

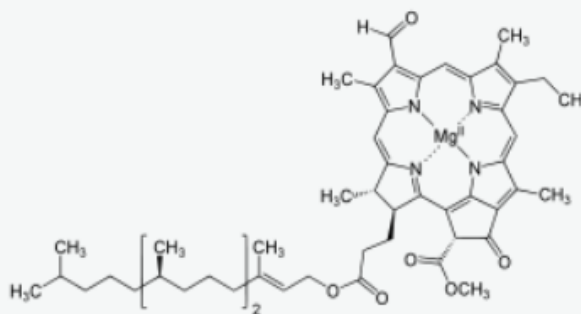
Mother Nature Knows Best



Organometallic Molecules Derived from Plants Advances Solar Energy



In photosynthesis, when light is absorbed by the chlorophyll, this excites two electrons! These electrons are then passed from one chlorophyll molecule to the next chlorophyll molecule until it is used to make ATP (energy!) and will also result in making sugar for the plant.



Using the chlorophyll structure as a model, scientists have reengineered solar cells to simulate how chlorophyll converts light to usable energy, while also being friendly to the environment!

Current Solar Cells

- Expensive, heavy, and are damaged easily
- Current attempts at replacing these solar cells with cheaper, more reliable ones contain Iodine
- Elemental iodine is toxic to the environment and harmful to humans in high doses (but has high efficiency!)

Chlorophyll-Based Solar Cells

- No negative impact on the environment
- Cheaper!
- Currently inefficient in their early stages of development



References:

Gray, J. C. (n.d.). Understanding Photosynthesis: How Does Chlorophyll Absorb Light Energy? Retrieved from <http://www.saps.org.uk/secondary/teaching-resources/283-photosynthesis-how-does-chlorophyll-absorb-light-energy>
Li, Y., Zhao, W., Li, M., Chen, G., Wang, X.-F., Fu, X., ... Sasaki, S. (2017). Chlorophyll-Based Organic-Inorganic Heterojunction Solar Cells. Chemistry - A European

