

Alternative Alternative Energy (A2E) strives to explore the creative boundaries of energy production. A2E designs draw inspiration from the diversity of nature and the limitless innovation of the human mind.

*Powercycle* is an exhibition of new energy ideas that power themselves.

Caught in a cycle of energy gained and lost, each individual project is conceptualized as a micro energy economy.

March 4 - April 4, 2008  
Jonson Gallery  
of the University of New Mexico Art Museum  
Albuquerque, New Mexico

[www.alternative2energy.com](http://www.alternative2energy.com)

EIW.01 Burning methane ice, under laboratory conditions.

Methane Ice, also known as Methane Clathrate, only exists in solid form under high pressure and low temperature conditions, such as those found deep under the ocean floor.



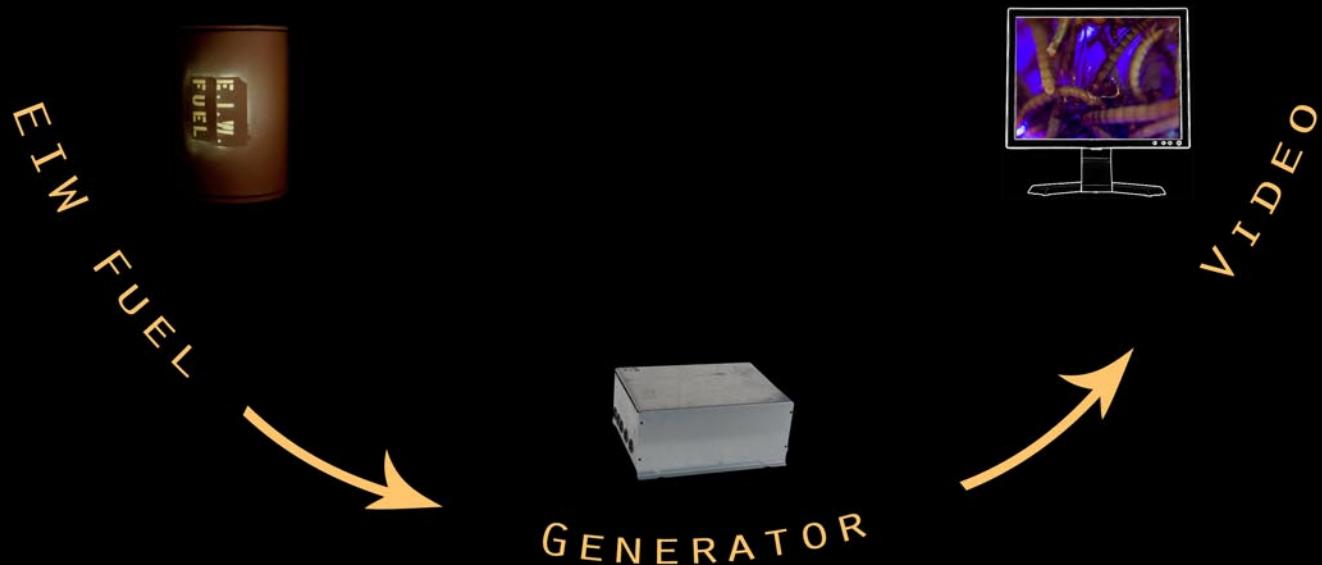
ENERGY  
ICE  
WORM FUEL

Project Code Name:

EIW

Energy ice worms are specially bred to consume methane ice, a solid form of natural gas that exists in deep ocean sediments at high pressure and low temperature.

When harvested and refined, the worms create a biomass fuel suitable for combustion engines.





EIW.03 EIW.04 EIW.05 Energy ice worms are delivered to deep ocean methane deposits using torpedos.





EIW.06 EIW.07 EIW.08 Spontaneous worm liquefaction during harvest from ocean depth.  
Ocean pressure simulation 403 decibars, 201 decibars, and 0 decibars.



