

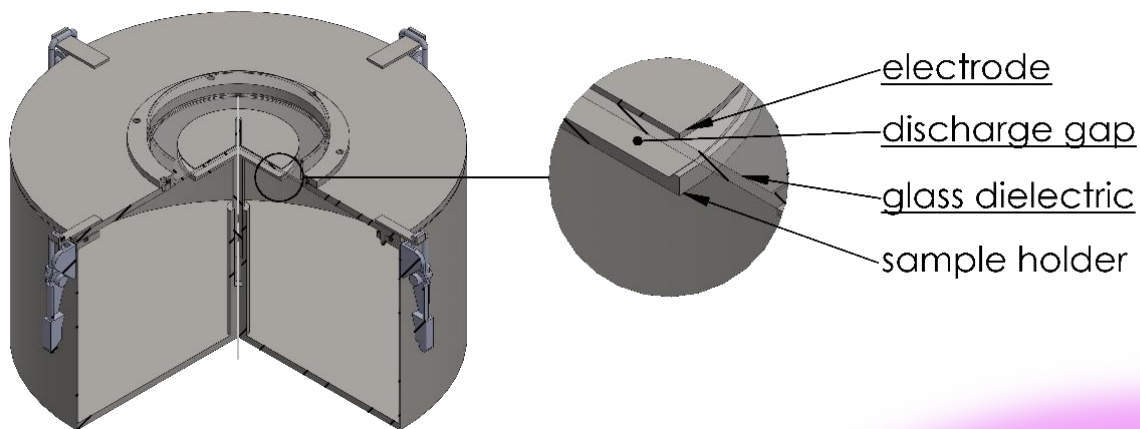


Coatings deposition from liquid HMDSO films via conversion in dielectric barrier discharges

