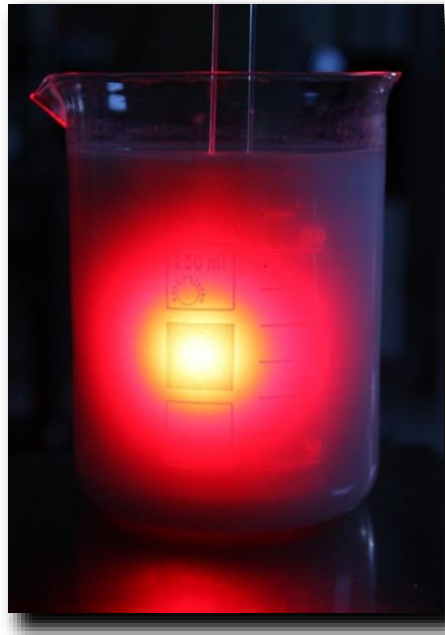


Process Analytics for Highly Turbid Materials: Photon Density Wave Spectroscopy



Dr. Anika Krause, Dr. Roland Hass, PDW Analytics GmbH, Potsdam, Germany

PDW spectroscopy applications



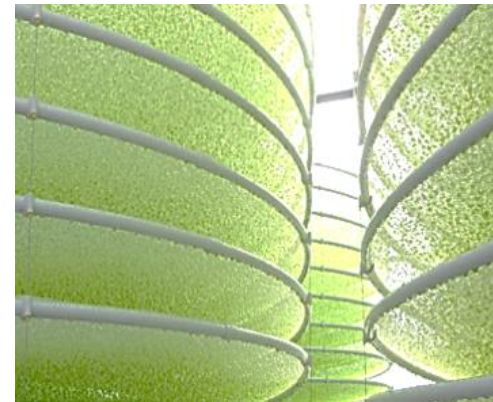
Chemistry



Food

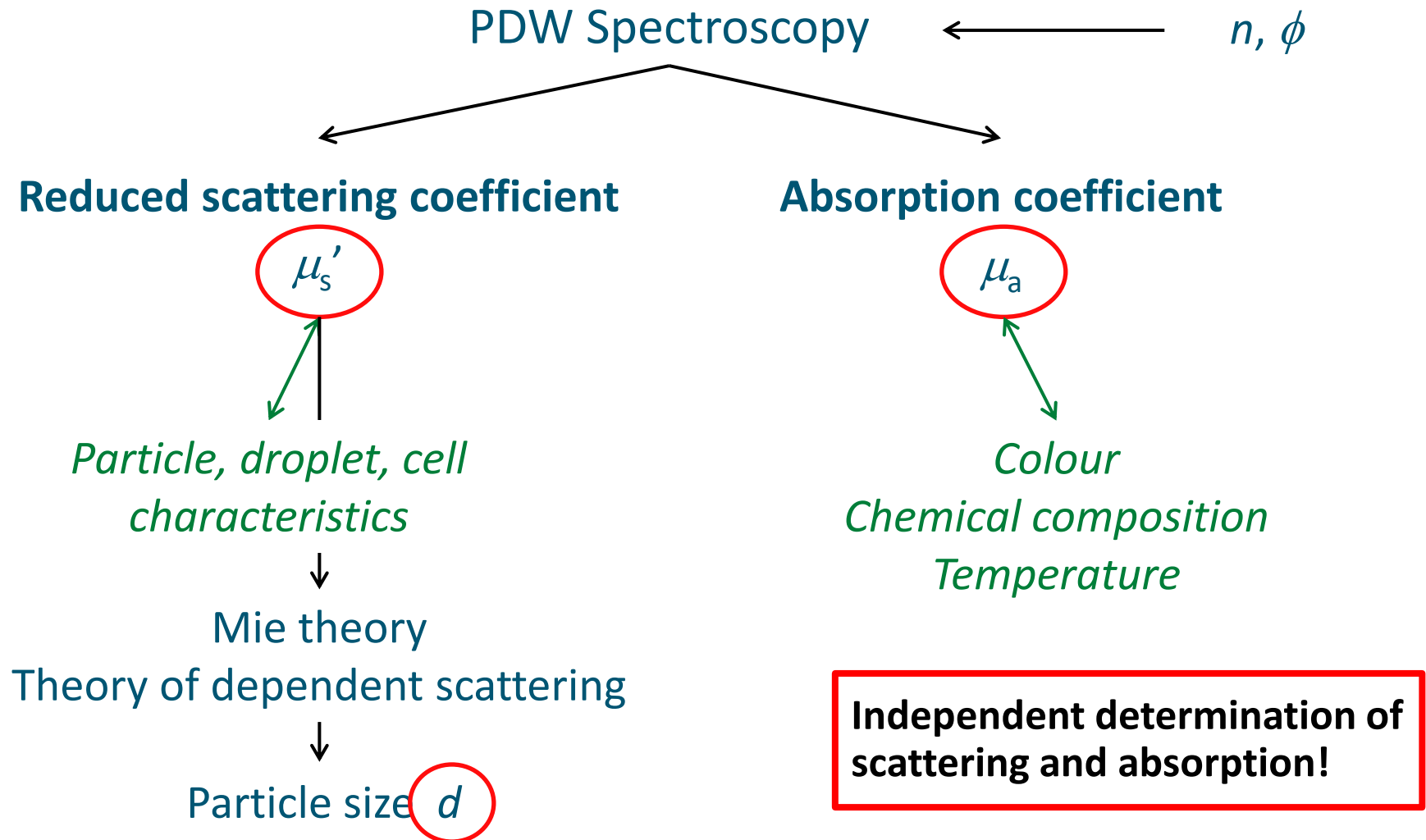


Cosmetic

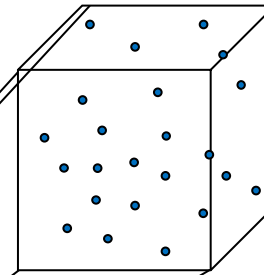
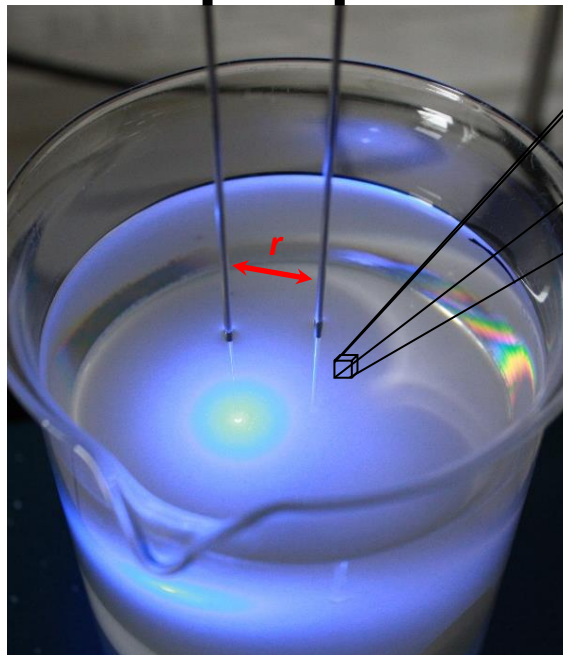
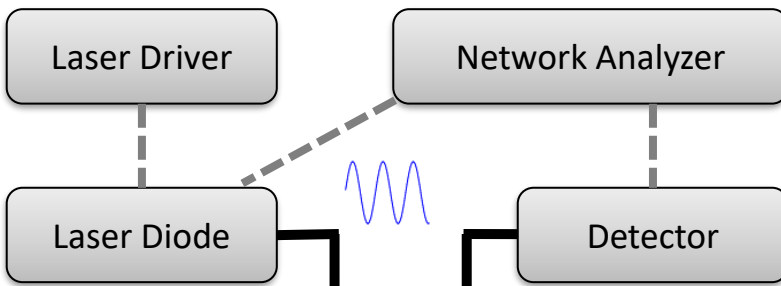


