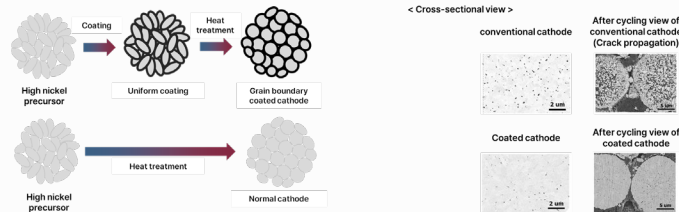
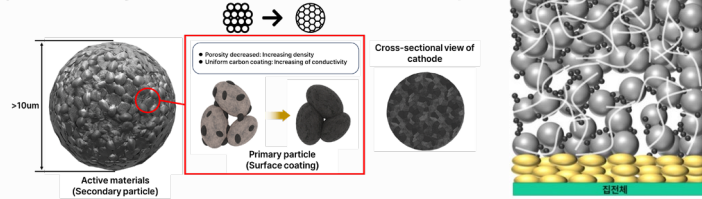


고성능 리튬 이온전지용 활물질 및 전극 공정

- Development of manufacturing technology for cathode active materials with nickel content of over 96%

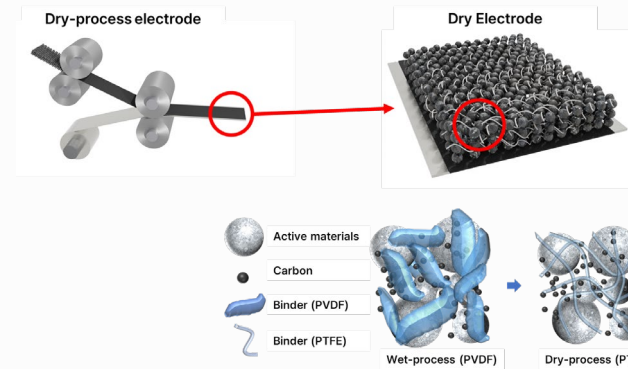


- Development of manufacturing technology for high-energy-density and high-performance LiFePO_4



- Development of high-efficiency carbon-reduced dry process for electrode manufacturing

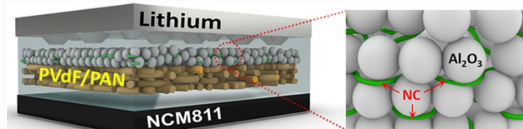
- Improving the uniformity of the dry electrode using fibrous binders
- Reducing the contact area between the material and binder to facilitate the establishment of lithium diffusion pathways



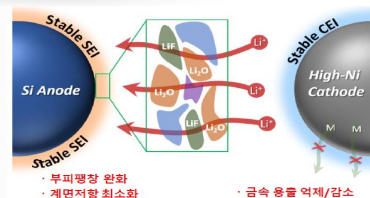
분리막과 전해질

- High-temperature resistant separators.

- Improved heat resistance through ceramic particle/nanocellulose composite coating
- Enhanced ion conductivity through improved electrolyte wettability and absorption capacity

