



Innovative Solar Cell Technology

WE ARE IN BUSINESS FOR A CLEANER WORLD

For thousands of years, we have used the sun's energy to warm our bodies and dry our food and about 50 years ago we started using silicon-based solar cells to convert that energy to electricity. Despite the improvements in silicon-based solar cell technology, fossil fuels are still the norm. To make solar energy the mainstream, solar cells need to be far more efficient at converting sunlight to electricity, also become more cost effective, and accessible.



Founders

Dr. Sahar Sam (CSO)



- **15 years +** experience
- **PhD** in **Nanofabrication**
- **Inventor** 4 patents

Fabian de la Fuente (CEO)



- **30 years +** experience
- **4x** Serial Entrepreneur
- **75** Patents

Solaires' founders are Dr. Sahar Sam and Fabian de la Fuente. Knowing the problems of current solar cell technology and being passionate for fighting climate change, they started Solaires.

Dr. Sahar Sam (CSO)



- **15 years +** experience
- **PhD** in **Nanofabrication**
- **Inventor** 4 patents

- **Inventions:**

- new technology for fabricating thin film solar cells
- Innovative fabrication process for transparent conductive electrodes

During her Masters, she invented a new technology for fabricating thin-film solar cells and in her PhD, she developed and patented an innovative fabrication process for transparent conductive electrodes that will enhance the properties of solar cells.

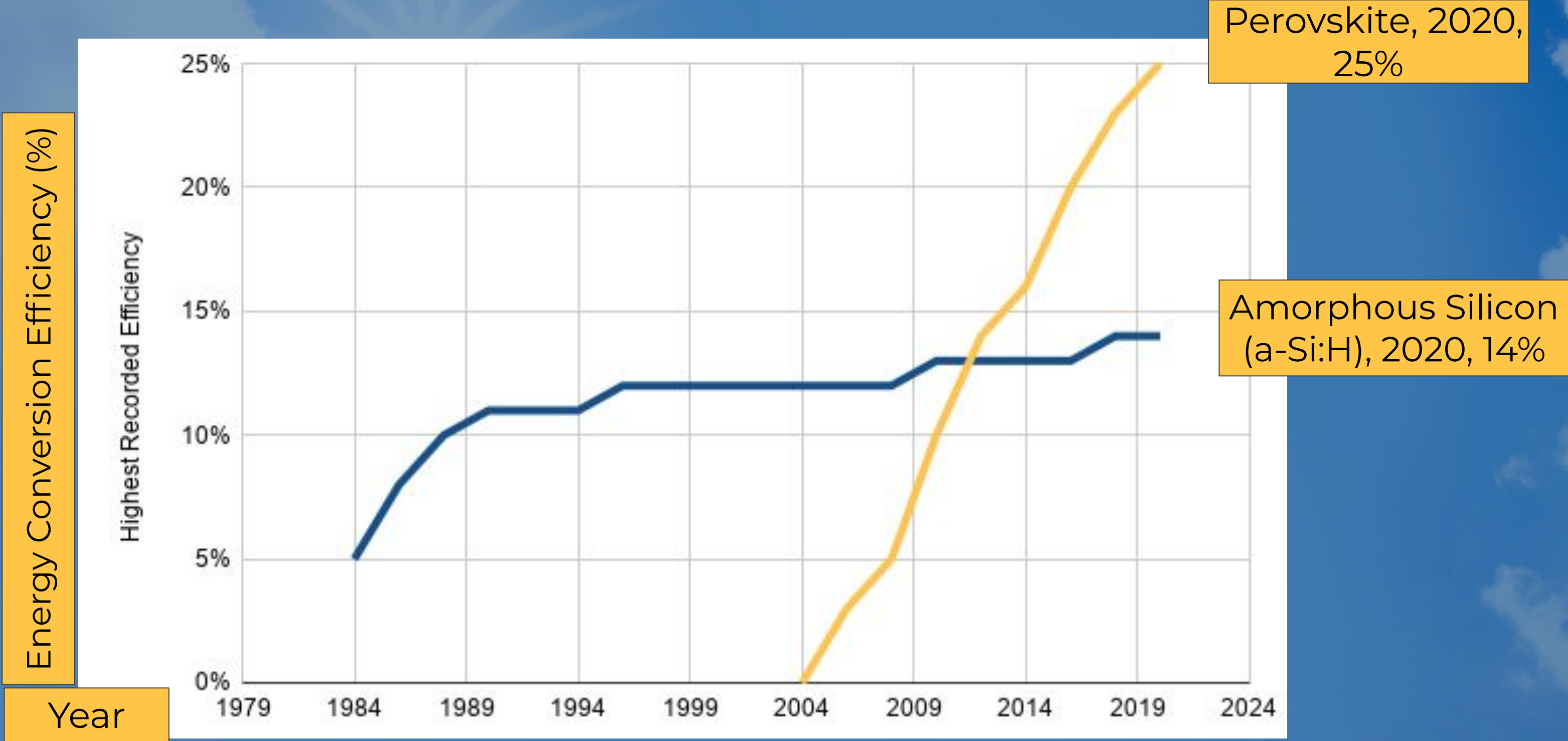
Silicon Solar Cells can only take us so far



