

HFML-FELIX een unieke onderzoeks- faciliteit op Nederlandse bodem

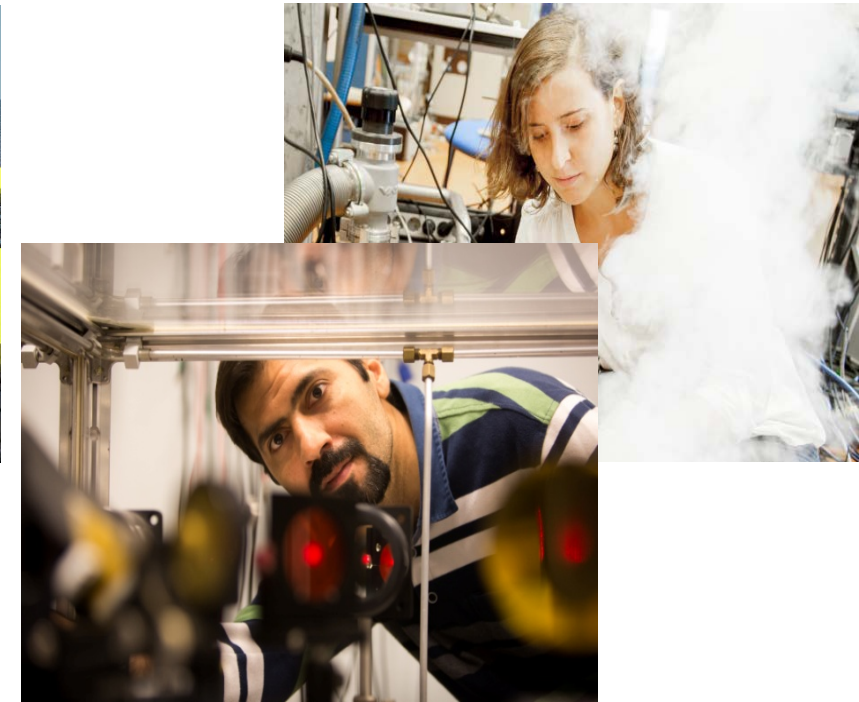
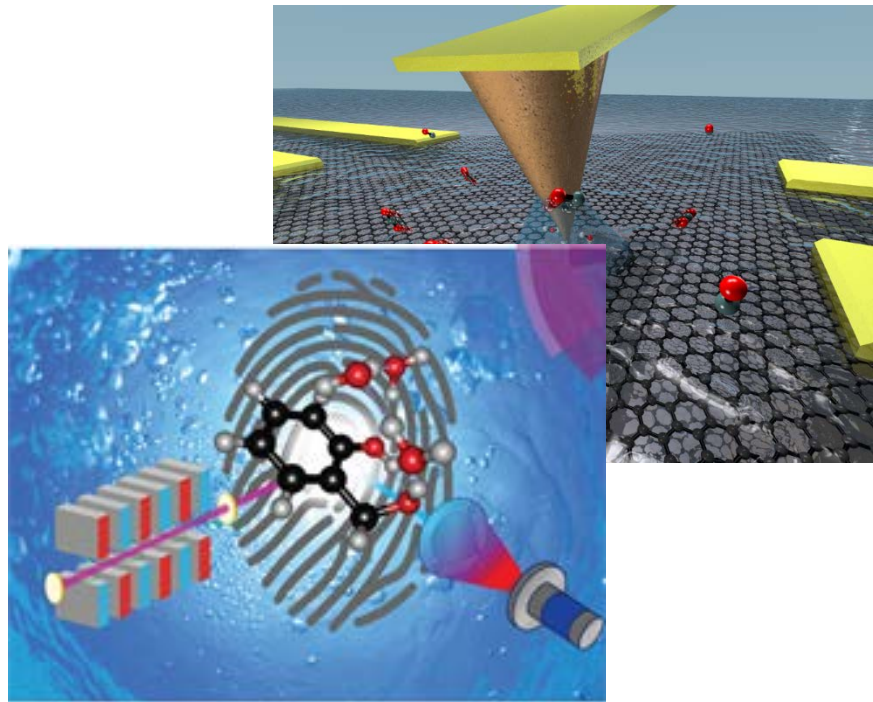
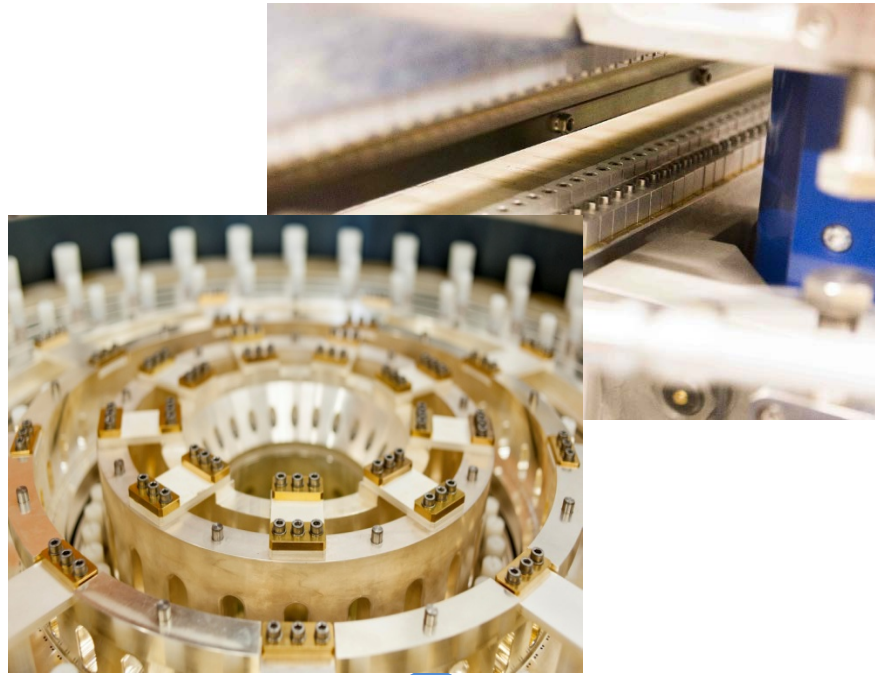
Martin van Breukelen
HFML-FELIX

