



HELIAAC

The Next Generation Low-Cost Concentrated Solar Thermal Power



6th Solar Cookers International World Conference

Solar thermal energy has been predicted by the International Energy Agency (IEA) to become the globally largest energy source once the cost is lower than fossil fuels. With our novel concept, we can achieve a substantial cost reduction compared to conventional CSP systems allowing for energy production at costs lower than the marginal cost of fossil fuel plants.

Production.

Polymeric Fresnel Lens as light-focussing optics

Our solar concentrators are made from polymer foil sheets containing micro-sized Fresnel lenses which are produced by a unique combination of established industrial packaging technology, extrusion coating, and modern microtechnology. This concept allows us to produce our micro-sized Fresnel structures as light-weighted and flat polymer foils at low cost and with high production throughput of several square meters per second.



Prototyp Plant.

Concentrated Solar Thermal Power.



The polymer sheets which are laminated onto a float glass plate. The plates are placed into an aluminum frame and mounted onto a 2-axis solar tracker. The sun light is concentrated and directed towards a stainless steel receiver which transfers the energy into a closed water-filled system.



Heliac ApS.

About US.

Heliac is a danish startup company founded in May 2014 with currently five employees. We are supported by a professional board with members from sales organizations, venture capital, manufacturing industry, legal advisory and the startup-sector. In addition, we are backed by three large industrial partners from the optics, packaging and energy conversion sector.

Our prototypes prove feasibility of the concept with an efficiency of >60%. To further improve our efficiency and power-to-cost ratio, the next generation units will comprise an optimized foil, support, and receiver design, delivering an expected efficiency of 70-80%. The automated systems will be able to produce heat at temperatures between 95°C and 350°C, depending on the heat transfer medium.

Authors.

Pushing Solar Power.

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