Project Code Name:

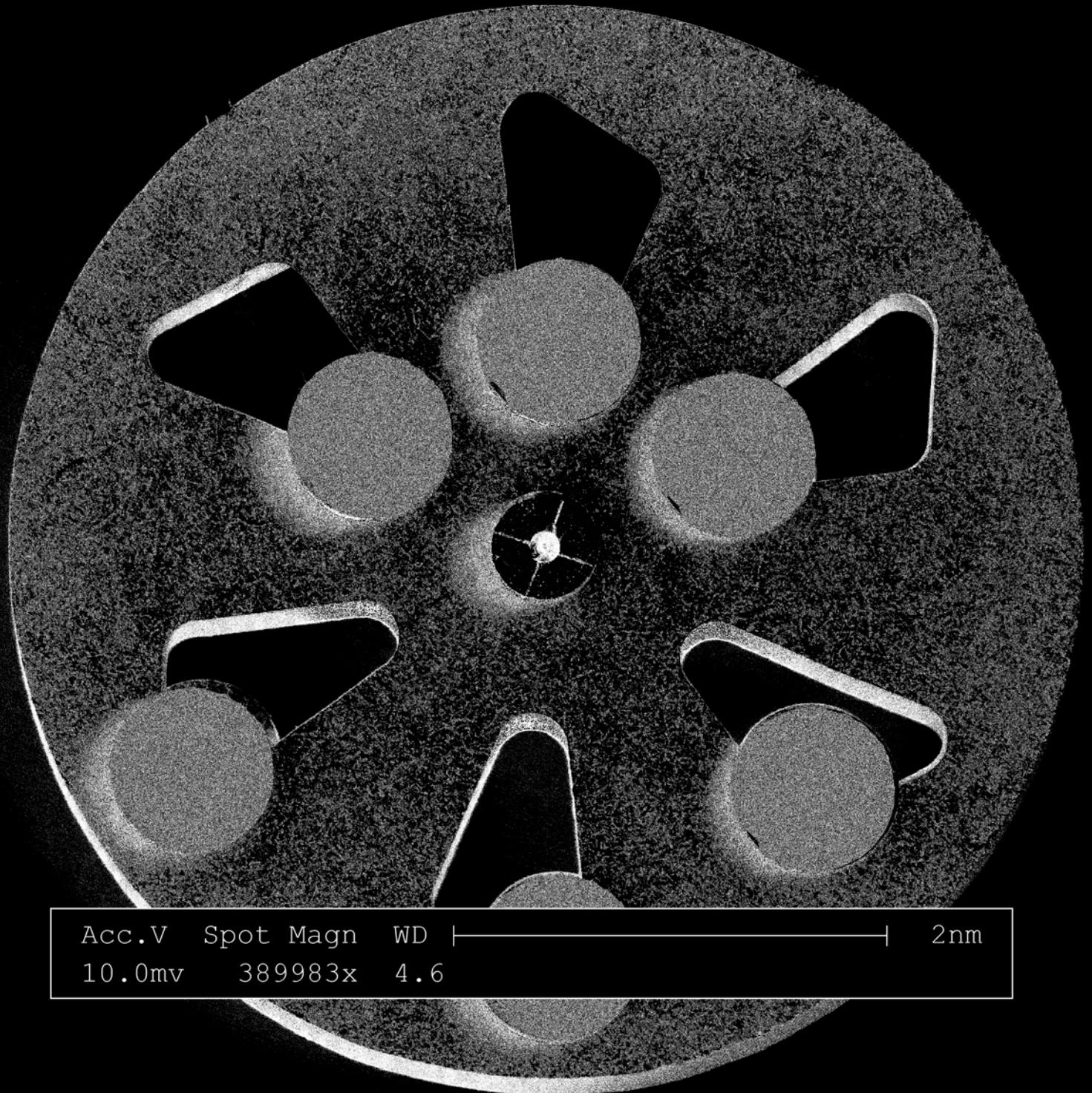
RRPP

# RECURSIVE REDUCTION PERPETURAL PROTOTYPE

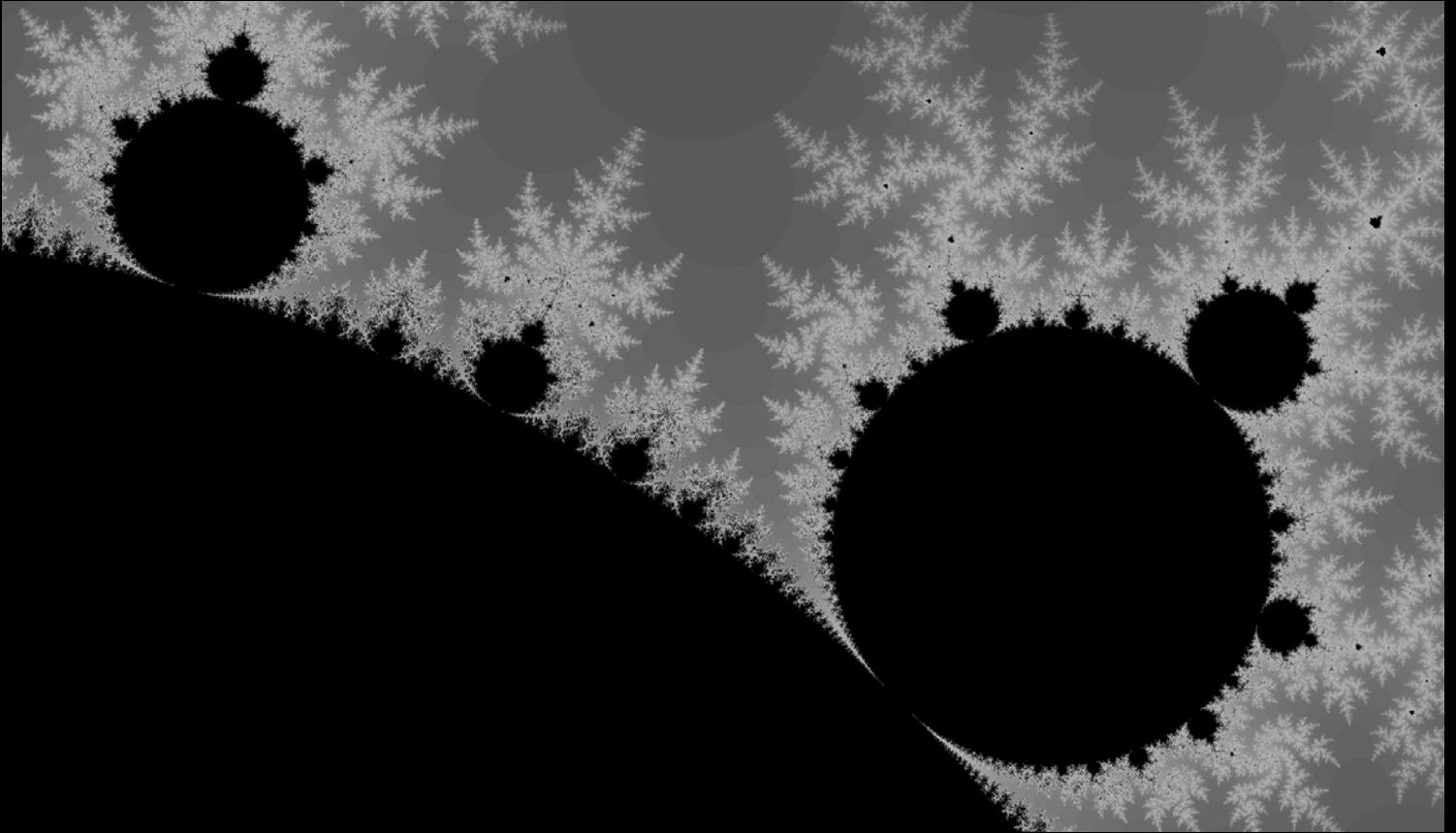
RRPP is a research model for a perpetual motion energy machine. Variations of the overbalanced wheel have been considered by inventors throughout history, but the perfect cycle of energy gained and lost has remained elusive.

