

ABOUT US

Since opening in 2018, the mission of Ateios has continued to be on accelerating innovation in the field of battery technology by focusing on how batteries are manufactured increasing output, managing supply chain, and increasing safety, decreasing size, and increasing performance. Located near NSWC Crane, Ateios has supported several fortune 500 companies perusing innovation in wearables and IoT devices. Ateios has positioned itself in a unique situation with its network partnerships, and facilities allowing for a highly adaptable mechanism for advanced battery development, testing and validation, certification, education, and commercialization of energy storage systems.



TEST AND EVALUATION SERVICES

Battery Testing and Evaluation

- 250+ channels of cell cycling
- Multiple altitude, humidity, and thermal environmental chambers
- Two 1200ft² controlled labs for EHS level tests
- Crush, Propagation, Drop, External Fire, and more
- Outdoor testing capabilities
- Industry certification to UL, MIL, UN-DOT, SAE, IEEE standards

ADVANCED CELL FABRICATION SERVICES

Battery Manufacturing Cell Component/Materials Development

- **Small Batch Mix & Coat:** multiple capabilities to establish component feasibility and conduct early-stage materials research and development. Our PhD scientists, Engineers and technicians develop slurry recipes, optimize mixing protocols, and identify baseline coating parameters.
- **Pilot Cell Build:** Prior to scaling up to large format cell builds, small-scale testing is completed to optimize cell variables. Ateios maintains standard coated materials in-house as well as various separator samples, coin cell materials, and electrolytes.
- **EIS Cell Testing:** Each of the 9 GAMRY 32-channel potentiostat/galvanostat units perform electrochemical impedance spectroscopy. Cell cyclers include over 300 channels of ARBIN Instruments test stations with DC current ranges from $\pm 15\mu\text{A}$ to $\pm 10\text{A}$ and $\pm 5\text{V}$, SOLATRON 8-channel frequency response analyzers for wet/dry-room formation, and over 5m³ of PERCIVAL/AES chamber space for cycling at temperatures -40 to 180°C.

R&D/Laboratory Scale Cell Fabrication

- **1,500 ft² Dry Room Space:** Three isolated and environmentally maintained at < 1% RH and dew points below -35°C, dry rooms provide critical workspace for cell fabrication.
- **Slurry Mix & Coating:** Multiple ROSS double planetary mixers (up to 7.5L) allow for vacuuming, temperature monitoring, and chilling complemented with TIA rheology. For smaller scale slurries, Ateios uses THINKY and FLACKTEK planetary centrifugal mixers. Current collector foils are coated on and DURR/MEGTEC reverse comma bar laboratory-scale roll-to-roll coating line with multi-stage drying ovens or TESTER SANGYO slip coat table.
- **Cell Assembly:** formats encompass coin, multi-layer pouch, prismatic, 18650 and limited 21700 cylindrical cells. Cell fabrication equipment includes IMC heated calender & adjustable slit, KATOH KIKO cell winder, HOHSEN can groover, electrolyte fill station & can crimper, MIYACHI resistance welder, and AUDIONVAC or FERTROD vacuum sealers. Tooling is adjustable to accommodate various cell formats and sizes.

Want to learn more? CONTACT



Build your own battery