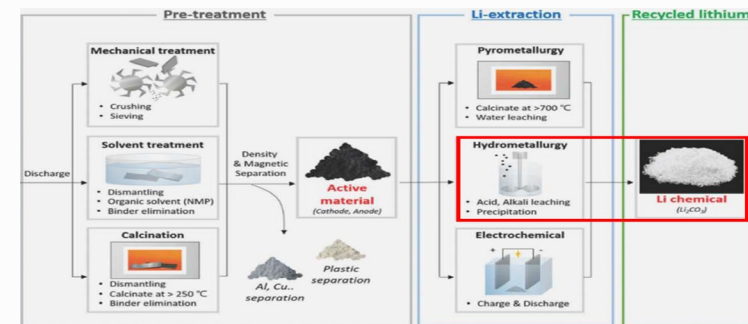


- Development of electrolytes for nano Si anode



폐전지 내 리튬 재활용

- Selective lithium recovery and lithium chemical manufacturing processes

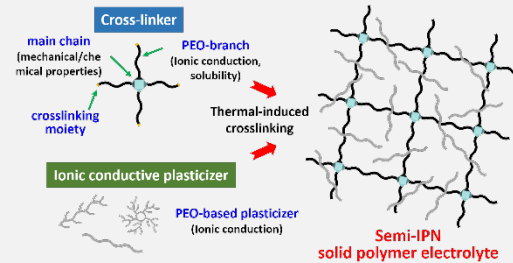


폴리머 전해질 기반 전고체 전지

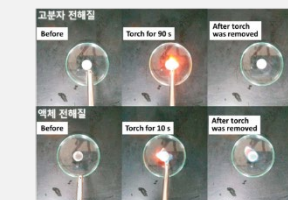
High Safety and Flexibility Polymer Electrolyte Materials and All-Solid-State Polymer Battery

* Technology transfer to Energin Co., Ltd. (2022.2)

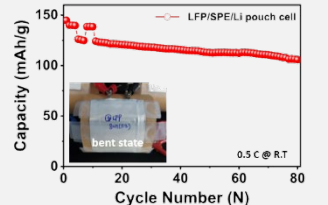
Development of inorganic-organic hybrid electrolyte applied all-solid-state batteries (SKON)



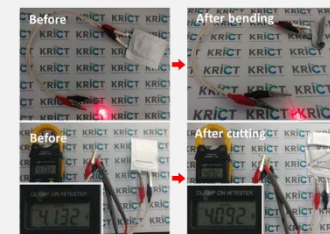
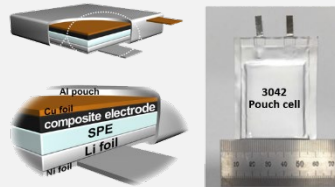
Solid-State Polymer Battery Technology



Excellent flame resistance of SPE



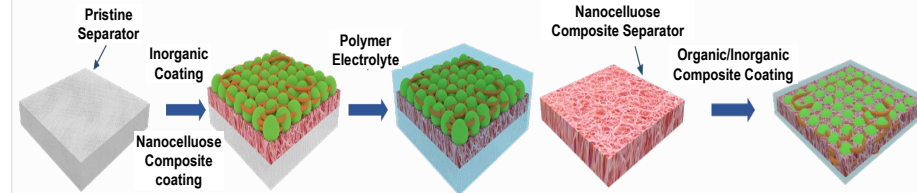
LCO, LFP, NCM - cathode / Si, graphite - anode
Stable ambient temp. charging/discharging behavior



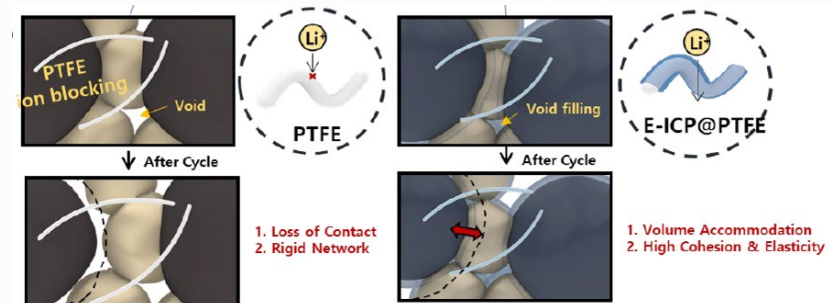
Deformable Li-ion polymer pouch cell

전고체 전지용 고안전성 물질

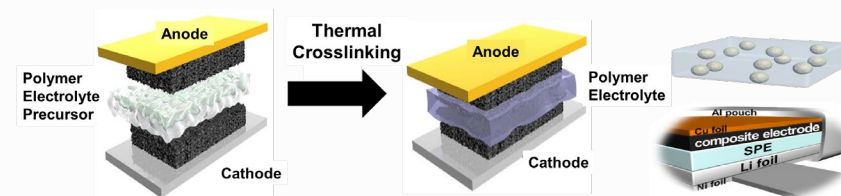
Integrated all-solid-state electrolytes/separator for high-safety



Composite cathodes and electrolyte membranes for sulfide-based all-solid-state batteries

