

qcoat

Maker of
Selective Performance Membranes

qCoat GmbH, Leipzig, Germany

Industrya • Investors Pitch • Sep 2023

qcoat

strictly confidential

Membrane Filters

omnipresent across many industries

picture credits: 3m.com, evoqua.com



Biotech & Pharma



Food & Beverage



Water Supply



Chemical Processing



General Process Water



Power Generation



HiTech & Research



Municipal & Industrial Wastewater



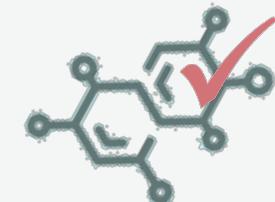
Aquatics & Pools

identified by European Commission as key enabling technology

Problem - Our Solution

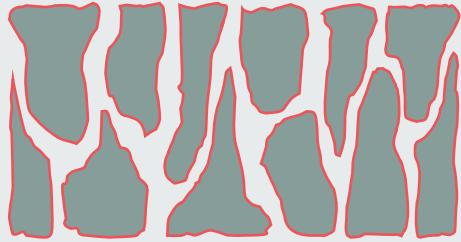
standard membrane filters turn target selective

- current biotech liquid processing technology impedes break-through of **antibody & protein mass production**
solved by target selective purification
- **operating** membrane filters **is energy intensive**
solved by high performance membranes
- **water body** increasingly burdened with **micropollutants**
solved by target selective degradation



Technology Platform for Membrane Functionalization

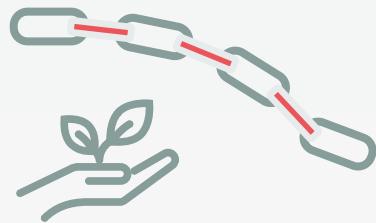
qCoat's patented electron beam grafting



fast electrons
penetrate membrane

active area
20x

lifetime solution



eco friendly



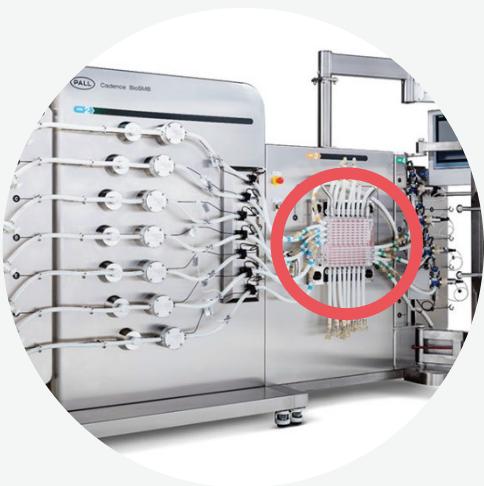
chemical toolbox

functional groups,
large bio molecules,
enzymes, proteins, etc.

Case - Biotech Fluid Processing

purification of antibodies, biomolecules and food proteins

picture credits – Pall Inc.



qCoat's chromatography membranes

- **10x productivity** over competing resin separation technology
- **process simplicity**
- easy scaling

qCoat membrane USP

- first mover advantage in affinity & bio-catalytic
- full spectrum supplier for ion exchange

Case - Water Filtration

solution for the elimination of micro and nano-pollutants



qCoat's high performance membranes (Hy2F[®])

