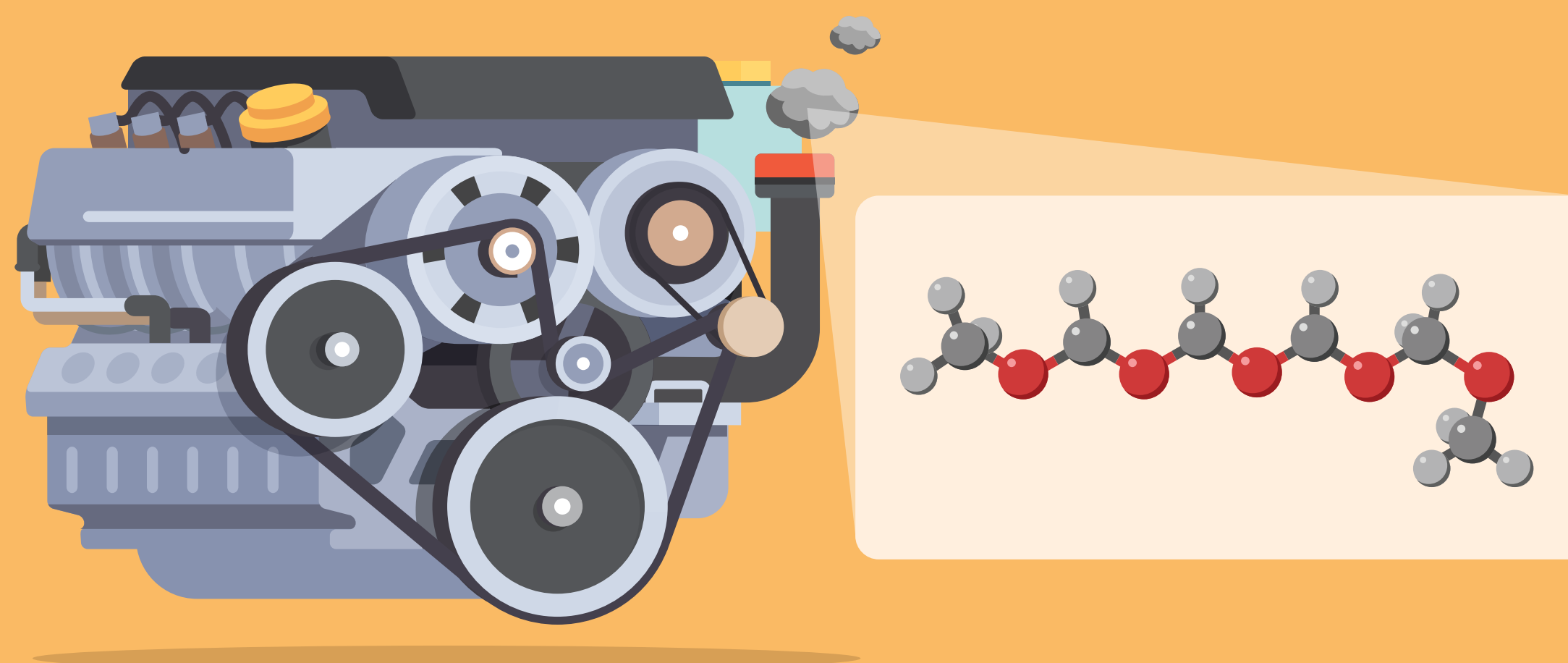


Investigating Nanoparticles Emission in OME-fueled Engines

Environmental
Science:
Atmospheres



Polyoxymethylene dimethyl ethers (OME), offering a soot-free combustion, are a cleaner and more sustainable alternative to fossil diesel fuel



Could nanoparticle emission in the exhaust of OME-fueled engines adversely affect the environment?

Investigation of particle size distribution in OME exhaust of a heavy-duty engine shows that



Particle emission mostly consists of volatile particles



Solid particle number (PN) emission is lower than Euro VI recommendation even without particulate filter



OME-fueled engine PN emission is lower than the average emission level of rural and urban Germany



Exhaust after-treatment removes both volatile and solid particles

Particle emission levels from OME-fueled engines are lower than those from diesel engines and mostly volatile