

**Supplement 2.** Selected cathodoluminescence images of zircon grains in the analysed samples. Numbers are from left to right.

**CL-08-66:** (1) round and rounded, (2) oval and subangular to subrounded, (3) oval and subangular to subrounded, (4) oval and euhedral.

**87RG3:** (1) oval and subangular to subrounded, (2) elongated and subangular to subrounded, (3) elongated and euhedral.

**SdR-138:** (1) oval and subangular to subrounded, (2) oval and subangular to subrounded, (3) elongated and subangular to subrounded.

**CL-08-73:** (1) round and subangular to subrounded, (2) round and subangular to subrounded, (3) oval and subangular to subrounded, (4) elongated and euhedral.

**02-66:** (1) oval and rounded, (2) oval and subangular to subrounded, (3) elongated and rounded.

**AT-04:** (1) round and rounded, (2) oval and rounded, (3) elongated and subangular to subrounded.

**CC-08-135:** (1) round and euhedral, (2) oval and subangular to subrounded, (3) elongated and subangular to subrounded.

**QC-08-39:** (1) round and subangular to subrounded, (2) oval and rounded, (3) oval and subangular to subrounded, (4) elongated and euhedral.

**CP-08-09:** (1) round and subangular to subrounded, (2) elongated and subangular to subrounded, (3) elongated and euhedral.

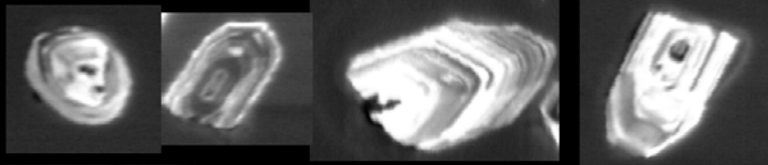
**SA-08-125:** (1) round and euhedral, (2) elongated and subangular to subrounded, (3) oval and subangular to subrounded.

**MS-08-60:** (1) oval and subangular to subrounded, (2) elongated and subangular to subrounded, (3) elongated and euhedral.

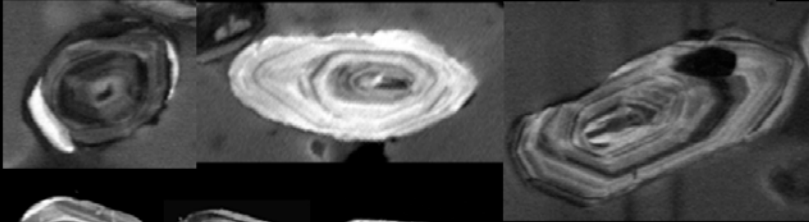
**CO-128:** (1) round and subangular to subrounded, (2) oval and euhedral, (3) elongated and euhedral.

**CC-08-139:** (1) round and subangular to subrounded, (2) oval and rounded, (3) elongated and subangular to subrounded.

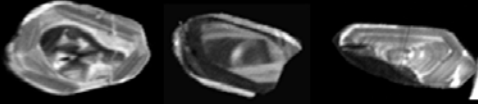
CL-08-66



87RG3

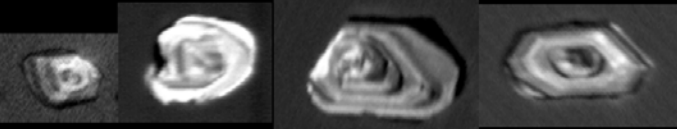


SdR-138



200  $\mu$ m

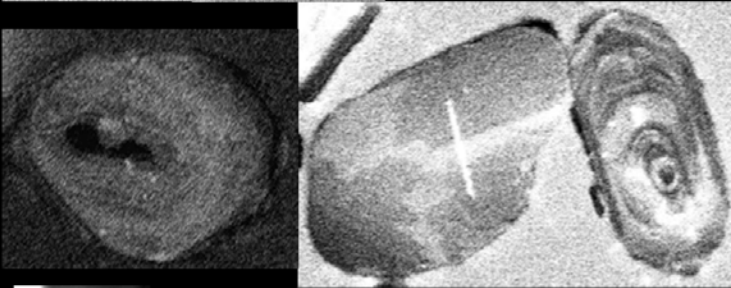
CL-08-73



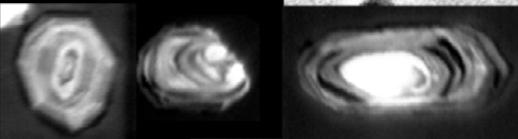
02-66



AT-04

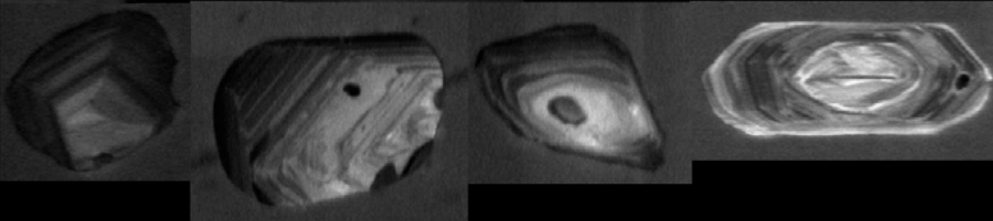


CC-08-135

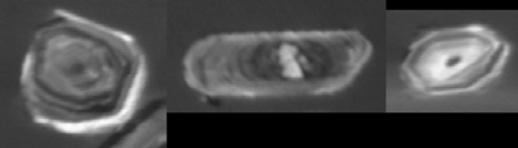


200  $\mu$ m

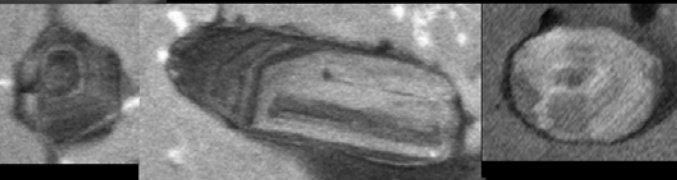
QC-08-39



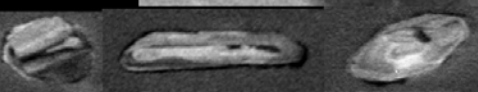
CP-08-09



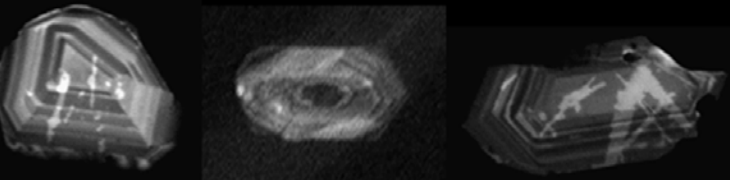
SA-08-125



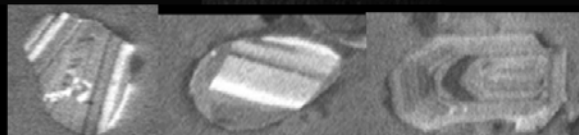
MS-08-60



CO-128



CC-08-139



200  $\mu$ m