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# HealingBat

**ADVANCED SENSING, MONITORING AND SELF-HEALING MECHANISMS TO SELF-REPAIR BATTERIES**

**Stefan Palzer, TU Dortmund  
Coordinator**



**BATTERY  
2030+**

# HealingBat Consortium

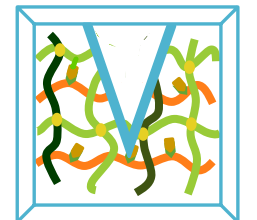
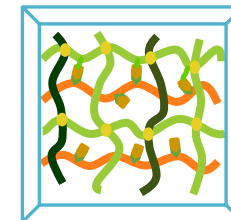
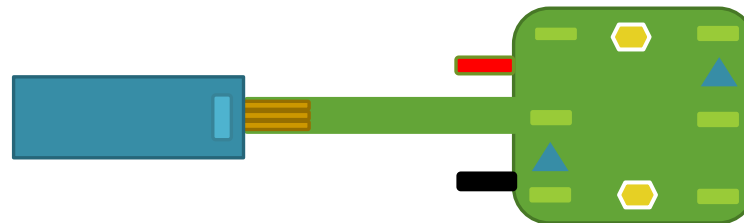
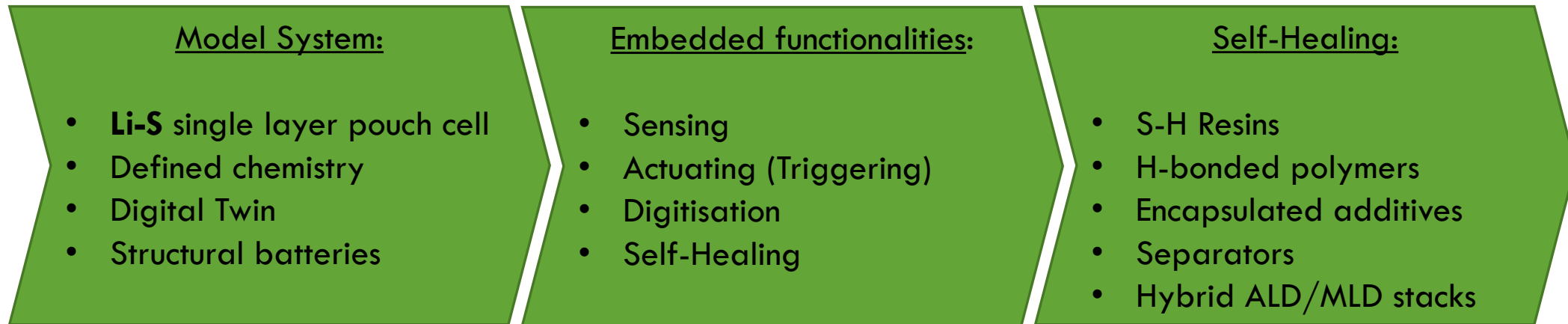
## Partners

- TU Dortmund (coordinator)
- Center for Process Innovation
- Coventry University
- Helmholtz-Zentrum Berlin für Materialien und Energie GmbH
- TU Delft
- Paul Scherrer Institute
- IDNEO
- Fundació Institut de Recerca de l'Energia de Catalunya
- FI Group
- SUPRAPOLIX



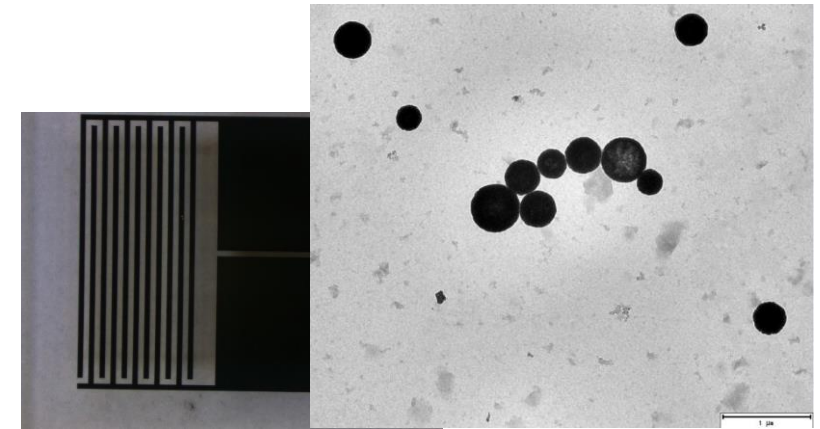
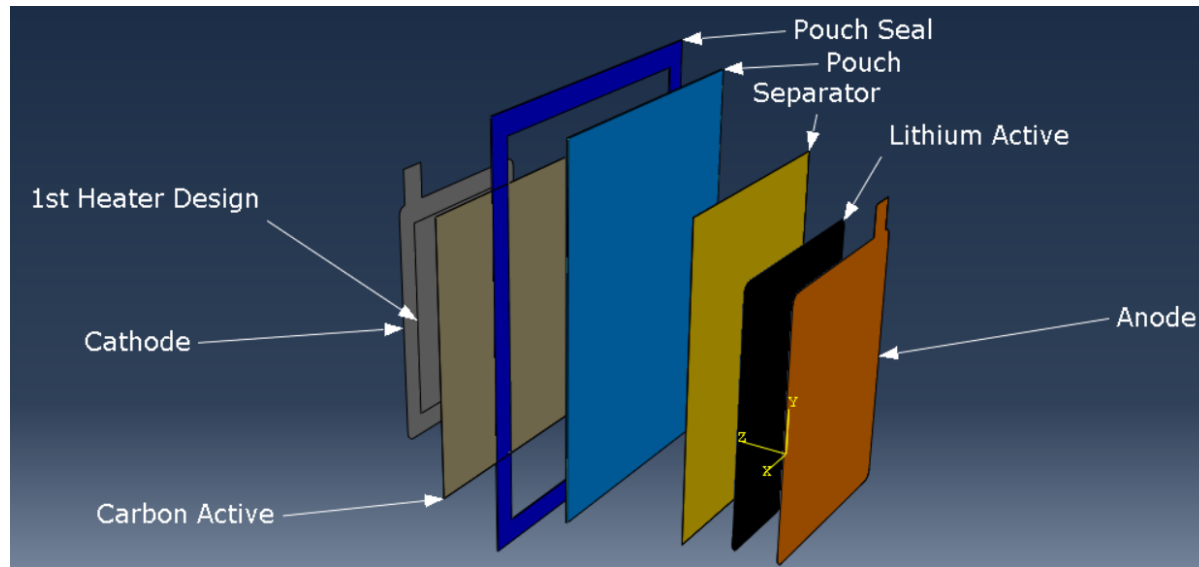
# HealingBat Goals

