Role of sulphuric acid aerosols in atmospheric science


Atmospheric aerosols exert an important influence on climate through their effects on stratiform cloud albedo and the invigoration of convective storms. Model calculations have shown that almost half of the global cloud condensation is due to atmospheric boundary layer aerosols, which may originate from the combustion of fossil fuels. Aerosol particles with a diameter of 10 nm or less can be formed and the number of cloud condensation nuclei to changes in the rate of cloud formation. Despite extensive research, uncertainties remain about the nucleation rate of sulfuric acid and the mechanisms responsible, including the role of heavy metal ions.