- 25% less energy demand
- **2x flow rate**

qCoat's membranes **eliminate**

- microplastic
- **pharmaceutical residues**, hormones

qCoat's USP

- pollutant's chemical degradation
- during flow-through filtration

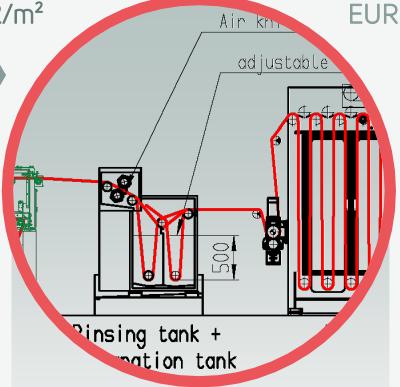
Business - Membrane Functionalization

for membrane and module manufacturers



membrane
manufacture

EUR 35/m²
EUR 12/m²



ocoat

EUR 1000/m²
EUR 300/m²
EUR 80/m²



module,
capsule

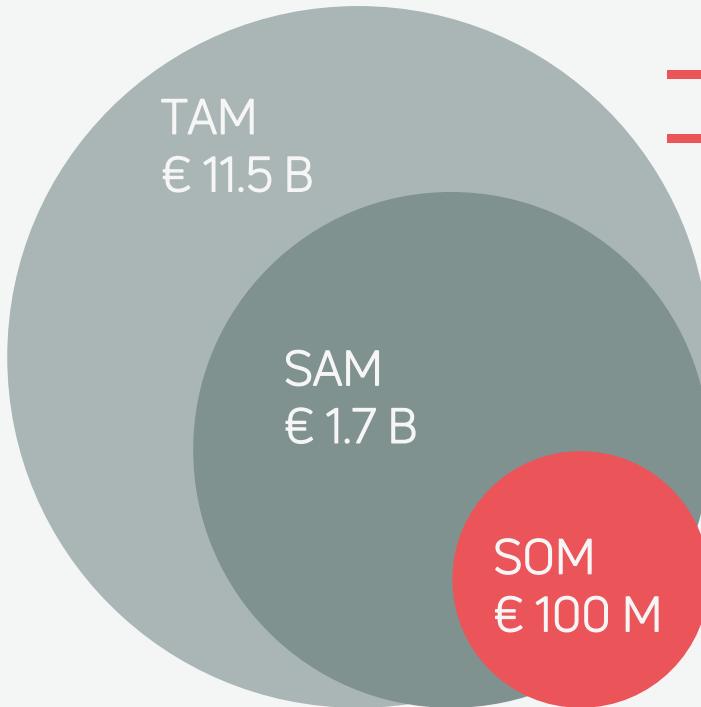


filtration
system

- direct sales and services
- product partnerships

Market - Porous Polymer Membranes

accelerated by selective performance



- fluid separation
- micro & ultrafiltration membranes

- biotech production (CAGR 18%)
- filtration of water & wastewater
- focus on EU, North America

- scale up 2028

TAM, SAM taken from several studies by Frost&Sullivan, Polaris Market Res. & others 2016-2022 and authors' calculations

Competition

membrane functionalization

methods & technologies	polymer blends	chemical coating	UV grafting	eBeam grafting
permanent coatings	😊	😢	😊	😊
all internal pores	😊	😊	😐	😊
membrane & ligands customizable	😢	😊	😊	😊
no toxic agents	😐	😢	😐	😊
manufacturing expenses	😐	😊	😊	😊
representative	Merck Millipore, Pall, 3M	Purilogics, Sartorius, Merck Millipore	3M, Pall	

qCoat only

- target selective membrane functionalization
- on third party membranes

Traction



prototypes

TRL4 – TRL7

3 patents, 2 trademarks



satisfied

returning customers
tech revenue 400 T€



pilot line

15 inch

200 meter coils



prototypes – sampling, paid trials

customers – exchange performance data, explore product partnerships

pilot line – for product qualification, roll-to-roll, inline quality control

Prepare Industrial Entry

become 1st choice in selective performance membranes

EUR 1.8 M

beachhead market
IP protection

membrane sampling
membrane sales

2021-Q2

EUR 3.5 M

sales team
expand pilot capabilit.
IP expansion

membrane sales,
qualification

2023-Q4

EUR 8.5 M

industrial entry

coating service,
membrane sales

2026

scaling

global rollout

coating service,
membrane sales,
global licensing

2028

Management and Team

many years of experience and one mission

serial hardtech
entrepreneur
since 2002

15 yrs VP finance,
COO automotive

ex-head of thin
film R&D

eBeam expert,
IOM graduate

chem. design
Uni-L graduate

ex-process dev.
Sc. Hydro Eng.



Alexander Braun
product & technology
managing director



Christian Wunderlich
finance & operations
managing director



Ivonne Stemmler
product & development
senior application engineer



Maria Krause
lab & quality assurance
chemical engineer



Chiara Dörner
membrane grafting
chemical engineer



Elias Bodner
sales & market
application engineer



qCoat

selective performance membranes

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