Sebastian Dahle

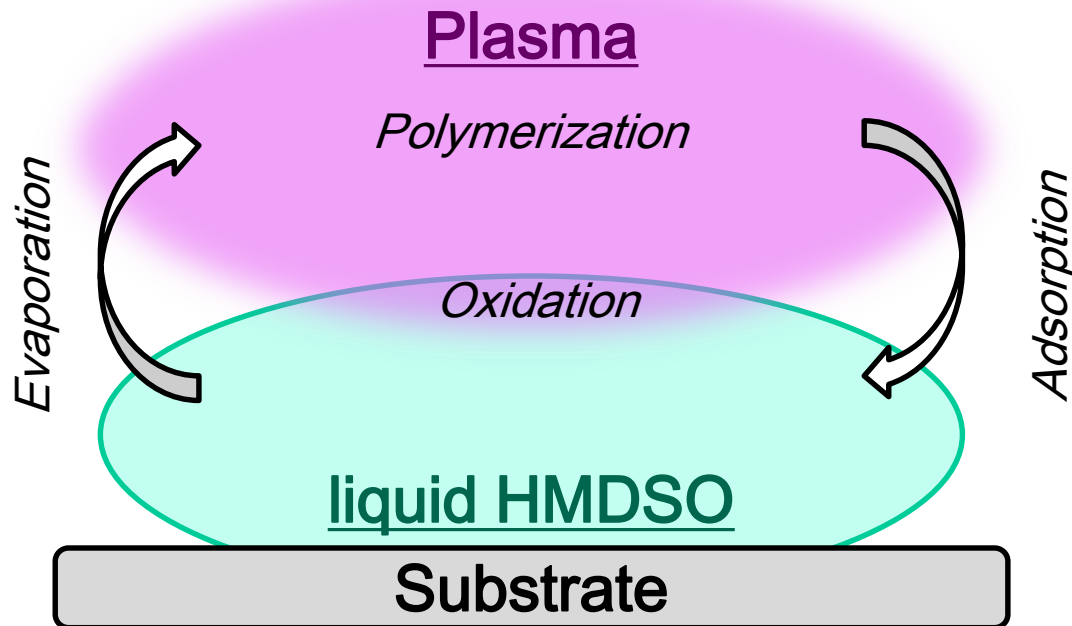
Clausthal University of Technology

DBD in closed vessel with large buffer volume



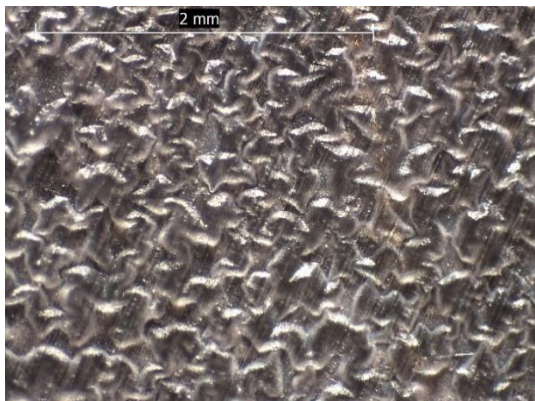
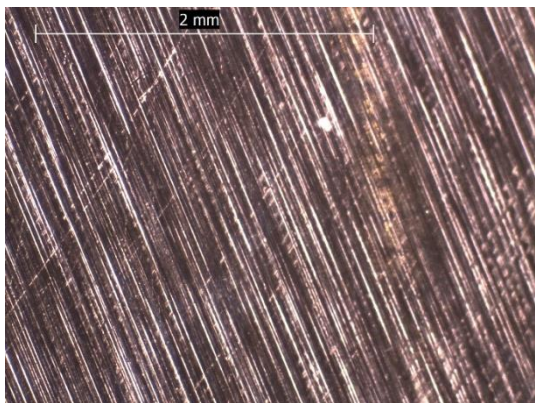
Time-dependent parameters:

- Oxygen partial pressure
- Monomer partial pressure
- Evaporation rate
- ...

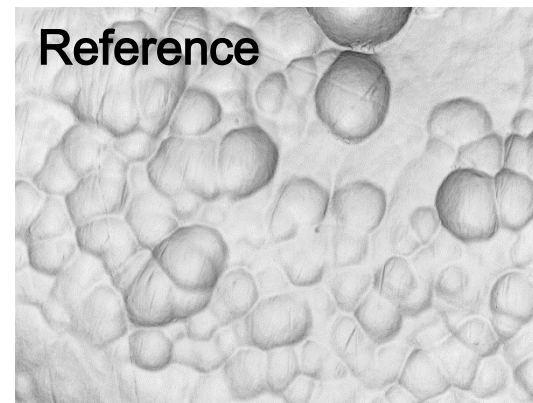
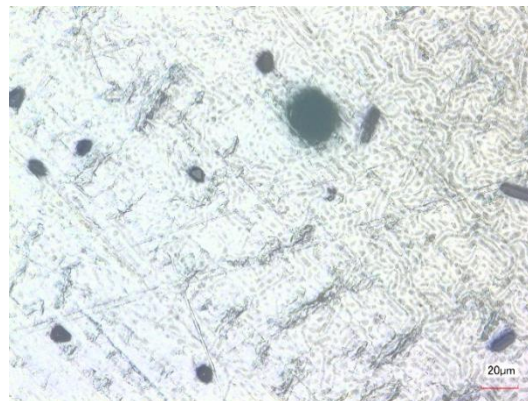
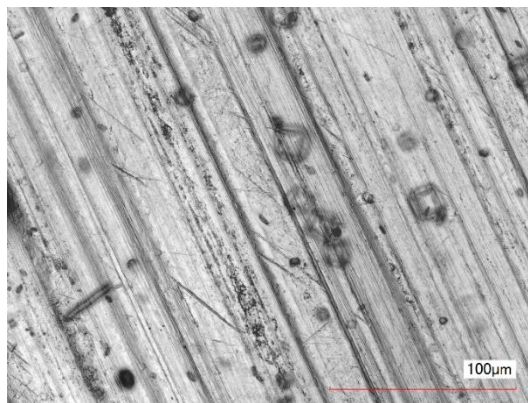