Introductie

HFML-FELIX is een samenwerkingsverband van de Radboud Universiteit en NWO-I. Twee grootschalige onderzoeksfaciliteiten, die gevestigd zijn op de campus van de Radboud Universiteit



Onze Missie



Technologie

state-of-the-art magneten,
lasers & instrumentatie

Wetenschap

Sterke in-huis
onderzoeksprogramma's

Gastenprogramma

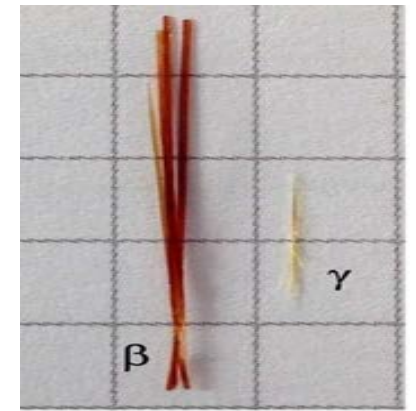
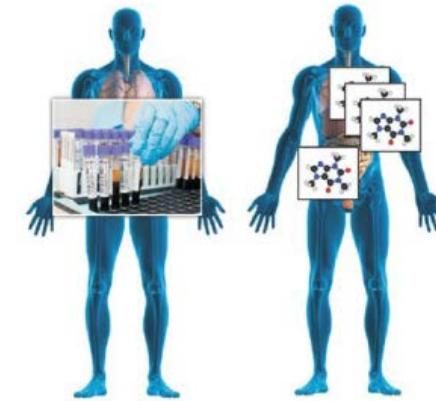
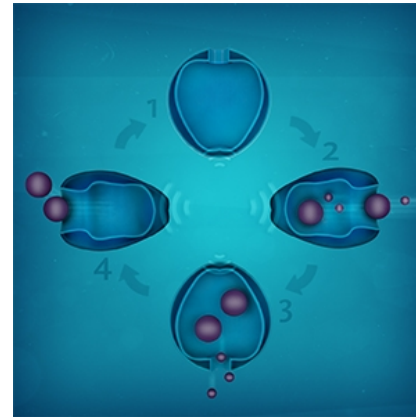
Internationaal erkende
onderzoeksfaciliteit

3 pilaren die met elkaar verweven zijn om de faciliteit optimaal te laten functioneren

Fundamenteel onderzoek & innovatie

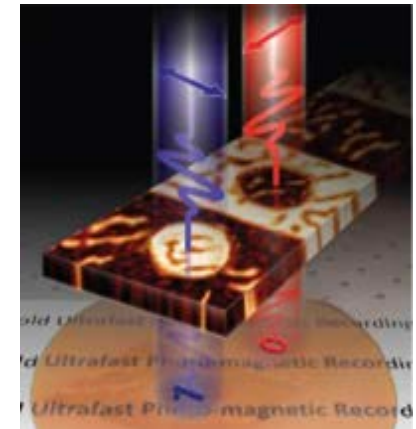
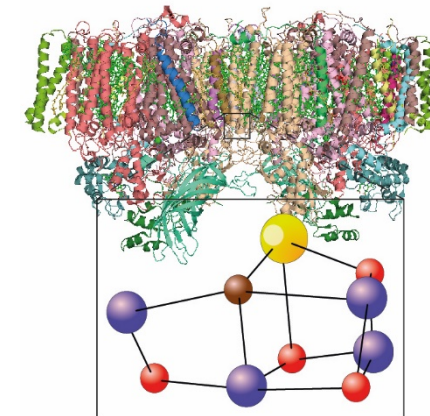
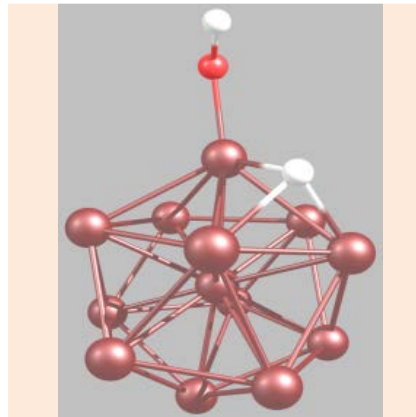
Gezondheid

- Magneet gedreven medicijnlevering
- Biomarkers diagnostiek
- Nieuwe structuren als grondstof voor medicijnen



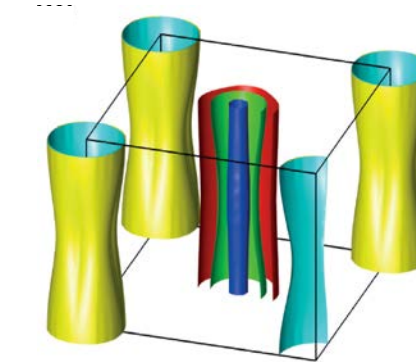
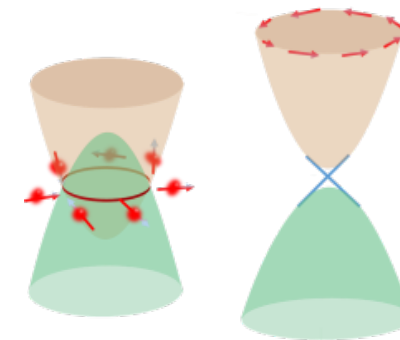
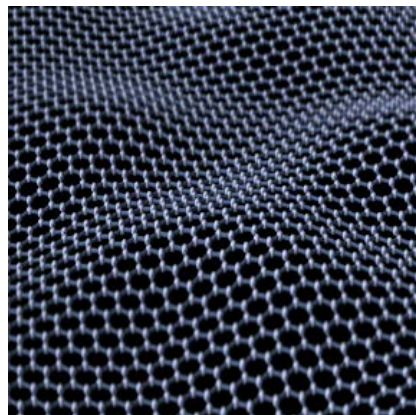
Energie/ duurzaamheid