This re-invention uses a recursive reduction of wheels within wheels, from macro to micro to nanoscale.





Acc.V	Spot	Magn	WD	-----	2nm
10.0mv		389983x	4.6		



RRPP.03 The Mandelbrot set fractal is a visual example of the recursive reduction that RRPP utilizes.

RRPP.04 A four nanometer overbalanced wheel. A2E is currently researching the differing physical properties of materials at the nanoscale.



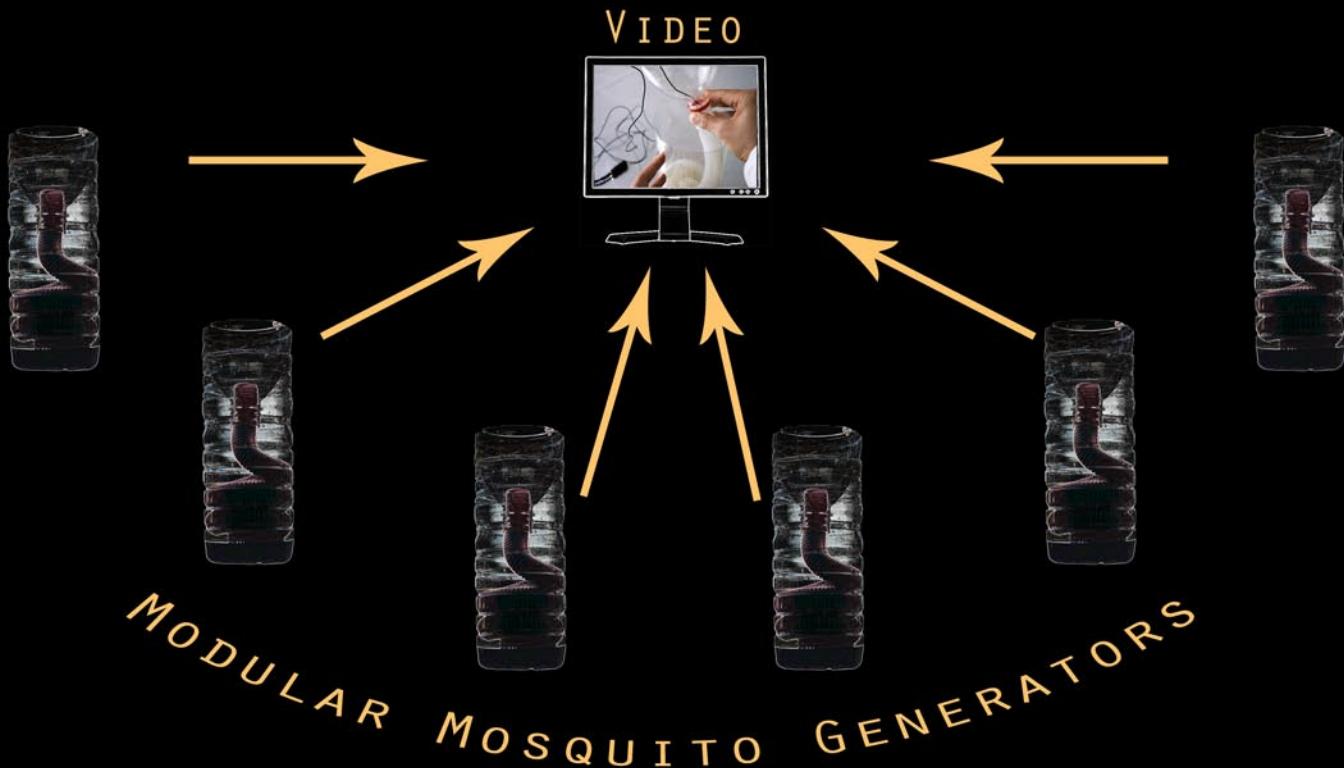
# MOSQUITO GENERATOR

Project Code Name:

