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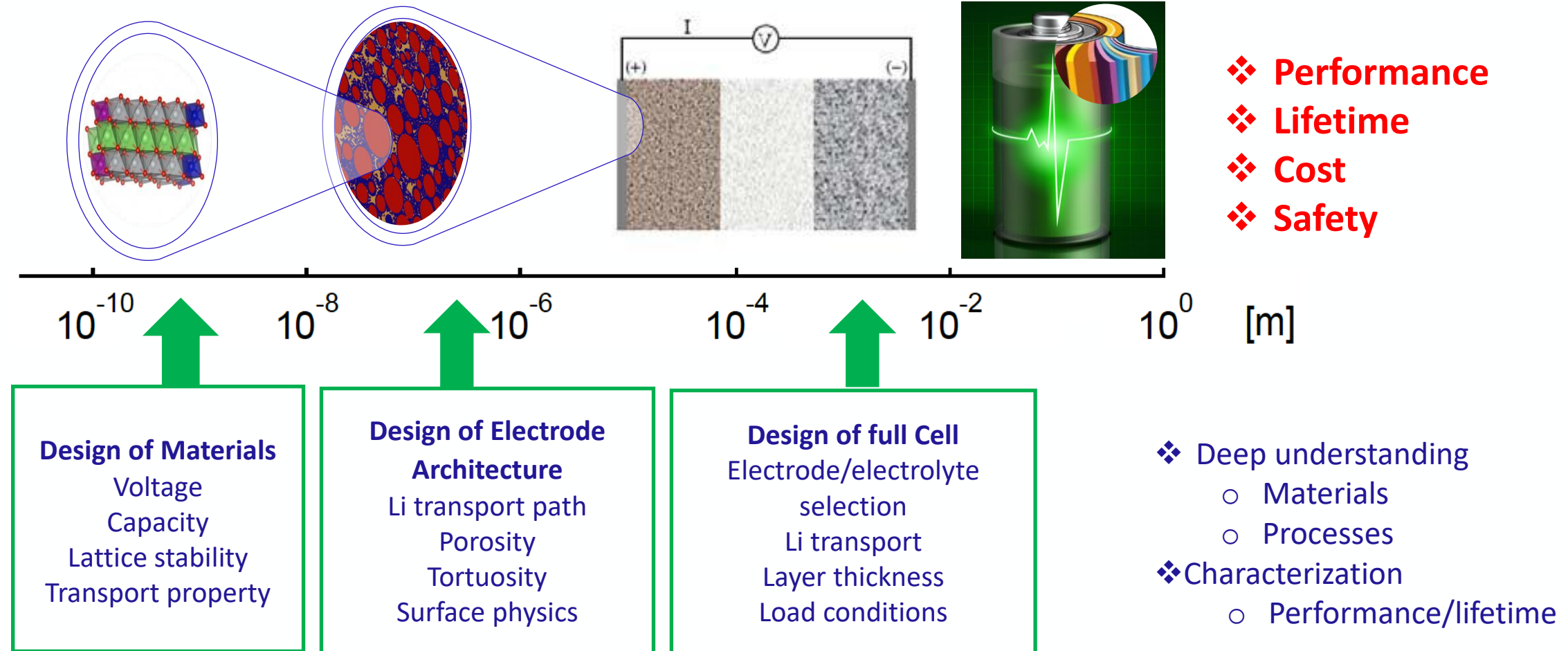


