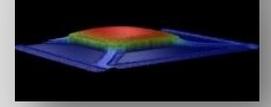
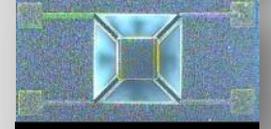
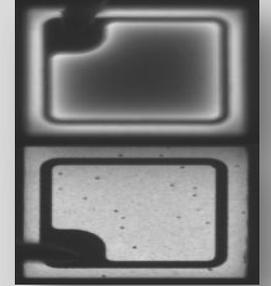
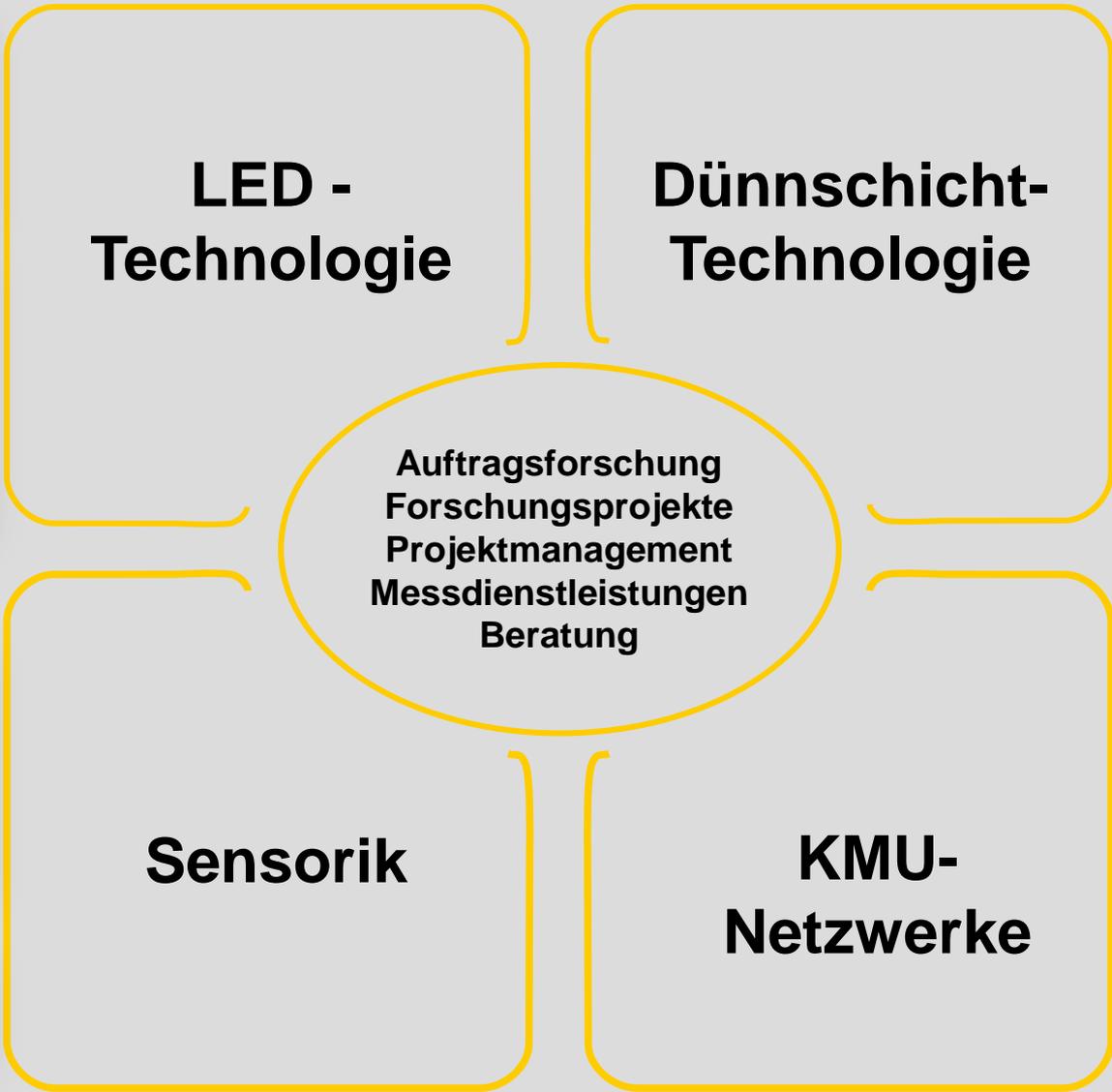
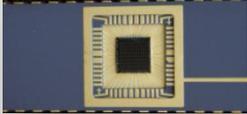
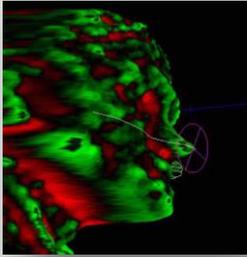
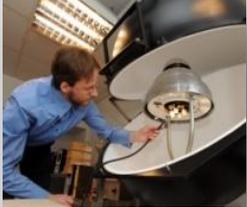