Microscopic results

Optical microscopy



Confocal laser-scanning microscopy

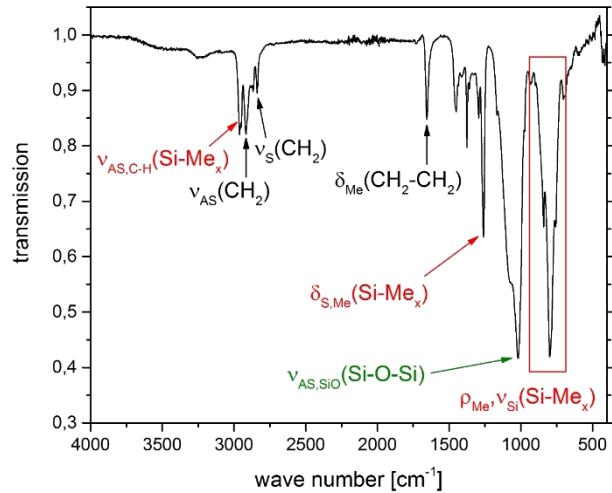


Al sheet

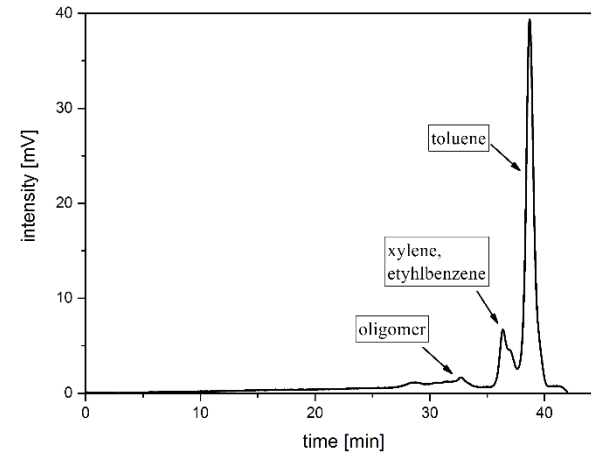
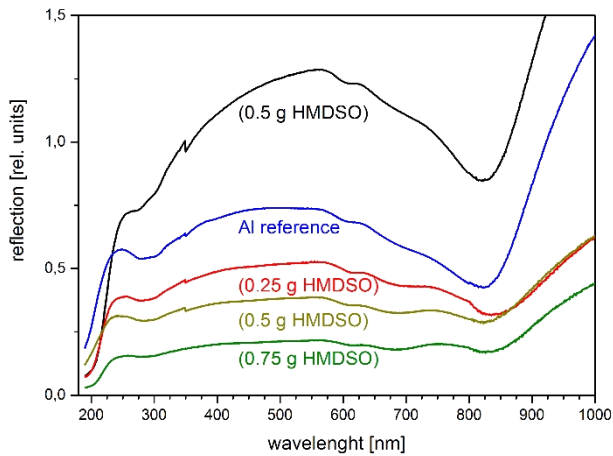
PE foil

