



**ANQUE**

ASOCIACIÓN NACIONAL DE  
QUÍMICOS E INGENIEROS  
QUÍMICOS DE ESPAÑA



**DECHEMA**



**WORLD  
CONGRESS  
ON PARTICLE  
TECHNOLOGY**

**EXPLORING  
BEYOND  
LIMITS**

September 18-22  
MADRID 2022  
wcpt9.org

## World Congress on Particle Technology (WCPT9)

### *Joint Event “III ANQUE-DECHEMA Leading edge conference: Particle Technology. Shaping the future”*

18<sup>th</sup> – 22<sup>nd</sup> September 2022, Madrid, Spain

As part of WCPT9 this Joint Event will be organized. Academic and industry experts will cover wide range of topics relevant to cutting-edge research, new technologies, and emerging growth areas in particle technology.

Depending on the research objective, chemical engineers, chemists, physicists, material scientists along with biologists, health professionals and experts from other disciplines work together to develop solutions based on innovative applications for virtually all sectors of society. This WCPT9 specialized joint event will explore how particle technology can help these applications to progress and at the same time benefit from this multidisciplinary approach.



Sessions will be organized covering the following areas:

- Energy
- Health
- Artificial Intelligence
- Additive manufacturing
- Self-assembly

In these sessions, special emphasis will be placed on the participation of promising early-career researchers in particle technology who will share their experiences with prestigious researchers.



**Prof. Dr.-Ing. Wolfgang Peukert**  
University of Erlangen-Nürnberg  
Institute of Particle Technology  
Germany



**Prof. Dr. Carlos Negro**  
University Complutense of Madrid  
WCPT9 Chair  
Spain



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The following keynotes have confirmed their participation

## ENERGY



*“Importance of Particle Technology for Circular Production of Today’s and Future Batteries”*

**Arno Kwade**

Technische Universität Braunschweig  
Germany

*“Thermal energy storage in thermal solar power plants by molten salts: past, present and future with nano-particles”*

**Javier Pérez-Trujillo**

University Complutense of Madrid  
Spain



*“Bridging the valley of death: The role of particle technology in bringing functional materials to technical electrochemistry at industrial scale”*

**Doris Segets**

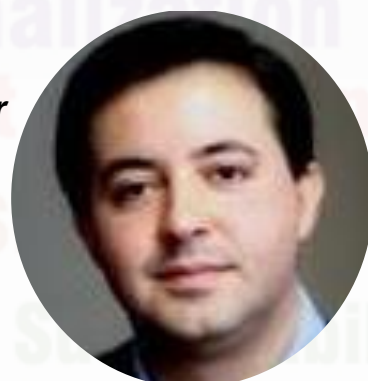
University of Duisburg-Essen  
Germany



*“From CO<sub>2</sub> to value-added products: particles for the electrocatalytic conversion of CO<sub>2</sub>”*

**Manuel Álvarez-Guerra**

University of Cantabria  
Spain





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## HEALTH



*“Particles in the air: decades of progress, but questions remain about how to monitor them”*

Lidia Morawska

Queensland University of Technology  
Australia

*“Key elements limiting aerosol-driven COVID-spread”*

Achim Dittler

Karlsruher Institut für Technologie  
Germany



*“Engineering nanoparticle aerosols to target alveoli: a new route for direct drug delivery in respiratory diseases”*

Mª Pilar Lobera

University of Zaragoza  
Spain

## ARTIFICIAL INTELLIGENCE

*“Artificial intelligence for particle technology”*

Carsten Schilde

Technische Universität Braunschweig  
Germany







***“On optimization of particulate products:  
From synthesis to colour”***

**Lukas Pflug**

**Competence Unit for Scientific Computing, FA  
Germany**

## SELF-ASSEMBLY

***“Understanding levan nanoparticles formation:  
reaction kinetics and self assembly”***

**Eva Martin del Valle**

**University of Salamanca  
Spain**



***“Self-assembly for the formation of highly  
regular particle structures”***

**Nicolas Vogel**

**University of Erlangen-Nuremberg  
Germany**

***“Hierarchical, self-assembled particle networks  
in thin films and in bulk:  
from transparent electrodes to flexible  
conductors”***

**Tobias Kraus**

**Leibniz Institute for New Materials  
Germany**



# ADDITIVE MANUFACTURING



*“Additive manufacturing of aluminum alloys”*

**María Teresa Pérez**

IMDEA Materials Institute  
Spain

*“Novel thermoplast feedstocks for laser powder bed fusion of polymers - approaches for production and process-adapted characterization”*

**Jochen Schmidt**

Friedrich-Alexander-University-Erlangen-  
Nuremberg  
Germany



Further information at: [www.wcpt9.org](http://www.wcpt9.org)

You are welcome to submit your abstract for this WCPT9-JE through the submission platform selecting the tab Joint Events: **Particle Technology. Shaping the future.**

**The deadline for abstract submission is May 2<sup>nd</sup>.**



supported by:



Collaborative Research Center CRC 1411 Design of Particulate Products