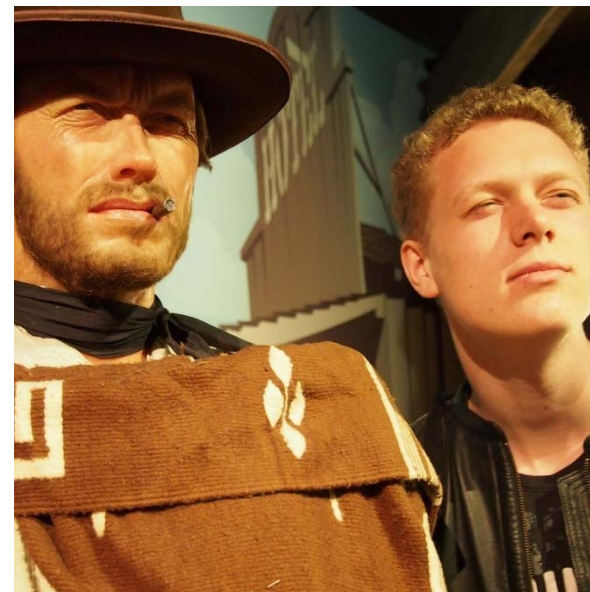




Casper Vindahl Jensen, PhD 2  
Department of Chemistry  
Vibrational and Electronic Spectroscopy

“One of the basic requirements of being a sprinter is being a biped!” –Norm Macdonald

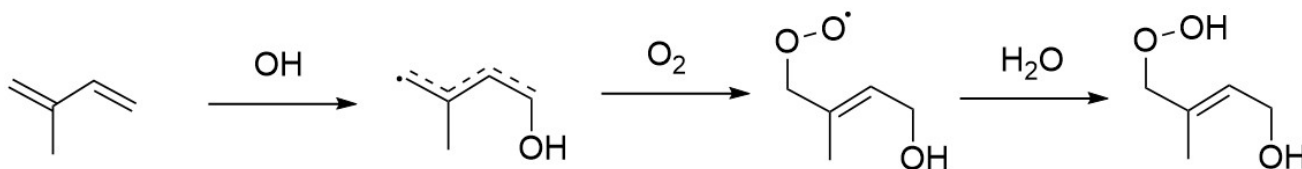
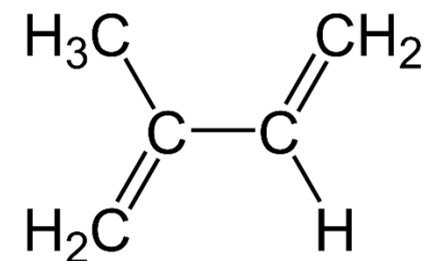
- Spectroscopy
  - Spectrometry
- Identify compound  
→ Buy it  
→ Learn everything about it  
→ Look for it elsewhere



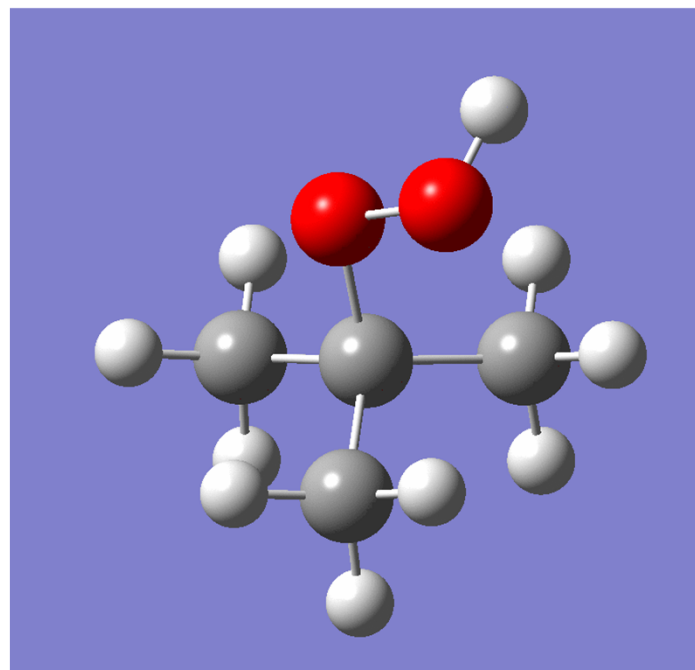
## Isoprene – Its everywhere!

