

Green Roof Service LLC presents:

January 30, 2013

Projects	Services	Modern Green Roof Technology	Living Architecture	Resources	About Us
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Brush up on your green roof plant knowledge with a new plant every month! Only on our Green Roof Plant Blog!



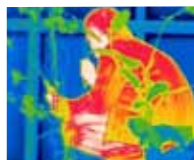
Jörg Celebrates 30 Years as a Green Roof Professional

We want to congratulate Jörg for being in the Green Roofing business for 30 years!



Spotlight on the Sun-Root™ System

The idea of combining alternative energy and vegetated roofs is gaining in popularity. Learn more about the efficiency of an integrated solar green roof system.



Cool Roofs are not Green Roofs

Cool roofs may lower temperatures high in the sky, but a green roof has proven to be more efficient when it comes down to it.



Un Jardin Sur Le Toit: A Nice Gift for Green Roofers

Need a special gift for that special green roofer for Valentine's Day? Look no further, the fragrance of a green roof now comes in a bottle!



Green Roof on Floating Home "Siberfish"

Introducing the first Sustainable Home on the Water with a Green Roof!



New Lancaster Green Roof

Take a look at one of the nine new green roofs being installed all over Lancaster, Pennsylvania today!



Green Roof Professional Celebration!

Thirty years ago on January 27th 1983, Jörg Breuning was one of the first people in the world to earn a green roof professional accreditation.

Optima, now Optigrün AG, was the first green roof manufacturer to offer an in depth educational system for the installation and maintenance of their products. In order to be eligible for the accreditation, a candidate had to have completed 3-years of apprenticeship with a certified landscaping company.

Jörg's green roofing career began on September 1st 1980 at Otto Arnold GmbH, one of the first landscaping companies in the world with its own green roofing division. In 1985 he earned his national certification and horticultural technician degree – a program of work and study that required 5-years of practice in an approved landscaping company and 4 semesters of University study.

Jörg learned green roofing from the original pioneers and visionaries of modern green roof technology. Since those early days in Germany, Jörg has gone on to pioneer many new innovations in green roof technology, start multiple companies in both Germany and the United States, and completed multiple award-winning projects.

Everyone here at Green Roof Technology would like to congratulate Jörg on his 30-years of excellence in the green roofing industry.



Spotlight on the Sun-Root™ System

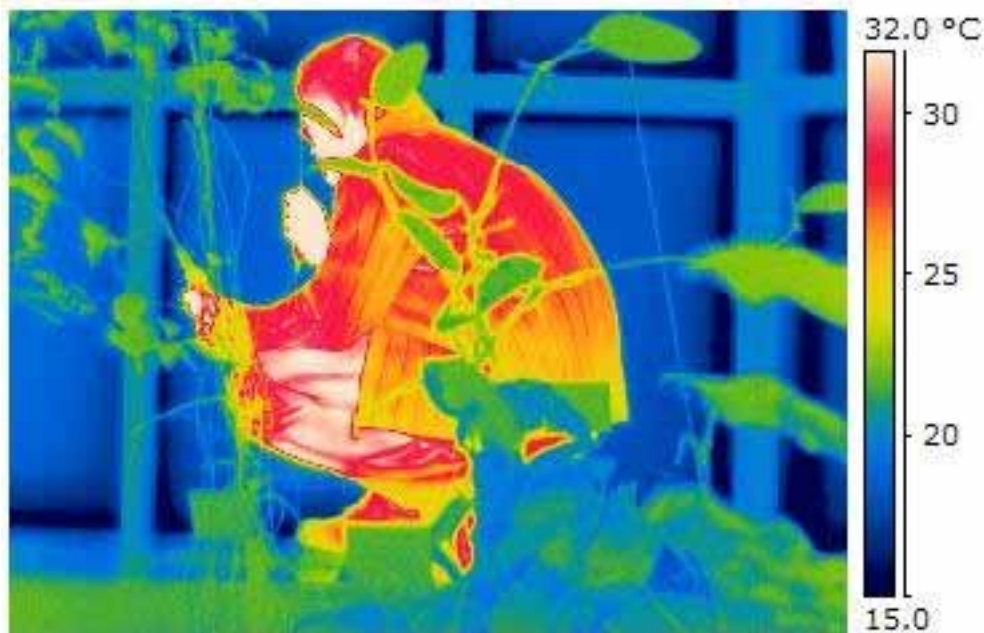
Back in 2012, Green Roof Technology installed our first Sun-Root™ System in New York City. The vegetation's ability to cool the air increases the efficiency of the solar panels perched atop the green roof.

Learn more about combining solar and vegetated roofs with our Sun-Root™ System

This week the Sun-Root™ System has been highlighted in "Under Cover: Solar Vegetated Roofs Take Root," a recent online article by Green Manufacturer. The Sun-Root™ will also be in the spotlight in their January/February issue of the Green Manufacturer Magazine.

Chicago, one of America's green roof leaders, is slowly falling behind in the technological race. Numerous studies have proven solar energy integrated with vegetated roofs are more efficient than either practice by itself. Chicago has yet to offer any incentives that include integrated solar green roof systems.

Northwestern University: What Chicago Green Roofs Are Missing Out On



Cool Roofs are not Green Roofs

In Physics class we learned basics about thermodynamics and about thermodynamic equilibrium. In simple words the content of a black coffee mug “adjusts” faster to the surrounding temperature than in a white coffee mug assuming the material and material thickness of the mugs are the same. Exposing these mugs to the sun light the black mug will convert the electronic energy (sun light) into heat faster and no light or shade cools it faster assuming the ambient temperature is lower. The physics behind converting light into heat is called radiation-less transition. White (or bright) colors reflect the (sun) light more effective than black.

