

A first digitisation phase of the UMONS Earth Sciences collections in the framework of the DiSSCO-FWB project

Earth Sciences collections of the University of Mons

→ Hosted and managed by the Geology & Applied Geology Dept of the Faculty of Engineering (ex-"Ecole des Mines du Hainaut")

- **Palaeontological** samples
 - **Mineral** and **ore** samples
 - **Rock** samples and preparation (e.g. thin slices, polished sections,...)
 - Well core and cuttings
- **Several dozens of thousands of samples + dozens of kilometers of wells**

+ Geological and mining archives



- Collections from the 18th to the 21st c.
- Mainly from Belgian sites that are now inaccessible
- Over one hundred preserved holotypes

Examples of heritage collections :

- Briart coll. (late-19th c.) : Danian marine fauna of the Mons basin
- Le Hon coll. (mid-19th c.) : Lutetian fauna of Brussel
- Denuit coll. ; Baudour coll. ; ... (early 20th c.) : Continental fauna and flora of the Hainaut coal basin
- Racheneur coll. (early 20th c.) : Praguian fishes of Wihéries
- Marine fauna from Strépy-Braquegnies (Albian) and phosphatic chalk of Mons basin (Maastrichtian) (late 19th and early 20th c.)

Palaeontological heritage collection

DiSSCO-FWB

DiSSCO : Distributed System of Scientific Collections

→ Digitisation of samples/data from scientific collection at the European level
>195 institutions in 23 countries ; 1.5 billion of specimen

DiSSCO-FWB : first implementation in FWB institutions (ULB, UCL, ULg, UNamur, UMONS)

→ Acquisition of equipment and first acquisition phase

First digitizing project in 2023 @ UMONS

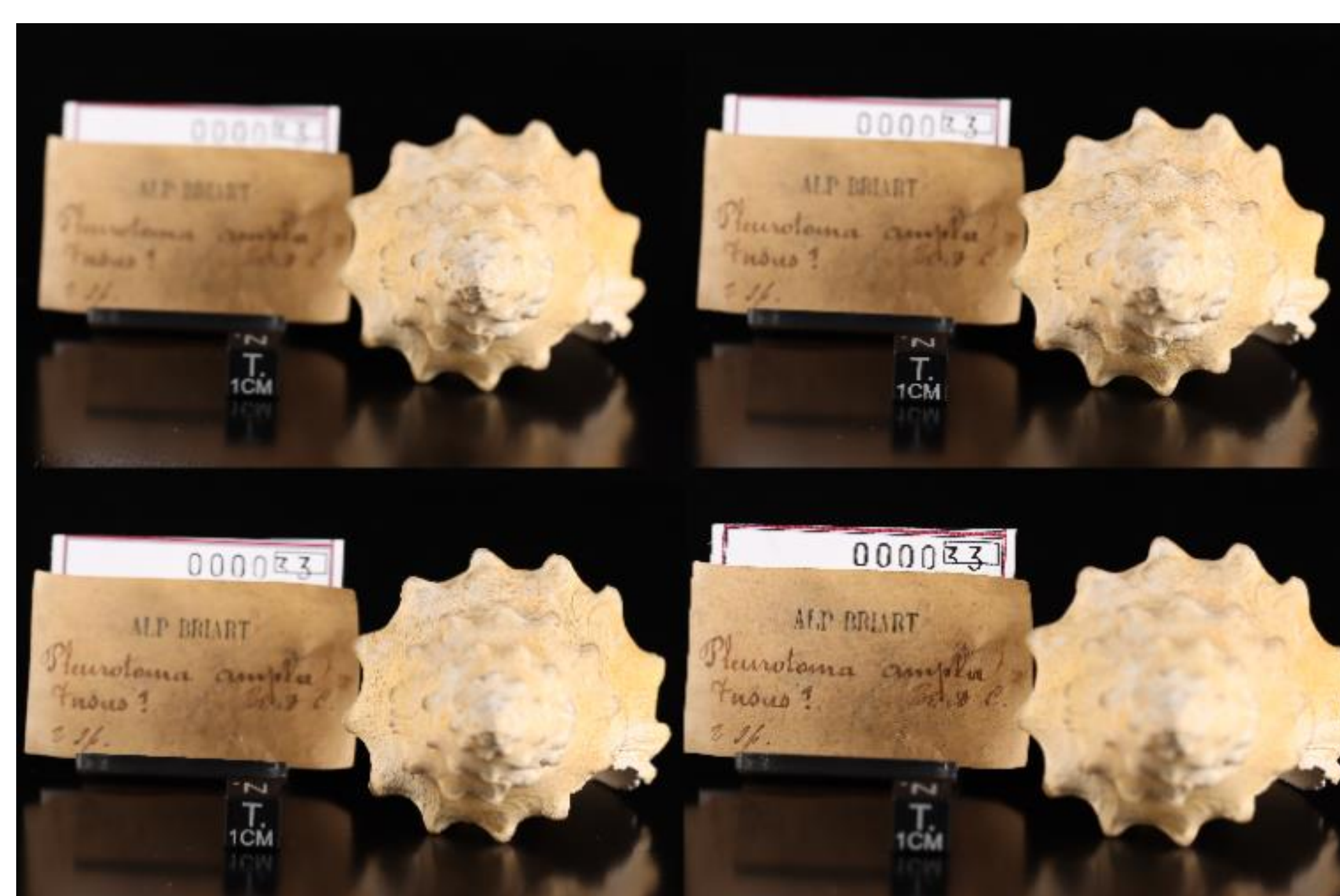
- 1) Definition of the technical characteristics of the equipment needed to meet digitization requirements
- 2) Acquisition of this equipment following an analysis of the products available on the market and complying with the defined technical characteristics
- 3) Testing the equipment and defining a digitization procedure adapted to Earth sciences samples
- 4) Implementation of the first phase of the digitization operation for the collections