- Efficiënte productie van Waterstof
- Begrijpen van fotosynthese
- Optisch schakelen van magnetische "bits"



Smart Materials

- Grafeen / 2D materialen
- (Topologische) spintronica
- Begrijpen van supergeleiding

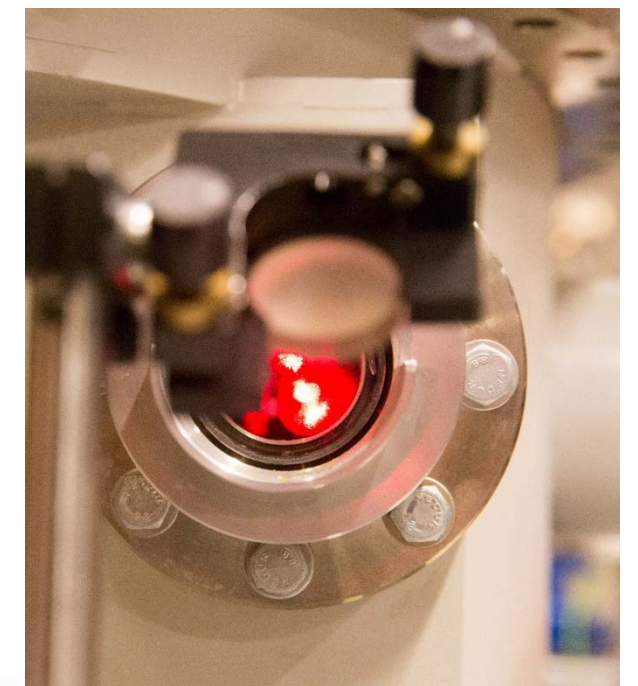
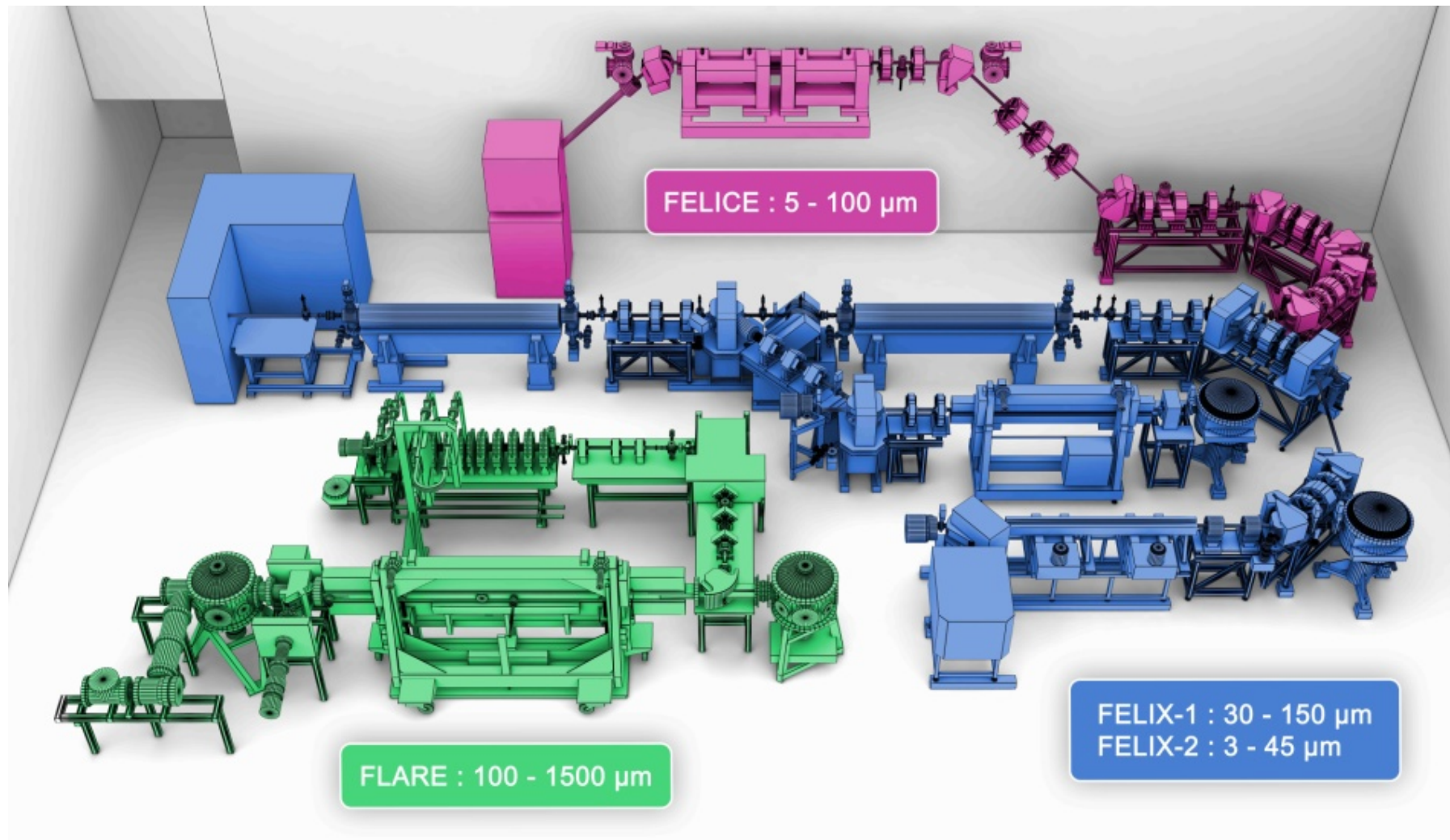


