

## **M. ERA-NET - international matchmaking event on battery materials**

**CRM Group**

# CRM Group at a glance

- CRM Group is the result of the merger of independent and private research centers (265 engineers) dedicated to processes, products and solutions for metallurgical applications
- Our approach
  - Holistic: product – process – application
  - From lab scale over pilot lines to industrialization
  - Multi-sectorial approach – cross-pollination
- Members and clients:
  - More than 45 members
  - More than 350 clients / year
  - Over 100 small & medium companies





# Remarkable pilot equipments

## R2R Coating lines in clean room iso 7

### Vacuum coating PVD - PECVD

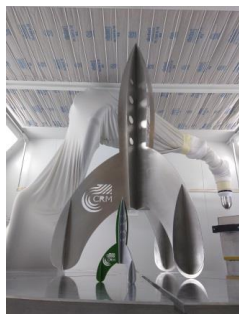


Home made pilot R2R  
Flexible tools (speed, coil width  
and thickness, processes)  
Up-scalable process  
Data monitoring for LCA

### Wet coating Slot die - 3 rolls

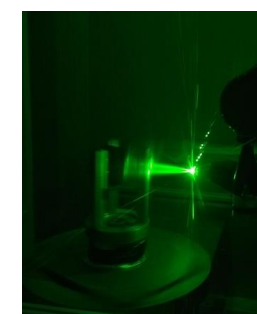


### Electrostatic spray



3D processes  
Flexible (size, coatings)  
Up-scalable process  
*Data monitoring for LCA*

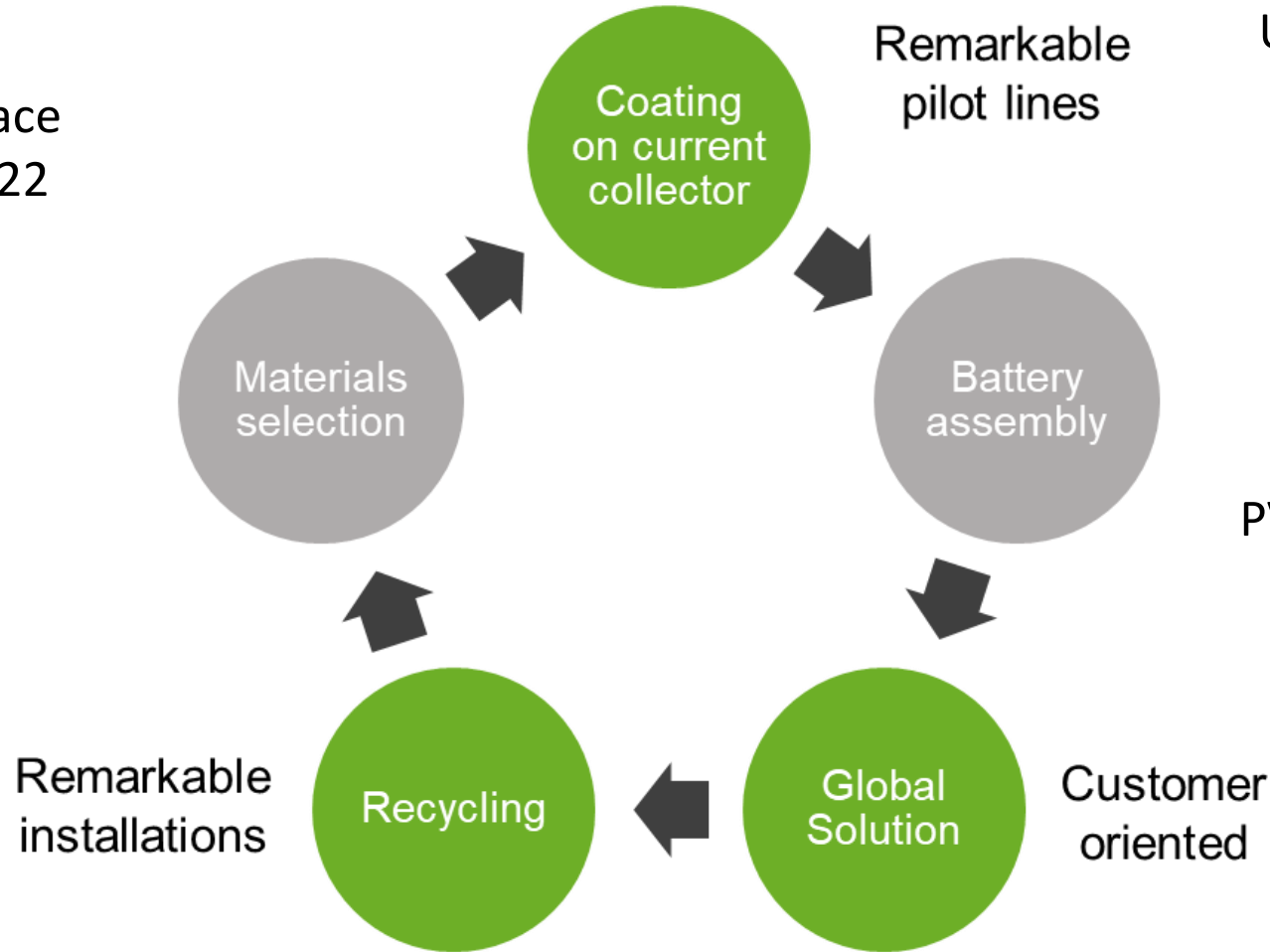
### Thermal Spray : HVOF, plasma, twin arc, ...