SUSTAINABLE MATERIALS
TECHNOLOGY
RESEARCH CONSORTIUM



ELECTROMOBILITY
RESEARCH CENTRE

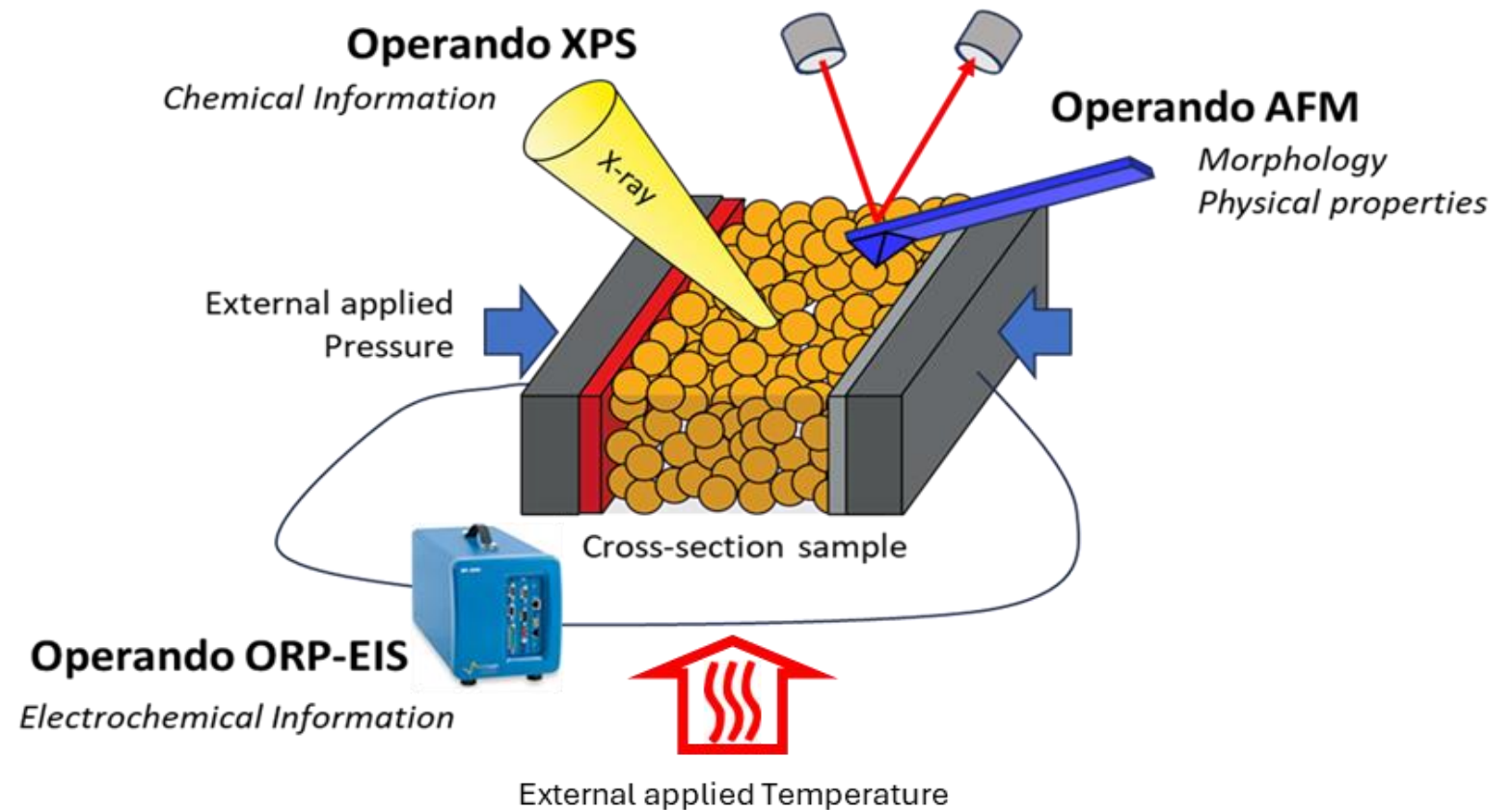
Material Research : AI-accelerated Multiscale Modeling