1150 Tg C /year from biosphere

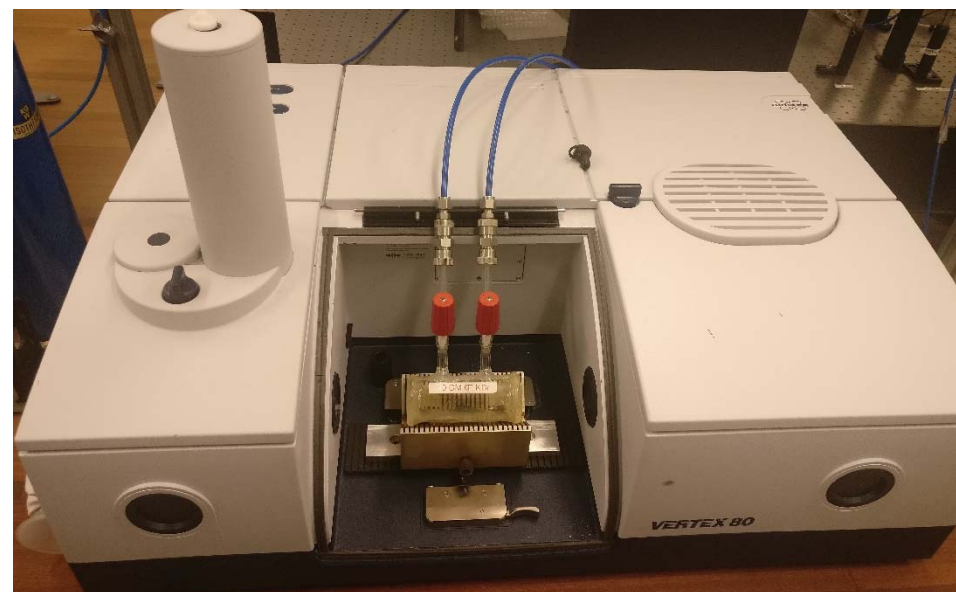