- 15 pictures of each samples at different depths of focus
- Stacking processing based of these 15 pictures

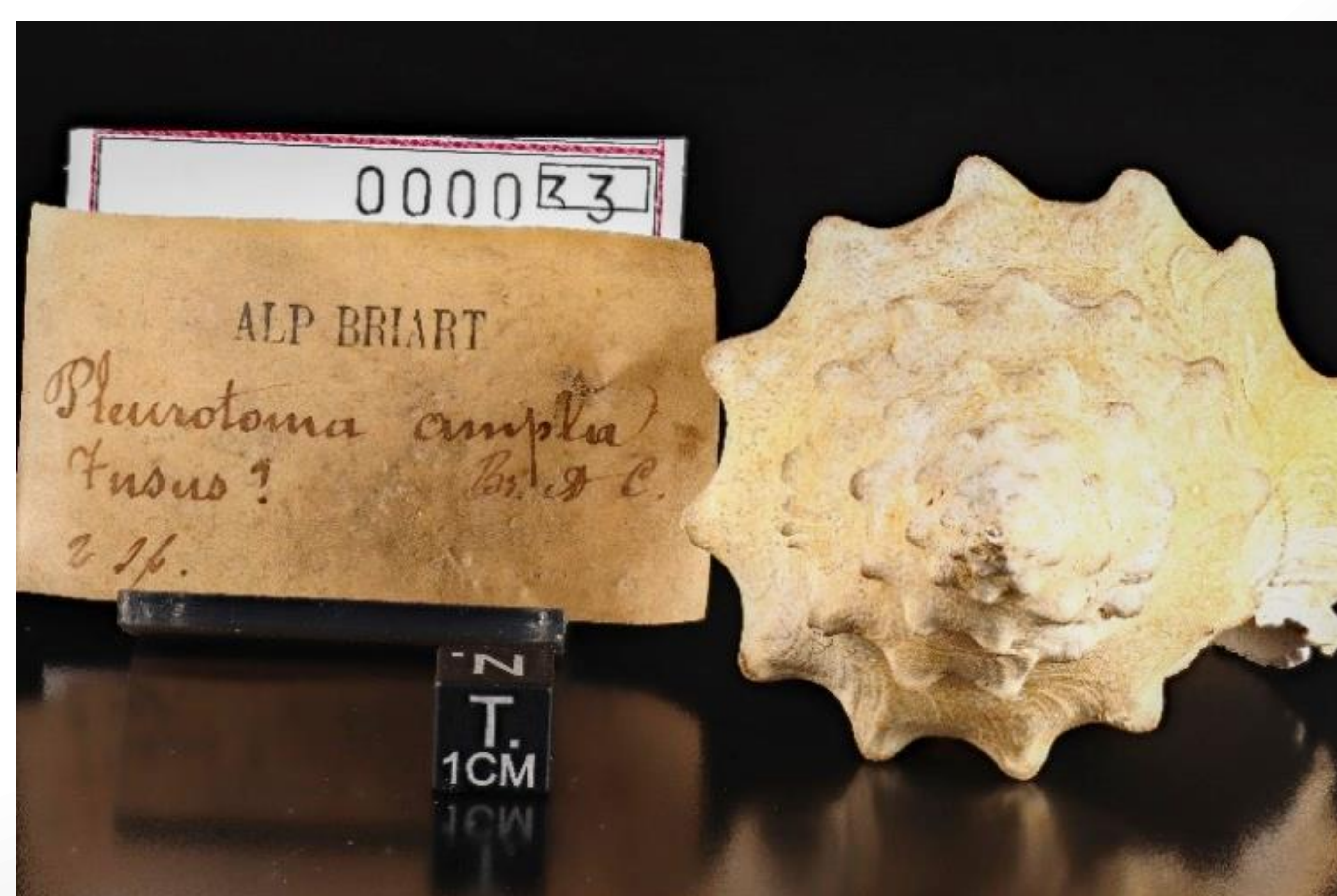
Up to now, several collections have been digitized (see examples above)
→ > 1200 samples



Development of a flexible and versatile sample digitization platform (with stacking technique)



Example of pictures of a sample at different depths of focus



Example of resulting picture after stacking processing