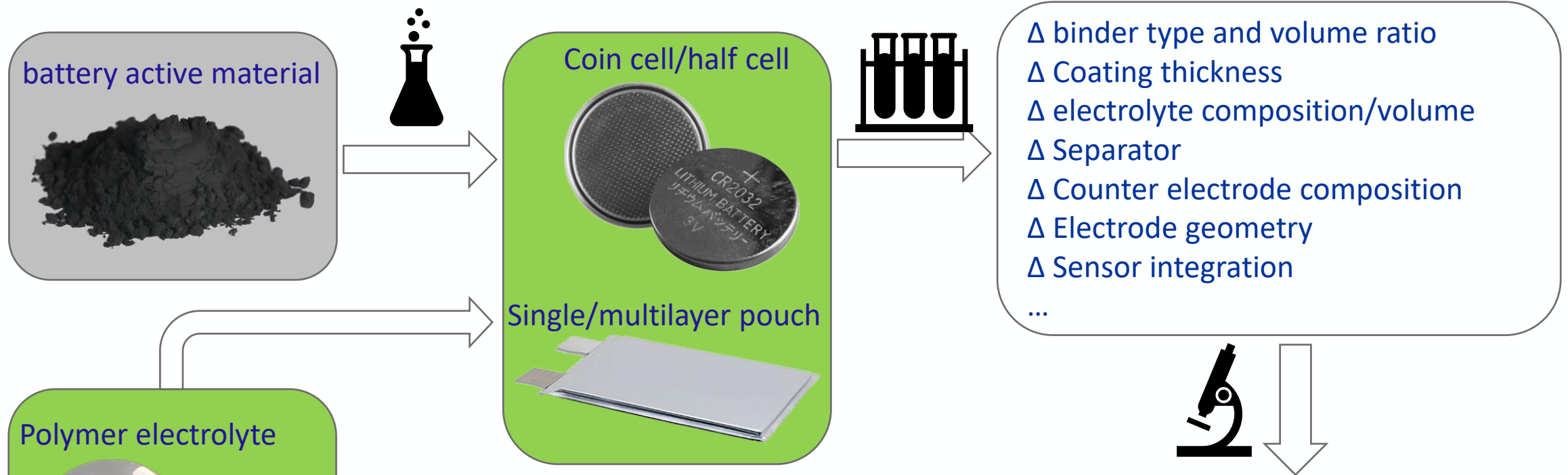
Material Research : Operando and in-situ Characterization

during battery cycling in real operative conditions

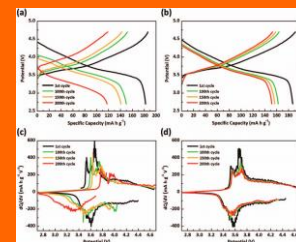
- ❖ Morphological
- ❖ Physical
- ❖ Chemical
- ❖ Electrochemical