Discover

Understand

Control

FELIX Laboratory



Voeding & koelinstallatie

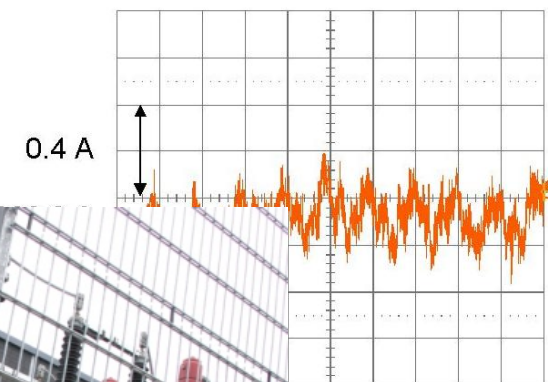


Voeding

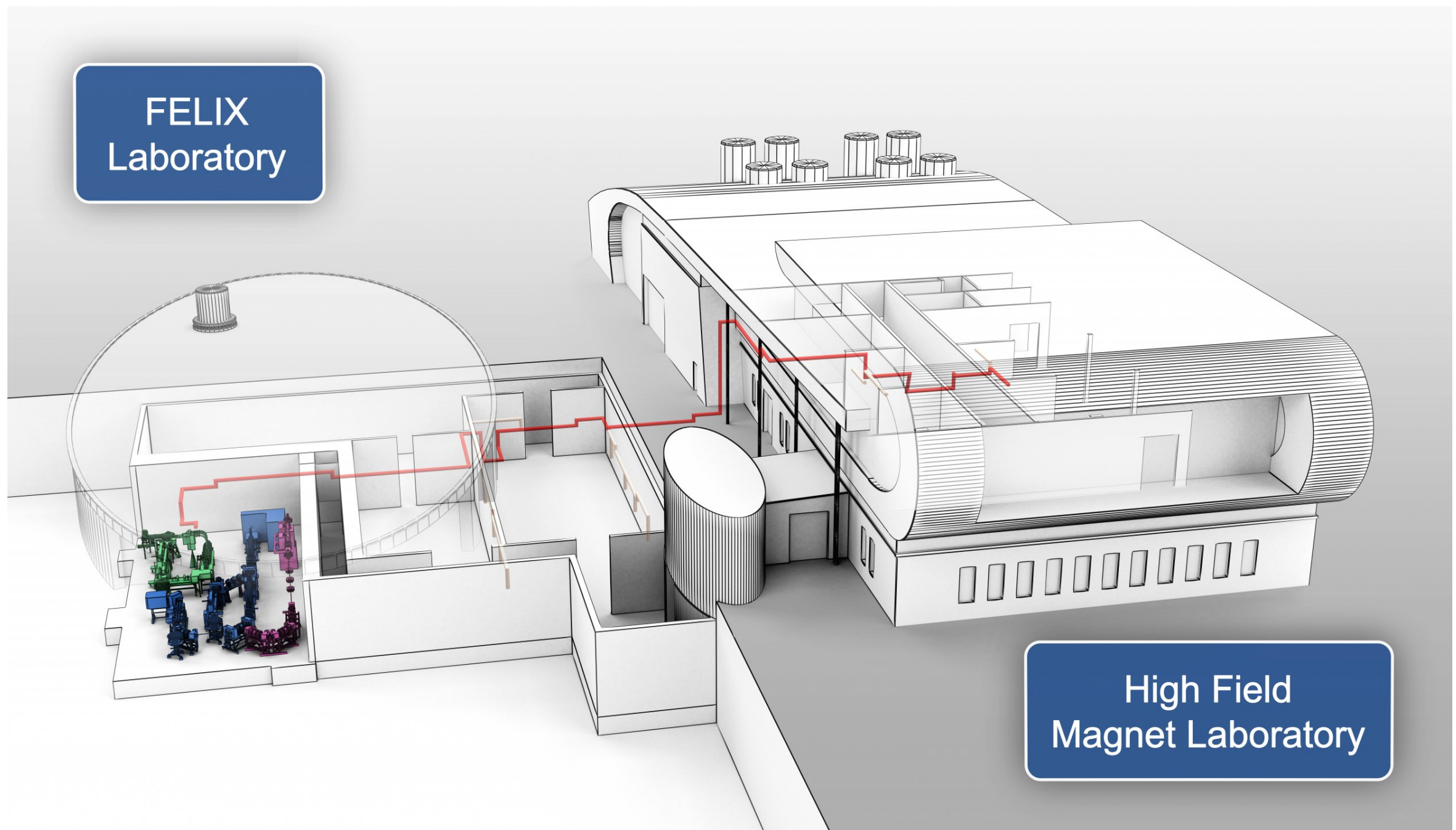
- 22 MW DC
- 40,000 A, 550 V
- 10 ppm rimpelling

