

Nano Science, Technology and Industry Scoreboard

Zeta Energy Corporation Selected to Receive \$4 Million in Federal Funding to Develop More Efficient Electric Vehicle Batteries

2023-02-01

Zeta Energy Corp. was selected to receive \$4 million in Federal funding from the U.S. Department of Energy Advanced Research Projects Agency-Energy (ARPA-E). The funding is part of the ARPA-E Electric Vehicles for American Low-Carbon Living (EVs4ALL) program, which seeks to develop more affordable, convenient, efficient, and resilient electric vehicle (EV) batteries.

Zeta's batteries offer much higher performance (energy capacity, specific power, and shelf life) at a significantly lower cost, and with no cobalt or nickel. Zeta's technology combines a carbon nanotube anode with a sulfurized carbon cathode. It is widely known that sulfur offers superior potential for holding lithium ions and is also lightweight, abundant, and economical. However, in the past, a problem known as the "polysulfide shuttle effect" held back development of lithium sulfur batteries because they were not long lasting – the sulfur would, in essence, dissolve into the electrolyte after a few cycles.

Zeta Energy's technology solves this problem, enabling the energy density and economy benefits of lithium sulfur batteries while also making the batteries long lasting. In short, Zeta's batteries will enable companies to make far more efficient electric vehicles and other battery powered products. Furthermore, since Zeta's technology relies on widely available and abundant materials, it helps to localize the battery supply chain, making it simpler and more secure.

As noted by ARPA-E, "Zeta Energy will create a new anode with a high Li content that is also highly accessible and rechargeable. The complementary physical and chemical features of the cathode and anode will enable transformational high charge rates and long-term stability while also minimizing performance losses at low temperatures."

Zeta Energy CEO Tom Pilette stated, "We are thrilled to have been selected for funding by the ARPA-E EVs4ALL program. We have been working hard to make this technology a reality, and we are really grateful to receive this recognition of the promise of our technology and the progress we have made on it. We are looking forward to working with ARPA-E to bring our technology to the marketplace, and help to create a more sustainable future."

| Read the <u>original article</u> o | on PR Newswire. |
|------------------------------------|-----------------|
|------------------------------------|-----------------|