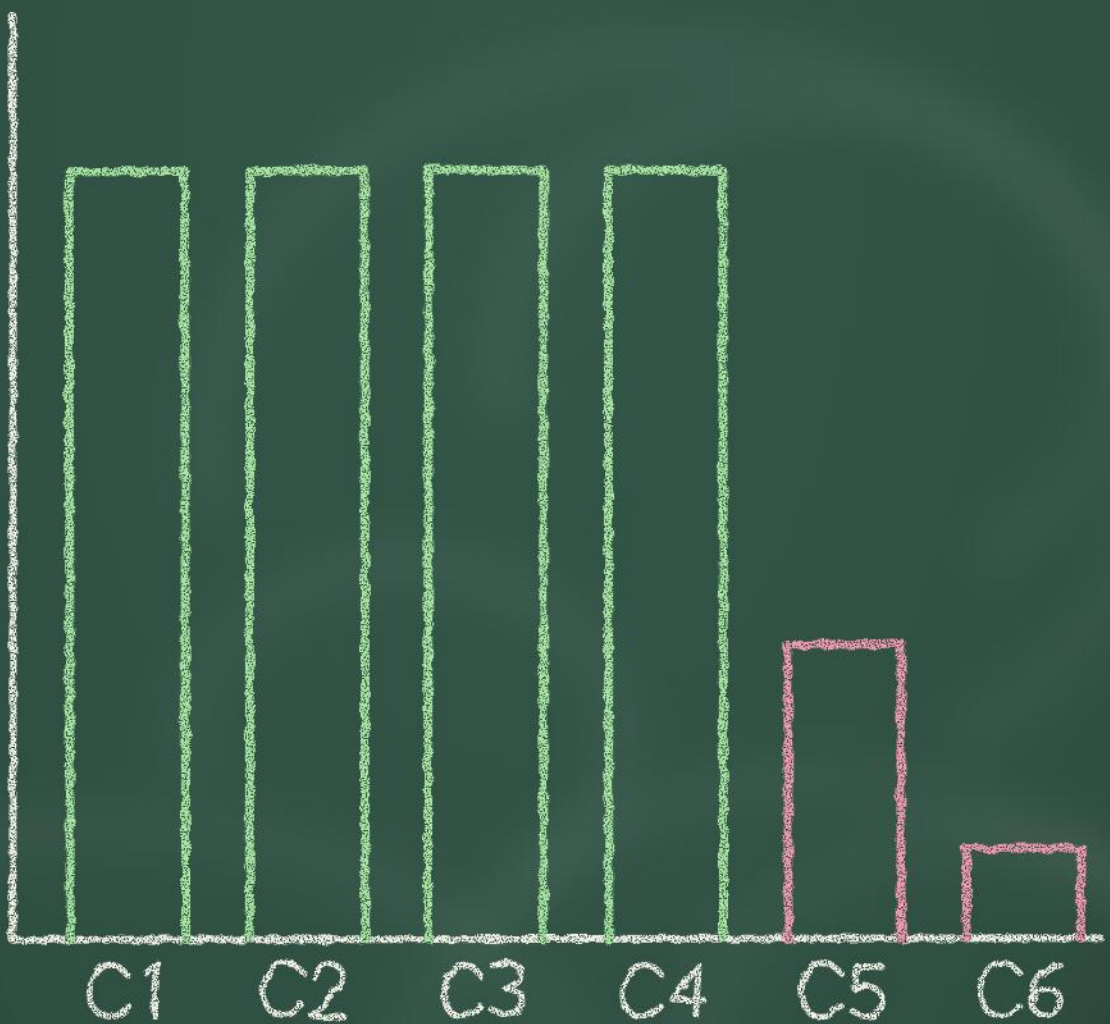
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Why Acids Boil So High

solubility in water

up to C4: miscible (H-bonds with water)



longer chain: less soluble

benzoic acid: nearly insoluble in cold water

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Why Acids Boil So High

remember



2 H-bonds → dimer

b.p.: acids > alcohols > aldehydes

next: why are acids acidic?