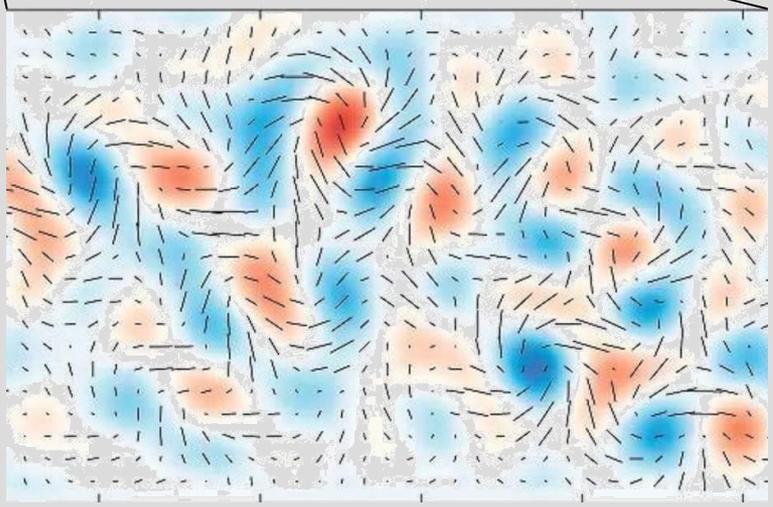
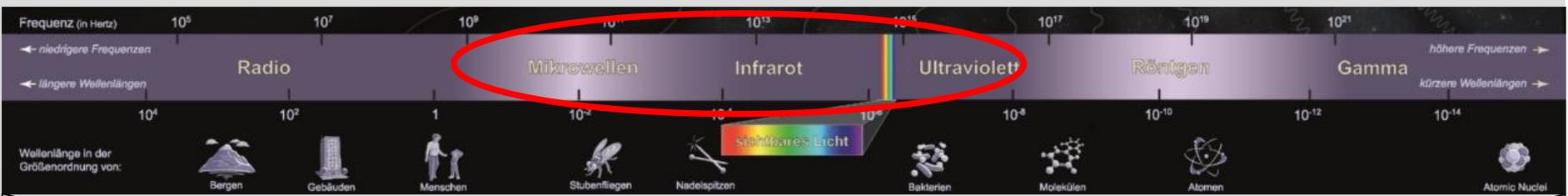


