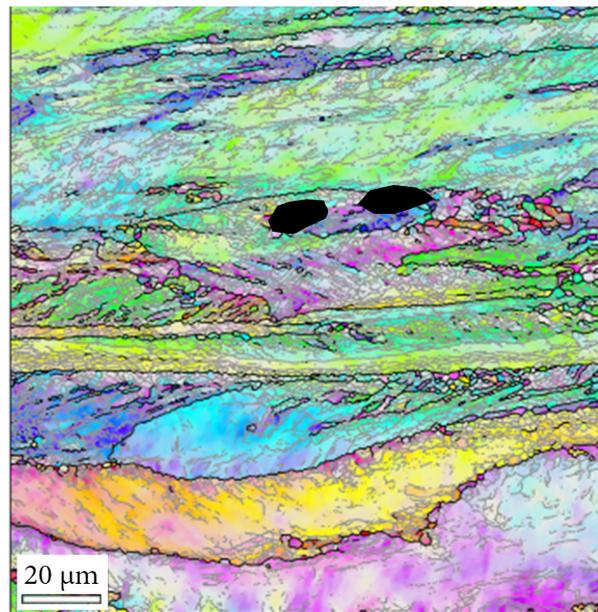
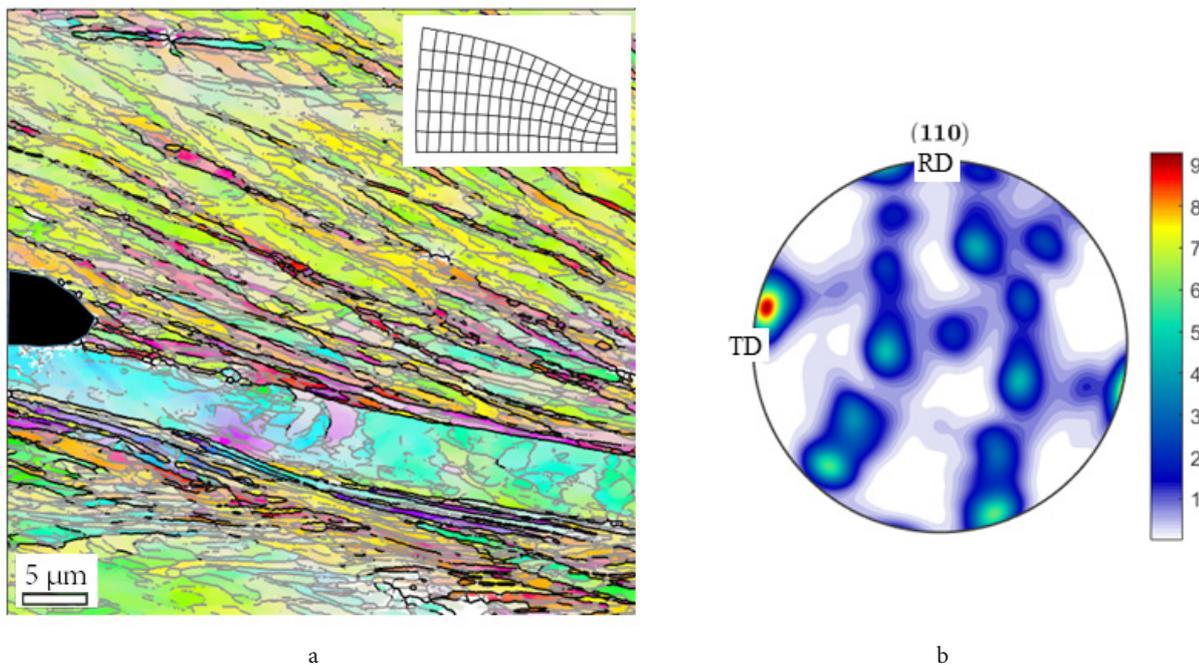


## Supplementary Material



**Fig. S1.** (Color online) EBSD maps of region A155.



**Fig. S2.** (Color online) EBSD map (a) and (110) direct pole figure (b) of region A180. The plastic strain non-uniformity peculiar to the neck is shown schematically on the map.

## Notions:

1. The areas, where clouds of non-indexed points occur (apparently these are large voids), are shadowed with black color on these map.
2. The map of region A155 was obtained by scanning with a stepsize of 200 nm, while the map of region A180 — with a stepsize of 50 nm.

Region A180, closest to the fracture surface among examined regions, is located slightly above the specimen axis (see Fig. 1b). Multiple microbands are observed in it, yet a non-fragmented region also occurs, which is suspected to be the elongated original grain. One can see in Fig. S2a that the direction, in which this assumed grain is elongated, correlates with the direction of the  $\langle 110 \rangle$  texture axis on the direct pole figure (Fig. S2b); the latter is rotated by an angle of about  $12^\circ$  from TD. This rotation seems to be a natural consequence of the spatial distribution of plastic flow near the fracture surface, which is represented schematically in Fig. S2a based on numeric modelling results [16].