



AzCATI

Arizona Center
for
Algae Technology *and* Innovation

ASU LightWorks
ARIZONA STATE UNIVERSITY

Light-Inspired Solutions





mission

about **AzCATI**

The Arizona Center for Algae Technology and Innovation (AzCATI), located at ASU's Polytechnic Campus in Mesa, serves as a hub for research, testing, and commercialization of algae-based products. These include biofuels, pharmaceuticals, nutraceuticals, and other algae biomass co-products. The center also serves as a learning environment for the next generation of scientists and engineers.

AzCATI provides open test and evaluation facilities for the algae industry and research community. The center can assess the performance of individual and combined unit operations across the algal value chain.



why algae?

Fast-growing algae offer enormous potential as a source of low-cost, sustainable biofuel. Algae produce lipids and oils in their cells that can be extracted and converted into renewable fuels such as biodiesel or aviation fuel. Unlike other biofuel sources, such as corn, algae do not require the use of arable farmland.



why **Arizona?**

With its available land, desirable climate, and abundant sunshine, the Southwest—and Arizona in particular—is an ideal location for growing algae. In addition, Arizona State University has been a pioneer in algae research for more than 30 years.

Scientists at ASU have developed fast-growing, high-oil-producing microalgal strains. They have also developed cultivation, harvesting, and extraction methods for mass culture and biomass production.



Connect

Serve as an intellectual and physical hub to foster local, state, national, and international research and education on algae-based solutions for a sustainable environment

Advance

Enable development of innovative and sustainable technologies for production of microalgae feedstocks for biofuels and bioproducts

Collaborate

Facilitate collaborations among universities, national laboratories, and industry to accelerate technology development and commercialization

Educate

Provide innovative learning and educational environments and opportunities for training next-generation scientists and engineers for the biotechnology workforce

Launch

Serve as a national test bed to accelerate algae technology development and commercialization



STRAIN DEVELOPMENT

FEEDSTOCK PRODUCTION

HARVESTING & DEWATERING

DRYING & PRE-PROCESSING

EXTRACTION & CONVERSION

COMMERCIALIZATION & DEPLOYMENT

EDUCATION

OUTREACH

TRAINING



BIOREMEDIATION
CARBON CAPTURE



CO-PRODUCTS



NON-FUEL LIPIDS



- Strain identification and evaluation
- Culture medium evaluation
- Culture systems design and evaluation
- Culture maintenance and operation protocol development
- Chemical and biochemical analysis
- Design recommendations for system integration and optimization
- Nutrient scaling, sustainability, and management
- Water conservation, management, and recycling
- Equipment evaluation and methods development
- Prototype unit operation assessment
- Process and techno-economic modeling
- Co-products identification and analysis

partners

AzCATI is administered and funded in part by Science Foundation Arizona and managed by Arizona State University. Partners include:

National Renewable Energy Laboratory

Sandia National Laboratories

Algasol

NanoVoltaix, Inc.

Raven Industries

Salt River Project

SRS Energy

World Water Works

Heliae Development

Intel

Phyco Biosciences

Algae Biosciences Corp.

Litree

QIBEBT

Dionex

Fluid Imaging Technologies

University of Arizona

contact us

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