Biotech/Medicine

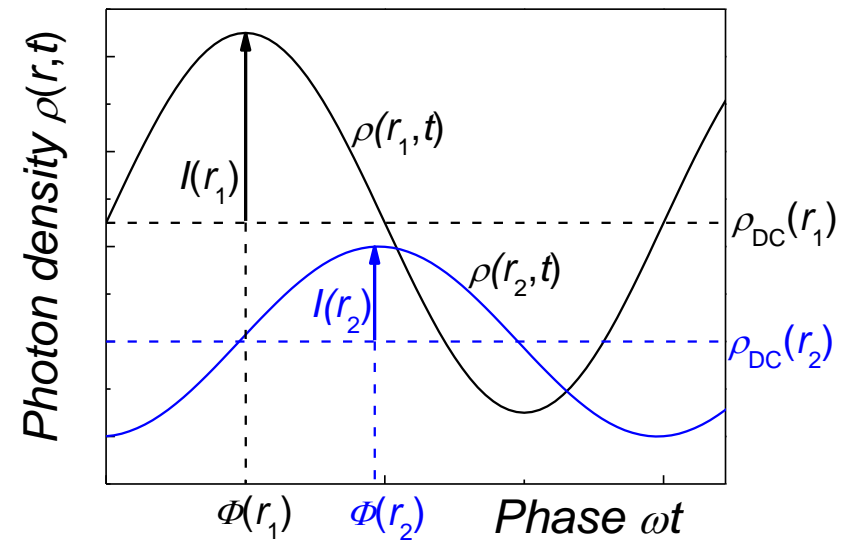
The technology: Photon Density Waves



The technology: Photon Density Waves



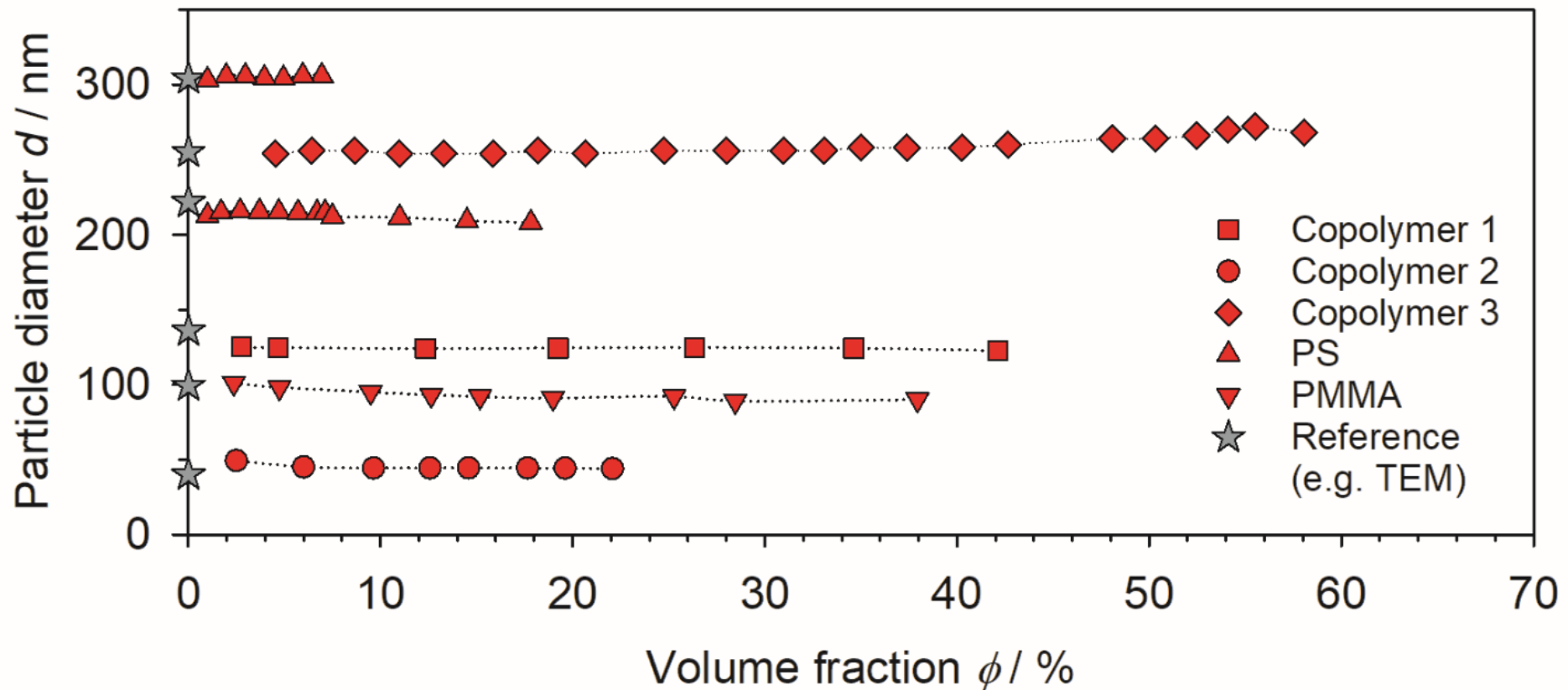
Photon Density =
number of photons
per volume