Biooptischer Sensor für alle Arten von Wasser

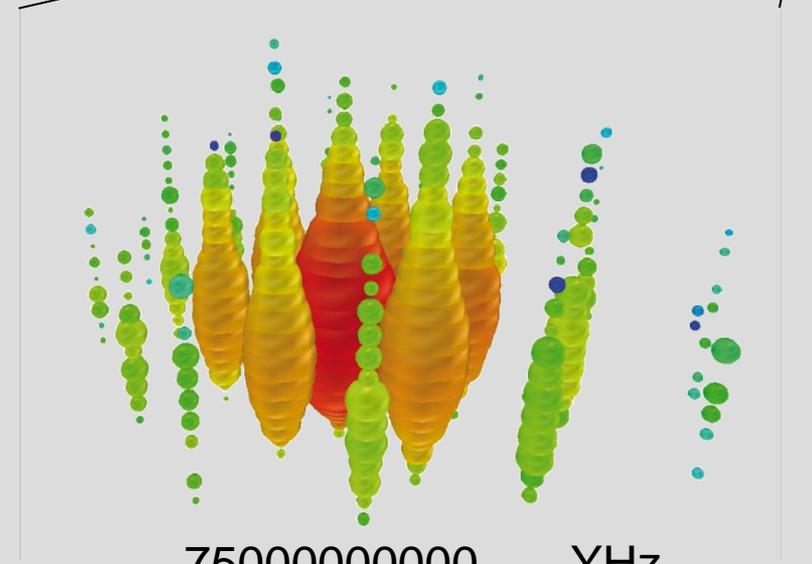
Anwendungsnahe Ergebnisse
08.03.2022



Das elektromagnetische Spektrum



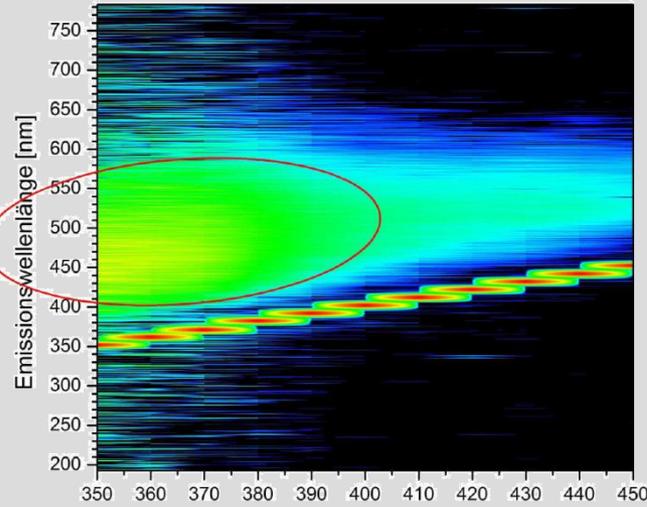
700 fHz
 4,3 Ym
 0,00000029 yeV



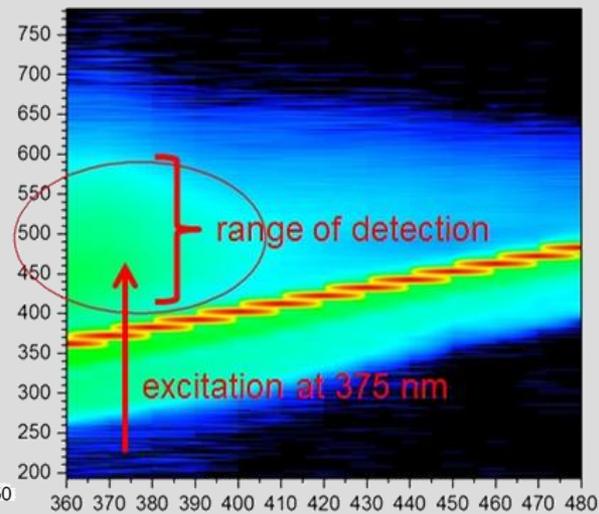
75000000000 YHz
 0,004 ym
 300 EeV

Der Biooptische Sensor – Fluoreszenz

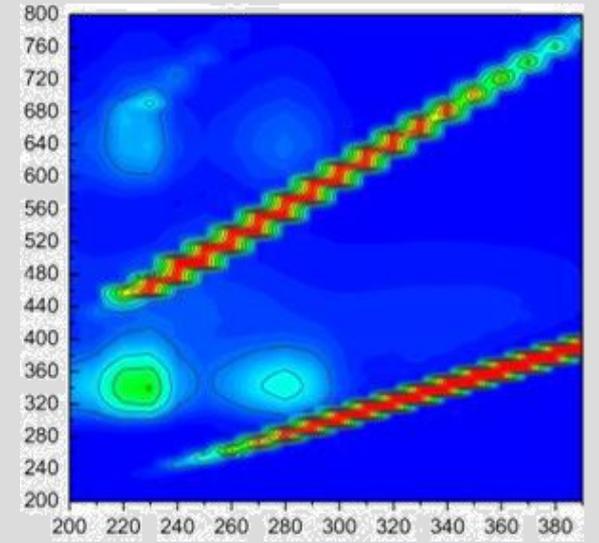
Pseudomonas fluorescense - 1mal autoklaviert - zentrifugiert



