

# 에너지저장 및 변환소재 연구실

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## 주요 연구

### Cathode Materials for Lithium-ion Batteries

- Advanced Cathode / Core-Shell & Concentration Gradient Material
- Olivine Phosphate
- Surface Modification

### Lithium Air Batteries

- Porous cathode for high efficiency and cyclability with ORR & OER catalytic effect
- Suitable electrolyte for stable and effective Li-O<sub>2</sub> battery system
- Suggestion of new mechanism in Li-O<sub>2</sub> battery system

### Lithium Sulfur Batteries

- High performance Li-S Battery Cathode Mesoporous hard carbon spherules-sulfur cathode
- Li-S Battery Electrolyte Application Effective role of polysulfide-added electrolyte
- Li<sub>x</sub>Si-S Battery system : Full cell

### Sodium-ion Batteries

- Novel concept transition metal oxide cathode materials Ni-Fe-Mn based material
- Advanced anode materials Anatase TiO<sub>2</sub> Material
- Optimization of full cells fabrication for practical approaches High capacity & long cycle life full cell system