EXPENSIVE
HIGH GREENHOUSE GASES
LOW EFFICIENCY

Some background context: current solar cells are made of silicon. The fabrication process is expensive, long, energy consuming, and it produces high greenhouse gas emissions. For the past few decades, people have had the idea that the world was going to be powered by solar energy but current technology is not nearly as efficient as it needs to be.

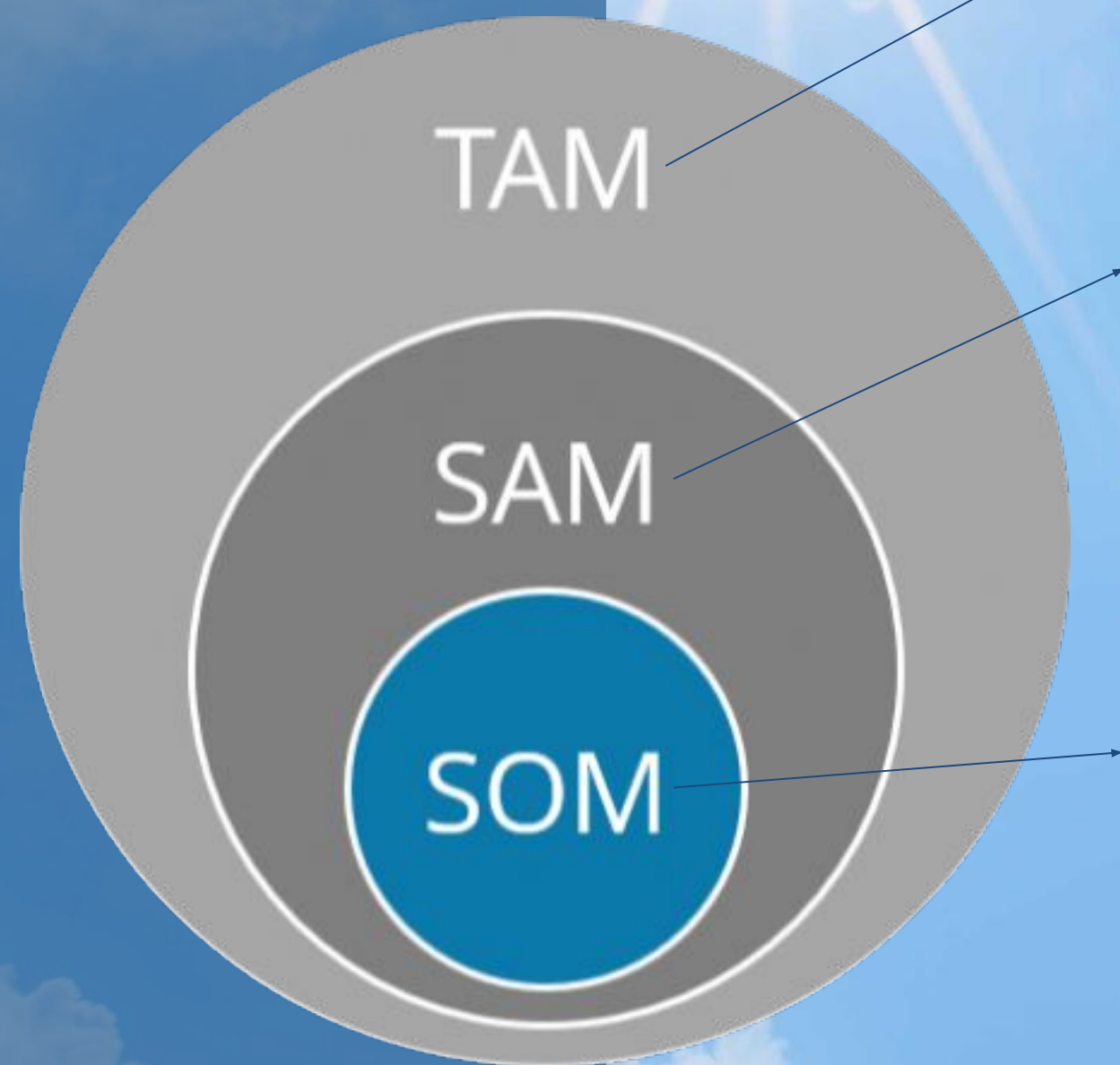
Perovskites Convert Energy More Efficiently



