Who is Harry Atwater?

Harry Atwater is the Otis Booth Leadership Chair, Division of Engineering and Applied Science, Howard Hughes Professor of Applied Physics and Materials Science, and Director, Liquid Sunlight Alliance at the California Institute of Technology.

What are Atwater's scientific interests?

Atwater's scientific interests span light-matter interactions from quantum nanophotonics, two-dimensional materials and metasurfaces to solar photovoltaics and artificial photosynthesis. Atwater is an early pioneer in nanophotonics and plasmonics; he gave the name to the field of plasmonics in 2001.

Who is Professor Atwater?

Professor Atwater has worked extensively as a consultant for industry and governmentand has actively served the materials community in a variety of roles,including President of the Materials Research Society in 2000,MRS Meeting Chair in 1997,and a member of the Board of Trustees of the Gordon Research Conferences.

Thus, the entire space solar array has been conceived of as an ultra-modular assembly. The tiles are designed to be incorporated into 2-m-wide (6.6-ft) strips measuring up to 60 m (197 ft) in length.

HARRY ATWATER SOLAR COMPANY

SSPP began after philanthropist Donald Bren, chairman of Irvine Company and a life member of the Caltech community, first learned about the potential for space-based solar energy manufacturing as a young man in an article in Popular Science magazine. Intrigued by the potential for space solar power, Bren approached Caltech's then-president Jean

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Space solar power, renewable energy transmitted 24 hours a day to anywhere on Earth, could help humanity transition away from fossil fuels and live more sustainably. "This is an extraordinary and unprecedented project," says Harry Atwater, an SSPP researcher and Otis Booth Leadership Chair of Caltech's Division of Engineering and Applied

HARRY ATWATER SOLAR COMPANY

Harry Atwater, Howard Hughes Professor and Professor of Applied Physics and Materials Science; and the Co-founder and Chief Technical Advisor for Alta Devices, a company that has developed a low cost GaAs photovoltaics technology with world record cell efficiency. including the silicon wire array solar cell, and layer-transferred

Harry Atwater is the Otis Booth Leadership Chair of the Division of Engineering and Applied Science, and the Howard Hughes Professor of Applied Physics and Materials Science at the California Institute of Technology. a Department of Energy Hub program for solar fuels. He is also founder of 5 early-stage companies, including Captura, which

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Prof. Harry A. Atwater. Howard Hughes Professor at Caltech. SPIE Involvement: Conference Program Committee | Author Publications (68) Proceedings Article | 13 March 2024 Free space optical communications, Wavefront sensors, Solar system, Robotics, Reflection, Plasmonics, Oxides. Read Abstract +

Following Caltech's first demonstration of wireless transmission of solar power in space, the other two experiments on the satellite are delivering promising results. Harry Atwater, another of the principal investigators on the project, was quoted as saying the processing is the same as is taught to Caltech's first year students

Harry Atwater, Howard Hughes Professor of Applied Physics and Materials Science and director of the Joint Center for Artificial Photosynthesis (JCAP), will receive the 2019 Institute of Electrical and Electronics Engineers (IEEE) William Cherry Award.. The award was established by the IEEE, an international association of technical professionals, to recognize ???

HARRY ATWATER SOLAR COMPANY

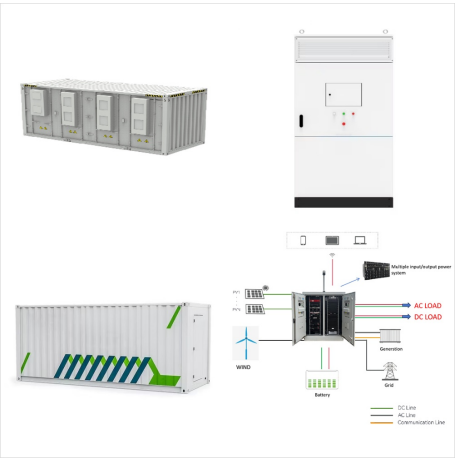
Captura, the other new company spun out of Caltech that is aiming to decarbonize the oceans, tested its first prototypes in the backyard pool of co-founder Harry Atwater, the chair of Caltech's Division of Engineering and Applied Science. "My son had just graduated from college and was looking for a biochemistry project," Atwater says.

It was launched on January 3, 2023, aboard a Momentus Vigoride spacecraft as part of the Caltech Space Solar Power Project (SSPP), led by professors Harry Atwater, Ali Hajimiri, and Sergio Pellegrino.

Left to right: Sergio Pellegrino, Harry Atwater, and Ali Hajimiri, the principal investigators of the Space Solar Power Project. A Long Journey The idea of space-based solar power dates back to as early as 1923 when Russian theorist Konstantin Tsiolkovsky proposed using mirrors in space to concentrate a strong beam of sunlight down to Earth.

HARRY ATWATER SOLAR COMPANY

Harry Atwater's research centers around two interwoven research themes: photovoltaics and solar energy, and plasmonics and optical metamaterials. Atwater and his group have been active in photovoltaics research for more than 20 years. Recently they have created new photovoltaic devices including silicon wire array solar cells and transferred-layer designs for III-V ???



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Three Engineering and Applied Science professors have joined forces to work with Northrop Grumman Corporation on the largest sponsored research project from industry that Caltech has undertaken in recent history. The project is called the Space Solar Power Initiative (SSPI), and the co-investigators are applied physicist and materials scientist Harry Atwater, ???

HARRY ATWATER SOLAR COMPANY

Harry Atwater California Institute of Technology Verified Solar-Driven Reduction of 1 atm of CO 2 to Formate at 10% Energy-Conversion Efficiency by Use of a TiO 2-Protected WH Cheng, HA Atwater, C Xiang. Nature communications 11 (1), 4412, 2020. 148: 2020: Scanning droplet cell for high throughput electrochemical and

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Led by professors Harry Atwater, Ali Hajimiri, and Sergio Pellegrino, the project gained international attention for its advancements. "It's not that we don"t have solar panels in space already.

HARRY ATWATER SOLAR COMPANY

A research agreement between the Northrop Grumman Corporation and Caltech provides up to $17.5M for the development of scientific and technological innovations necessary to enable a space solar power system. Three Caltech professors jointly lead the project: Harry Atwater, Ali Hajimiri, and Sergio Pellegrino.

Professor Harry Atwater has been awarded the 2021 Von Hippel Award. The Von Hippel Award, the Materials Research Society's highest honor, recognizes those qualities most prized by materials scientists and engineers???brilliance and ???

Harry Atwater. California Institute of Technology. Verified email at caltech - Homepage. Comparison of the device physics principles of planar and radial pn junction nanorod solar cells. BM Kayes, HA Atwater, NS Lewis. Journal of applied physics 97 (11), 2005. 1736: 2005: