



Progress beyond

NAATBATT 2023

# Solvay

Feb 2023

# SOLVAY

## in BATTERY MATERIALS

### We are **LEADING**

- In **electrode binders**
- **Separator coatings**
- Advanced **electrolyte ingredients**

### We are **COMMITTED**

- To deliver **solutions** for next **generation** batteries
- To provide **environmentally responsible solutions**
- To enable **circular economy**



#### MARKET EXPERIENCE

More than 20 years in battery materials

#### TECHNOLOGY LEADERSHIP

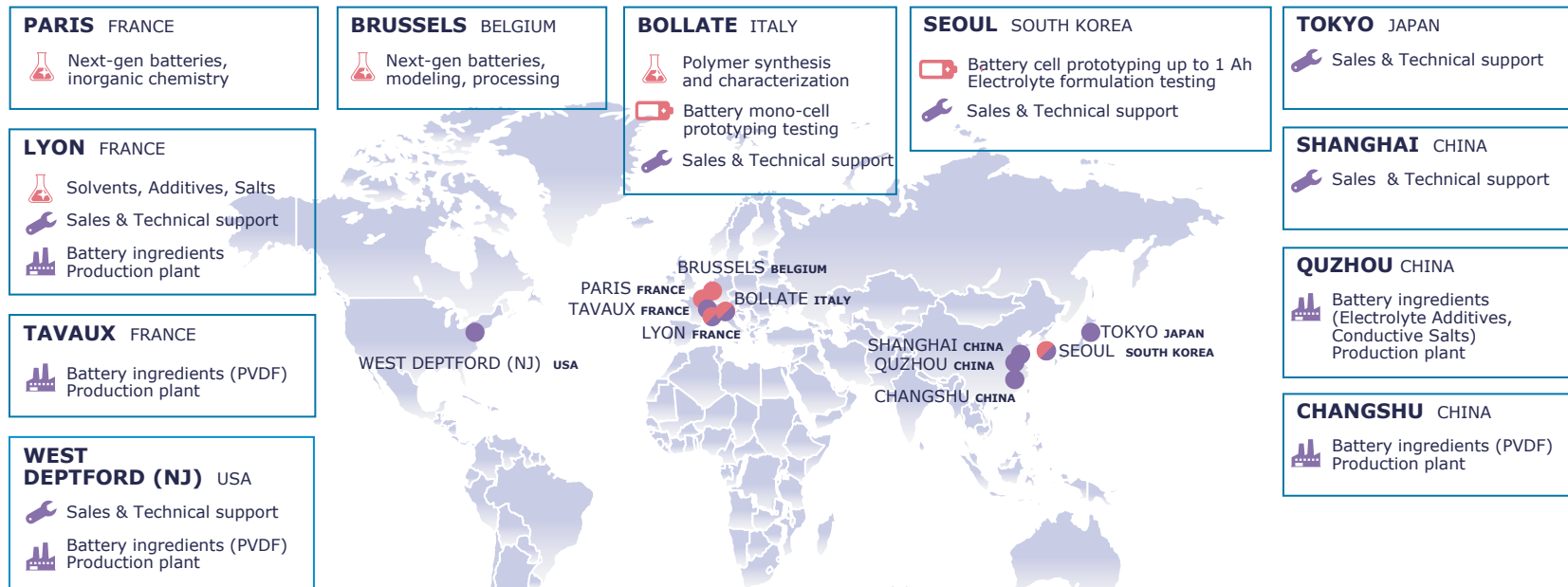
- Specialty Polymers
- Fluorine Chemistry
- Advanced Inorganic Materials
- Composites
- Metal extraction

Collaborative **INNOVATION**  
with the **KEY LEADERS** in the value chain

#### GLOBAL PRESENCE

supporting customers locally

# Our global footprint and cutting edge technical capabilities to serve you locally with high quality products and safe supply



- Sales & Technical support, Plant
- Research, Application

- Strong application **knowledge**
- In depth **scientific capabilities** & testing **infrastructure**
- 2 **application labs** (Asia, Europe) to support customers locally

- Widespread **industrial footprint**

- Strong innovation **ecosystem** with leading institutes and start-ups

# Leveraging our leadership in fluorine chemistry



A **portfolio** to meet our customer's ever more demanding requirements

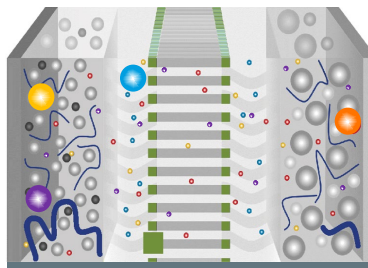
## **ENERGAIN®**

### **Solvents, specialty**

**additives** and formulation

- instructions for
- high energy density
- high voltage
- long cycle life
- enhanced safety
- temperature stability

in advanced anodes (Si, Li)  
and cathodes (Ni rich)



## **LiFSI, LiTFSI, M-TFSI**

### **Lithium salts**

to improve

- power density
- fast charging
- temperature performance

## **SOLEF® PVDF**

**Binders** to improve energy density  
and battery cycle life in

- cathodes (NCA, NMC 811, etc)
- catholytes,
- polymer electrolytes,
- solid state batteries.