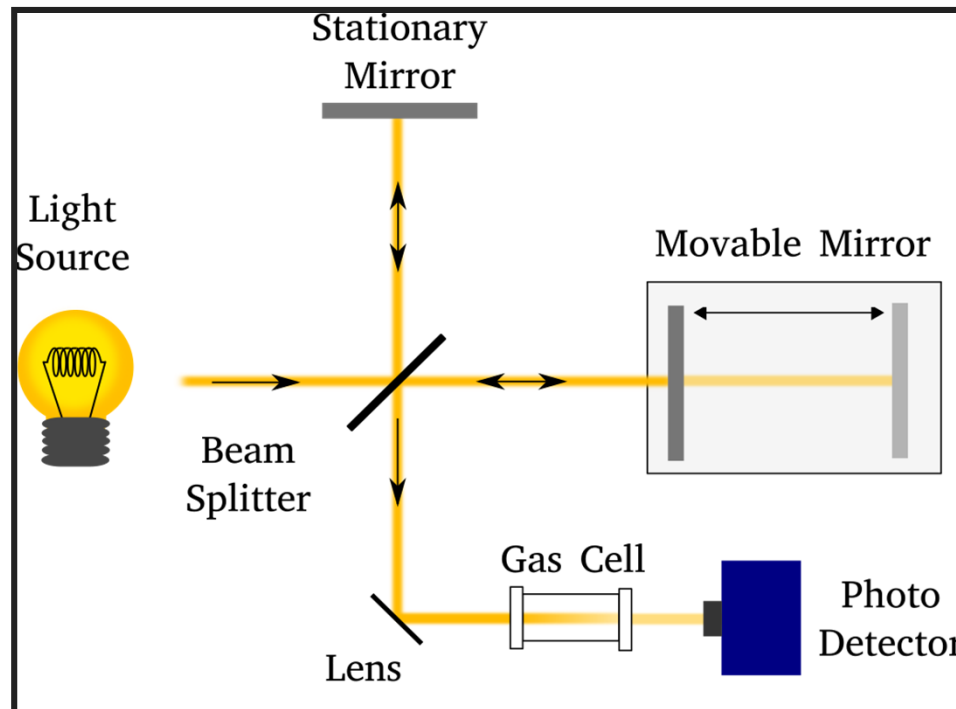
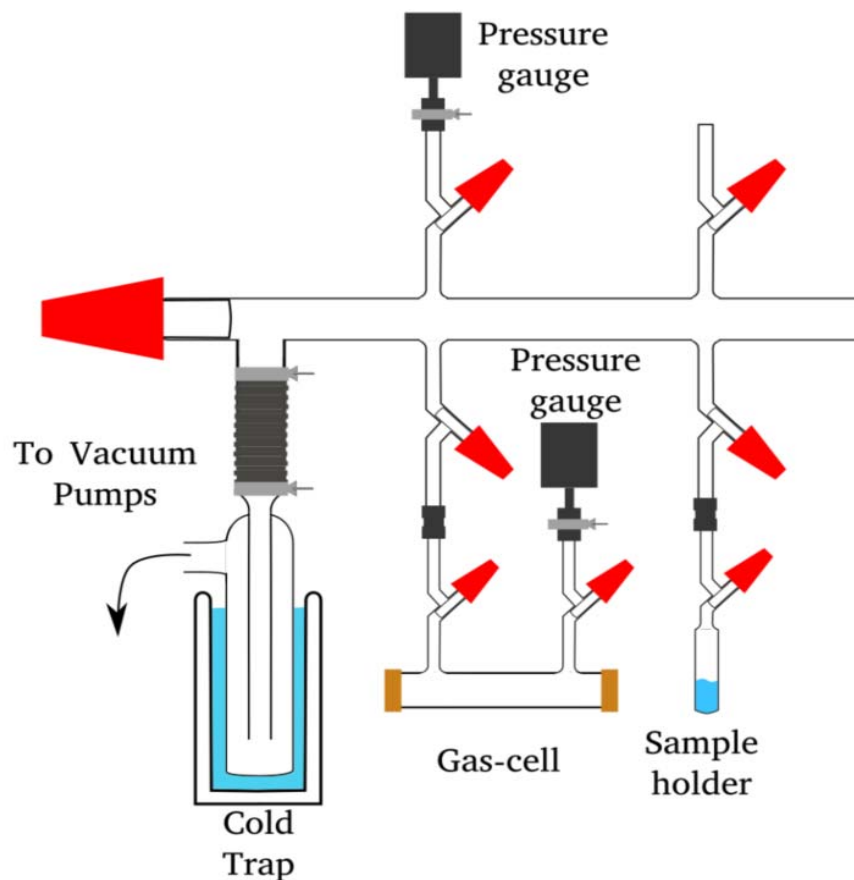
→ Isoprene 44%