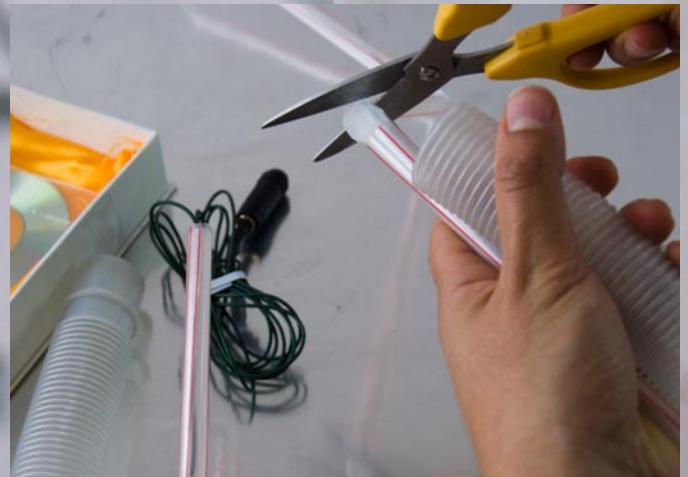
MOSQ

There are over 3000 species of mosquitos, and they inhabit every continent except Antarctica. A female mosquito can lay up to 300 eggs at a time.

The mosquito generator takes advantage of this abundant and extremely renewable resource.



MOSQ.03 MOSQ.04 MOSQ.05 Illustrations from  
Alternative Alternative Energy Publication #108:  
"Build Your Own Mosquito Generator With  
Recycled Materials and and an A2E Kit."







MOSQ.08 When the mosquito flies down the tube of the mosquito generator, the membrane lining the tube converts the vibration of the mosquito's buzz into electrical energy.



MOSQ.09 The generator membrane has two layers. The first layer is composed of tiny drums tuned to vibrate at the frequency of a mosquito's buzz.



MOSQ.10 The first layer causes the piezoelectric material of the second layer to flex, generating current.

Project Code Name:

PPRR

# PRODUCE POWERED ROBOTIC RODENT

PPRR is a animaloid robot powered by an adaptation of the vegetable battery. Over 100 vegetable units connected in parallel and serial arrangements provide sufficient current at the correct voltage to power a AA battery charger.





PPRR.01 The robotic rodent is also part of related research projects on the metabolism of organic materials by mechanical animals.

Project Code Name:

MOTH

# MOTH GENERATOR

Using the innate attraction of moths to light, the Moth Generator creates electrical current from the movement of magnetized moths past conductive coils.