- Koelinstallatie

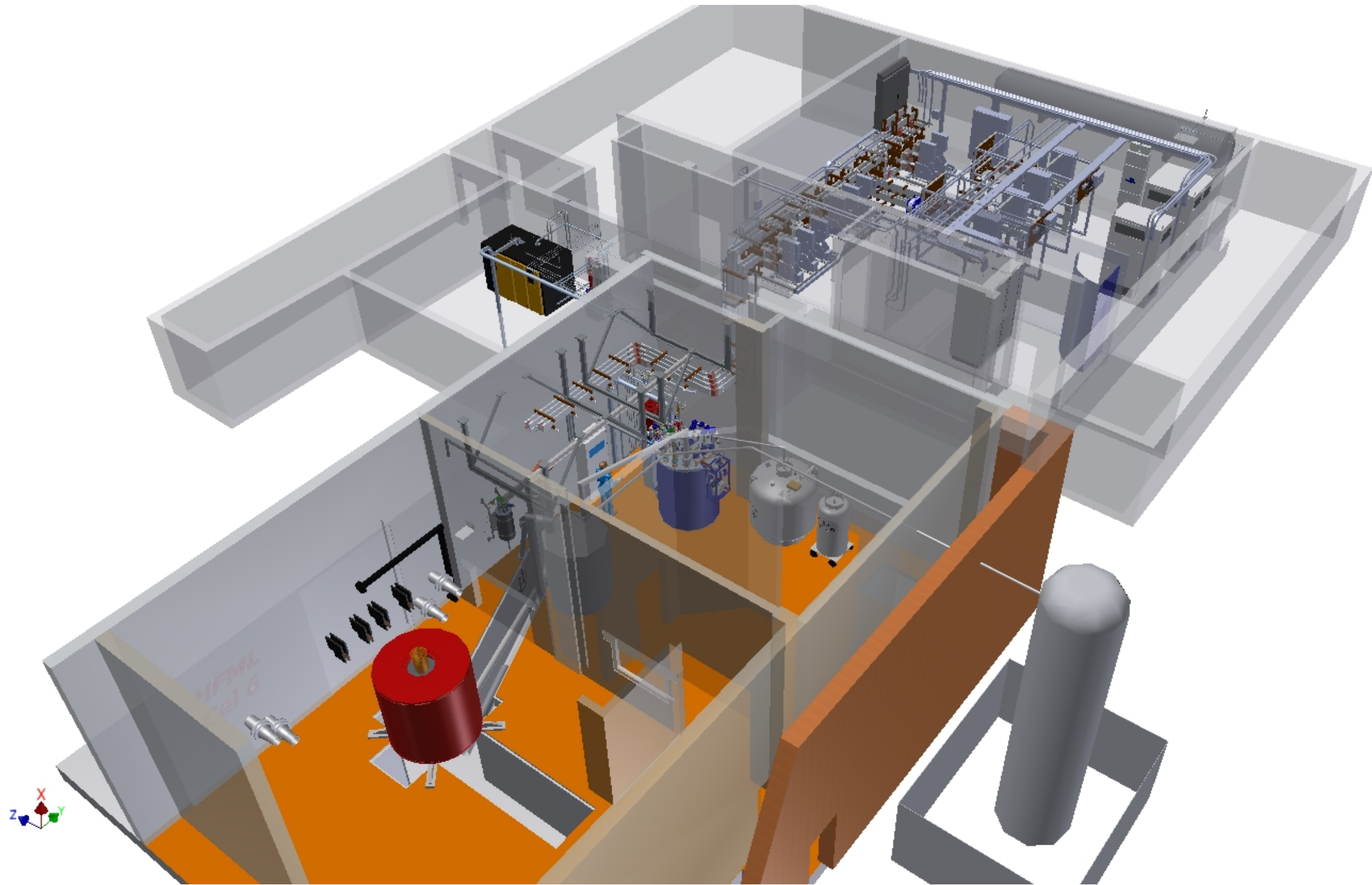
- 200 l/s, 30 bar voor magneet koeling
- Koeltorens & koelmachines voor koud water (4-7 MW)
- Recovery van “afvalwarmte”



