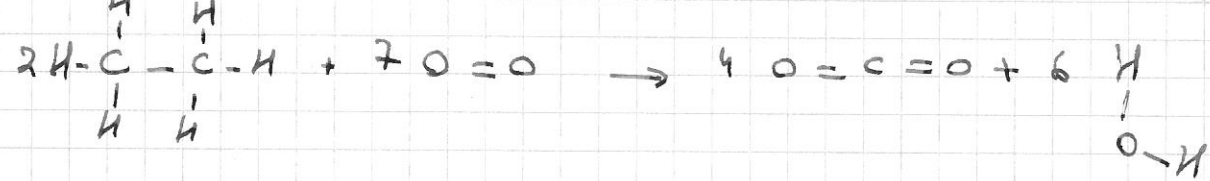


### ③ Ethane

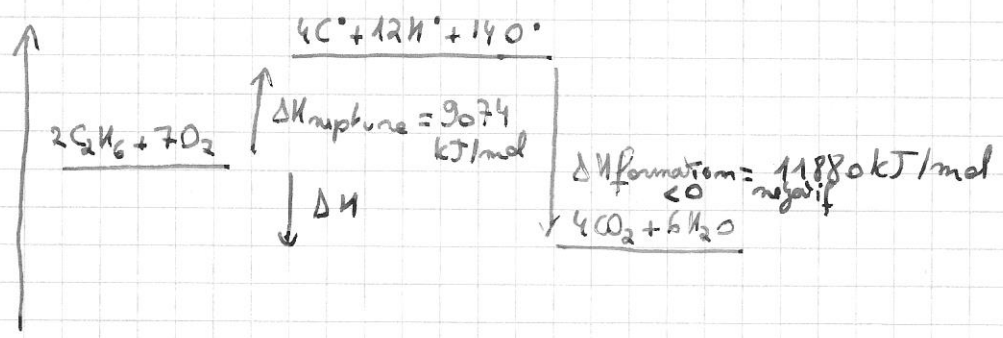


x2 car ne tombe pas, usk



$$\begin{aligned}
 \Delta H_{rupture} &= 2 \times 6 \times C-H + 2 \times C-C + 7 \times O=O = 0 \\
 &= 12.410 + 2.348 + 7.494 = 9074 \text{ kJ/mol}
 \end{aligned}$$

$$\begin{aligned}
 \Delta H_{formation} &= 4 \times 2 \times C=O + 6 \times 2 \times O-H \\
 &= 8.795 + 12.460 = 11880 \text{ kJ/mol}
 \end{aligned}$$



$$\Delta H = \Delta H_{rupture} + \Delta H_{formation} = 9074 - 11880 = -2806 \text{ kJ/mol}$$

les kJ/mol du ΔH signifient pour une seule mole de l'équation

donc 2 mol de C<sub>2</sub>H<sub>6</sub> donnent -2806 kJ

réaction exothermique



④  $V_{air} = 2,5 \text{ L}$   $\rho = 11 \text{ g/L}$   $m = 2,5 \text{ kg} = 2500 \text{ g}$   $c_{eau} = 4,18 \text{ J/g} \cdot ^\circ\text{C}$

$\theta_i = 25^\circ\text{C}$   $\theta_f = 95^\circ\text{C}$   $\Delta\theta = 70^\circ\text{C}$   $m_{verre} = 0,25 \text{ kg} = 250 \text{ g}$   $c_{verre} = 0,84 \text{ J/g} \cdot ^\circ\text{C}$

$$Q = c m \Delta\theta_{eau} + c m \Delta\theta_{verre} = 4,18 \cdot 2500 \cdot 80 + 0,84 \cdot 250 \cdot 80$$

$$= 836000 + 16800 = 852800 \text{ J} = 852,8 \text{ kJ}$$

besoin de 852,8 kJ

2 mol donnent 2806 kJ

