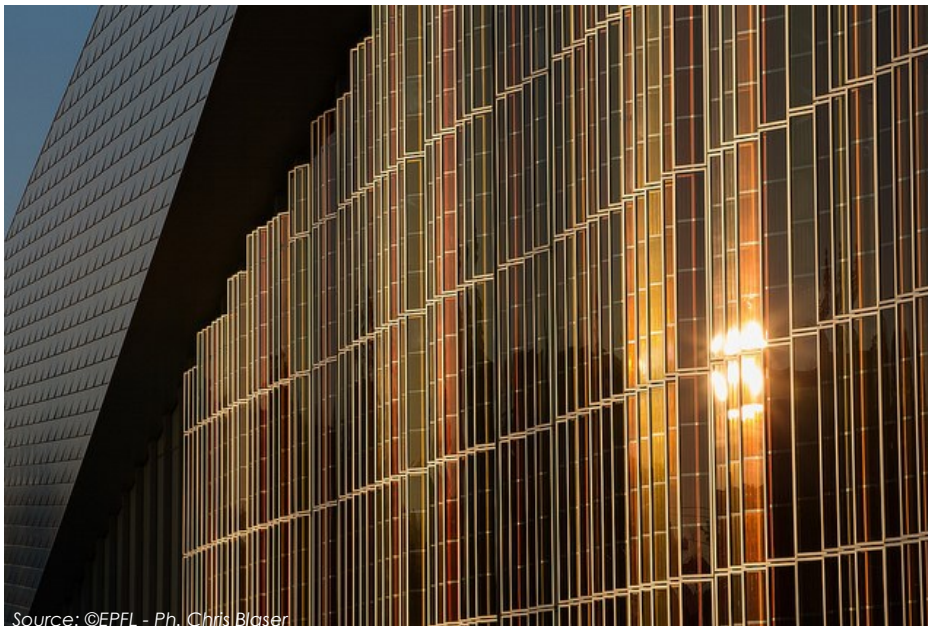




**SUPSI**

Swiss BiPV Competence Centre



Source: ©EPFL - Ph. Chris Blaser

# SwissTech Convention Center

Lausanne (Ch)

## Building Details

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

## BUILDING

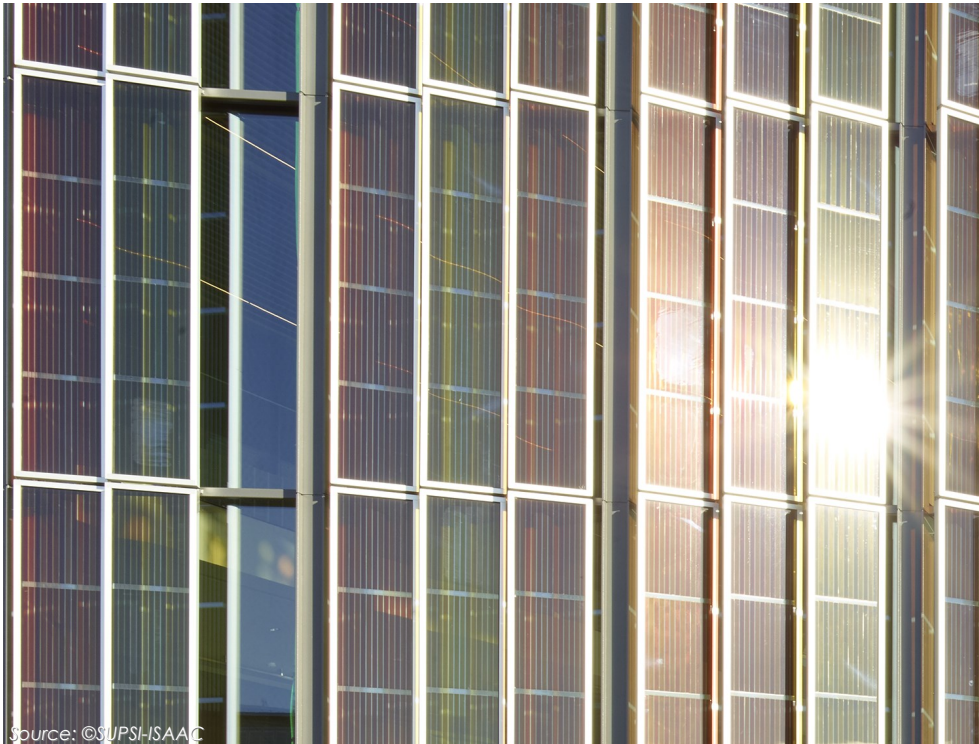
<b>Completion year</b>	2008-2014	Building	2008-2014	Plant
<b>Category</b>	New	Renovation	Enlargement	Other
<b>Typology</b>	Residential	Administration	Industrial	Sport
	Agricultural	Urban	Historical	Other

**Building Energy Performance** kWh/m<sup>2</sup>y -

## 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.

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



Source: ©SUPSHSAAC

## BiPV Details

### LOCATION OF PLANT

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

### ARCHITECTURAL EVALUATION

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

### COSTUMIZATION LANGUAGE AT COMPONENT SCALE

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

### SPECIFICATION

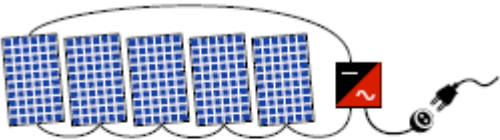
<b>Photovoltaic</b>	Monocrystalline	Multicrystalline	Thin Film
<b>PV Module</b>	<b>Cells</b>	Multicolored Dye-Sensitized solar cell - Grätzel Cells	
	<b>Module</b>	1'400 solar modules (35 x 50 cm)-Solaronix LP4M-3550W19-PS (10W <sub>p</sub> )	
<b>Power</b>	<b>kWp</b>	2	
<b>Size</b>	<b>m<sup>2</sup></b>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

CONSTRUCTIVE SYSTEM SECTION

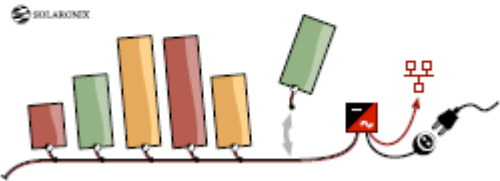
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DETAILS

BiPV Details			
BUILDING SYSTEM INFORMATION			
Transparency	OPAQUE	TRASPARENT	G Value
Constructive system	MASSIVE BUILDING		LIGHTWEIGHT
Ventilation system	NOT VENTILATED	MICROVENTILATED	NATURAL VENTILATED
U value (W/m² K)			



Conventional photovoltaic chain installation.



Solaronix' smart photovoltaic installation.