

## **Recent scientific advances**



#### News on solar flares!

Three scientists have managed to predict the moment when solar flares will occur. These rashes are harmful to our planet because during their formation, they cause problems to earth equipment (satellites, drones ...) producing interfering waves, as well as creating resistance on low-orbit satellites and reducing their lifetime. Thus by planning these eruptions, our planet will no longer suffer damage that will slow scientific progress. However the fact of planning these eruptions does not spare the earth, it simply allows us to prepare ourselves better to face this phenomenon by taking more precautions and therefore suffering less damage ....

Thomas.

Pour en savoir plus : article de Nicolas Revoy paru dans le journal de la science le 25 octobre 2014. http://www.journaldelascience.fr/espace/articles/prevoir-eruptions-solaires-c-est-peut-etre-pour-bientot-4211



# Artificial leaves to capture sunlight

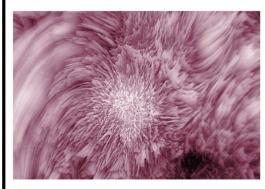
Using one's car through an artificial leaf: this progress would be incredible! Antonio REGALADO is a science journalist who reports the research of N. Lewis and those of many scientific laboratories. They have been able to demonstrate that the sun could produce right away chemical fuel.

Indeed, the newspaper article **pourlascience.fr** explains that thanks to the inventions of scientists, artificial leaves, like green plants, would capture the sun rays, which we could use to fuel our cars and power our electric plants.

Despite these advanced researches, artificial leaves have not yet been realized.

Elodie.

Pour en savoir plus : article d'Antonio Regalado paru dans le magazine Pour la science, juillet 2011. http://www.pourlascience.fr/ewb\_pages/a/article-de-l-energie-issue-de-feuilles-artificielles-27108.php



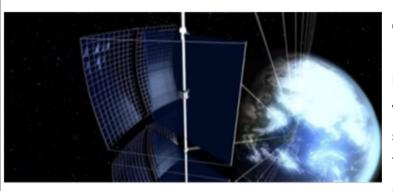
### The mystery of the pink spot on the sun

This pink spot named 2177 appeared in October 2014 and was photographed by the Solar Observatory Big-Bear. This pink colour is due to the light emission of ionized hydrogen in the chromosphere. The petals of solar roses are composed of plasma tubes contained by strong magnetic fields at work in the active regions, and they are called fibrils. Some of them exceed in size the diameter of the Earth.

Salma.

*Pour en savoir plus : article de Joël Ignasse paru dans* Sciences et avenir *le 04/03/2015. http://www.sciencesetavenir.fr/espace/20150304.OBS3806/image-ceci-n-est-pas-une-rose.html* 

# Solar panels in space? The scientific breakthrough that allows to believe it



The Huffington Post newspaper published on March 13, 2015 an article (**Solar Panels in space? The scientific breakthrough thatallows to believe it**) written by Manon Gabriel telling about a scientific breakthrough not quite visible. This article is about an invention which could revolutionize the world as it could solve energy shortageproblems.

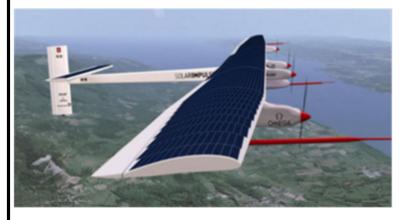
Indeed, this invention is clean and inexhaustible. Since 1980 Japan dreams of producing electricity in interstellar level and then send it to the earth. Their first research began in 1998. This ambitious project was launched in 2009. It consists in sending large photovoltaic panels in space. With a capacity ten times bigger than it is now, such devices will convert the energy of sunlight into electricity.

This electric current transformed into an energy flow would then be transmitted by laser or micro-wave beam to the Earth where it would be picked up by a giant satellite dish to be converted into electricity.

Christopher.

*Pour en savoir plus : article de Manon Gabriel paru dans le magazine le* Huffington Post *le 13/03/2015. http://www.huffingtonpost.fr/2015/03/13/panneaux-solaires-espace-japon-decouverte\_n\_6863376.html* 

#### SOLAR IMPULSE 2: Solar plane begins its world tour



It is a new ecological system: the unit flies without fuel to pay more attention to our planet. The airplane Solar Impulse 2 is powered by over 17,000 solar cells lining the 72 meters long wings, almost as long as those of an Airbus A380. The aircraft designed in carbon fiber weighs 2.5 tons only.

In total the unit will travel 35,000 km, at a relatively modest speed (between 50 and 100 km / h) flying over two oceans, and this convolution, 8,500 meters up, will take five months, including 25 days of effective flight, before returning to Abu Dhabi in late July / early August. It took 12 years of research conducted by Dr. Borshbleg and M.Picard to finally create this wonder. Both of them are trying to convey a political message.

A total of 130 people participate to the adventure : 65 will accompany the pilots around the world and 65 others will be in Monaco at the mission control center (meteorologists, air traffic controllers and engineers).

Soraya.

Pour en savoir plus : Sciences et avenir avec l'AFP, (Mehdi Benyezzar), paru le 09/03/2015. http://www.sciencesetavenir.fr/high-tech/20150309.OBS4144/l-avion-solaire-commence-son-tour-du-monde.html