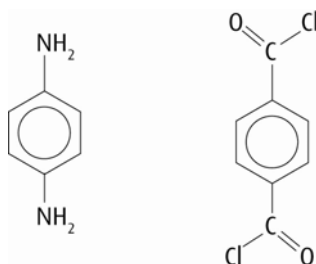


Marking scheme for AHL Worksheet – Option C

1 a 1 mark for each monomer

[2]



condensation

[1]

b in solution the strands of Kevlar show some alignment

[1]

the existence of liquid crystal behaviour depends on the concentration of the solution

[1]

c liquid crystal between two glass sheets with scratches at 90° to each other

[1]

molecules align with both sets of scratches and a twisted array of molecules is formed between the glass plates

[1]

display has liquid crystal between crossed polarisers

[1]

when the display is off, polarised light is rotated through 90° as it passes through the liquid crystal so it passes through the second polariser and the display appears clear

[1]

when voltage is applied liquid crystal molecules align with electric field

[1]

the polarised light is not rotated, cannot pass through second polariser and display appears black

[1]

2 n-type

[1]

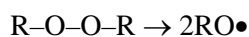
arsenic provides extra electrons

[1]

in the conduction band

[1]

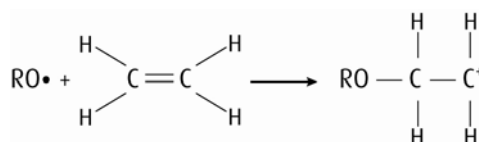
3 initiation:



[1]

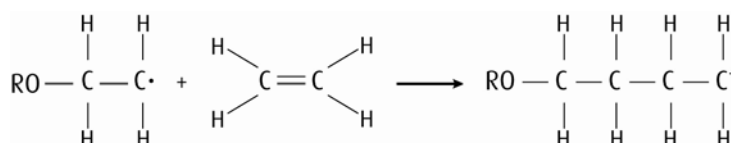
propagation:

[1]



propagation:

[1]



2 marks maximum if equations not labelled

- 1 mark maximum if anode and cathode not labelled