

# Fight Fouling with High-Performance Membrane Coatings used all across water purification and fluid separation industry

**qCoat GmbH** offers hydrophilic performance coatings applied on standard polymer membranes such as PES, PVDF, etc., targeted at **membrane manufacturers and filter module assemblers.** 

Gain a true performance based technical advantage in the market by supply enhanced filter technology, reducing costs, increasing throughput and extending total membrane lifetime.



### Hy2F Coatings Add Value for Your Customer's Satisfaction

Hy2F coatings simplify life for filter operators, boosting **filtration efficiency** and retaining process control. Engineers favour **increased throughput** and accountants return for the **lower total cost of ownership**.

## qCoat's Solution to Membrane Fouling



July 2021 OCOat

## **Grafting of Functional Molecules**

to porous membranes means the formation of **permanent atomic bonds of performance boosting molecules** on the polymer's surface - this relates to the visible areas as well as deep inside the pore's inner surfaces.

#### Our Proprietary Coating Technology - How we do it?









- select functional molecules depending on end-user's needs and application specifics
- membrane dip-coated in functional aqueous solution
- Linear curtain electron beam, covalent immobilization of functional molecules
- membranes retain their distinct separation characteristics , i.e. MWCO

## **Our Coating Capabilities**

are based on a 2<sup>nd</sup> generation **roll-to-roll grafting platform**, which unites the technology of 3 patents and more than 10 years of intensive R&D at Leibniz-Institute of Surface Engineering. Our platform coats virgin **flat sheet and hollow fibre** membranes from the **MF**, **UF and NF filtration** spectrum. All tailored towards product qualification according to your filtration needs.

## Further developments in Membrane Functionalities

grafted to membrane	product function	application
amphiphilic molecules (Hy2F)	extreme hydrophilic membrane	high permeability, lowest fouling
oxidase enzyme	bio-catalytic membrane reactor	decompose micro pollutants, pharmaceuticals, hormones
digestive enzymes	self-cleaning membranes	"filtration for amateurs"
antibacterial peptides	bacteria-killing membranes	advanced sanitation
photo-sensitizers	photo-toxic membranes against algae, bacteria, fungi, viruses	advanced sanitation
carbon nanotubes	catalyst carrier platforms	membrane reactors

## Book an Expert Consultation with qCoat Today

- \_ Dr. Alexander Braun www.qCoat.de
- \_ cell: +49 179 48 979 20 email: braun@qCoat.de,
- address: qCoat GmbH, Dölitzer Str. 18, 04277 Leipzig, GERMANY



July 2021 O COat