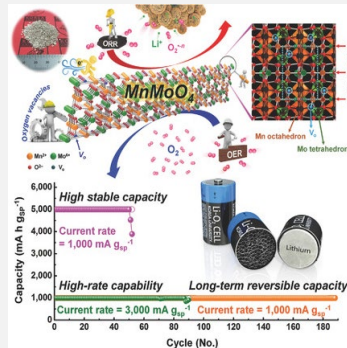


Solid polymer electrolyte materials and solid-state lithium polymer batteries

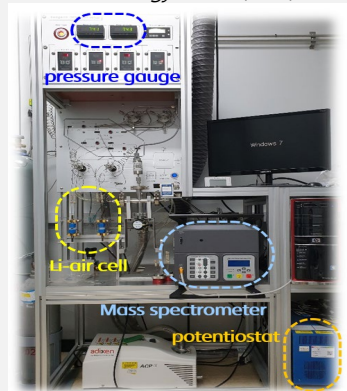


리튬-공기 전지

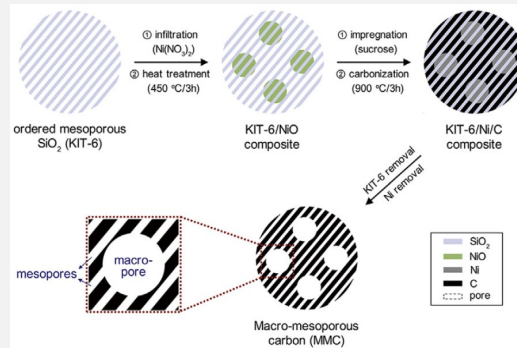
- High-energy-density next-generation lithium-O₂ batteries and real-time gas analysis technology.
 - Technology transfer of real-time gas analysis to Hyundai Motor Company (November 2015).
 - Publication of several outstanding papers, including in Advanced Energy Materials (IF=29.698) and others.
 - Multiple patent applications/registrations



Adv. Energy Mater. (2017)



DEMS



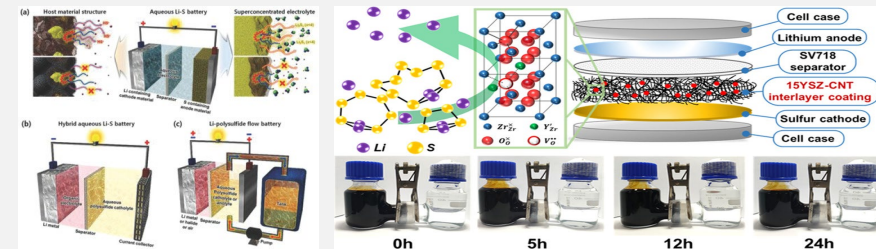
Carbon (2018)



Research Papers

리튬-황 전지

- Improving the electrochemical characteristics of next-generation high-energy-density lithium-sulfur batteries.
 - Publication of several outstanding papers, including in Advanced Functional Materials (IF=19.924) and others.
 - Multiple patent applications/registrations

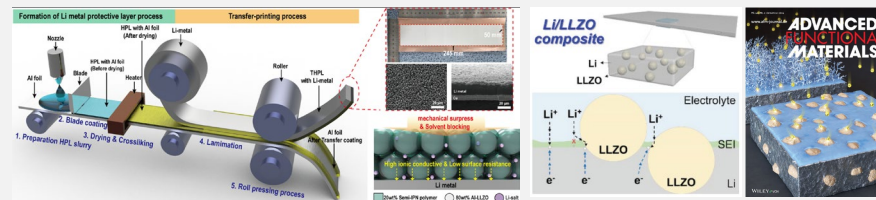


Adv. Func. Mater. (2018)

ACS Appl. Mater. Interfaces (2022)

리튬 메탈 전지

- Lithium growth control materials for inducing stable growth of lithium metal
 - Publication of several outstanding papers, including in Energy Storage Mater. (IF=19.3), Adv. Funct. Mater. (IF=19.9) and others.
 - Multiple patent applications (12 cases)



Energy Storage Mater. (2025)

Adv. Funct. Mater. (2024)