# Amazon Catalyst at ECS

amazon catalyst

All ▾

Are you an innovator, inventor, dreamer?
Do you notice problems, big and small?
Do you love to create solutions?

If you answered "**Yes!**" then you will be interested in the **Amazon Catalyst at ECS** program, kicking off at the 233rd ECS Meeting in Seattle, WA.

ECS members have an opportunity to interact with one of the world's largest companies and potentially be awarded a grant to tackle a number of different challenges.

Amazon Catalyst at ECS is committing up to **$100,000** to help fund your great research.

Find out more from Amazon at the plenary session on
**Monday, May 14, 1700-1800h**,
*Ballroom 6E, Washington State Convention Center*

ECS

More information will be available online at
**www.electrochem.org**

All ▾

# Amazon Catalyst at ECS

## Open Challenge

- ***Anything*** topic you want to propose!

## Biomedical and Health

- How will the confluence of electrochemistry and neural stimulation of the brain and muscles impact biomedical engineering?
- Superbug resistant materials and coatings for hospitals, clothing and public spaces
- How can wearable health interfaces and computer monitoring systems revolutionize clinical medicine?

## Energy Conversion and Energy Storage

- Electrochemical energy conversion and energy storage, energy harvesting
- How to cost effectively integrate natural habitat into solar and wind assets?
- Ultra-low cost and sustainable energy storage for very large capacity use
- Innovations in high energy density batteries (electric flight?)
- Reversible oxygen reduction catalysts for energy conversion and energy storage
- 3D printed energy storage and batteries

## Infrastructure and Industry

- Ubiquitous sensors for the Internet of Things
- Can we develop systems to co-produce electricity and clean water?
- Designing transportation, energy, and water infrastructure to last longer without failing
- Smart window, green roof technologies for smart cities
- Modular, point-of-use electrochemical synthesis of high value products like chemicals and pharmaceuticals
- Processing of materials for quantum computing
- Ultra-low latency 5G networking for dense networks communication (concerted drone flight)
- Multi-material additive manufacturing and printing
- How will AI change edge computing?

## Water Treatment, $CO_2$ Reduction, and Environmental Responsibility

- How do we scrub 400pmm $CO_2$ from atmosphere, $CO_2$ capture, $CO_2$ to chemical feedstocks?
- Water purification, water desalination, lead ion monitoring/removal, and waste water treatment
- Fertilizer improvements/innovations, minimize run-off, irrigations improvements/ impact minimization
- Efficient chemical synthesis/conversion for waste plastic recycling for value-added second use
- Can we safely store highly radioactive materials for times of 100,000 years or longer?