



# Mesodyne lightcell DR Congo

How does mesodyne's lightcell convert fuel into electricity?

Mesodyne's LightCell converts fuel into electricity via light. Unable to load video. Try again later. Mesodyne's patented LightCell(TM) power generator converts any fuel into electricity via light. The core of the LightCell is a nanophotonic material that is engineered to only emit certain wavelengths of light when heated.

Why is mesodyne more efficient than traditional thermophotovoltaics?

Mesodyne's generator is significantly more efficient than traditional thermophotovoltaics because the light emitted by the nanophotonic material nearly perfectly matches what the PV cell can convert into electricity. Mesodyne's founders demonstrated the world record efficiency for this type of energy conversion in 2017 during their PhDs at MIT.

Who is mesodyne?

We founded Mesodyne shortly after we demonstrated the world record efficiency for thermophotovoltaic energy conversion at MIT in 2017. At our advisors' recommendation, we took entrepreneurship classes, started to conduct customer interviews, and saw real interest in the technology.

Why did mesodyne join Luminate?

From there Mesodyne participated in Chain Reaction Innovations, the WERC Bench Labs Accelerator, the Air Force Techstars, the Air Force Mass Challenge, and now Luminate. When we joined Luminate, the goal was to expand our network, specifically in optics and photonics.

Who are mesodyne's co-founders?

Mesodyne's Co-Founders, Dr. Veronika Stelmakh and Dr. Walker Chan. Image courtesy of Argonne National Laboratory. We founded Mesodyne shortly after we demonstrated the world record efficiency for thermophotovoltaic energy conversion at MIT in 2017.

The Mesodyne LightCell(TM) converts fuel to electricity via light. LightCells(TM) are silent, have no moving parts, operate on any hydrocarbon fuel, and store 10x the energy of lithium ion batteries of equal weight. Mesodyne is building a set of portable power products that generate long endurance power for remote unmanned systems, drones and ...

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The LightCell converts any fuel to electricity with the endurance of gas engines and the silence and reliability of batteries. In the LightCell, a small microcombustor heats a photonic crystal to incandescence. This nanophotonic ...

With more than 10x the energy density of Li-Ion batteries, the LightCell enables people, sensors, autonomous vehicles - virtually any system that requires portable power - to perform their mission beyond what is possible today and extend range, endurance, and ...

Mesodyne's LightCell generator -- about the size of a loaf of bread and roughly eight pounds -- puts out five-to-10 times the wattage per pound of current tactical batteries, Veronika Stelmakh, CEO and co-founder of Mesodyne, said during an interview at the Fed Supernova conference.

Mesodyne is developing a new kind of power generator that converts fuel to electricity via light. The company is one of 10 finalist companies with optics, imaging and photonics-enabled technologies that's working with NextCorps' Luminate NY accelerator as part of its fourth cohort. Each company received an initial investment of \$100,000 and

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In Mesodyne's LightCell(TM), a microcombustor heats a nanoengineered photonic crystal material to incandescence, which shines light on the photovoltaic (PV) cell, generating electricity. My co-founder, Dr. Walker ...

With its remarkably low weight, high energy-density, and virtually no moving parts, the Mesodyne LightCell could be an ideal power solution for prolonged operations by systems in which weight is a critical factor, including autonomous robotic platforms, unmanned aerial systems, and remote monitoring stations, as well as for dismounted ...

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Developed at MIT's Institute for Soldier Nanotechnologies, incubated at Chain Reaction Innovations at Argonne National Lab, and accelerated by Techstars, Mesodyne's patented LightCell technology enables long endurance, reliable, efficient, silent power for remote unmanned sites and systems, drones and robots, warfighters and emergency ...

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in mind.

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In the LightCell, a small microcombustor heats a photonic crystal to incandescence. This nanophotonic material is engineered to emit certain wavelengths of light preferentially when heated. The emitted light drives photovoltaic cells to generate electricity without moving parts with unprecedented efficiency at this scale - no specialized fuel ...

Web: <https://www.foton-zonnepanelen.nl>

