



Kenya mesodyne lightcell

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.

Why should you use mesodyne power generators?

Low temperature exhaust for covert operation. Mesodyne's power generator reduces the battery load of researchers and infrastructure operators relying on remote unmanned instrumentation, dismantled warfighters, and operators using unmanned aerial vehicles by 75% resulting in increased capability and cost savings.

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 demand for portable power is constantly growing, and there's currently no solution for lightweight, portable power generation. Mesodyne, a startup in the...

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. ... The company's LightCell(TM) power generator offers a ...



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Mesodyne, a startup in the Luminate accelerator's fourth cohort, is developing a new kind of generator that enables compact, ... CEO and Co-Founder, Dr. Veronika Stelmakh, talks with Luminate's Technology Program Manager, Dr. Damon Diehl, about Mesodyne's LightCell(TM) power generators, which convert fuel to electricity via light. ...

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, ...

It is interesting that Mesodyne got some funding from military research sources, with a focus on small portable generators (for UAV's and potentially exoskeletons?). ... Lightcell.jpg (404.78 kB, 2500x2922 - viewed 39 times.) Logged Print; Pages: [1] Go Up. Tags: Forums » General Discussion » Advanced Concepts » Lightcell power generator .

Mesodyne - LightCell Technology by Mesodyne. Mesodyne's LightCell converts fuel into electricity via light. Mesodyne's patented LightCell trade; power generator converts any fuel into electricity via light. The core of the LightCell is a ...

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 ...

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 ...

Mesodyne's LightCell is completely silent, has no moving parts, operates on any fuel, and has up to 10X the energy density of lithium ion batteries. LightCell technology enables new capabilities for unmanned small systems: increased endurance over batteries, improved reliability over internal combustion, fuel flexibility over fuel cells, and more.

Mesodyne's LightCell is a portable solution designed for defense use cases, where it can be carried by soldiers as a drone charging system that extends flight time by over 10x. Mesodyne's innovative product is also 75% lighter than existing battery solutions, making it a viable option for consumer applications, as well.

Dr. Walker Chan is the cofounder and CTO of Mesodyne, where he leads the team of engineers designing the LightCell's integration into products for use across military and commercial applications. He serves on the company's Board of Directors and is an expert in thermophotovoltaics, thermofluids, combustion systems, and high temperature ...

Mesodyne is developing a new kind of power generator that converts fuel to electricity via light. The generator is silent with no moving parts, operates on any fuel, and has 10 times the energy density of lithium ion



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batteries. ... and ...

Mesodyne's novel ultra-high energy-density compact power generators increase the endurance of small autonomous systems by 10X over batteries alone resulting in increased capability and cost savings.

The LightCell increases the endurance of fixed wing UAVs by 10X compared to batteries alone. Increased endurance is particularly useful when the UAV needs fly to a remote inaccessible site, perform its mission, and return. Low vibration ...

As demand for electricity to power unmanned vehicles, dismantled war fighters and critical infrastructure increases, existing solutions such as batteries and generators cannot keep. Mesodyne is ...

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 Chan, and I developed the technology at MIT's Institute for Soldier Nanotechnologies with the soldier in mind.

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 ...

Mesodyne is developing a new kind of power generator that con-verts fuel to electricity via light. The company is one of 10 finalist compa-nies with optics, imaging and pho-tonics-enabled ...

Mesodyne Dr. Veronika Stelmakh is the CEO and co-founder of Mesodyne, an MIT spin out commercializing a new class of power generator that converts fuel to electricity via light. Mesodyne's LightCell(TM) generator is silent, has no moving parts, operates on any hydrocarbon fuel, and offers up to 10x the energy density of lithium ion batteries.

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Experience: Mesodyne · Education: Northeastern University · Location: Boston · 500+ connections on LinkedIn. View Mathew Ellis" profile on LinkedIn, a professional community of 1 billion members.

Watch Mesodyne, xTechSearch 5 semifinalist, present their topic: Light-Cell Compact Silent Power Generator for Long Endurance Small UAVs.This presentation wa...

Mesodyne's LightCell is silent, has no moving parts, operates on most commercial and military fuels, and has more than 10X the energy density of lithium ion batteries. Developed at MIT's Institute for Soldier



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Nanotechnologies, Mesodyne's patented technology enables new capabilities for remote infrastructure, small electric UAVs, and other ...

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Wow! Mesodyne has been awarded an AFWERX Agility Prime USAF SBIR/STTR Phase II contract to further develop and field the LightCell(TM) power generator for #sUAS... | 14 comments on LinkedIn

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