Silicon solar panels have reached their peak for energy conversion efficiency. When you hear that solar contributes with 51 TeraWatts-hour, it sounds like a huge number, but it is only 2% of the global energy production. These numbers are related to silicon solar cells, the blue line in the graph, with 14% efficiency in converting solar energy to electricity. The yellow line however, shows the emergence and improvement of a new material, called perovskite, which has a much higher energy conversion efficiency. Solaires makes perovskite solar cells.

Market Size

(Global)



Total Available Market \$768B

Solar Cells Market (by 2027)

Serviceable Available Mkt \$360B

Transparent, Polymer, Flexible, and Thin Film Solar Cells (by 2023-2027)

Serviceable Obtainable Mkt \$1B

Polymer and Flexible Solar Cells (by 2026-2027)

This is a \$768 Billion dollar market. Solaires is focusing on polymer and flexible solar cell manufacturers which is a \$1 Billion dollar market. The company has signed NDAs with manufacturing partners in Europe and Asia to test and evaluate its products.



MICROQUANTA SEMICONDUCTOR

Panasonic



SAULE
TECHNOLOGIES

Competition

Not solving the issue of

- Rigidity
- Cost
- Greenhouse gas emissions

There are a few companies around the world working towards marketing perovskite solar cells such as OxfordPV, Microquanta, Panasonic, and Saule, but almost all of these companies are trying to add a layer of perovskite to already existing silicon solar cells. This may improve the efficiency of resulting solar cells but doesn't solve the other issues such as limited use due to weight and rigidity of the panels as well as the cost and high greenhouse gas emissions of the silicon fabrication process.

Solution = Perovskites

Fast and clean to produce

40% more efficient and
growing

Light, flexible, and translucent:
opening new applications

Solaires is focused on developing perovskite technology. The company has developed a patent-pending manufacturing process that uses only perovskite crystals, that have 40% higher energy conversion efficiency than silicon, with lower manufacturing costs & lower greenhouse gas emissions.

Product and Revenue Streams



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graph TD; A[Product and Revenue Streams] --> B[Solar Ink™]; A --> C[Manufacturing Process]
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Solar Ink™