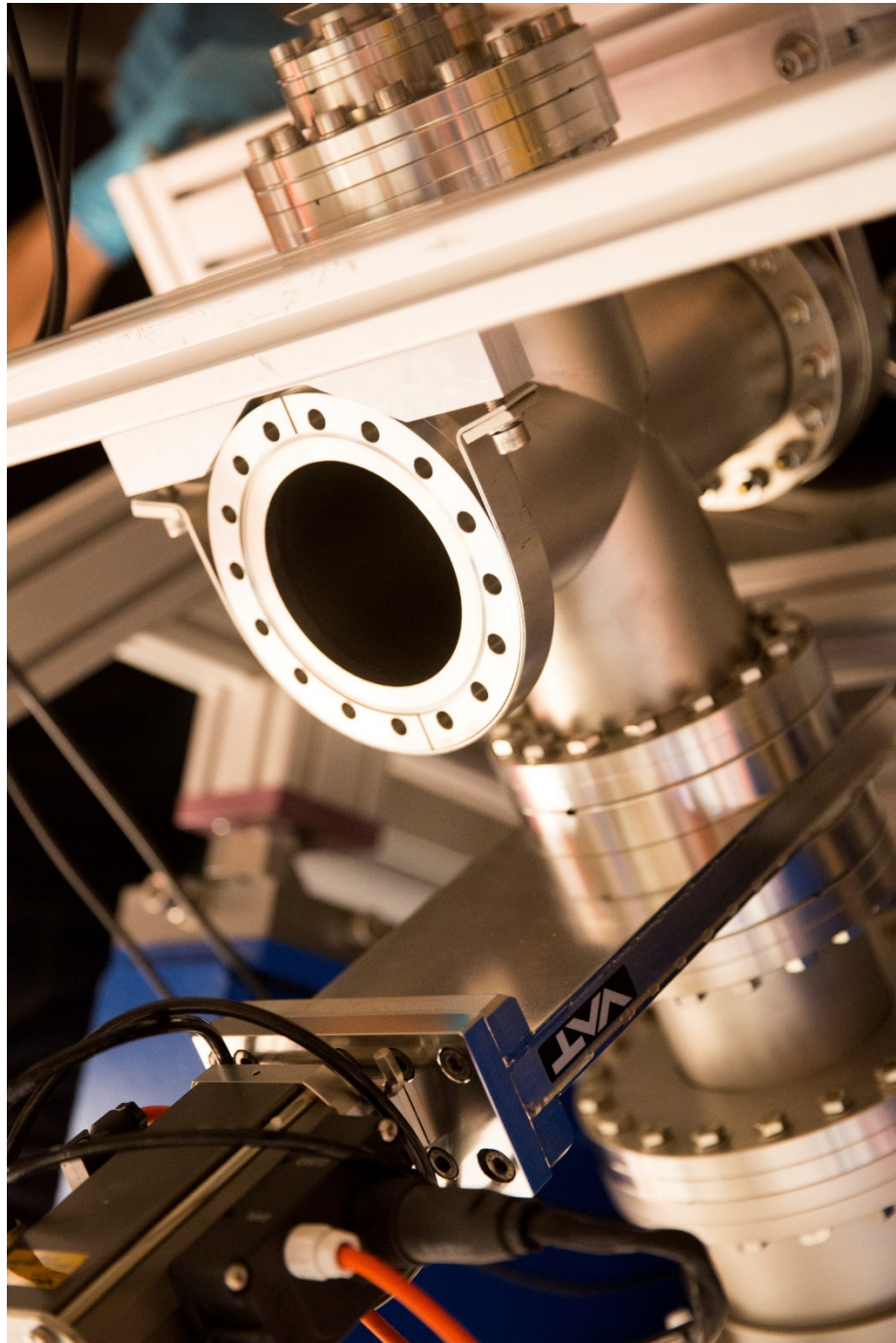
FELIX licht naar HFML magneten



Hybride magneet project



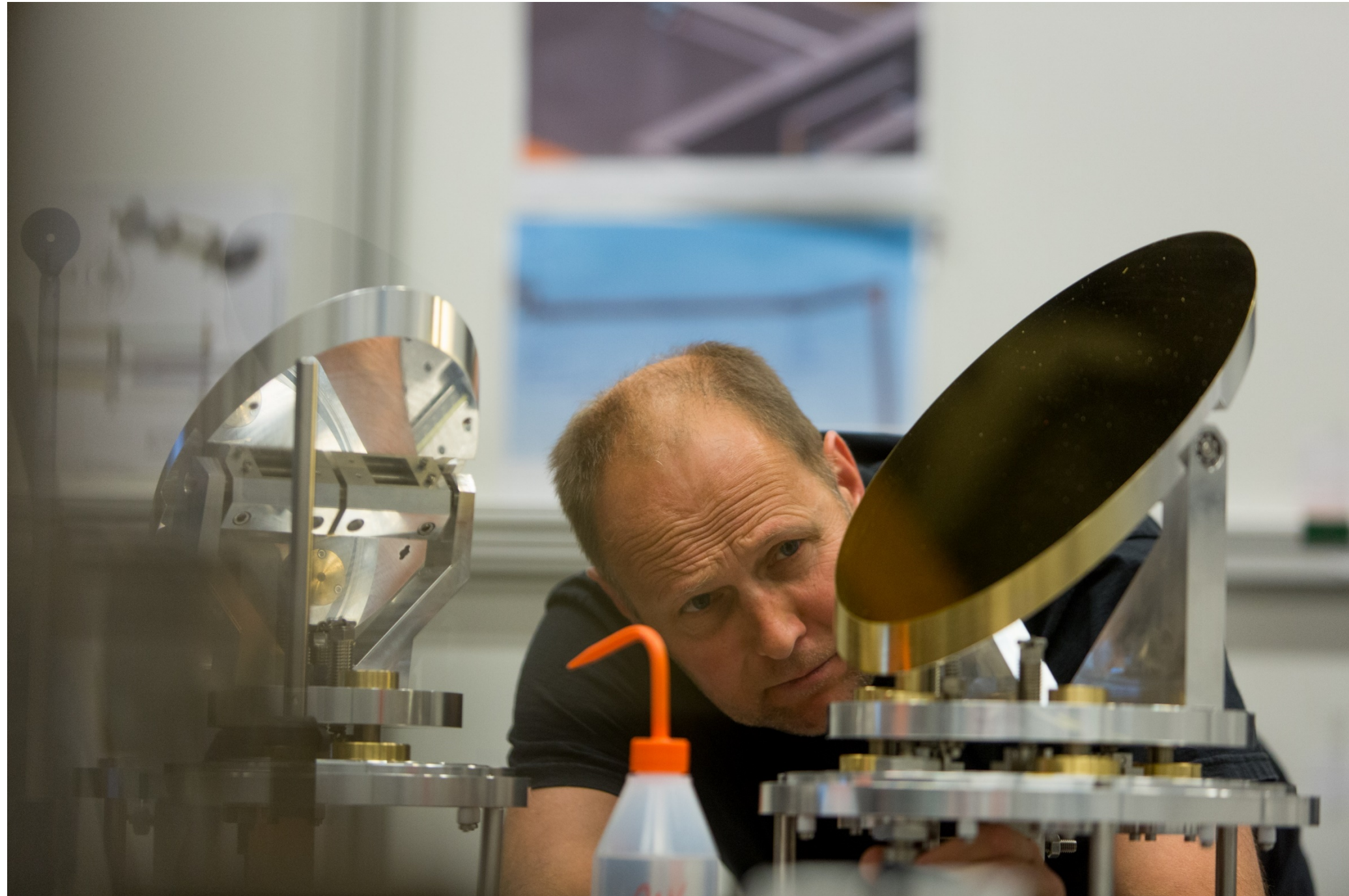
Link met industrie