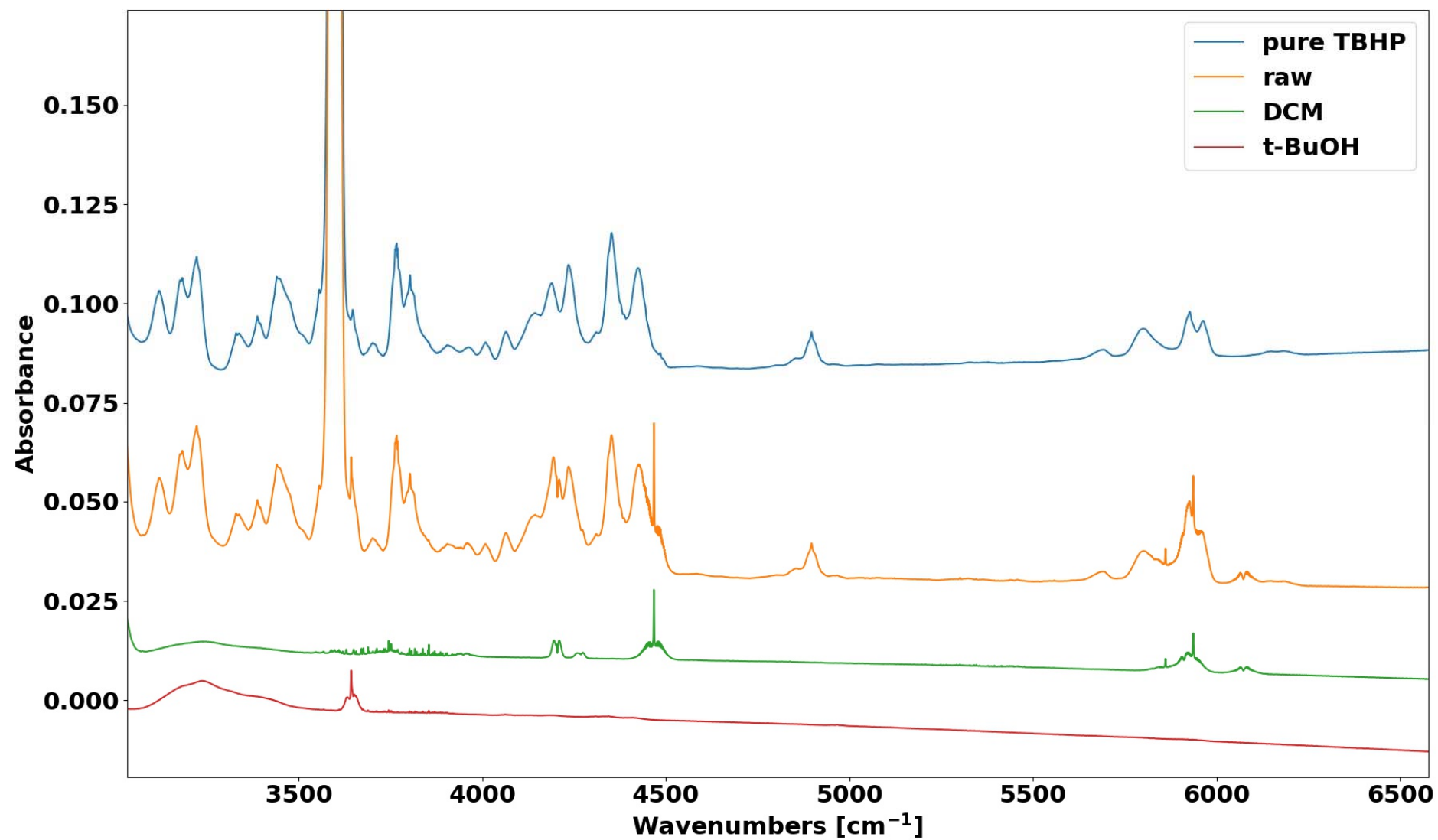


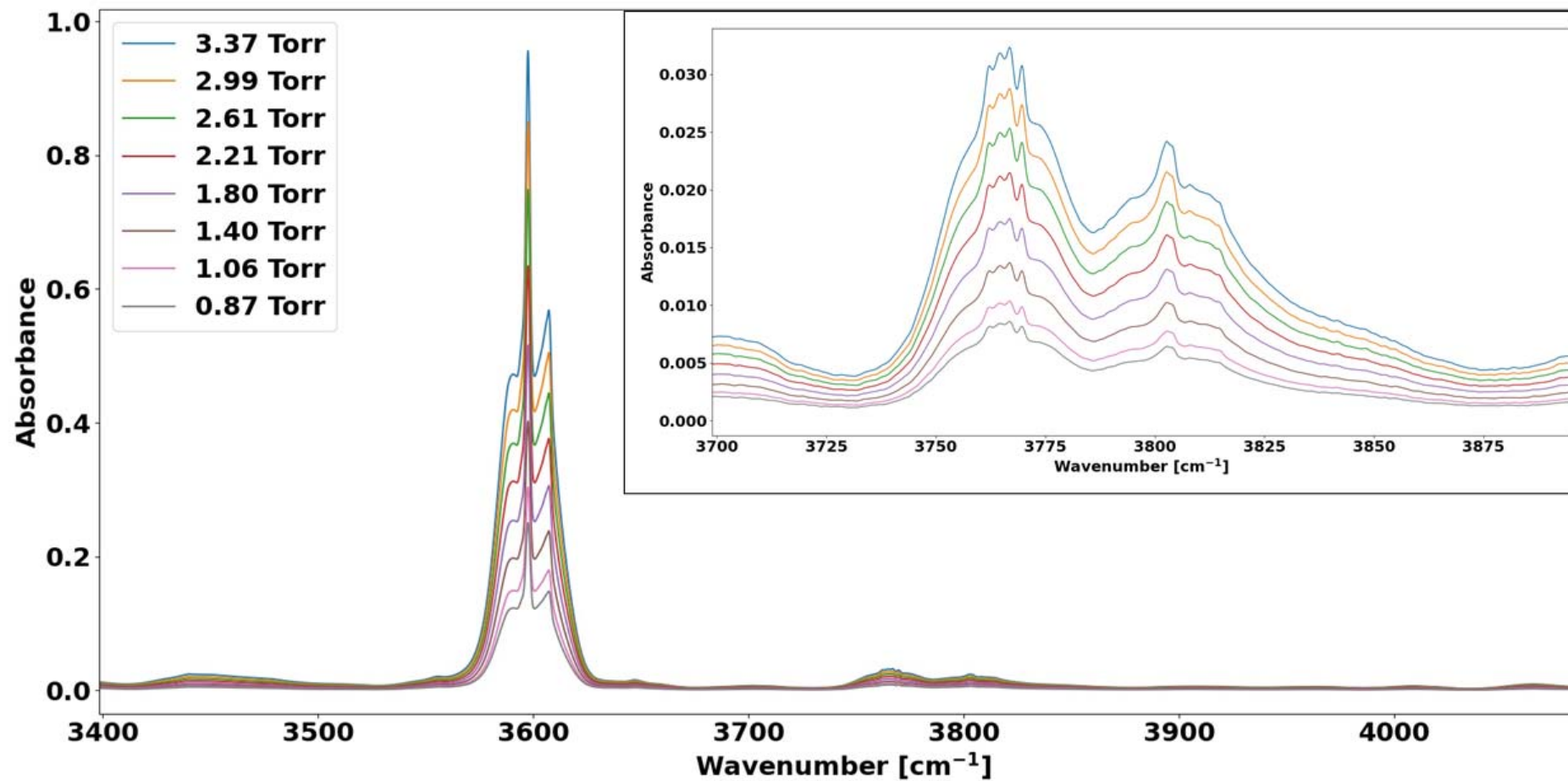
- Isoprene → biomarker?
- Oxidation products?