- Build model system to demonstrate self-healing
- Embedded Sensors & actuators as part of BMS & to build a digital twin
- LCA



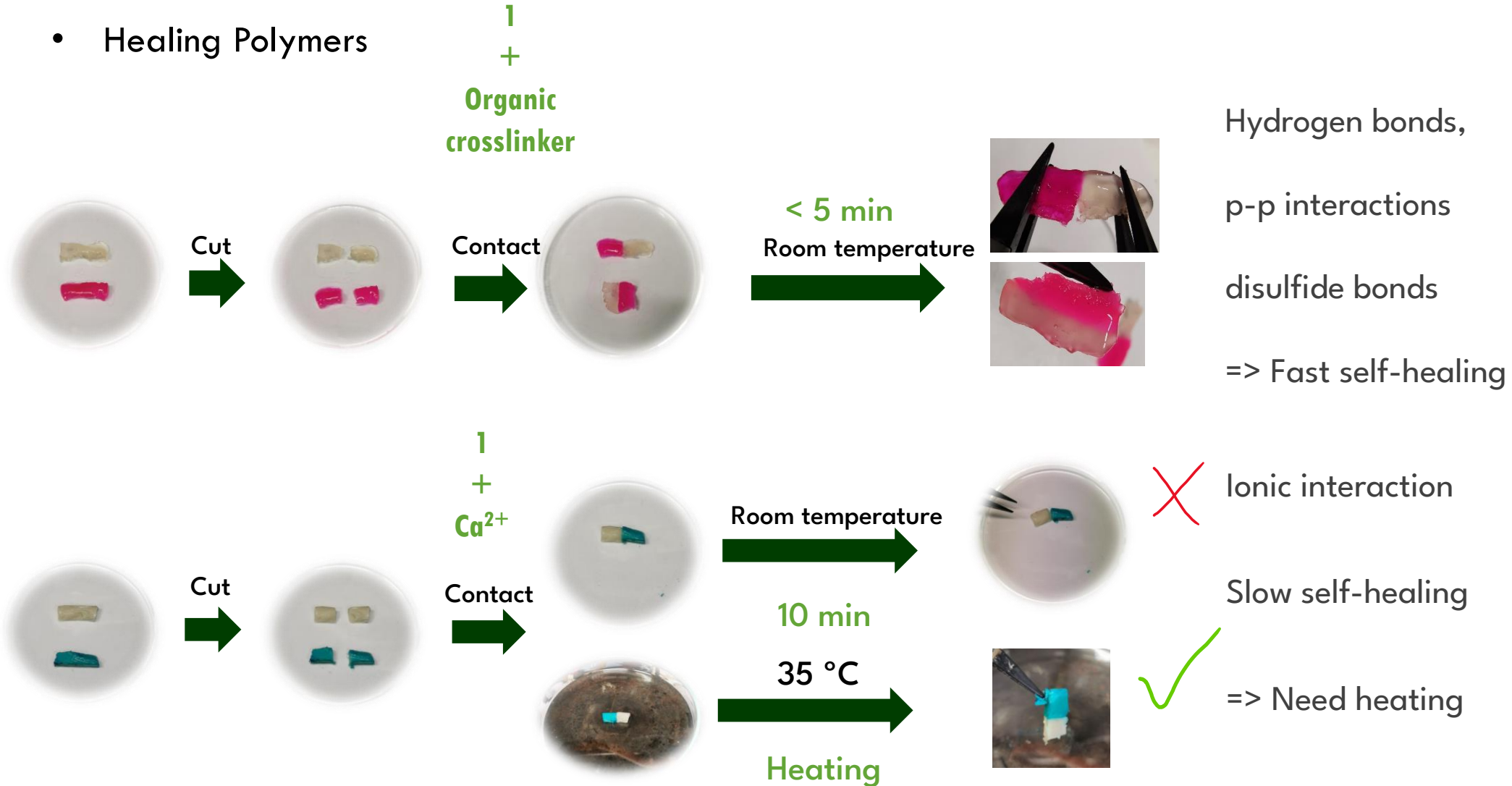
# HealingBat Results

- FEM simulation of model system Pouch cell
- Technology flow for v1.0 of embedded sensing and thermal actuator
- Micromachined sensor structures
- Printable functional inks for gas sensing



# HealingBat Results

- Healing Polymers





# HealingBat @ Roadmap

## 1) Which objectives of my project could be added to the roadmap goals?

Scalable, low-cost & embedded sensors

Integration of tailor-made sensors, actuators & BMS

Demonstrate benefits of added system complexity

## 2) What are the expectations of my project from the future roadmap?

Possibility to advance on promising results, i.e. open topic option

Integration/Closer collaboration of basic research & technology,  
e.g. interface vs. self-healing projects