Any macroscopic or microscopic body on our earth is exposed to these physics properties including all particles in the air of which can be plentiful in polluted cities. While the sun light enters in to the earth’s atmosphere, all bodies (particles in the air) receive portions of the sun’s electronic energy and convert them in to heat. For example, on a high mountain we experience much more sunlight, or electronic energy, because the air is “thinner” or has less particles in which the light has to travel through. On a beach the light intensity is also very high and this is caused by the reflection of the light off the water and sand. Sunburns on the beach are of high risk because of the consistent wind, we don’t experience the transition from light into heat on our skin as fast. No living organisms can reflect the light 100% effectively, but they can actively reduce the consequences (heat) by using techniques such as evapotranspiration.

Reflective roofs can’t reflect 100% of the light either, but they are good to a certain degree (see roof temps above). However while reflecting the light back in to the atmosphere, this reflected light will meet all the particles (bodies) again and substantially increase their temperature. It is well proven that less than 5% of sunlight is reflected back into space once it’s in our atmosphere. White roofs relocate the transition point of light into heat from the roof into the atmosphere or surrounding bodies (e.g. buildings). They simply don’t eliminate the problem of increasing temperatures (heat island effect) caused by human settlements and they don’t decrease the environmental foot print of structures. In addition, the white surface has a slow thermodynamic equilibrium. It takes a long time to to heat up in the winter (when heat is necessary) and cools down slower during summer nights.

The kingdom of plants were the only organisms over millions of year who developed a super-efficient mechanism to reduce the heat transitioned from the sun light. It is called evapotranspiration - powerful, miniature AC units powered simply by solar energy. These super little AC units are found naturally on Earth, but can be practically placed anywhere. By using this naturally occurring phenomenon and installing green roofs, the outcome will go further beyond any man-made machine or material.

In many countries where insulation requirements are more intense than in North America, it is questionable whether reflecting roof material makes sense to start with. From a global environmental perspective and understanding the basic science of physics, reflective roofs are just relocating the heat issue caused by human development. It is similar to building a chimney higher at a coal power plant so not to pollute the air, when in fact the wind will just carry the pollution toward a different city. Sometimes I wish all LEED™ professionals would have more common sense and follow these laws of nature and their own environmental gut feeling - it is simply better living under a tree canopy rather than under a polar glacier.



A Nice Gift for Green Roofers Un Jardin sur le Toit – First Green Roof Fragrance

Jardin sur le Toit by Hermès features a little slice of nature perched on the rooftop of the building of the house of Hermès in Paris, France. A feast for the sense and the mind. A fragrance of light and delight, crunchy and cheerful.

Hermès launches the new fourth fragrance from the collection of garden-inspired fragrances Un Jardin, named Un Jardin Sur Le Toit or "A Garden on the Roof" in 2011. Un Jardin Sur Le Toit refers to the especially luxurious garden located on the Hermès' headquarters building roof. A secret roof garden, hidden in the heart of the city, in Paris.

The garden is full of aromatic herbs, flowers and fruits whose flavors vary as they pass through the metamorphosis induced by the seasons. Its fresh and sweet-smelling atmosphere is captured by apple, pear, rose, green grass, basil, magnolia and compost notes. This fruity, vegetal, floral eau de toilette is appreciated by both women and men.





Green Roof on Floating Home “Siberfisch” First Sustainable Home on the Water with a Green Roof

With the cost of living in large cities constantly rising, the search for viable alternatives is constant.

Flo Florian and Sascha Akkermann of design firm Confused-Direction and the project-developer Bernhard Urich had urban affordability in mind when they designed the Silberfisch houseboat.

The house is a thoroughly modern floating home that, instead of occupying a valuable plot of land, is anchored in a body of water. In theory, the Silberfisch would allow residents to remain in a location indefinitely or relocate on a whim. It’s an interesting concept whose acceptance by the general public might be debatable.

However, the eco-friendly principles underlying the house are universally appealing. Two of the primary “green” methods used in the house’s construction are a green roof planted with vegetation and the use of reclaimed wood wherever possible. The toilet is an Eco-Toilet which saves water resources. Additionally, the house produces zero emissions. As home prices and eco-friendliness become increasingly critical issues, Confused-Direction’s Silberfisch houseboat may become a realistic option.



Silberfisch houseboat is a floating home by Bernhard Urich and the guys from the design firm Confused-Direction Flo Florian and Sascha Akkermann. This eco-friendly project, with zero emissions, represents a balanced mix of design and maritime romance. It has been designed for the areas with big water surfaces or in cities where property costs are high house boats offer an alternative.

Visit their home page:
www.schwimmhausboot.de/



New Lancaster Green Roof

The sun sets on the 3rd day of construction. High winds and freezing cold temperatures have made this project particularly challenging.

Using money from their \$7 million dollar PENNVEST green infrastructure loan, the City of Lancaster has begun installing the first of 10 green roof projects. The first extensive green roof is currently being installed on the Dewatering Building at the City's Wastewater Treatment Facility. The 7,000 square foot extensive green roof is divided between two rooftops. Green Roof Technology has been the City's green roof consultant for a while now and will continue to be involved every step of the way. Our primary objective now is to oversee the installation of the extensive green roofs. Many more pictures to come.

[Read more information about Lancaster's Green Infrastructure PENNVEST loan at Water World](#)

[Video Highlighting Lancaster's Green Infrastructure Plan](#)