

# Collaboration

Our STEM program will continuously provide new technologies, principles, materials, instructions, and training, in addition to our class curriculum, for a proficient STEM education.

BIOeCHEM offers:

- Summer Camp programs
- After school programs
- Internship training programs



Founder:



Dr. Pei Zhang is an MIT postdoctoral research scholar, a National Science Foundation awardee, and a postdoctoral research associate and a PhD in environmental engineering with a sub-focus in environmental biotechnology.

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# Our Lab

Our lab activities will teach participants principles in the following concentrations in an engaging format through active learning:

- Biology & Micro-biology
- Soldering
- Product Design
- Radio-biology
- Microwave Radiation
- Sustainable Energy Creation



- Lab time for creation products range from an hour and a half to two hours
- Challenging and captivating activities for children aged 9-14
- Activities concentrate on our STEM created products, including but not limited to: microbiology, bio-energy, water treatment technology, microwave radiation, and environmental biotechnology.



## Summer Camp Curriculum for Children Ages 9-14



# STEM Summer Camp

Available July 9 - August 24

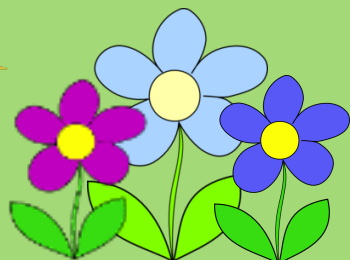
## Biobattery powered Electric Flower

The battery we use daily has harsh compounds inside. They must be sealed to prevent from leaking and exploring. You can't touch the battery liquid by hand, because the liquid is toxic and can potentially burn skin.



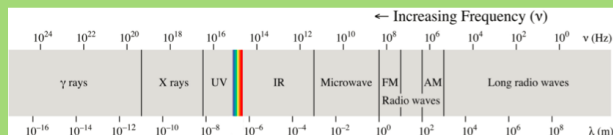
Our Biobatteries are different from traditional batteries. They contain active biological compounds instead of harsh chemicals. Special microorganisms can live in our Biobatteries and help electrons transport energy up to the light bulb. Kids will learn about how our batteries work and have a chance to make their own during camp.

The light in the center of the flower is powered by biological batteries partially submerged in water. If you continue to add new water to the container sporadically, the light can stay on for up to month!



## Microwave Detection Bracelet

On the Electromagnetic Spectrum, microwaves have longer wavelengths than radio waves. Receiving microwave radiation can cause brain damages, cataracts, pervasive developmental disorder, or even cancer.



Microwave ovens use microwaves to cook food. They often leak out of the space between the oven and door while cooking. This can potentially lead to many health problems.



It is recommended to keep distance while the microwave oven is running or use a protection kit to block the leak permanently.

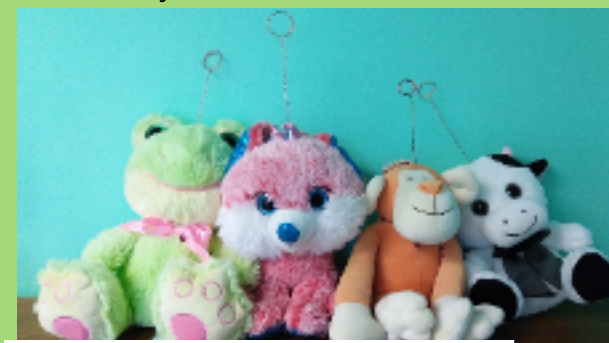


In our program, we can train students to solder the microwave detector, and integrate it into bracelets in a variety of materials, styles, and colors. By placing one of these bracelets near the crack of the door in a microwave oven, if the red LED light on the bracelet turns on, then it's leaking.

## Little Monsters

Electromagnetic Field radiation measures the radiation you receive from electricity cables, switchboards, electrical appliances, etc. with a low frequency radiation meter.

Kids will learn and play with our educational toy (containing our patented technology) that is able to detect electricity inside wires and powered electronic devices everywhere. This activity is not only fun, but creates curiosity and realization of all the science going on around them which they are not able to see with their eyes.



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