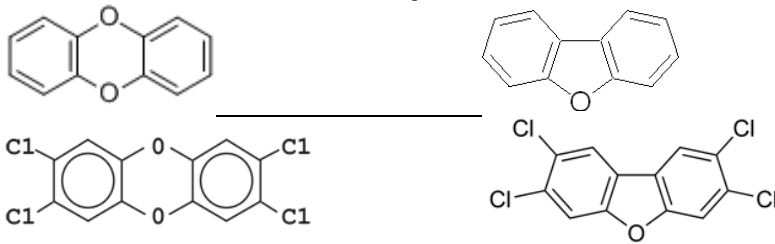


Wildfire Emissions:

1. Carbon: CO, CO₂, black carbon
 - a. Greenhouse gas
 - b. Heating agent
 - c. ~40 million metric tons of carbon emissions from wildfires out of ~6 billion (annually)
2. Particulate matter (PM₁₀)
 - a. Health hazard
 - b. Visibility/ air quality

3. Dioxins/ Furans → **dibenzo-p-dioxins and dibenzofurans**



- a. React relatively fast with OH radicals ($k \sim 10^{-12} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$)
 - b. Less than one day lifetime in troposphere
 - c. Absorb in the visible
 - d. Wild fires are the greatest contributor (greater than industry)
 - e. Toxic/ Health hazards
4. Other (small amounts)
 - a. NO_x
 - b. SO₂
 - c. NH₃
 - d. N₂O

What can be done?

Increasing global temp. increases chance of fire

Controlled brush fires are the only plausible solution to forest fires.

Amount released is much less

Largest emissions are from thick tree trunks

Build a model based on soil and tree types and thickness

Need funding (not free, no profit)