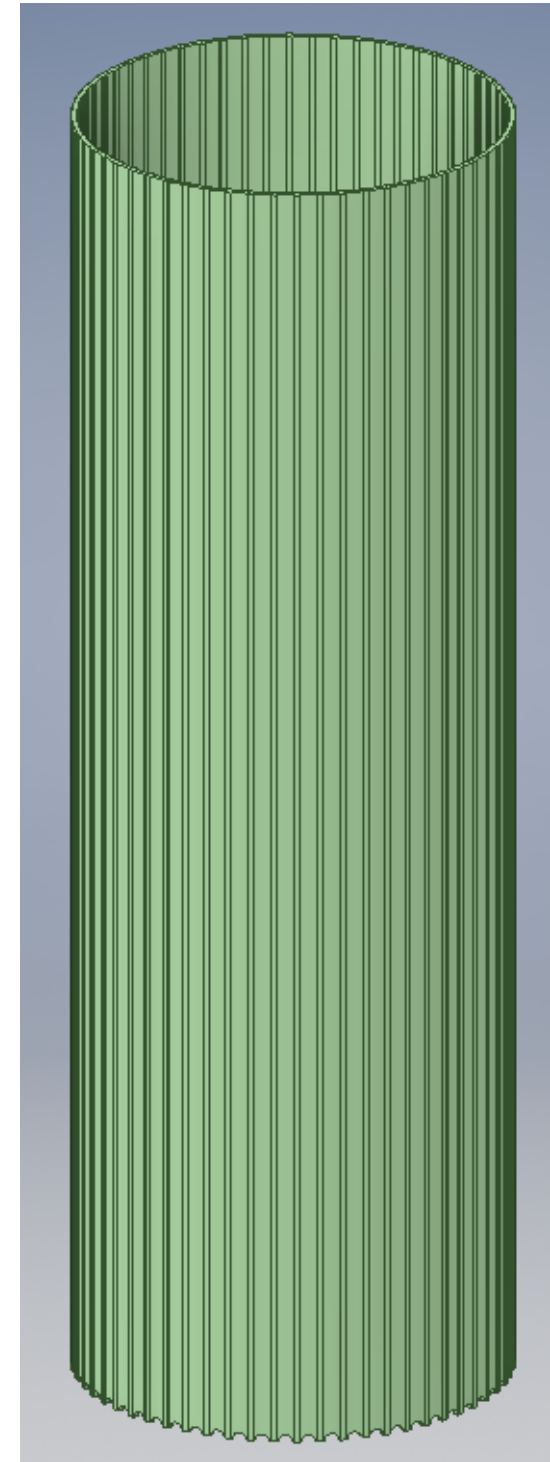
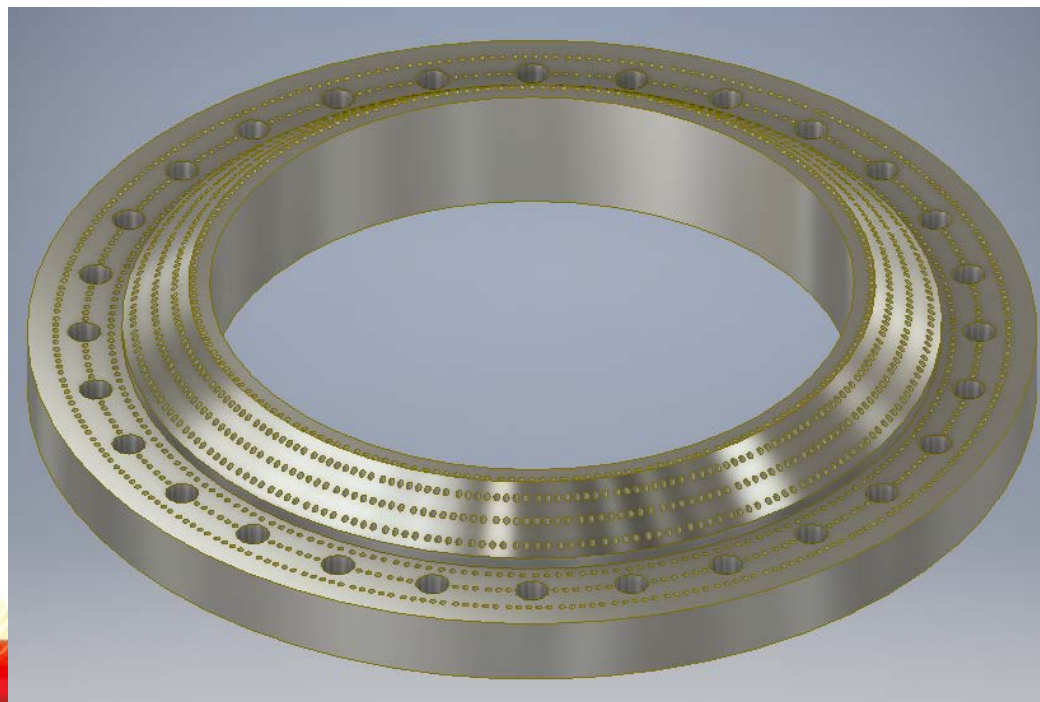
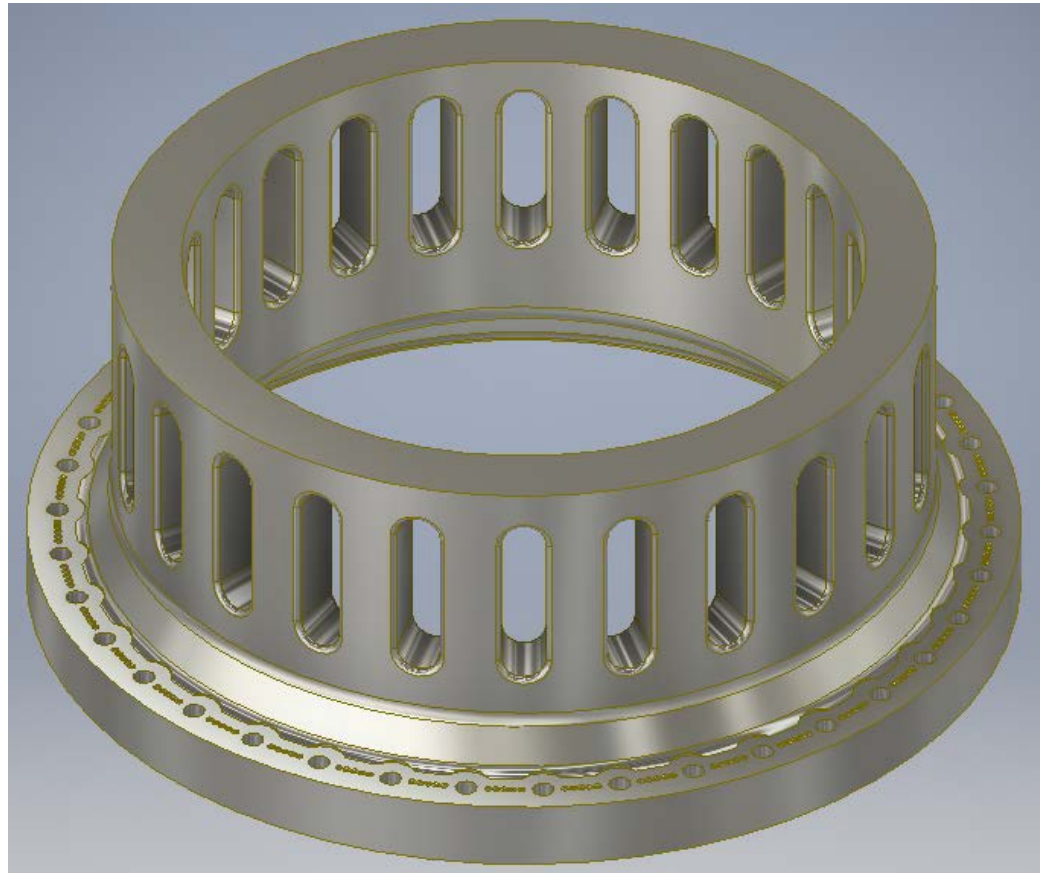
Drukvlaten & verbindingen