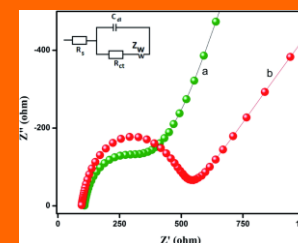
Material research – Battery prototyping



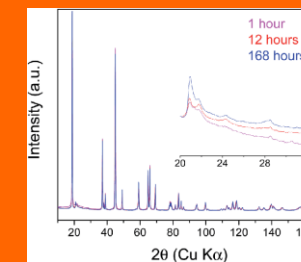
mA ch/dch



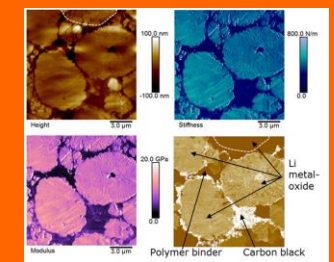
EIS



in-situ XRD

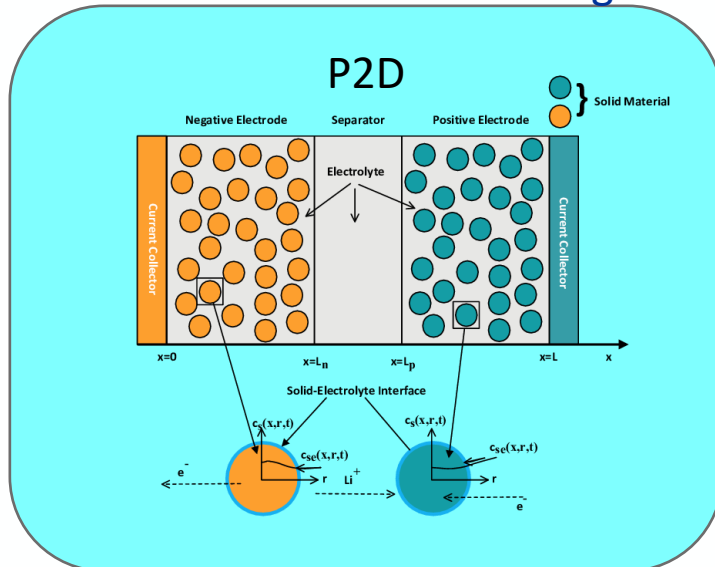


AFM

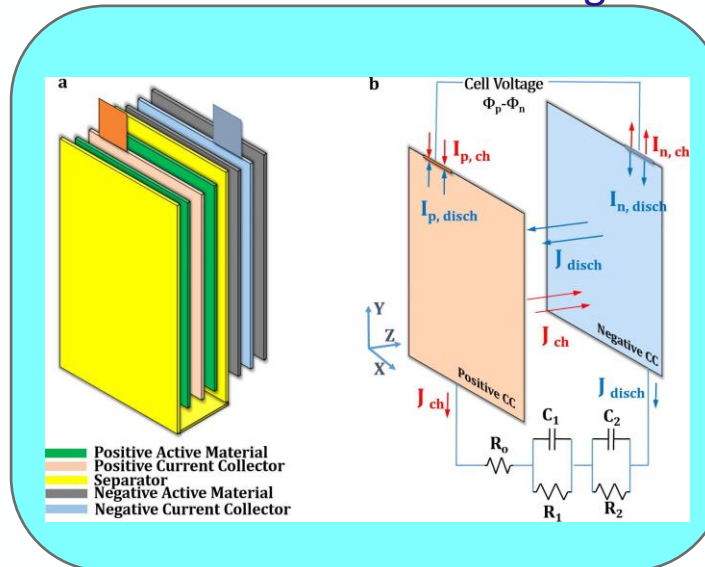


Material research – modeling development

Electrochemical modeling

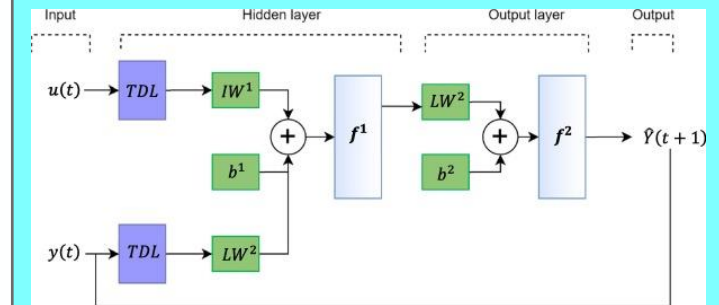


Electrothermal modeling

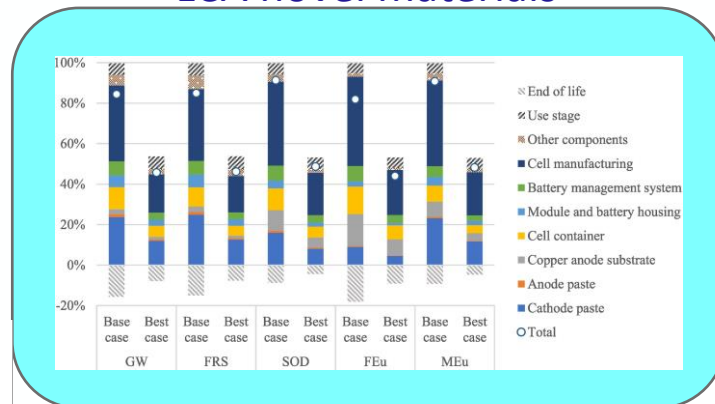


Datadriven modeling

ML based SoC/SoH



LCA novel materials



Manufacturability

