

Milling of Ductile Materials with Planetary Ball Mills

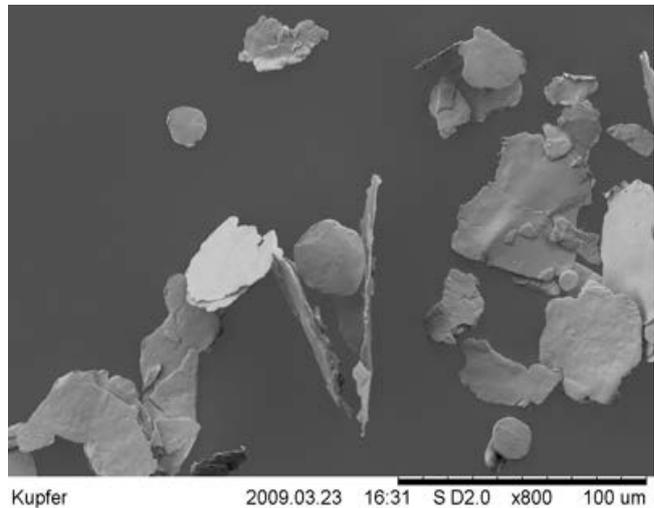
Vorteile der Planetenmühlen

Planetary Ball Mills like for example the **FRITSCH Planetary Mono Mill PULVERISETTE 6 classic line** are the ideal tools for the comminution of hard, brittle materials. Through their special planetary movements the sample is ground fast and efficient inside the grinding bowl.

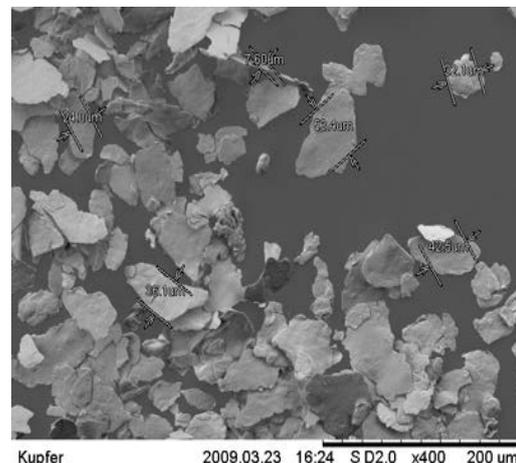
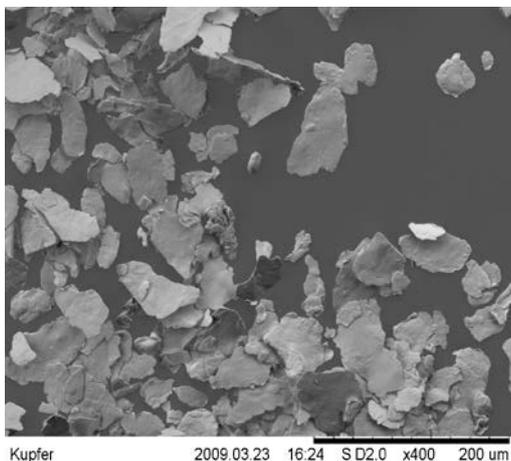
With limitations planetary mills are also suitable for the comminution of ductile samples like for example copper.

Ductility is defined as the mechanical property used to describe the extent to which materials can be deformed plastically without fracture.

In contrast to brittle materials, are the materials partly sheeted to platelets. So here the same final fineness as with brittle materials cannot be obtained.



This can be easily discerned in the following images which were obtained with an electron microscope. With a platelet thickness of $\sim 2 \mu\text{m}$ the measurement in longitudinal respectively cross direction is approximately 20-40 μm .



We thank the company **Inula** for supplying the electron microscope images

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