

# **SINTEF Industry**









#### **Research and innovation**

We generate new technologies and knowledge together with our clients



#### Laboratories and software

We build and operate key research infrastructure





#### **Thought leadership**

We offer advice and knowledge that informs public debate and policymaking



## **Economy and employees**





35 % of our employees are from abroad, and from 50 different nations.

**SINTEF** 



# **SINTEF Industry**





- SINTEF Industry is certified by DNV GL in accordance with ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007 standards.
- SINTEF Industry shall at all times work to ensure that the organisation's results meet adequately the requirements and expectations of our clients and other stakeholders.
- Our management system ensures that SINTEF delivers products and services in accordance with specified level of quality, safeguards the environment and operates with a systematic approach to occupational health and safety.





# **SINTEF Industry prioritized research areas**





Materials properties and utilization



Metal processing

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production



**Plastics and** composites



**Process technology** 



Circular economy



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Applied geoscience

**Processes** 



Nanomedicine



Decision

support

Biotechnology

**Operations** research and economics



Hydrogen



Battery



Wind

Solar







institute.





Subsea Marine resources and technology

Sustainable transport Manufacturing

Applied chemistry and biotechnology



# **Collaboration in an innovation ecosystem**

## - where new businesses play a greater role









# **SINTEF Industry - organisation**





- Bioprocess development
- Microbial molecular biology
- Advanced research-based analyses
- Nanomedicine, polymer particles and surface chemistry

### Applied within:

• pharmaceutics, vaccines, biomaterials, enzymes, food, feed, chemicals and energy





## Sustainable Energy Technology

- Renewable energy and CO<sub>2</sub> capture
- Hydrogen production and fuel cells
- Battery technology and energy harvesting
- Silicon production for solar cells
- Membrane development and gas separation
- Functional materials and powder technology
- CO<sub>2</sub> capture, PV and H2&FC national infrastructures





## Materials and Nanotechnology

- Aluminium, Silicon, Iron and steel
- Minerals and raw materials
- Polymer and composite materials
- Nanotechnology and functional materials
- Materials properties and utilization





- Minerals and raw materials
- Metal production process metallurgy and electrolysis
- Urban mining and recycling
- Casting and casting technology
- Metal forming and processing
- Emissions and environmental monitoring
- Process modelling





- Exploration technologies
- Reservoir technologies
- Drilling and well
- CO<sub>2</sub> storage
- Increased recovery
- Geothermal energy





- Computational Fluid Dynamics (CFD) and Multiphase flow
- Catalysis and Kinetics
- Porous and functional materials, separation
- Powder Technology
- High Throughput Technology
- Process Analytical Technology (PAT)
- CO<sub>2</sub> Capture and Separation (CCS)
- Process design and Techno-Economics
- Large scale experimental testing and validation





## **Laboratories**



Materials characterisation



Subsurface lab.



Multiphase flow, Tiller



CO2-laboratory, Tiller



Nanotechnology



Advanced membranes



Material technology



Solar cells



Mass spectrometry



Metal Production



Biotechnology



#### Gemini-Centre

- Batterier
- <u>CO<sub>2</sub> Impact</u>
- <u>CO<sub>2</sub> Enhanced Oil Recovery & Storage (CEORS)</u>
- Funksjonelle oksider for ren energiteknologi (FORENT)
- Fysikalsk metallurgi (FysMet)
- Hydrokjemisk prosessteknologi i den sirkulære økonomien (HyProS)
- Levetidsforlengelse av metalliske strukturer (Life<sup>X</sup>)
- PV Solar Cell Materials
- Kinetikk og katalyse (KinCat)
- Marin planktonteknologi og –økologi
- Materials and energy
- Metallforming
- <u>Norwegian Laboratory for Mineral and Materials Characterisation</u> (MiMaC)
- Solceller
- Surface characterization by Emission and Scattering Spectroscopies (SUCCESS)
- Termisk energilagring
- Transmisjonselektromikroskopi (TEM)
- <u>Tribology</u>
- Økonomisk analyse og modellering

#### **Centres for Research-based Innovation (SFI)**

- DrillWell (2010-2019)
- Metal Production (2015-2024)
- Centre for Advanced Structural Analysis (CASA) (2015-2024)
- SFI Manufacturing (2015-2024)
- Industrial Catalysis Science and Innovation (iCSI) (2015-2024)
- Center for Innovative Ultrasound Solutions (2015-2024)
- SFI Industrial Biotechnology (2020-2028)
- <u>SFI SWIPA</u> (2020-2028)
- <u>SFI PhysMet</u> (2020-2028)

#### **Centres for Environment-friendly Energy Research (FME)**

- Bio4Fuels (2016-2024)
- <u>HighEFF</u> (2016-2024)
- <u>NCCS</u> (2016-2024)
- <u>MoZEES</u> (2017-2024)
- SuSolTech (2017-2025)
- <u>HYDROGENi</u> (2022-2030)

#### **Other Centre**

Low Emission (2019-2026)



Technology for a better society