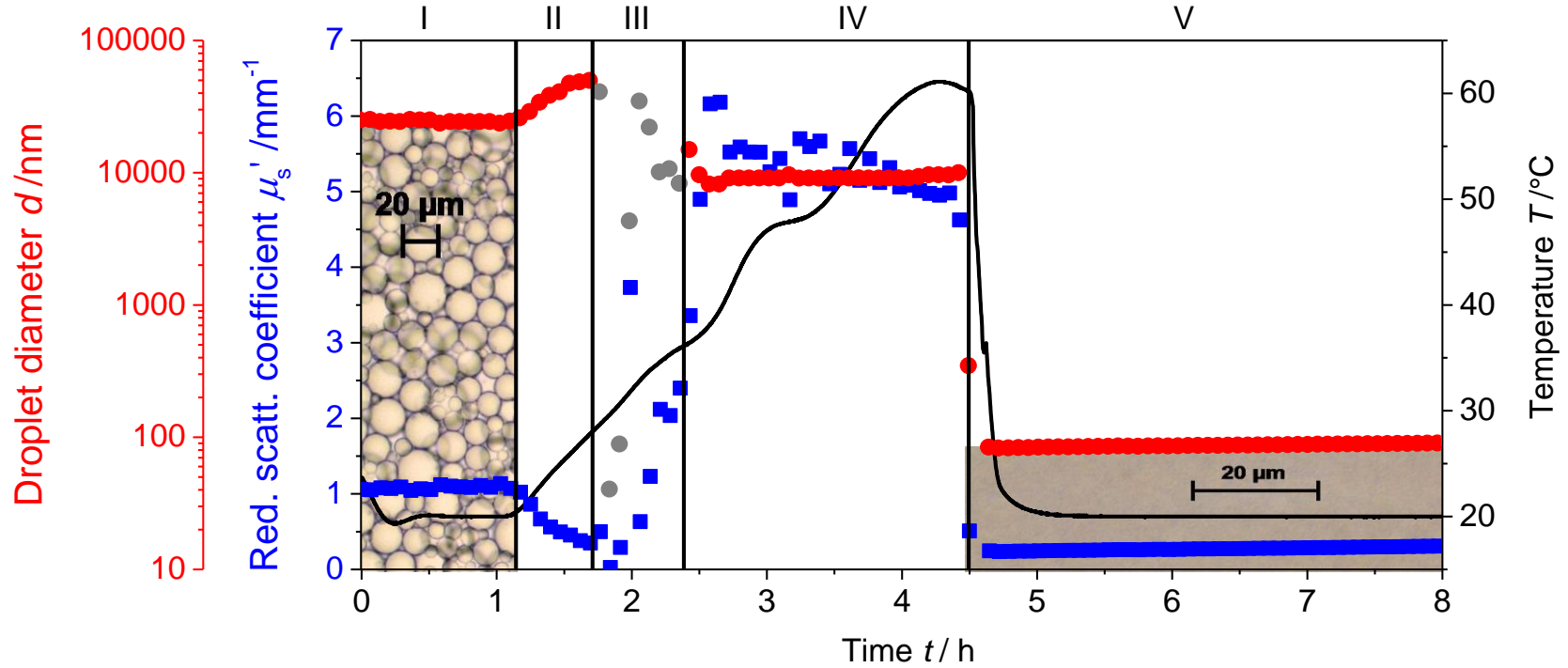
The benefit: Dilution free inline particle sizing

e.g. polymer latices (homo- and copolymers):

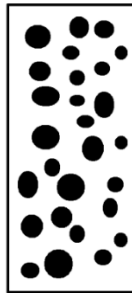
Particle size measurements independent of concentration



The benefit: Inline process monitoring PIT emulsification



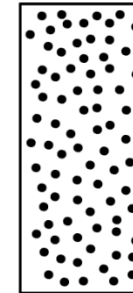
20 vol% isohexadecane



oil in water
micro



water in oil
micro



oil in water
nano

Münzberg, Hass, Reich, *SOFW J.* 4, 38-46 (2013)

The company

- Founded 2013 as spin-off from Potsdam University
- Aim:
 - Transfer of PDW technology from university lab into „real world“
 - Commercial source of PDW spectrometers
- Coolest current project: “NanoPAT” by HORIZON 2020
- Great people pushing the technology development



Roland



Anika



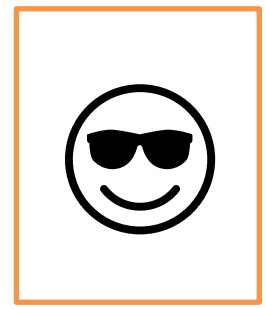
Marvin



Tobias



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Paul

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