Advanced Air Mobility Research at Advanced Energy and Sensor Lab (AESL)

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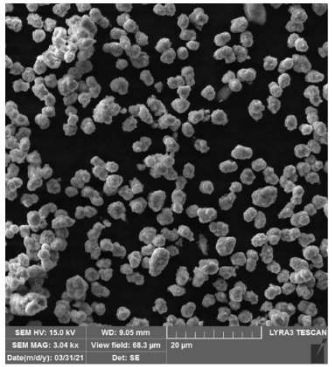
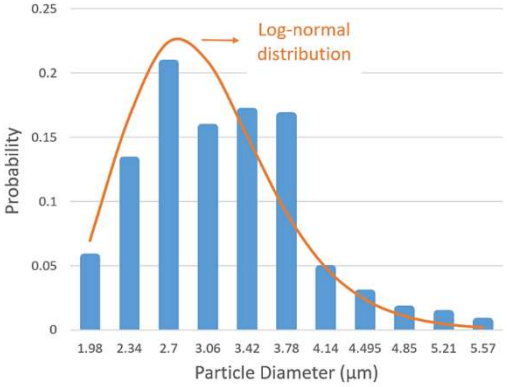
Sample Work

- *Precision coating of high nickel NMC with $LiNbO_3$ with consideration of particle size distribution of active material and achiving the optimium interface.*





High Energy Density Solid State Lithium Battery

- We are developing the following items for solid-state batteries for electric aircraft:
  - Synthesis sulfide electrolyte
  - Coat electric active material to minimize corrosion and side reactions
  - Optimize the mixing ratio of material for anolyte and catholyte
  - Engineer the solid-state battery for any targeted applications though modeling and computer simulation.
- Novelties:
  - Specific energy of >500 Wh/kg
  - High safety for aircraft
  - No need for thermal management
- The technology is the being developed at lab scale.

Requirement(s) Benefits, Money Saved, Eliminates What?

- Our activities are solving the problems to achieve safe and high specific energy lithium metal battery step by step.
- We are looking for funding to make our first pouch cell in one year.

Airspace Management	Command & Control	Comms	Power & Energy Storage	Propulsion	Sensors & Awareness	Other
☐	☐	☐	☒	☐	☐	☐