Spectroscopic results

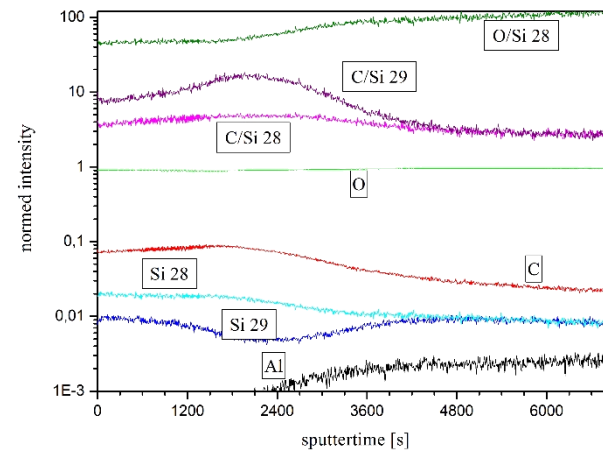
ATR-FTIR



UV / VIS



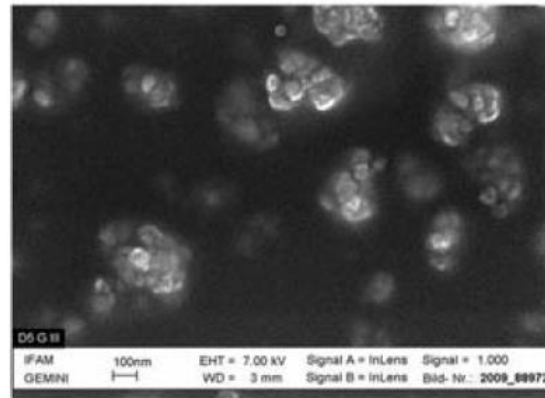
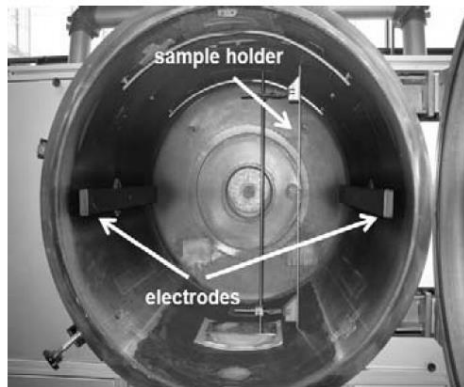
GPC



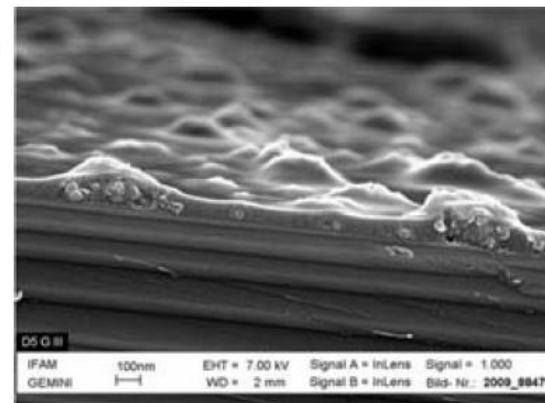
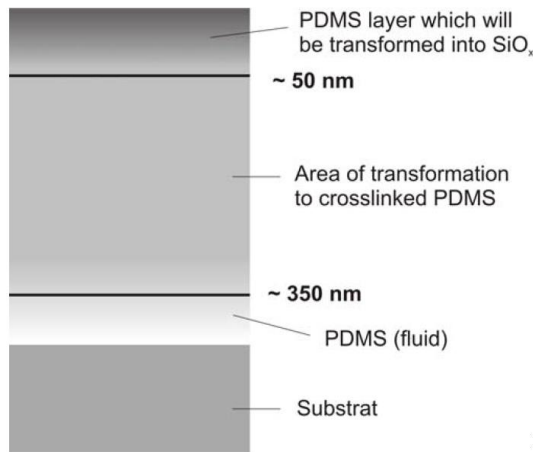
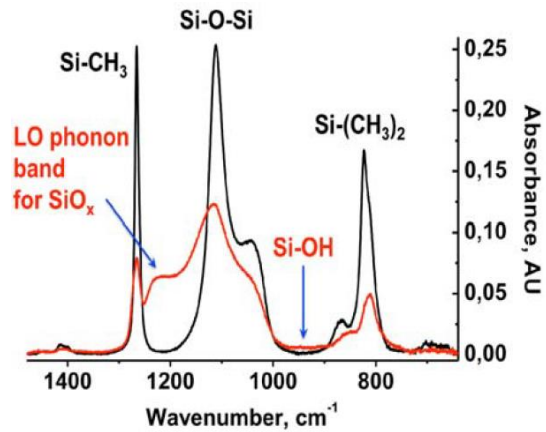
SIMS

Former use of liquid phases in plasma-based film deposition

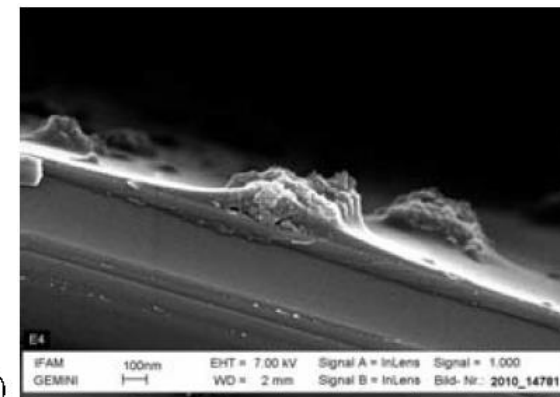
■ Plasma Curing of PDMS



a)