Spiegels & frames

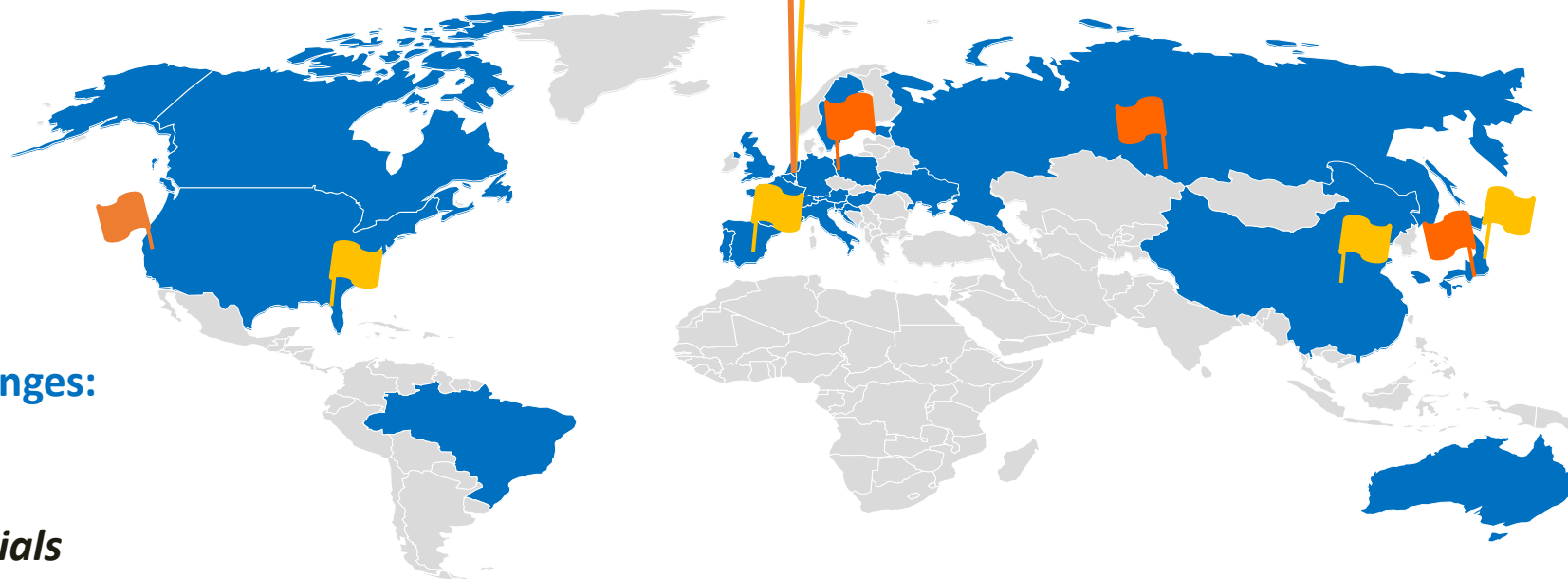
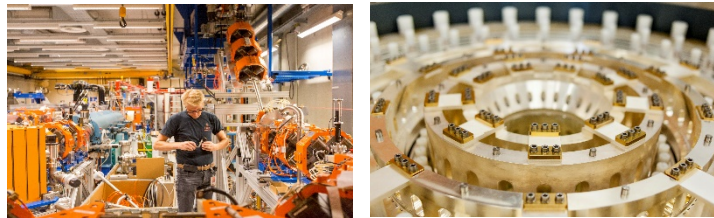


Op maat gemaakte onderdelen



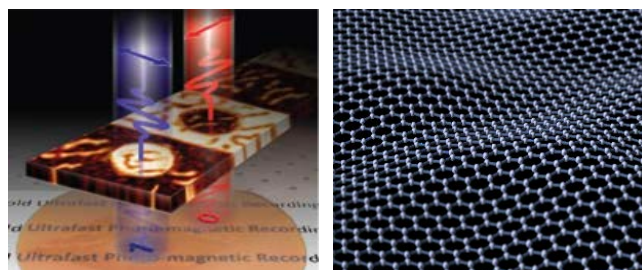
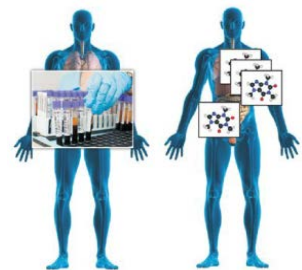
HFML-FELIX onderzoekscentrum

Unique Instrumentation

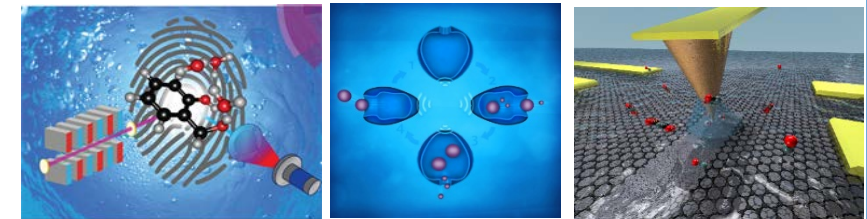


Grand Challenges:

Health
Energy
Smart Materials



Scientific



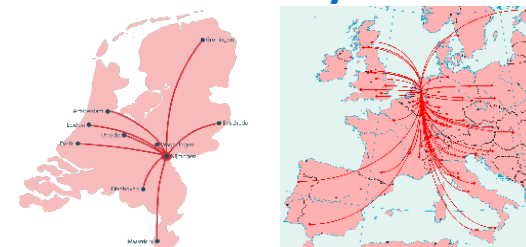
Training and Outreach



Innovation and Industry



User Facility



International Partner



Bedankt voor uw aandacht!

