PRINTED INTEGRAL BATTERIES
IMPROVED PERFORMANCE,REDUCED PRODUCTION COSTS

PARC offers a novel co-extrusion printing technique that enables the printing of a full-thickness battery cathode, anode, and separator in a single pass to dramatically improve battery performance and reduce production costs.

PARC’s co-extrusion printing technique, CoEx, can create micron-scale surface area features in a very cost-effective manner. Applying the technique to batteries, CoEx enables the building of structured electrodes with heterogeneous materials to improve energy or power densities by up to 30% while significantly reducing production costs.

PARC’S INNOVATION

PARC is developing a method to simultaneously deposit a full-thickness battery cathode, anode, and separator in a single pass onto a current collector. Requiring only the lamination of the final current collector to complete the battery, the technology eliminates four steps from the typical parallel anode and cathode manufacturing processes. The result is reduced capital, operational, and material costs associated with deposition, calendaring, lamination, and yield loss, with improved overall battery performance. This technique can be applied to most mature battery chemistries and operates at conventional mass-production speeds. It can also be used to deposit two functional layers instead of all three battery layers.

COST-EFFECTIVE BATTERY PRODUCTION

PARC can help battery manufacturers apply this technology to their production processes to improve the efficiencies of their batteries while dramatically reducing overall production costs.

Contact PARC to learn more. engage@parc.com