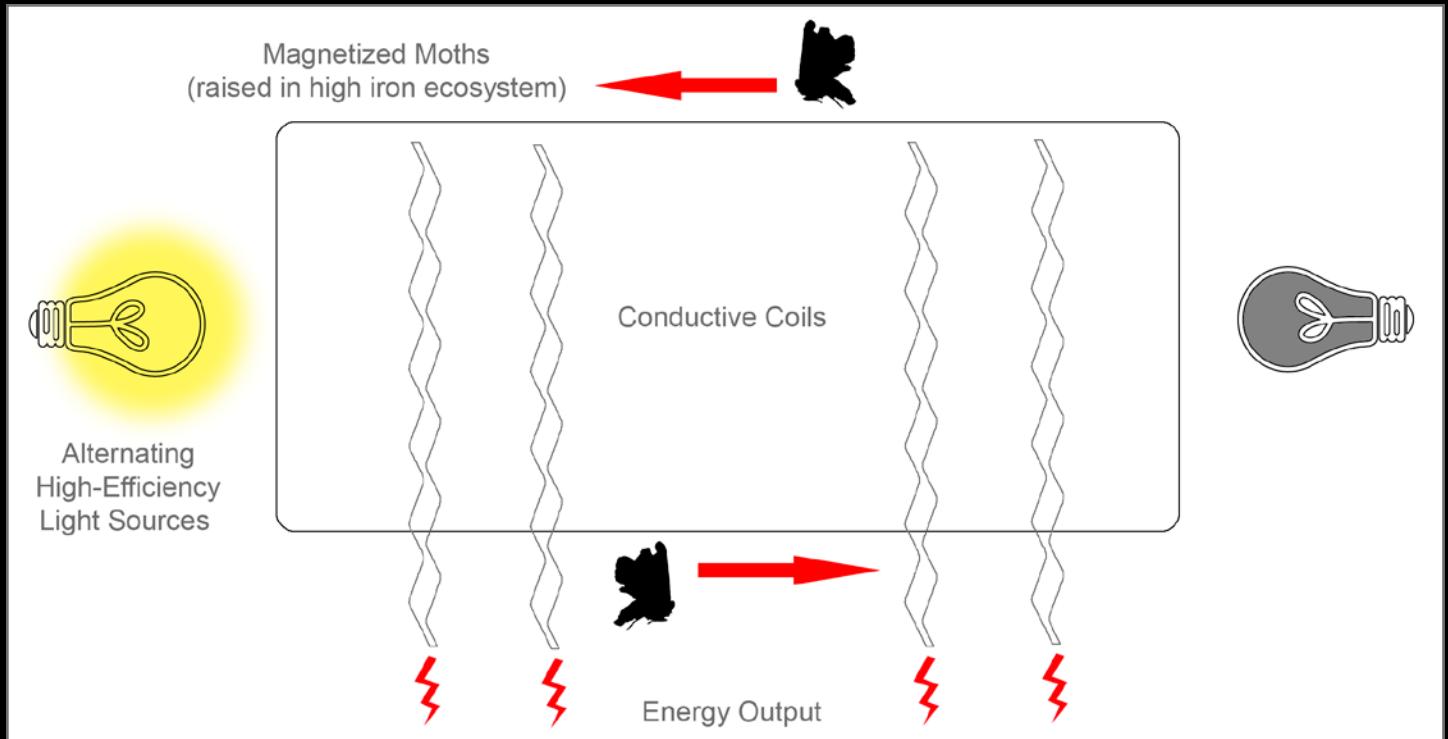
A single moth creates only a small charge, but thousands of moths flying together create a significant output.

MOTH.02 Model of the Moth Generator in site.





THE UNIVERSITY OF CALIFORNIA  
SAN DIEGO  
10TH GENERATOR



MOTH.03 Diagram of Moth Generator technology.



MOTH.05 Early moth power design concept utilizing a single moth.

MOTH.04  
Magnetized moth showing magnetic polarity in iron filings.



# Jonson Gallery Exhibit List

EIW  
Energy Ice Worm Fuel

Installation: Barrel of EIW Fuel, Generator, Video

RRPP  
Recursive Reduction Perpetual Prototype

Installation: RRPP Prototype Wheel (4' diameter), Exhibit Case for Nano Wheel, 8x10 Scanning Microscope Image

MOSQ  
Modular Mosquito Generator

Installation: 6 Mosquito Generators in 8"x8"x12" Plexiglass Boxes, Mosquitos, Wire, Video

PPRR  
Produce Powered Robotic Rodent

Installation: 100+ Apples, Wire, Zinc Plated Nails, Pennies, Battery Charger, Robotic Rodent

MOTH  
Moth Generator

Installation: 8'x 3' x 3' Plexiglass and Aluminum Box, Alternating Lights, Video Camera, LCD Projector