**Manufacturing
Process**

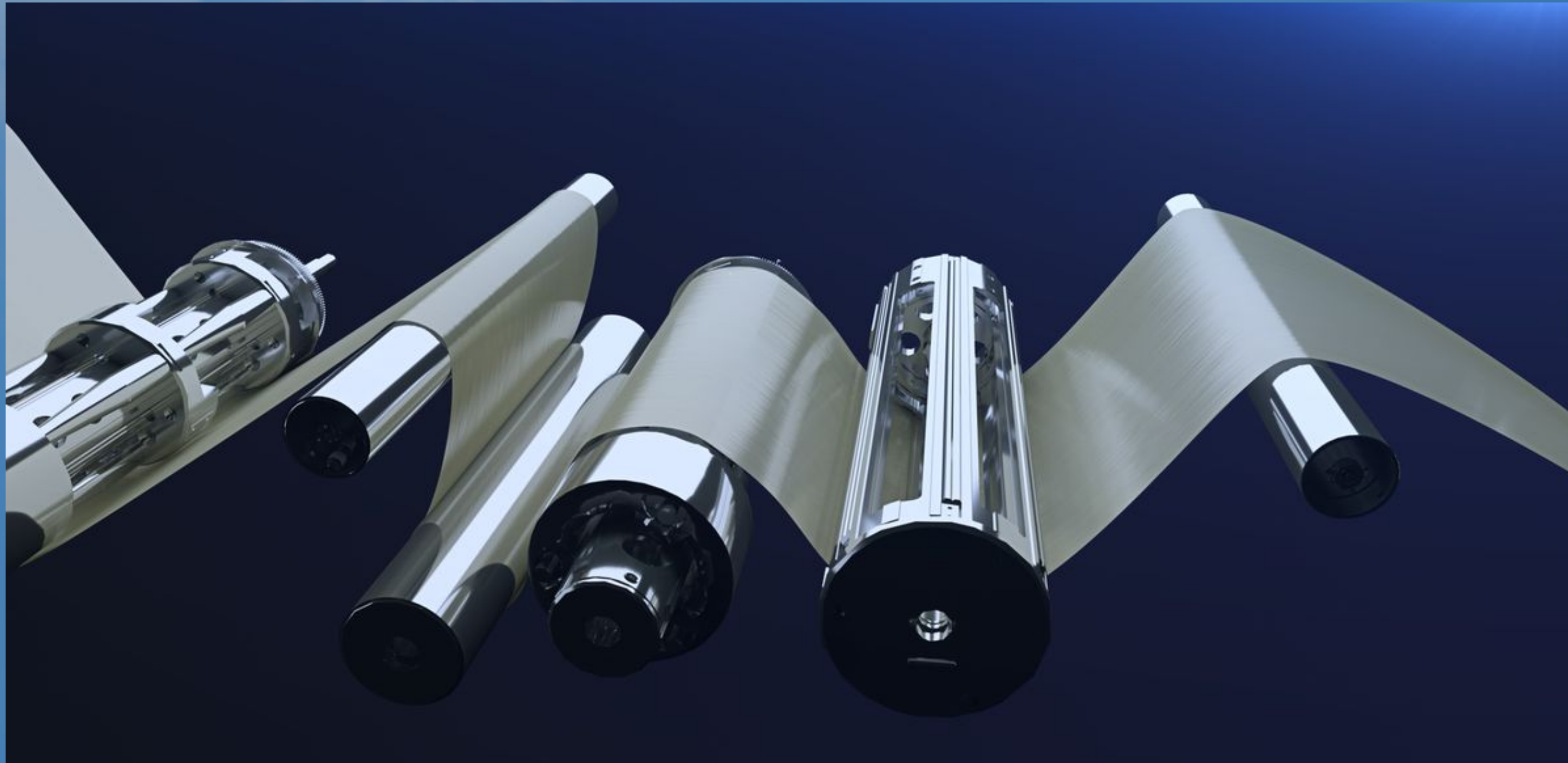
Solaires is developing a Solar Ink™ that can be used to coat different substrates. Also, the company is developing an innovative manufacturing process that enables the fabrication of perovskite solar cells with high energy conversion efficiency, on different types of substrates, and for different applications.



As a result of Solaires' technology, the world will have light, flexible, and translucent photovoltaic films that can be attached to different surfaces, enabling new innovative applications such as solar vehicles, photovoltaic blinds, or transparent solar windows.

Customer Segment

Roll to Roll Solar Cell



Solaires' customers are the polymer and flexible solar cell manufacturers who need to meet market demands for new applications that require flexible solar cells with higher energy conversion efficiency.

Management Team



Dr. Sahar Sam
CSO
PhD in Nanofabrication
15 years + experience



Fabian de la Fuente
CEO
4X serial entrepreneur
30 years + experience



Dr. Anjusree Shyla
Materials + Tech Researcher
PhD in Chemical Eng



Dr. Deepak Gangadharan
Materials and Tech Dev
PhD in Material Science



Adam Bruce
Engineering Lead
Mechanical Engineer



Carolina Betancourt
Marketing and Business Dev
Master of Global Business



Dr. Sonal Prajapati
Market Research Analyst
PhD in Applied Physics

Solaires' founders have extensive technical and business experience in developing and marketing new technologies. The company was founded in early 2020 and is now composed by a growing team of 17 scientists and professionals, including four PhDs and two masters, who are passionate about creating innovative solutions to address climate change.