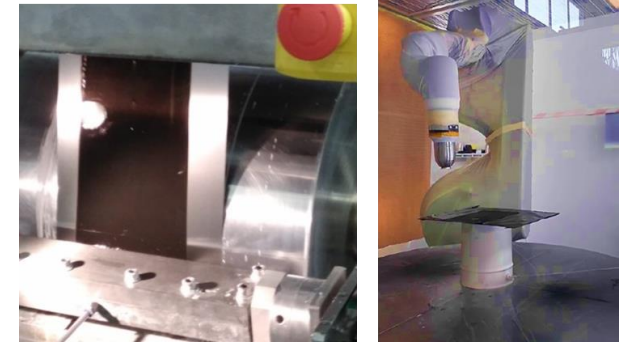
# Batteries @ CRM Group



Induction smelting furnace  
Plasma pilot facility -2022



NMP-Free LFP-based ink  
Upscale on pilot equipment



PV panels integrated on steel roofs

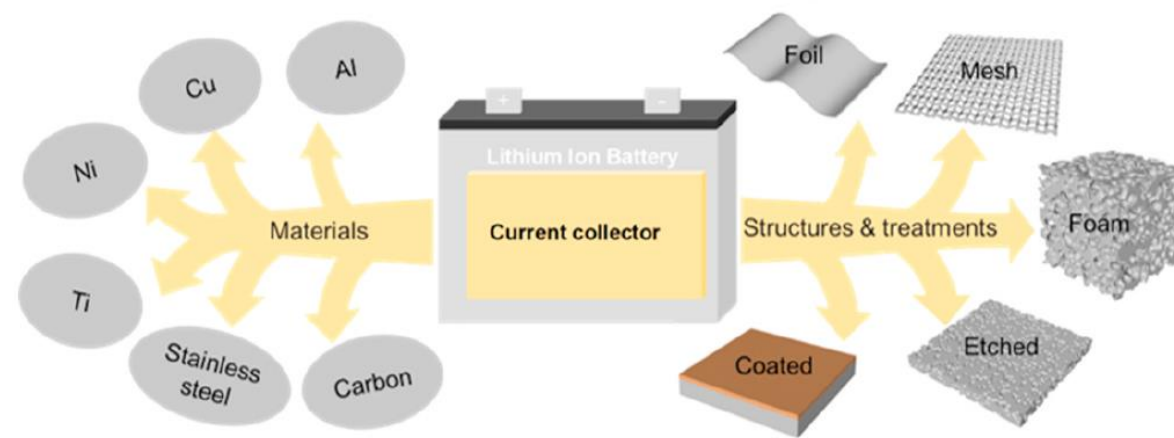




# Area of interest

## New current collectors and associated interfaces

- Lab investigation of innovative designs or materials
- Pilot scale product and process validation



*P. Zhu et al., Journal of Power Sources 485 (2021) 229321.*

# THANK YOU

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