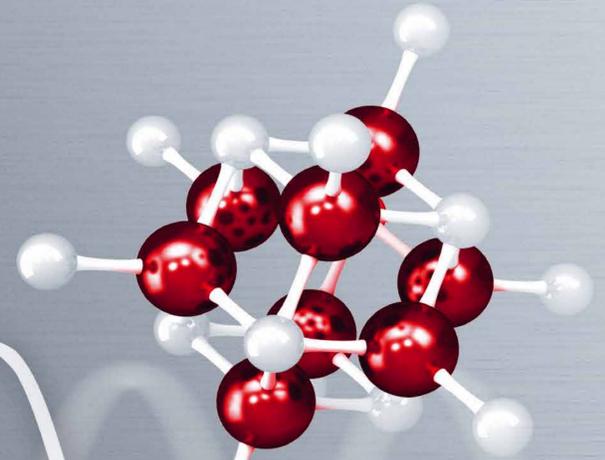


APPtec®



A NEW GENERATION OF SPRAY PYROLYSIS FOR ADVANCED POWDER MATERIALS

Rising demands on functionality and durability of components and devices lead to new challenges in the development of materials. Utilizing high performance powders, produced with Glatt APPtec®, enhance the applications functionality and increases performance to its maximum.

The new **Advanced Pulse Powder Technology APPtec®** is a unique, continuous process to generate and modify powders. In the specially designed combustion chamber, the heart of the synthesis reactor, a **pulsating stream of hot gas** is created. Here particles are generated, treated and modified. The pulsating stream of hot gas can be adjusted in **frequency, amplitude, temperature and flow-velocity**. The reactor is constructed in a way that the gas stream pulsates within strictly controlled parameters.

Due to the pulsation of the gas stream, the **heat transfer** from gas to particle is **increased by a factor of five to ten**, compared to continuous gas streams. Because of this, the generation of particles and phase-transitions are much faster and **unique structures** can be created.

Because of large turbulences pulsating gas streams exhibit **no gradients in temperature or flow-velocity**, as they are typical for continuous gas streams. Because of this all particles experience an identical treatment regarding temperature and retention time as basis for homogeneous powders.



APPtec pilot and production plant

Advanced Pulse Powder Technology to design YOUR materials

Benefit from the advantages of this new Glatt technology for targeted design of particles with desired properties!

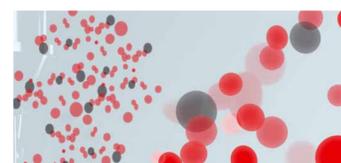
Develop new technological solutions with Glatt and create innovative and significantly improved powder materials with increased performance!



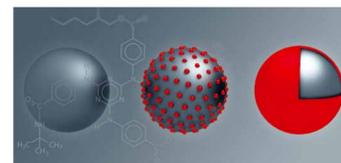
Contract manufacturing or own production plant



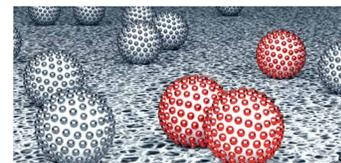
Simple oxides, doped materials, complex mixed oxides



Adjustable particle size and narrow size-distribution



Functionalization of powder particles



Very high activity for catalytic materials

Our Service

- » joint development of materials & processes
- » material characterization/optimization
- » lab scale production and scale up
- » set-up of your own lab scale ProAPP 15
- » set-up of your own production scale ProAPP 500
- » toll production on our ProAPP 500

Chemical + Phase Composition

- » adjustable chemical composition
- » doped and undoped complex oxides
- » mixed oxides like Spinel or Mullite
- » adjustable by process parameters

Particle Size & Surface

- » from nano to micro
- » very narrow particle size distribution
- » adjustable surface properties

Coating & Core-Shell

- » unique core-shell particles
- » defined layer thickness
- » defined porosity and activity

Advanced Materials

- » catalytic materials with exceptionally high activities
- » ceramic high-performance powders with application-specific doping