

Solid APIs

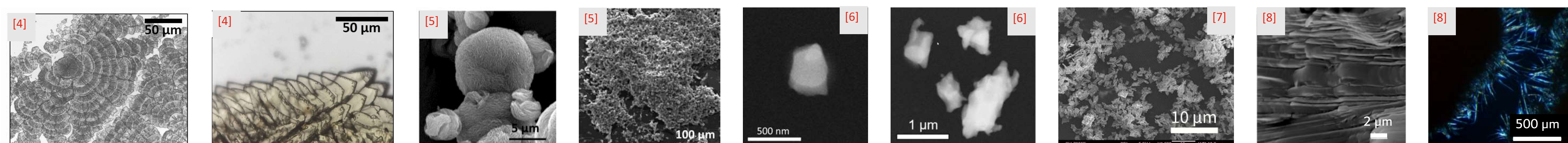
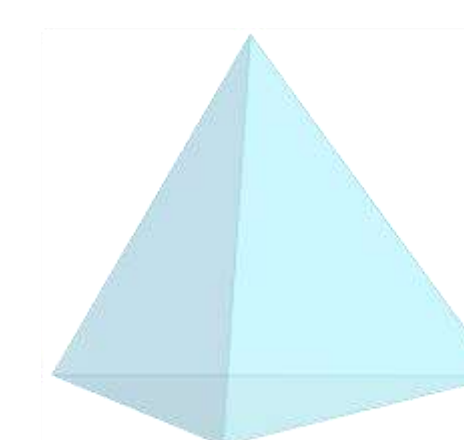
Most pharmaceuticals are administered in solid form, and extensive research and development efforts are invested to explore the phase diagram of APIs and solid-state formulations.

Crystal structure determination is the key tool for elucidating the molecular structure and rationalizing the solid form properties.

Difficult crystallization, small crystal size, mixture of phases, small product quantities are very frequent obstacles to the structural characterization of APIs with the established x-ray diffraction-based methods and can act as bottlenecks in drug-development.

Nonconventional crystallization methods[1, 2] enable the discovery of new solid forms including polymorphs, cocrystals and solvates, allowing to see even known APIs under a new light.

However, these methods can easily lead to **nanocrystalline** products, which hampers structural elucidation.



Dedicated electron diffractometer

It combines the ease-of-use of a single-crystal diffractometer, with the nanoscale resolution of an electron beam.

Improved goniometer:
for nano-crystallographic experiments

Crystal mapping
over the entire sample grid

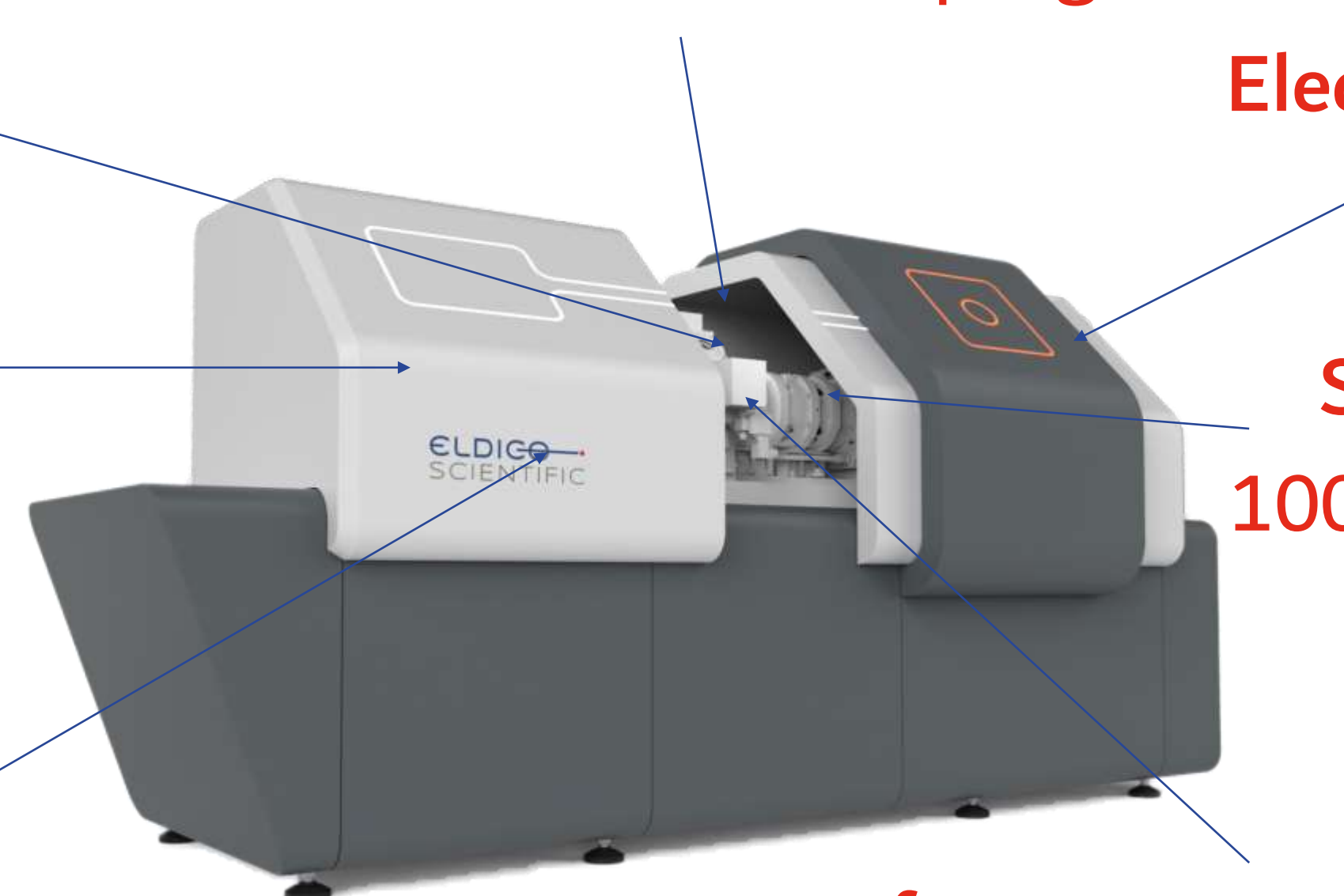
Electron beam
160 kV

Hybrid-pixel detector
Low-noise and high dynamic range

Sample size
100–1000 nm

Diffraction mode:
continuous rotation

Octagon:
for custom attachments



The concept:

- Designed by crystallographers for crystallographers
- Device optimized for diffraction experiments
- Easy-to-use hardware and software
- Low dose for beam-sensitive materials
- Stable goniometer for precise nano rotation
- Hybrid pixel detector for fast acquisition of data