## **SOLEF® PVDF**

### **Separator**

coatings

- to improve
- battery cycle life

## MAIN BENEFITS



### Cost



### Performance



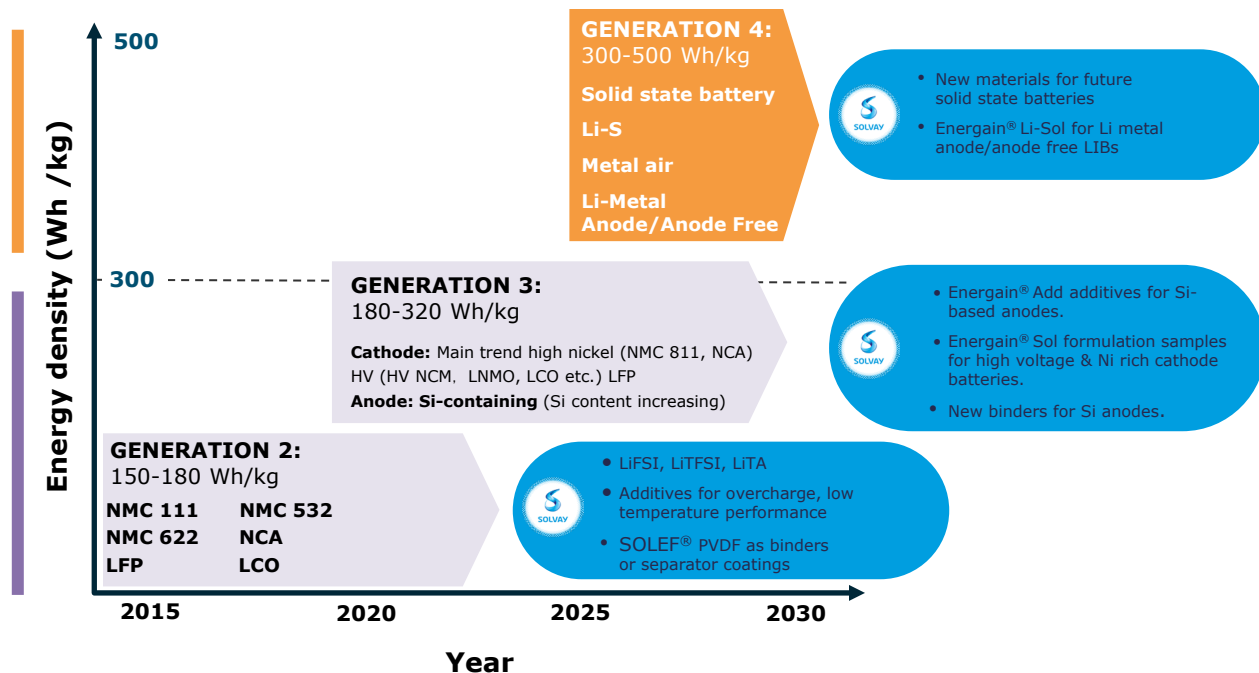
### Safety

# Our innovative portfolio addresses the current and future challenges of the battery industry



Next generation

Li-ion Batteries



Materials are available for sampling

# SOLVAY BATTERY MATERIALS for today, tomorrow and the future



## PORTFOLIO OF ENABLING MATERIALS

Solvay has a robust portfolio of products and technologies for battery materials, serving the battery industry for more than 20 years

## COLLABORATIONS & PARTNERSHIPS

Solvay strives to establish long-lasting collaborations & partnerships with our customers as well as with leading academic institutes and start-ups around the world

## RESPONSIBLE SOLUTIONS

Solvay is engaged in providing environmentally responsible solutions and enabling the circular economy of batteries

## Solvay is COMMITTED

- to serving the growing demand for battery materials **with timely investments** in production capacity
- to **developing new chemistries** for current and next gen batteries with **scale, quality and cost**
- to being the **reference in advanced materials** for Battery and Automotive OEMs