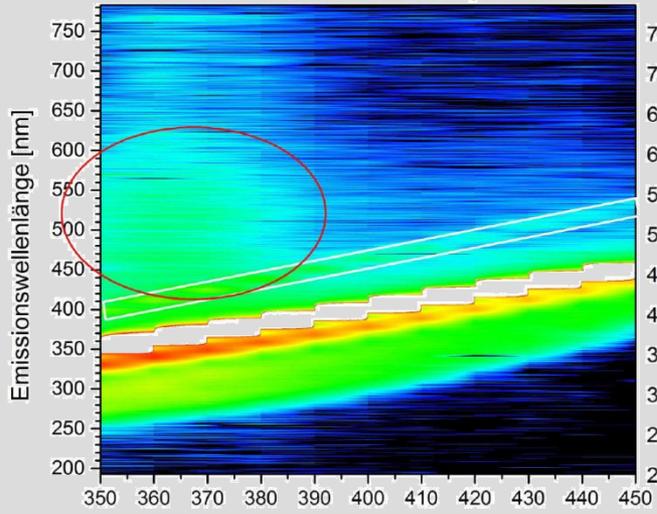
Pseudomonas aeruginosa



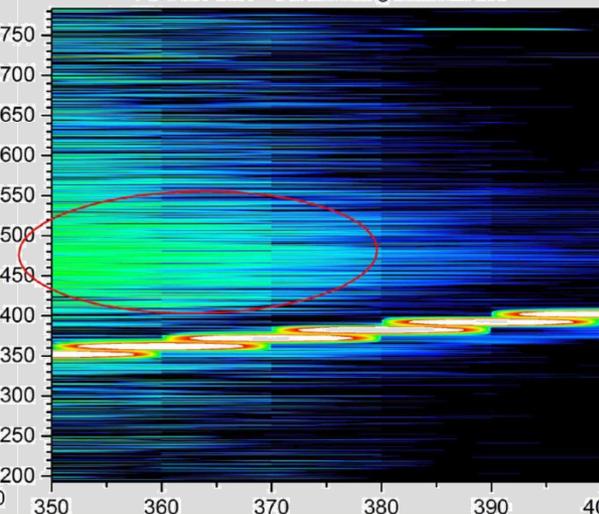
L. pneumophila



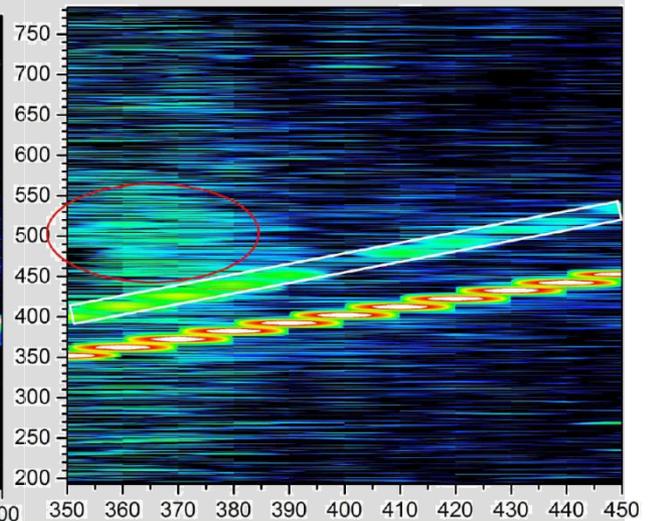
E. Coli A151 - Verdünnung



E. Coli A151 - Verdünnung autoklaviert



0.9% Kochsalzlösung



