



SUPSI

Swiss BiPV Competence Centre



Source: ©EPFL - Ph. Chris Blaser

SwissTech Convention Center

Lausanne (Ch)

Building Details

CONTACTS	Name	Website (or e-mail)
Owner	Credit Suisse Real Estate Fund Living Plus; EPFL	www.credit-suisse.com www.epfl.ch
Architect	Richter Dahl Rocha & Associés	www.richterdahlrocha.com
Energy Consultant	Romande Energie; Michael Grätzel, researcher EPFL	www.romande-energie.ch www.epfl.ch
PV Installer	Betelec SA / Solaronix	www.betelec.ch

BUILDING

Completion year	2008-2014 Building	2008-2014 Plant		
Category	New	Renovation	Enlargement	Other
Typology	Residential	Administration	Industrial	Sport
	Agricultural	Urban	Historical	Other

Building Energy Performance kWh/m²y -

Description

The SwissTech Convention Center, located in the Northern quarter of the École Polytechnique Fédérale de Lausanne (EPFL), in the area of the Lake Geneva Region, is a building of the new EPFL campus including housing for 516 students, retails and service areas and a hotel organized around a main public plaza. The Convention Center is the key protagonist thanks to its formal and expressive identity. The anodized aluminum roof, shaped like a catamaran, contrasts with the lightness of glassed façade below. This project is the first application of multicolored dye photovoltaic cells (Grätzel technology). The panels, installed as horizontal shading system in the western facade, are arranged in 65 colored columns, with 5 different shades of red, green and orange, providing a unique color tone to the light transmitted into the interior hall. The solar facade passively prevents overheating the of the entrance hall and actively produces renewable electricity from sunlight.

Acknowledgments Special recognition Awards -Architectural Award Building-Integrated Solar Technology 2014; PPP Competition 1st Prize



Source: ©SUPSI/ISAAC

BiPV Details

LOCATION OF PLANT

Roof	Flat roof	Sloped	Curved	Greenhouse
Façade	Cladding	Balcony	Greenhouse	Curved
Glass	Façade	Roof	Solar shading	Canopy
Orientation	South	West	East	North
BiPV System	Shading device (fixed)			

ARCHITECTURAL EVALUATION

Color	5 different shades of red, green and orange
Transparency	Semi-transparent (30% light transmission)
Frame	Aluminium frame

COSTUMIZATION LANGUAGE AT COMPONENT SCALE

PV CELL	MODULE LAYERING	MODULE FEATURES	DUMMIES
DESCRIPTION Hand manufactured prototypes; Special color of cell; special dimensions of modules			

SPECIFICATION

Photovoltaic	Monocrystalline	Multicrystalline	Thin Film
PV Module	Cells	Multicolored Dye-Sensitized solar cell - Grätzel Cells	
	Module	1'400 solar modules (35 x 50 cm)-Solaronix LP4M-3550W19-PS (10W _p)	
Power	kWp	2	
Size	m²	250	
Energy production	kWh/year	2,000	
Cost	€/m²	2,000	