

Crop Boosting Smart Facades for Zero Net Electricity Greenhouses

For the future of agriculture, we must think critically about how we are using every resource. Greenhouses use about 10% of the water required by traditional agriculture, but most growers rely heavily on electricity to ensure their crops face optimum conditions year round.

We have developed a crop-boosting luminescent greenhouse film called UbiGro, but it is so far only a retrofit solution. We hope to integrate our yield-boosting UbiGro formula into a luminescent solar concentrator with solar cells coupled to its perimeter.

With UbiGro luminescent solar concentrators installed directly into a greenhouse's exterior facade, we will be able to help growers cut their reliance on fossil fuels for heating and electricity while enabling zero net electricity growing facilities around the world.

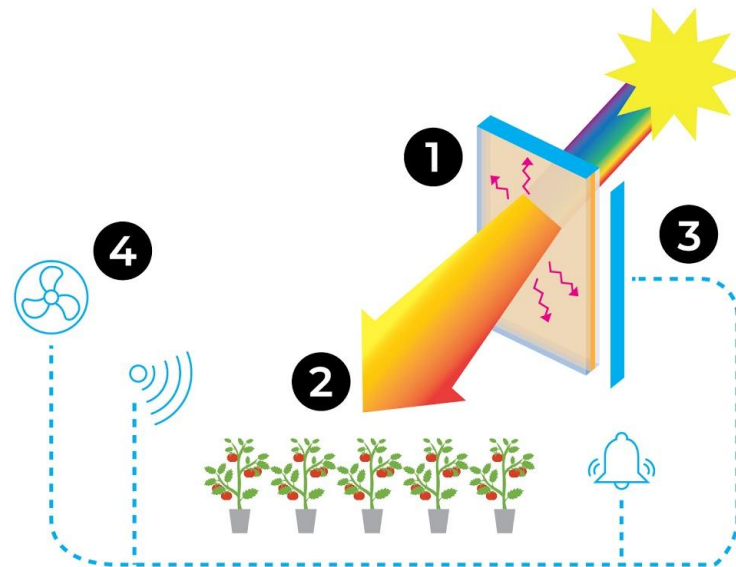
We believe that UbiGro is a key ingredient in the future of food security for a growing population and food production in a time of climate crisis.



Our current LSC for solar windows



UbiGro film retrofit in a greenhouse



Our Innovation

- 1** Luminescent Solar Concentrator (LSC) made with UbiGro crop-boosting interlayer
- 2** Some UV and blue light is shifted towards the red, boosting crop yields
- 3** Sunlight not diffused by the UbiGro interlayer is guided to LSC "Power Perimeter"
- 4** Electricity generated by power perimeter supports greenhouse microgrid