

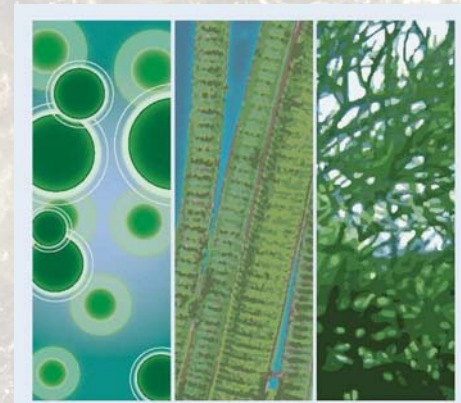
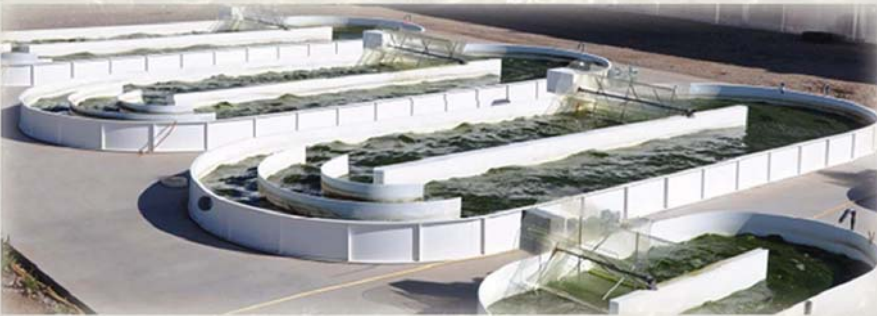
Science Foundation Arizona Algae Research Programs

ALGAE, tiny organisms considered a nuisance by many, could become the raw material used to power the world's aircraft, fuel our cars and trucks, or even feed cattle and other livestock.

Algae has emerged as a promising feedstock for future biofuels due to its high energy content, energy yield per acre and incredibly fast growth.

According to the U.S. Department of Energy, algae may be able to produce **100 times** more oil per acre than soybeans — currently the leading source of U.S. biodiesel — or any other terrestrial oil-producing crop.

Because of its high energy content, oil from algae can be refined into biodiesel, green gasoline, jet fuel or a variety of high-value food products and additives.

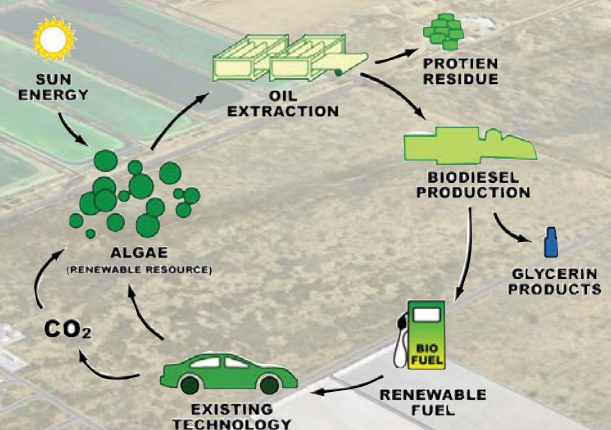


MICROALGAE CYANOBACTERIA MACROALGAE

Energy Solutions Through Innovation

Arizona has an extraordinary opportunity to be a leading developer and producer of biofuel and other high-value products derived from Algae.

- Outstanding research and development capabilities
- Abundant sunshine
- Ample supply of wastewater and saline aquifers
- Ample supply of CO₂ feedstock
- Ample desert land for algae farms



Algae Research Programs



Science Foundation Arizona has funded research grants for two Arizona State University programs on biofuels.

Professors Milton Sommerfeld and Qiang Hu lead a project focused on identifying and cultivating optimal strains of algae for biofuel production. Their work was cited by Time Magazine as one of the "Best Inventions of 2008."

Prof. Bruce Rittman leads a team focused on developing a new form of biofuel based on cyanobacteria - leveraging the fact that these microorganisms use photosynthesis (i.e. sunlight) to produce high-energy biofuel.

The Arizona Center for Algae Technology and Innovation

~ ~ ~ AzCATI ~ ~ ~

This newly formed center is a collaborative partnership housed at Arizona State University's Laboratory for Algae Research & Biotechnology.

AzCATI is designed to position Arizona as a leader in research, development and commercialization of next-generation biofuels and other algae-based technologies and products.

With seed funding from **Science Foundation Arizona**, AzCATI will serve as a critical hub in the exploration and development of bioenergy sources and technologies.

Industry partners:

- Heliae Development
- Salt River Project
- NanoVoltaix



"We need to work on robust strains of algae to optimize qualities useful in fuel production, and devise growth systems like open ponds or closed containers that will allow for inexpensive algae "farming."

U.S. Department of Energy