Intellectual Property

Trademarks

Solaires™

Solar Ink™

Voltiles™

PVBlinds™

Patents

Ink Formulation

Electrodes

Additives and surfactant

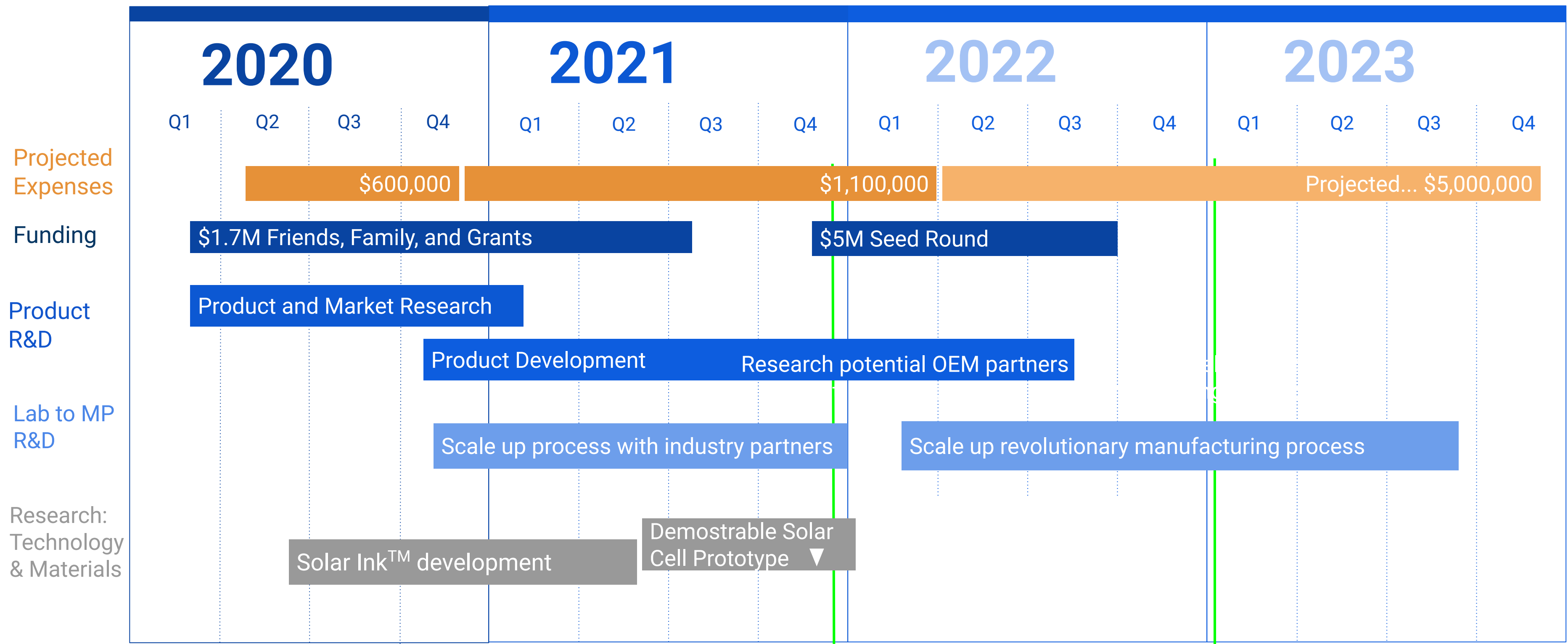
Device Structure

Process

Products

Solaires' has created a comprehensive intellectual property strategy that includes filing a dozen patent applications.

Road Map



Solaires' has secured \$1.7 million dollars in equity funding and grants. This gives the company a runway for the next 18 months.

Ask

- Building relationships with Strategic Capitals in the cleantech industry

THANK YOU

Dr. Sahar Sam
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Solaires.net



Solaires' wants to start building relationships with Smart Strategic Capitals for networking and potential investment opportunities.
Solaires is in business for a cleaner world!