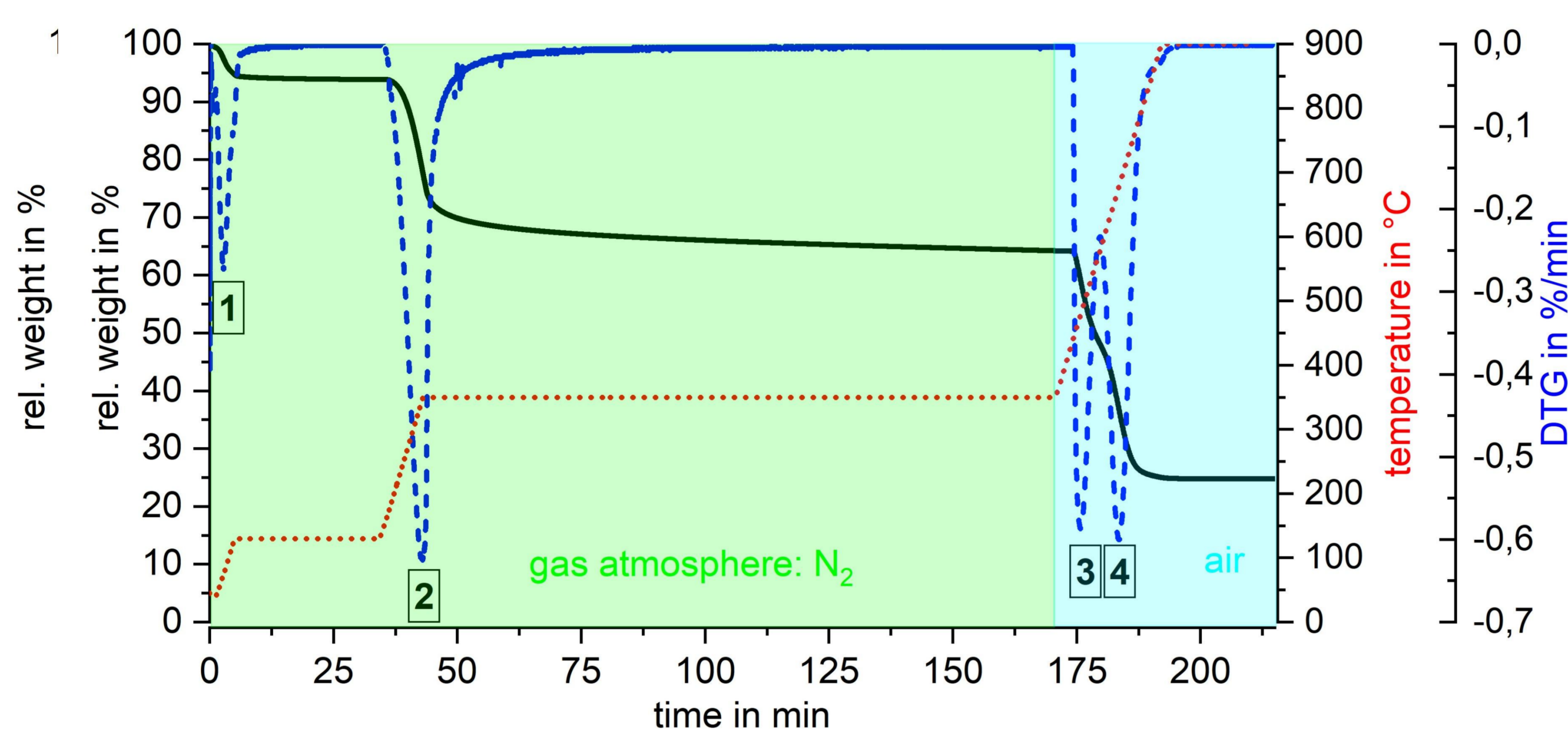


Operation Principle

- TGA heats a sample under a controlled gas atmosphere and records mass loss as a function of time and temperature.
- Evolved gases are analyzed by IR spectroscopy to identify functional groups and chemical bonds.
- Gas products can be separated by GC and identified by MS, or detected directly by online MS.
- ATD-GC-MS enables analysis of volatile compounds collected on sorbent tubes.



Research Objectives

- Powerful analytical platform for material investigations when stand-alone TGA or IR is not sufficient
- Monitoring of compositional changes in polymeric materials.
- Quantitative analysis of powdered activated carbon in wastewater sludge
- Analysis of crude oil residues and other complex sample matrices
- Sensitive analysis of gas mixtures and ambient air quality.
- Detection of volatile micropollutants and trace residues such as solvents, gasoline components, and fats.