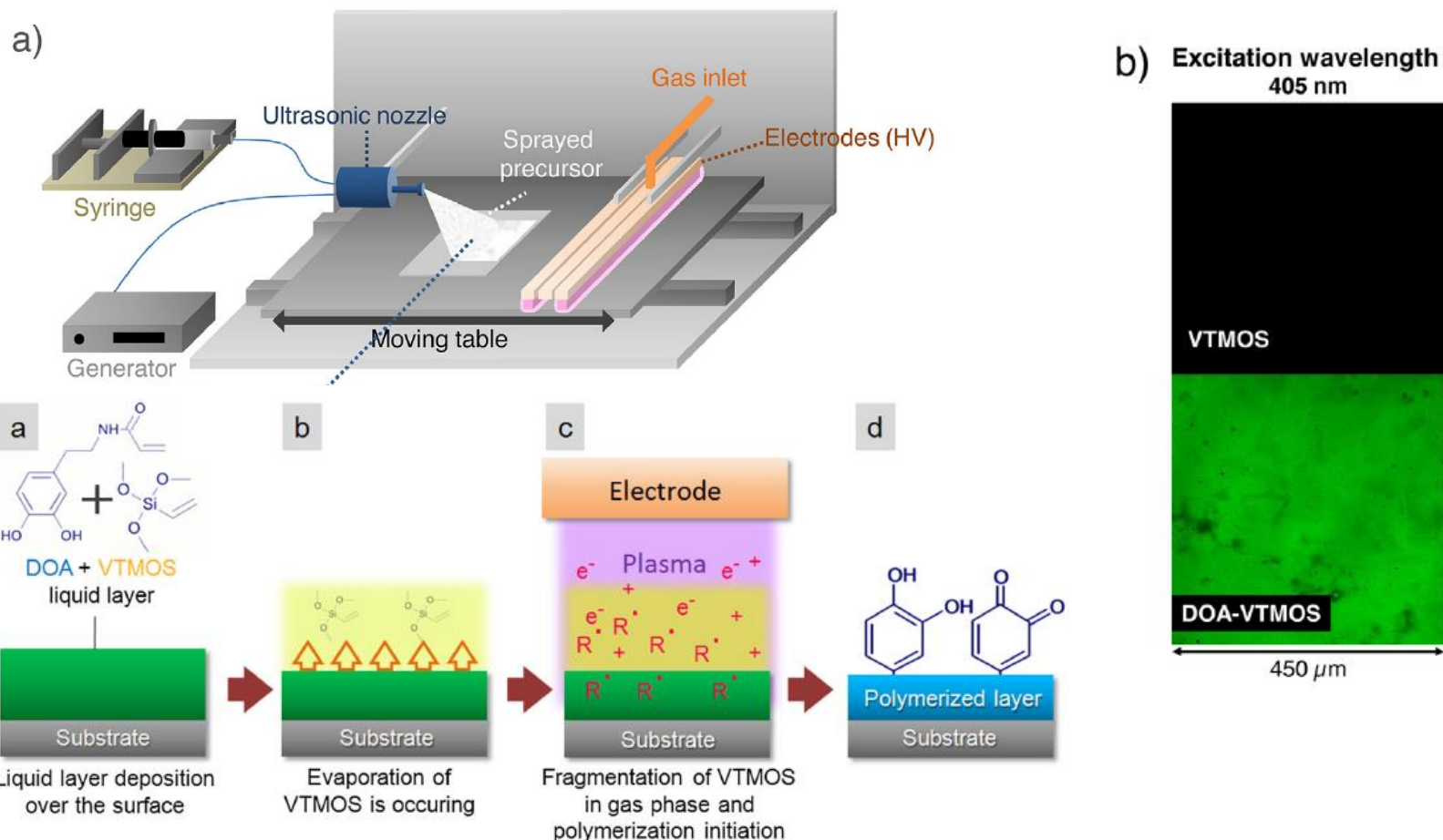
b)



c)

Former use of liquid phases in plasma-based film deposition

■ Liquid Assisted – Plasma Enhanced Chemical Vapour Deposition



Plasma-Enhanced Chemical Solution Deposition

