

Argonne and PulseForge Advance Solid-State Electrolyte Manufacturing in Phase 2 CRADA

AUSTIN, TX, UNITED STATES, April 22, 2026 /EINPresswire.com/ -- [PulseForge](#) and Argonne National Laboratory launch phase 2 of their Cooperative Research and Development Agreement (CRADA), funded by the U.S. Department of Energy's Technology Commercialization Fund. This effort builds on their 2024 R&D 100 Award-winning phase 1 work on Solid-State Electrolyte (SSE) synthesis for next-generation batteries and electrolyzers. In phase 2, the team will focus on commercializing the technology by combining Argonne's development expertise with PulseForge's materials processing capabilities.

In the coming years the need for fast charging, high-capacity, batteries will only grow. SSEs meet that need with their extended lifespan, capacity and charging rate compared to conventional liquid electrolyte batteries. PulseForge with Argonne National Laboratory is spreading this innovation to deliver a scalable manufacturing solution to the industry.

In Phase 1 Argonne and PulseForge demonstrated the feasibility of synthesizing Lithium Lanthanum Titanate (LLTO) with a tenfold reduction in energy consumption and a 200-fold increase in manufacturing speed by combining Argonne's greenbody synthesis techniques with flash processing from a PulseForge roll to roll. In Phase 2 the team will adapt this combined synthesis pathway from the laboratory to pilot scale by demonstrating continuous production with a PulseForge roll to roll system, increasing the technology readiness level for adoption in the market. During the project, industry partners are encouraged to get involved to provide their feedback on the project and sample materials. Following completion, industry partners will have the opportunity to license the process and or purchase tools.

Details of this 2025 Core Laboratory Infrastructure for Market Readiness (CLIMR) project under EERE's Advanced Materials and Manufacturing Technologies Office covering the next stage of development:

<https://www.energy.gov/technologycommercialization/fiscal-year-2025-climr-projects-commercializing-energy-technologies>

Details of the 2024 R&D100 Award winning Phase 1 project demonstrating accelerated processing of Argonne's green bodies demonstrating decreased cost of time and energy in the synthesis of LLTO:

<https://www.anl.gov/article/six-argonne-projects-receive-rd-100-awards>

About PulseForge, Inc.

PulseForge, Inc. develops and manufactures state-of-the-art flashlamp-based tools that deliver energy in a precise and targeted manner to enable innovation in industrial manufacturing. Our expertise and tools empower our customers to explore novel materials and manufacturing methodologies, driving dynamic and efficient production at an industrial scale.

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