Biooptische Sensor – Anwendungsbereiche

Pseudomonas fluorescense - 1mal autoklaviert - zentrifugiert



Pseudomonas aeruginosa



L. pneumophila



E. Coli A151 - Verdünnung



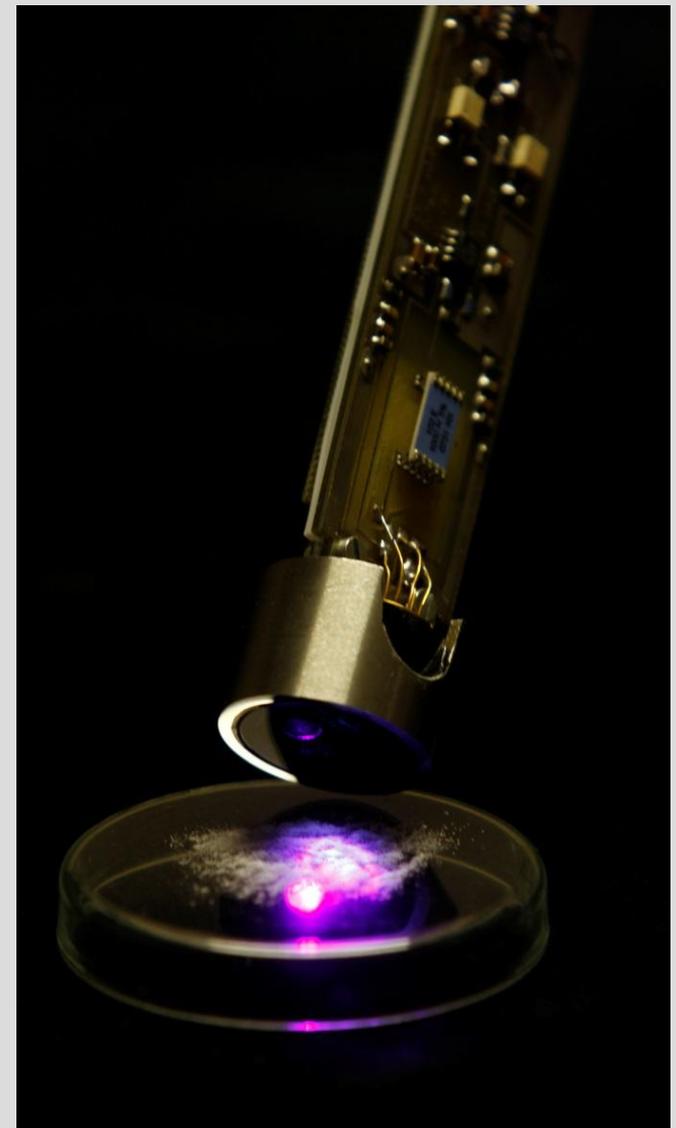
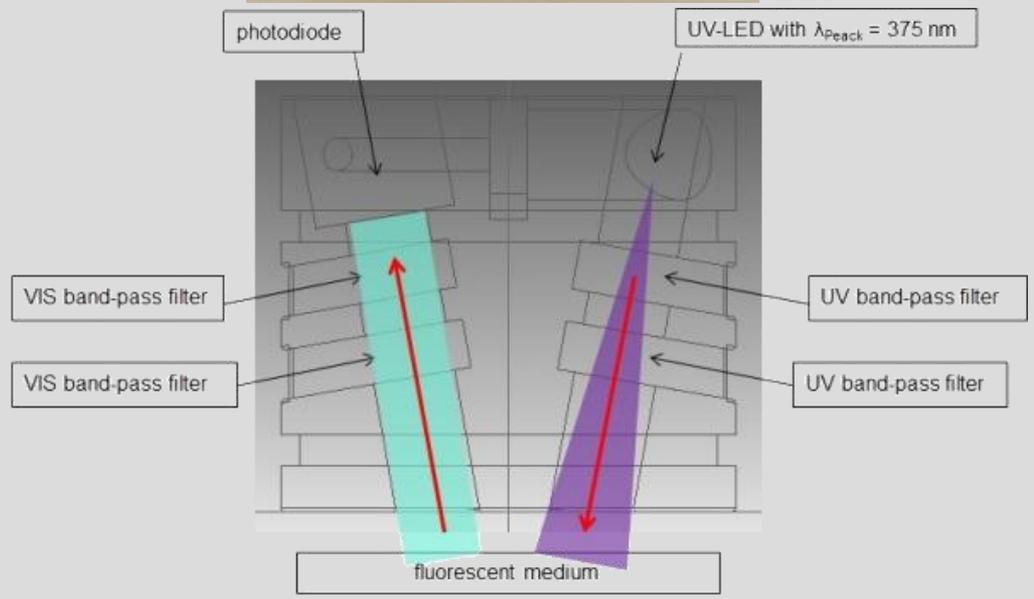
E. Coli A151 - Verdünnung autoklaviert



