

# EFCE Spotlight Talks

Working Parties on Comminution and  
Classification and  
Mechanics of Particulate  
Solids

19  
May  
2025

09:30-11:30  
CET



## Powder technology for sustainable production of battery electrodes

Along the circular battery process chain, particle technology plays a very important role. For the production of lithium-ion battery electrodes, the active material particles have to be mixed, today particularly wet in an appropriate solvent together with a conductive agent and a binder to produce a well dispersed slurry. The electrode slurry is coated on a thin metal foil, is dried to a porous film and is densified (calendered) between two rollers to produce the electrodes. The resulting cell performance is determined by the material itself and very strongly by the electrode structure, which depends very much on the processing of the different particles (material-process-structure-performance relations), which will be highlighted within the spotlight talk. Today, the ecological footprint of cell production is supposed to be enhanced by dry coating including dry mixing and dry powder handling to avoid wet coating and, thus, expensive drying. The dry processing is even more valuable for the production of so-called solid state batteries with particulate electrolytes.

### PROGRAM

- 09:30      **Welcome and introduction**  
Arno Kwade, Chair of the Working Party on Comminution and Classification  
Diego Barletta, Chair of the Working Party Mechanics of Particulate Solids  
Giorgio Veronesi, EFCE President
- 09:40      **Powder Technology based Innovations of modern battery electrode production**  
Arno Kwade, Institute for Particle Technology, TU Braunschweig - Germany
- 10:20      **Linking process, structure and performance for lithium ion battery electrodes**  
Rachel Smith, School of Chemical and Biological Engineering, University of Sheffield - UK
- 10:50      **Key processing steps in dry battery electrode production - dry mixing and powder handling for film formation**  
Hans Schneider, Zeppelin Systems GmbH, Friedrichshafen - Germany
- 11:20      **Concluding remarks**  
Arno Kwade, Chair Working party on Comminution and Classification  
Diego Barletta, Chair of the Working Party Mechanics of Particulate Solids

[REGISTRATION](#)

*free of charge but mandatory*

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