Atmospheric pollutants from fuels: Worksheet 9.10.3

Catalytic converters

1. Nitrogen is an unreactive gas, so it does not react with the oxygen in the air.

However, the high temperature in a car’s internal combustion engine allows the two gases to react. They form the mixture of oxides shown. For simplicity, the mixture is called NO*x*.

Write a formula for each of the oxides in the mixture.

a. ­­­\_\_\_\_\_\_\_\_\_\_ b. \_\_\_\_\_\_\_\_\_ c. \_\_\_\_\_\_\_\_\_\_

1. Car exhaust gases include carbon monoxide.

Draw a molecule of this gas.



1. In a catalytic converter, oxides of nitrogen and carbon monoxide pass over a catalyst (shown), which allows them to react with each other.

The products are harmless nitrogen and carbon dioxide.

‘NO’ is called nitrogen monoxide. Complete the equations and particle picture below to show what happens to it in a catalytic converter.

1. Explain how catalytic converters use one pollutant to destroy another.