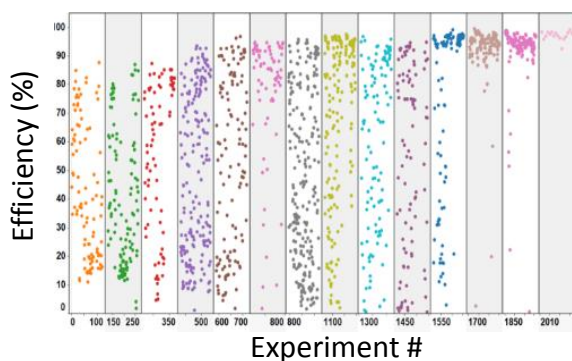


# Accelerate battery discoveries with Wildcat high throughput

Wildcat uses proprietary high throughput technology to **accelerate battery materials R&D** for others. This massively parallel technique enables our scientists to **investigate hundreds of materials** in the time standard laboratories look at only a handful.



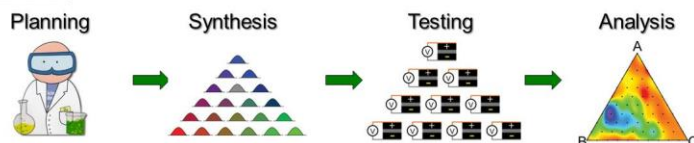
## Wildcat's Unique Approach

- Up to **10X faster** than conventional research
- All tests in half or full cells
- Excellent for rapid **electrolyte optimization**
- Well-suited for electrode formulation optimization
- **Active material** capabilities include compositions, dopants, and coatings
- **Synthesis of 1g up to 1kg**

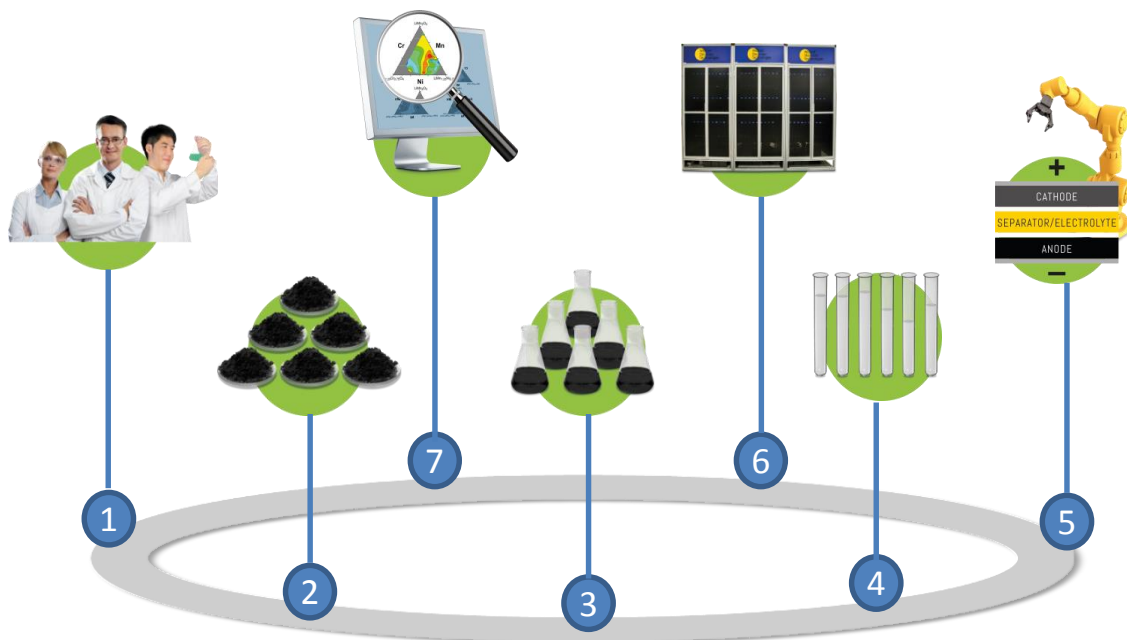
### Traditional



### Wildcat



[www.wildcatdiscovery.com](http://www.wildcatdiscovery.com)



## 1. Strategy

The first step in Wildcat's process is to develop a sound research strategy. Together with our partners, we draw on experience and the literature to develop hypotheses, and then carefully design libraries of experiments to test those hypotheses. Once we define the first round of tests, the information is entered into Wildcat's workflow request system and the high throughput workflow is set into motion.

## 5 Cell Assembly

Once all of the components of the battery are ready, it's time to assemble the battery cells for testing. Wildcat can test materials in half cells, full cells and even three electrode cells - the choice depends on the project and its goals. Although the design of Wildcat's cells is proprietary, the inside of each cell contains everything you'd expect to see: cathode, separator, electrolyte, anode, current collectors, etc.

## 2 Synthesis

For projects involving inorganic materials, Wildcat has a wide variety of high throughput synthesis capabilities including milling, solution and heat treatment methods. Unlike thin film deposition methods, Wildcat's tools enable our scientists to synthesize hundreds of samples in bulk form quantities from 10 mg to 2 g. We can also scale up any interesting "hits" to 1 kilogram batches.

## 6 Testing

Our electrochemical assays were entirely designed and built by Wildcat's engineering team. We have thousands of channels with accuracy and precision exceeding anything commercially available. We can test at low and high temperatures, and can also measure gas evolution in each cell while it cycles. Any DC electrochemical test is possible including capacity, cycle life, pulse power, rate capability, impedance...plus a few others.

## 3 Electrodes

Wildcat's automated solution handling and formulation equipment is then used to combine the active materials with binder, conductive additives, and other ingredients to prepare electrode slurries. The slurries are cast, dried and calendared into films for use in Wildcat's batteries. Alternatively, we can also incorporate electrode films received directly from our customers.

## 7 Analysis

Wildcat has developed proprietary software and analytical tools that enable our scientists to quickly mine meaningful insight from huge volumes of data, visualize the key trends and validate our hypotheses. Everything, including the raw data, is shared with our customers. Our goal is to significantly accelerate improvements in batteries - enabling new discoveries to be made far faster than via conventional methods!

## 4 Electrolyte

The fourth step of our parallel process involves the preparation of the electrolyte. We combine unique combinations of solvents, salts and additives to create new formulations for evaluation. Electrolyte screening is one of our most popular project types and is ideally suited to combinatorial screening of hundreds or even thousands of new electrolyte formulations.

***Accelerate your  
materials discovery!***

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