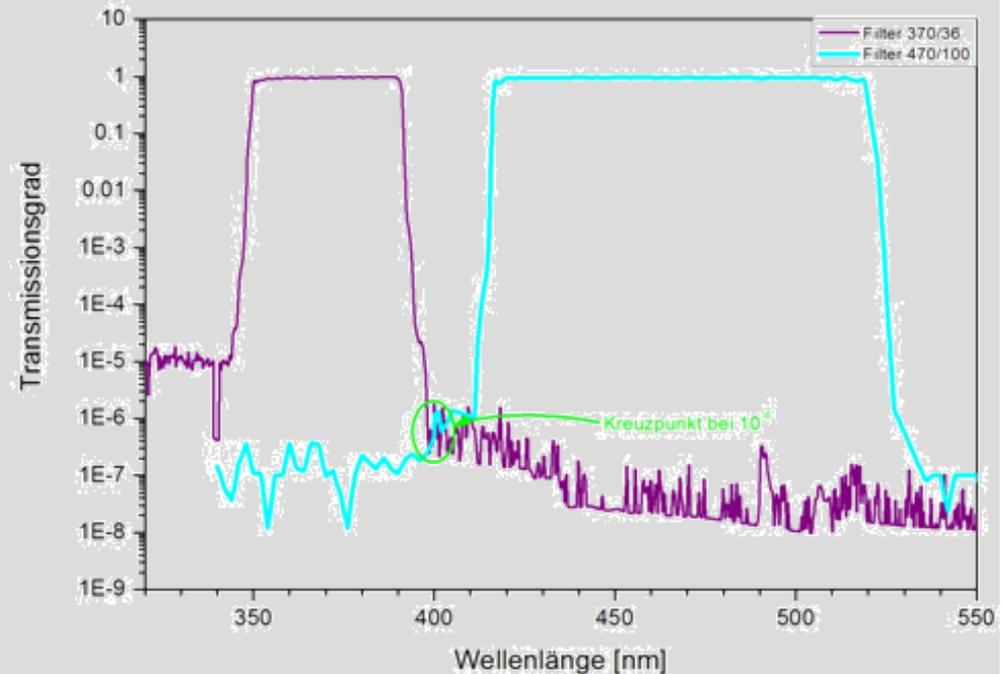
0.9% Kochsalzlösung



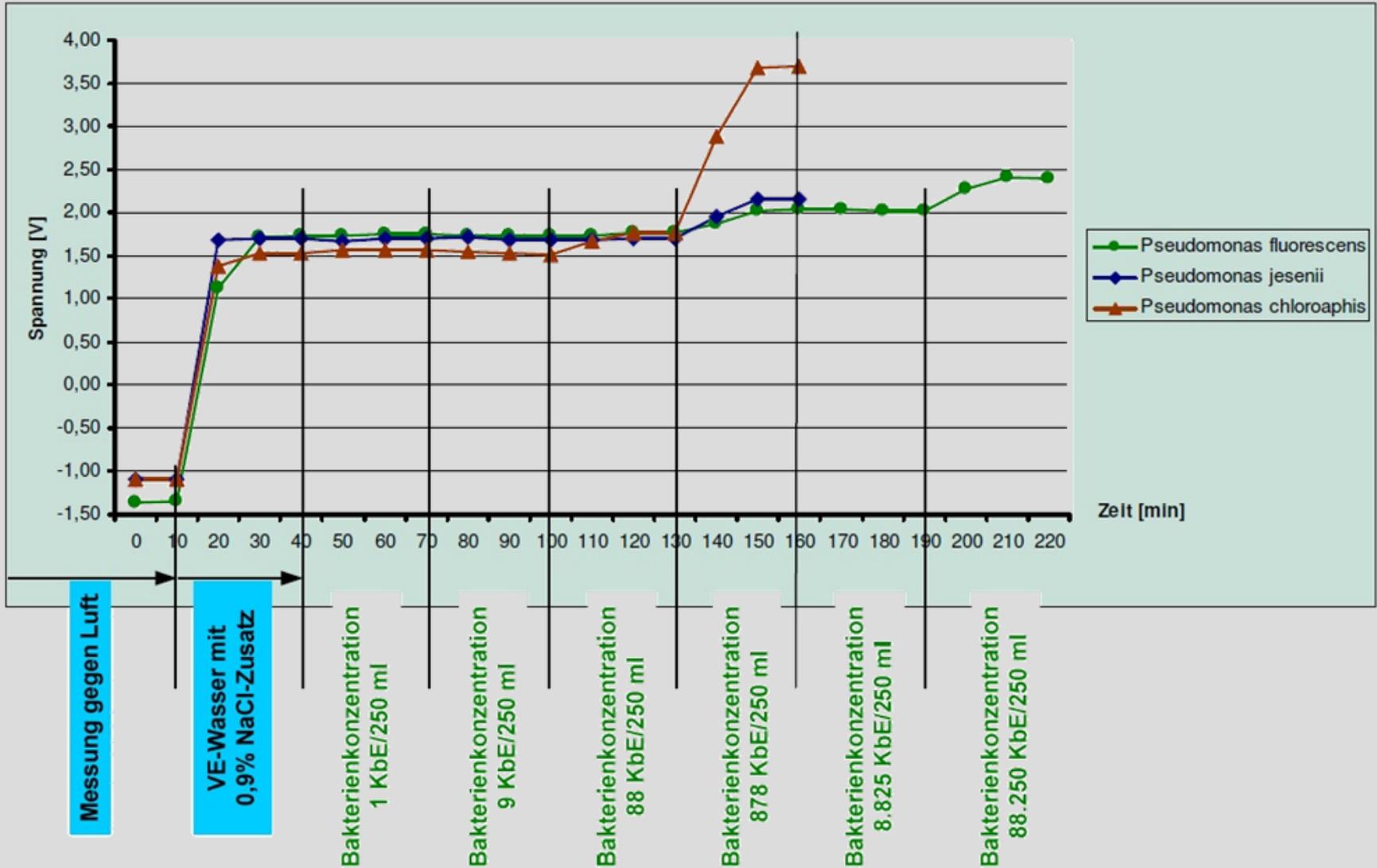
Der Biooptische Sensor – Der optische Aufbau



