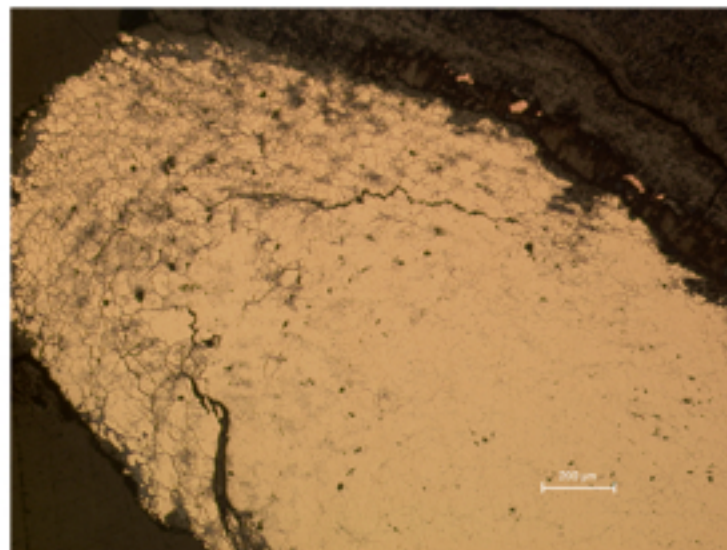
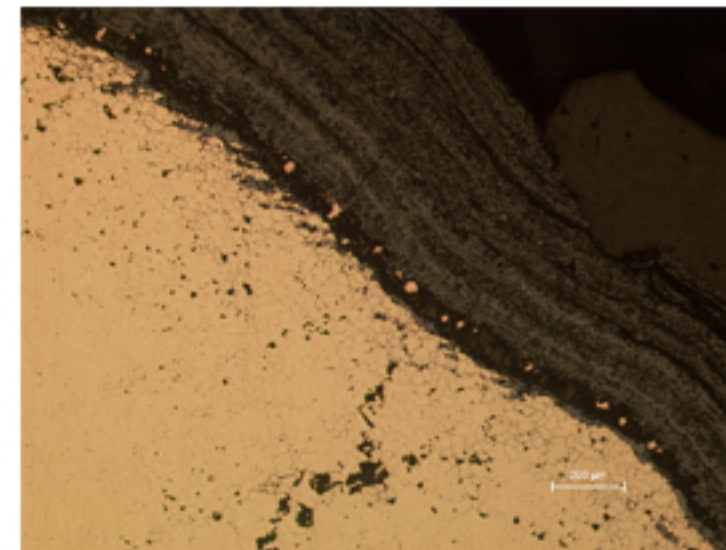


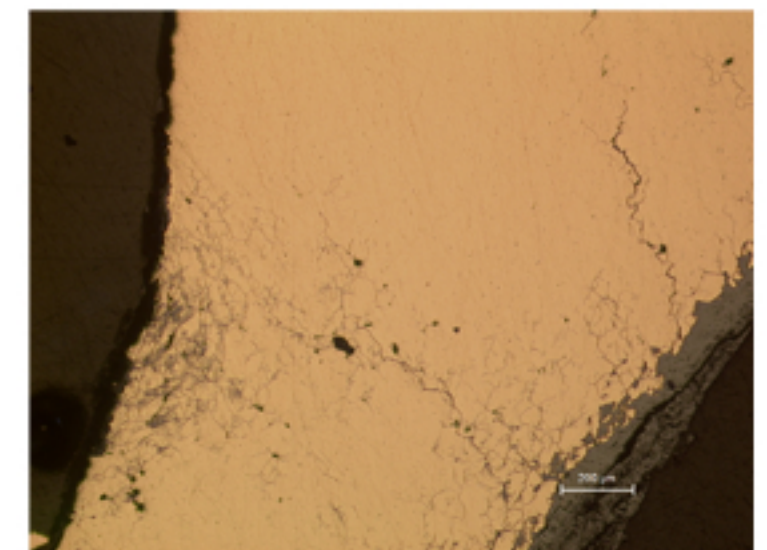
## A39 - MIRROR



A39.1



A39.2



A39.3

### Identification

**Sample:** A39  
**Card reference:** C49  
**Origin:** Etruria  
**Location:** Musée du Louvre n. 1808

### Description

The alloy has a tin content of around 5%. The object has been hammered; the thickness at the center is 1mm. The reflecting surfaces were tinned. Corrosion takes the form of a thick stratified layer of cuprite covered with carbonate and penetrates intergranularly.

### Figure captions

A39.1  
General view near an edge: intergranular and slip band corrosion; an intergranular crack follows the surface contour.

