



## AllCell Technologies, LLC

### IP List – August 2021

- **PCM battery thermal management:**
  - “Thermal Management of Battery System” US 6,468,689 B1
- **PCC matrix for battery thermal management:**
  - “Battery System Thermal Management” US 6,942,944 B2
- **PCC matrix for battery thermal management & Safety:**
  - “Battery System Thermal Management” US 8,273,474 B2
- **Microchannel heat exchanger with PCM fluid:**
  - “Microchannel Heat exchanger with Micro-Encapsulated PCM for High Flux Cooling” US 8,109,324 B2
- **Flexible PCC:**
  - “Flexible PCM Composite for Thermal Management Systems” US 10,005,941 B2
- **Multi-temperature PCM:**
  - “Energy Storage Thermal Management System Using Multi-Temperature PCM” US 10,164,301 EPO 2,719,013 (Validated in Germany and France)
- **PCC Thermal State of Charge:**
  - “Thermal State of Charge of PCM In a Battery Pack with a PCM Thermal Management” US11,050,101, WO 2018/156251 A1
- **PCC/Hydrogel Hybrid battery for thermal runaway propagation prevention:**
  - “Apparatus and method for thermal runaway propagation prevention” US20200403201A1 Application US16/902,788