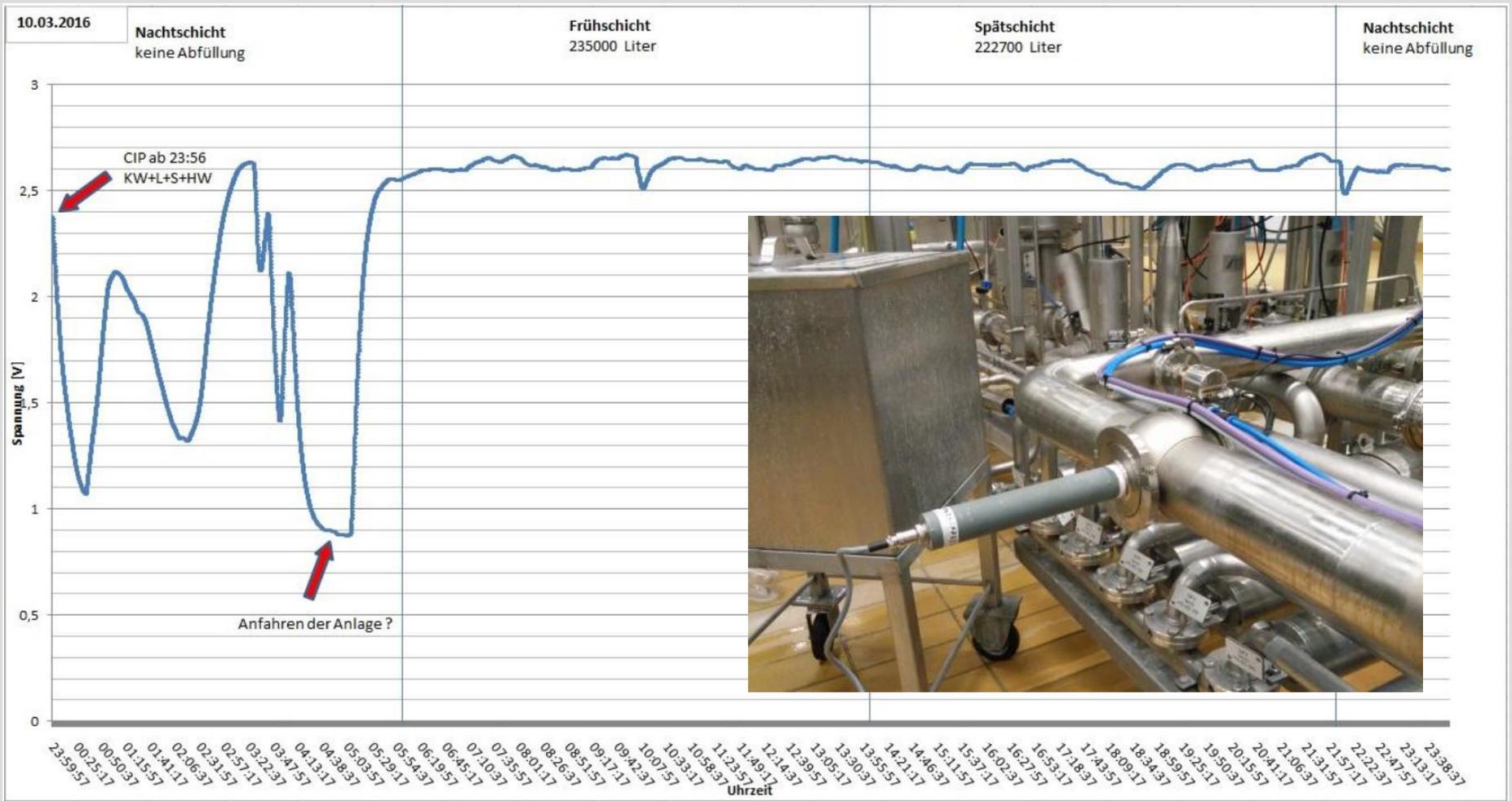
- Anregung 275 - 375 nm
- UVED, $P_{opt.}$ 5 - 150 mW
- Detektion oberhalb 405 nm
- Photodiode empfängt mind. 5 fW
- Vier Bandpassfilter mit ca. 10^{-20}
- Boxcar-Integrator 10^{13} bis 10^{15} A/W
- Zeitkonstante 100 ms bis 10 Min.
- Länge 25 cm, Durchmesser 1''
- Borosilikat oder Saphirglas-Fenster
- Einzelkosten unter 1 k€



