

C2 - Nanoparticles and their Application (Chemistry Only)

Match the particle to the correct size

- | | | | |
|------------------|---|---|--|
| Coarse particles | • | • | 1-100nm |
| Nanoparticles | • | • | $1 \times 10^{-7} \text{ m} \times 2.5 \times 10^{-6} \text{ m}$ |
| Fine particles | • | • | $1 \times 10^{-5} \text{ m} \times 2.5 \times 10^{-6} \text{ m}$ |

As the side of a cube decreases by a factor of 10 the surface area to volume ratio increases by a factor of ____.

Nano particles can have different p_____ from those for the same bulk material.

Titanium oxide and zinc oxide nanoparticles are used in sun creams.

Give 1 advantage of using nanoparticles in sun creams.

Give 1 disadvantage of using nanoparticles in sun creams.

Give one reason why 2g of cobalt oxide nanoparticles is a better catalyst than 2g of cobalt oxide powder.

Silver nanoparticles can be embedded in to sock fibres.

Why is the silver used in the socks?

Why might people worry about wearing the socks?

How might the silver particles find their way into the environment?

Do you know any other uses of nanoparticles that are not mentioned on this sheet?

