# The Symbiosis of Urban Living Space and Energy Generation – Building Integrated Photovoltaics (BIPV)

More than 7.5 billion people are living on our planet and the number is rising continuously. On the other hand, all of us consume energy and hence the demand per person is growing in the same way. As more and more people claim more and more energy we have to think about new opportunities how to compensate for our vastly increasing needs.

Undisputable, we only have one earth to “consume” and our plant offers a couple of different usage options. However, nowadays only one option per piece of land is being considered: either conservation, utilization for food production, exploitation for the generation of energy or use as living environment. What we urgently need are symbiotic approaches and energy generation in the form of photovoltaics (PV) is predestinated to enter our living space.

The talk will address the power harvesting properties of different photovoltaic technologies in the context of real life applications and it will be clarified why this has little to do with what people call "power conversion efficiency". Moreover, it will be also discussed why organic photovoltaics (OPV) is the enabler technology for building integrated photovoltaics (BIPV) and why BIPV is in fact no PV product anymore, but rather a construction material. Finally, the latest BIPV-related projects OPVIUS has realized recently will be highlighted in detail.

***Figure:*** *Glass façade of an external lift shaft comprising organic photovoltaics inlays by OPVIUS (left) and OPVIUS’ polycarbonate solar umbrellas on the climate pavilion of the state horticultural show in Thüringen 2017 (right).*