

Aerosol Lab

Investigations on the high temperature behavior of nanoparticles (NP)

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Main focus of investigation

- Investigation of the high-temperature behavior of nanoparticles in flames of laboratory burners (McKenna or tube burners) and in a high-temperature tube furnace.
- Nanoparticulate metal oxides such as titanium dioxide and cerium oxide are investigated.
- Laboratory with extensive equipment for NP dosage and NP synthesis, as well as particle measurement technology.

Laboratory equipment

- Particle dosing by means of suspension atomizer
- Particle synthesis by spark generator
- Laboratory burner (McKenna burner / tube burner)
- HT tube furnace (Carbolite-Gero up to 1,600 °C / Nabertherm up to 1,000 °C)
- Particle measurement technology (SMPS / ELPI / DLPI / scattered light analyzer)
- dilution systems
- Gas dosing (O₂ / CO₂ / Ar / N₂ / CO / ethylene)