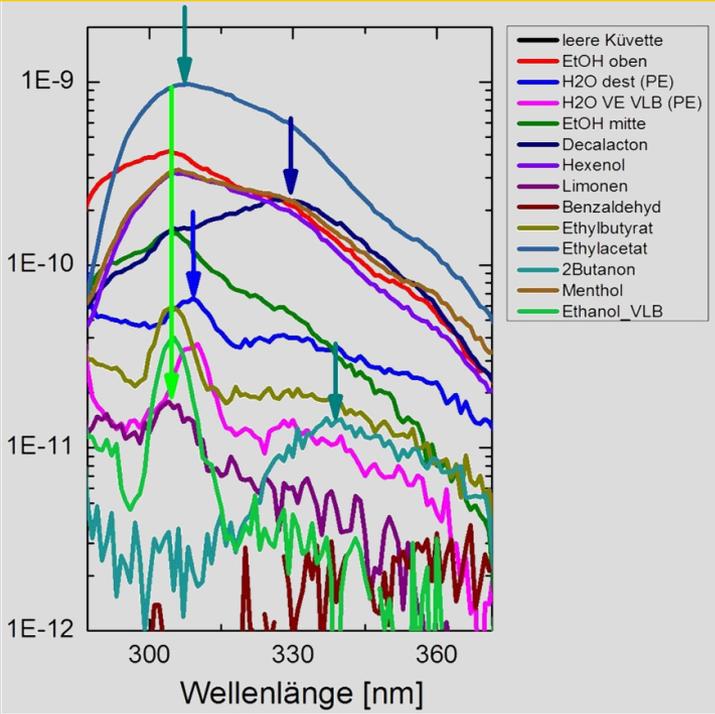
Der Biooptische Sensor – Im Labor



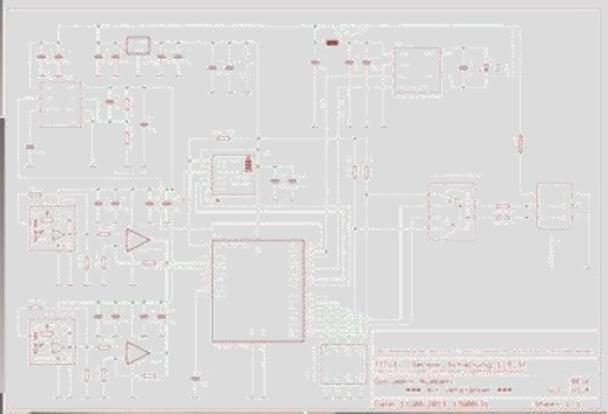
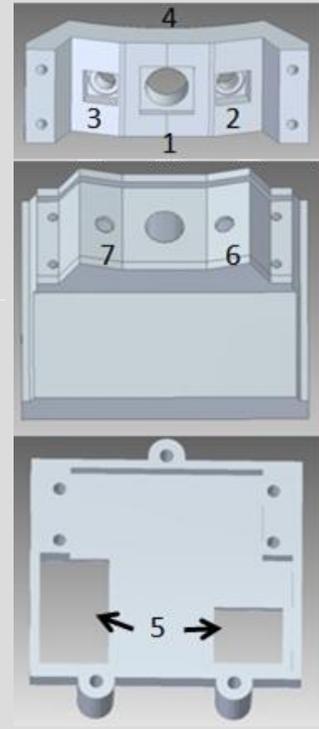
Der Biooptische Sensor – Im Feld



Weitere Spektralbereiche: 280 – 700 nm



Galvanik-Elektrolyt-Verbrauch analysieren



Phytolux-Sensor, Lipidanteil in Algen



Aromaverschleppung in der Getränkeindustrie

Vielen Dank für Ihre Aufmerksamkeit!



Kontakt

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