University of Applied Sciences and Arts of Southern Switzerland
Department of Environment Constructions and Design
**Institute of Applied Sustainability to the Built Environment**

**SUPSI**

Swiss BiPV Competence Centre

Glass roof

# Welios Wels
## Bremerhaven (D)


## Building Details

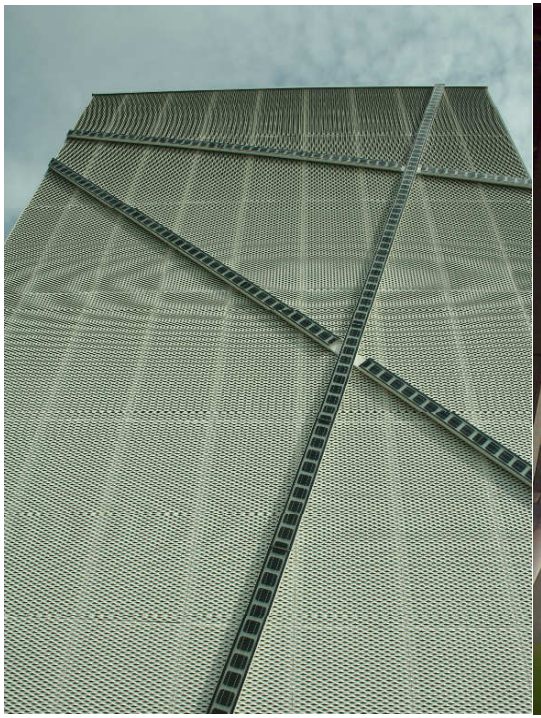
| CONTACTS | Name | Website (or e-mail) |
|---|---|---|
| **Owner** | Welios Betriebs-GmbH | www.bean-bremerhaven.de |
| **Architect** | Archinauten | www.archinauten.com |
| **Energy Consultant** | Petri & Tiemann GmbH | |
| **PV Installer** | Ertex solartechnik | www.ertex-solar.at |

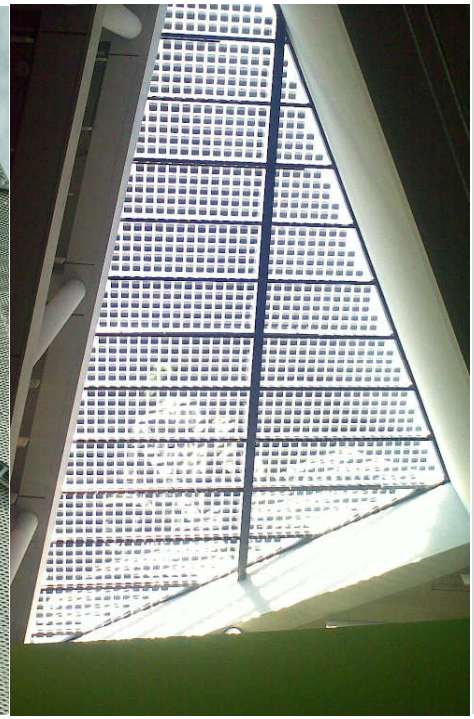
**BUILDING**

| | | | | |
|---|---|---|---|---|
| **Completion year** | 2011 Building | | 2011 PV Plant | |
| **Category** | New | Renovation | Enlargement | Other |
| **Typology** | Residential | Administration | Industrial | Sport |
| | Agricultural | Urban | Historical | Science Centre |

## Description

Welios is a science museum that makes it possible to experience physical phenomena in interactive arrangements. The construction is characterized by the guiding idea of "energy", which gives the building its form. A massive body with a hard shell is opened up and shaped by the energy inside it. The resultant recesses allow glimpses into the interior of the museum and serve to light the thematic spaces. BiPV is conceived within some electroluminescent "signs" onto the main built volumes and in a glazed roof.



# BiPV Details

## LOCATION OF PLANT

| | | | | |
|---|---|---|---|---|
| **Roof** | Flat roof | Sloped | Curved | |
| **Façade** | Cladding | Balcony | Greenhouse | Curved |
| **Glass** | Façade | Roof | Solar shading | Canopy |
| **Orientation** | South | West | East | North |

## ARCHITECTURAL EVALUATION

| | |
|---|---|
| **Color** | Black |
| **Transparency** | 50% (roof) |
| **Frame** | Steel |
| **Aknowledgments** | - |

## SPECIFICATION

| | | | |
|---|---|---|---|
| **Photovoltaic** | Monocrystalline | Multicrystalline | Thin Film |
| **PV Module** | **Cells** | sc/mc-Si | |
| | **Module** | Laminated safety glass (roof) | |
| **Power** | **kWp** | 8.8 | |
| **Size** | **m²** | 77 (roof) | |
| **Energy production** | **kWh/year** | 6700 | |