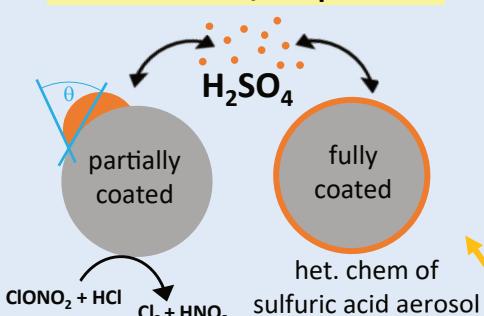


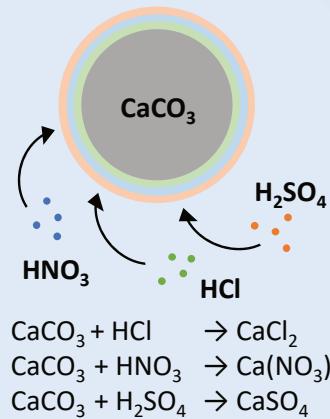
# Alumina Particles

## Condensation / Evaporation

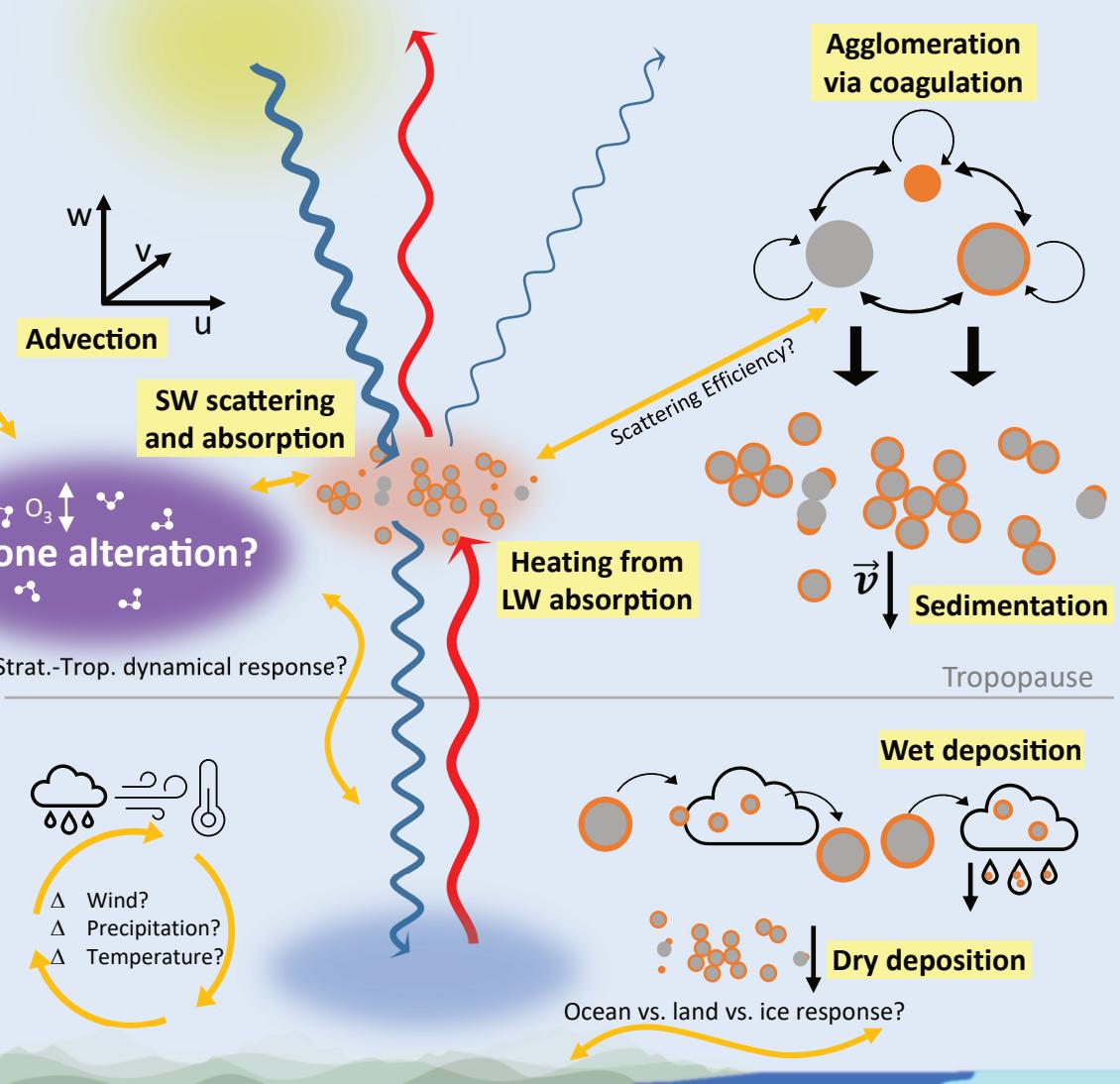


## Heterogeneous Chemistry

# Calcite Particles



## Heterogeneous Chemistry



••• Gaseous  $\text{H}_2\text{SO}_4$  /  $\text{HNO}_3$  /  $\text{HCl}$  molecules

● Polydisperse  $\text{H}_2\text{SO}_4\text{-H}_2\text{O}$  background aerosol

● Monodisperse solid particles

● Solid agglomerates (dimers, 4-mers,  $i$ -mers, ... 512-mers)

●  $\text{CaCO}_3$  with  $\text{CaCl}_2$ ,  $\text{Ca}(\text{NO}_3)_2$  and  $\text{CaSO}_4$  layers

●  $\text{H}_2\text{SO}_4$ -coated monomers and agglomerates

● Shortwave (blue) and longwave (red) radiation

● Feedbacks between processes