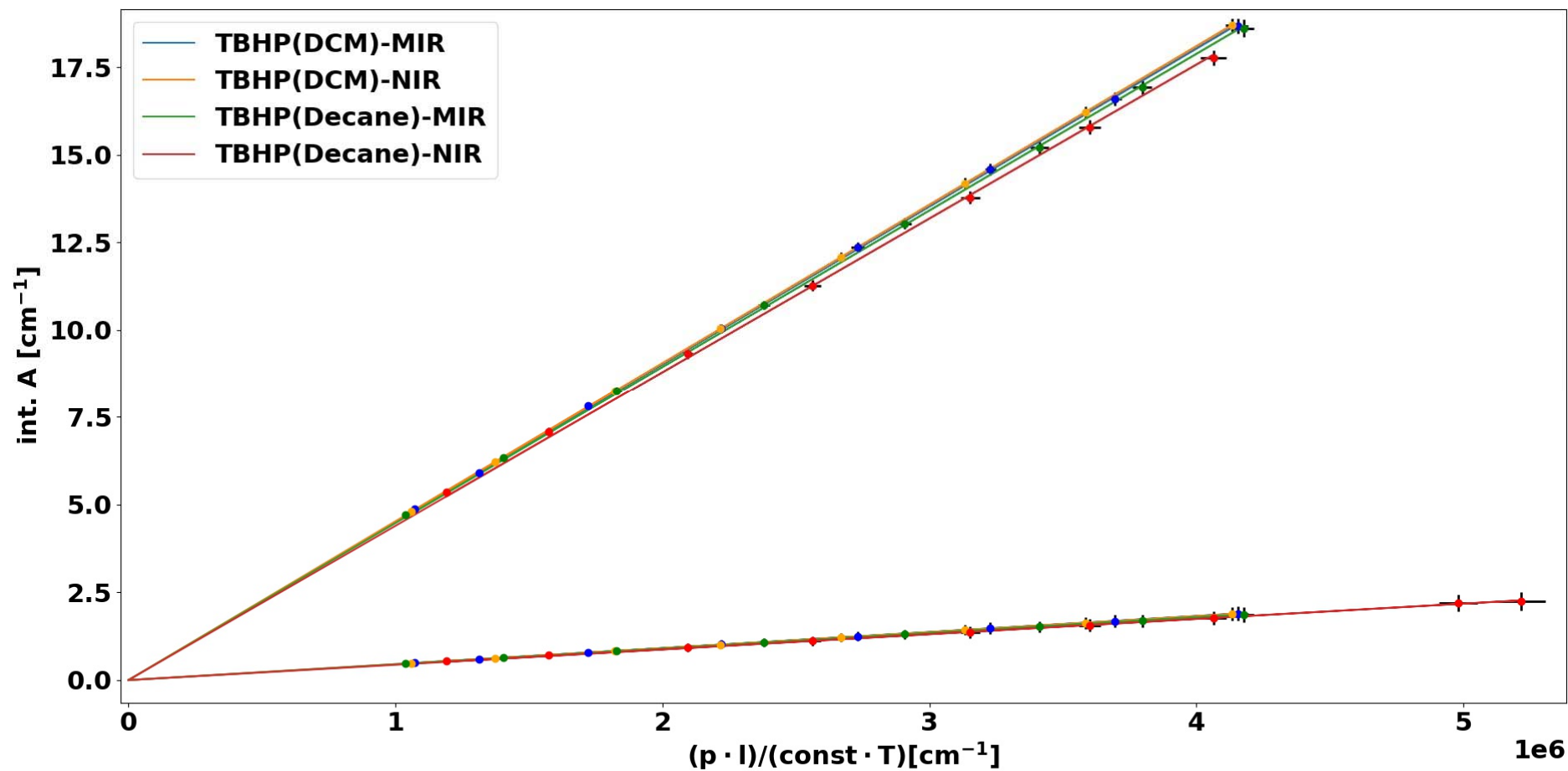
# Spectroscopy Vac-line and FT-IR







Fit  $\rightarrow$  Find oscillator strengths  $\rightarrow$  Quantities!



Cavity Ring-Down 10000-16000  $\text{cm}^{-1}$  (Higher Overtones)

"Effective pathlength" = 15 km

