

NORGES TEKNISK-NATURVITENSKAPELIGE JNIVERSITET (NTNU), Trondheim Norway

**Products** 

Materials and

components for

smart glazing and

windows

manufacturing

# Comprehensive Approach to Smart Window Development

- From materials preparation to system testing
- Designed for companies in the smart materials & window manufacturing industries
- Goal: Optimized material properties, superior solar energy modulation, and enhanced durability

Development of materials & components for smart windows using advanced technologies, such as electrochromism

**Smart Windows** 

Testing of various material/system compositions to achieve reversible & controllable changes in optical properties

#### Optimization of solar radiation control for:

- Daylight management
- Space heating
- Electricity generation
- Minimization of unwanted solar heating

## **Quality Testing**

- Properties testing & chemical composition analysis using advanced instruments
  (e.g. FTIR, UV-VIS-NIR, GC-MS, LC-MS)
- Evaluation of:
- **1.**Solar energy modulation (ΔTvis & ΔTsol).
- 2. Switching capabilities
- 3. Long-term durability





Pilot Line 4: Materials and components for smart glazing and windows manufacturing

## Key Features & Advantages

#### **Materials and Components Preparation**

Development of new materials and manufacturing techniques for internal and external windows, possibly roofs

Advanced Technologies 🕂

- Incorporation of electrochromism for dynamic control of solar radiation
- PDLC-based smart windows
- Electrochromic smart windows



### **Contact Us**

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