## Additional A2E Images and Projects

<http://www.alternative2energy.com>

Moth Generator

MOTH.01 Satellite Image, Archival Pigment Print, 30"x30"

MOTH.02 Model In Site, Archival Pigment Print, 30"x54"

MOTH.03 Moth Generator Diagram, Flash Animation, variable dimensions

MOTH.04 Magnetized Moth, Archival Pigment Print, 40"x30"

MOTH.05 Single Moth Generator, Archival Pigment Print, 30"x40"

## Energy Ice Worm Fuel

Energy Ice Worm Video, 2 minutes 45 seconds, variable dimensions

- EIW.01 Burning Ice, Archival Pigment Print, 40"x30"
- EIW.02 South China Sea, Archival Pigment Print, 30"x40"
- EIW.03 Ice Worms Feeding, Archival Pigment Print, 30"x40"
- EIW.04 Ice Worm Delivery Torpedos, Archival Pigment Print, 30"x40"
- EIW.05 Worm Release, Archival Pigment Print, 30"x40"
- EIW.06 Worm Liquefaction, Archival Pigment Print, 16"x20"
- EIW.07 Worm Liquefaction, Archival Pigment Print, 16"x20"
- EIW.08 Worm Liquefaction, Archival Pigment Print, 16"x20"
- EIW.09 Refined EIW Fuel, Archival Pigment Print, 30"x40"

## Bat Generator

Bat Generator Video, 3 minutes, variable dimensions

- BAT.01 Satellite Image, Archival Pigment Print, 30"x30"
- BAT.02 Still from Bat Generator Movie, Archival Pigment Print, 30"x40"
- BAT.03 Still from Bat Generator Movie, Archival Pigment Print, 30"x30"
- BAT.04 Bat Generator Prototype, Archival Pigment Print, 30"x40"

## Sea Cucumber Methane Recovery

- SCMR.00 (background) Conventional Sea Cucumbers, Archival Pigment Print, 16"x20"
- SCMR.01a Coal Mine Methane Recovery Diagram, Archival Pigment Print, 22"x30"
- SCMR.01b Coal Mine Methane Recovery Diagram, Archival Pigment Print, 22"x30"
- SCMR.02 Symbiotic Bacteria, Archival Pigment Print, 22"x30"
- SCMR.03 Symbiotic Bacteria, Archival Pigment Print, 22"x30"
- SCMR.04 Deep Ocean Sea Cucumber Cuisine, Archival Pigment Print, 30"x40"

## Mosquito Generator

Mosquito Generator Video, 3 minutes 23 seconds, variable dimensions

- MOSQ.01 (background) Feeding Female Mosquito, Archival Pigment Print, 30"x40"
- MOSQ.02 Mosquito Generator, Archival Pigment Print, 22"x30"
- MOSQ.03 Build Your Own Generator, Archival Pigment Print, 16"x20"
- MOSQ.04 Build Your Own Generator, Archival Pigment Print, 16"x20"
- MOSQ.05 Build Your Own Generator, Archival Pigment Print, 16"x20"
- MOSQ.08 Mosquito in Generator Tube, Archival Pigment Print, 22"x30"
- MOSQ.09 Mosquito Generator Membrane, Archival Pigment Print, 22"x30"
- MOSQ.15 Guangxi Province Field Tests, Archival Pigment Print, 22"x30"
- MOSQ.20 Guangxi Province Field Tests, Archival Pigment Print, 22"x30"
- MOSQ.23 Guangxi Province Field Tests, Archival Pigment Print, 22"x30"
- MOSQ.27 Guangxi Province Field Tests, Archival Pigment Print, 22"x30"

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MFA Committee:

Jim Stone

Patrick Nagatani

Joyce Neimanas

Adrienne Salinger

Joyce Szabo

Dedicated to Mom and Dad, with love

Jonson Gallery

March 4-April 4, 2008

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