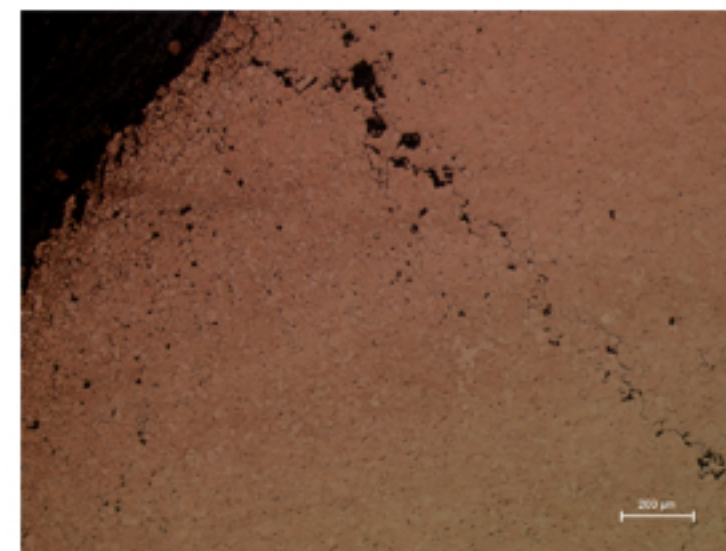
A39.2  
Detail of the surface: copper particles, probably redeposited by electrochemical action under layered corrosion products.

A39.3  
Detail of the thinned region, showing severely deformed areas and intergranular cracks.

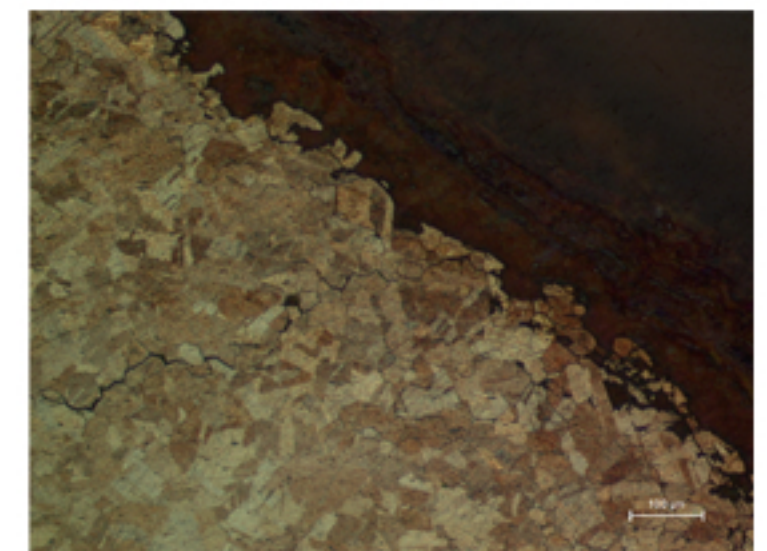
A39.4  
Detail showing regular equiaxed grains, with a relatively smaller grain size near the surface due to severe mechanical deformation in this region; intergranular cracks and voids (etchant: aqueous  $\text{FeCl}_3$ ).

A39.5  
Detail showing annealing twins inside the grains and intergranular corrosion (etchant: aqueous  $\text{FeCl}_3$ ; viewed under bright field illumination).

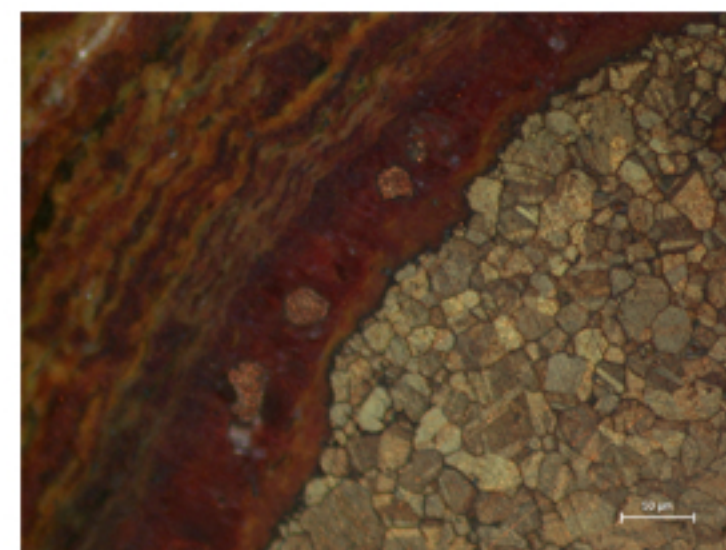
A39.6  
Detail showing stratified corrosion products with included metallic copper particles (etchant: aqueous  $\text{FeCl}_3$ ; viewed under bright field illumination).



A39.4

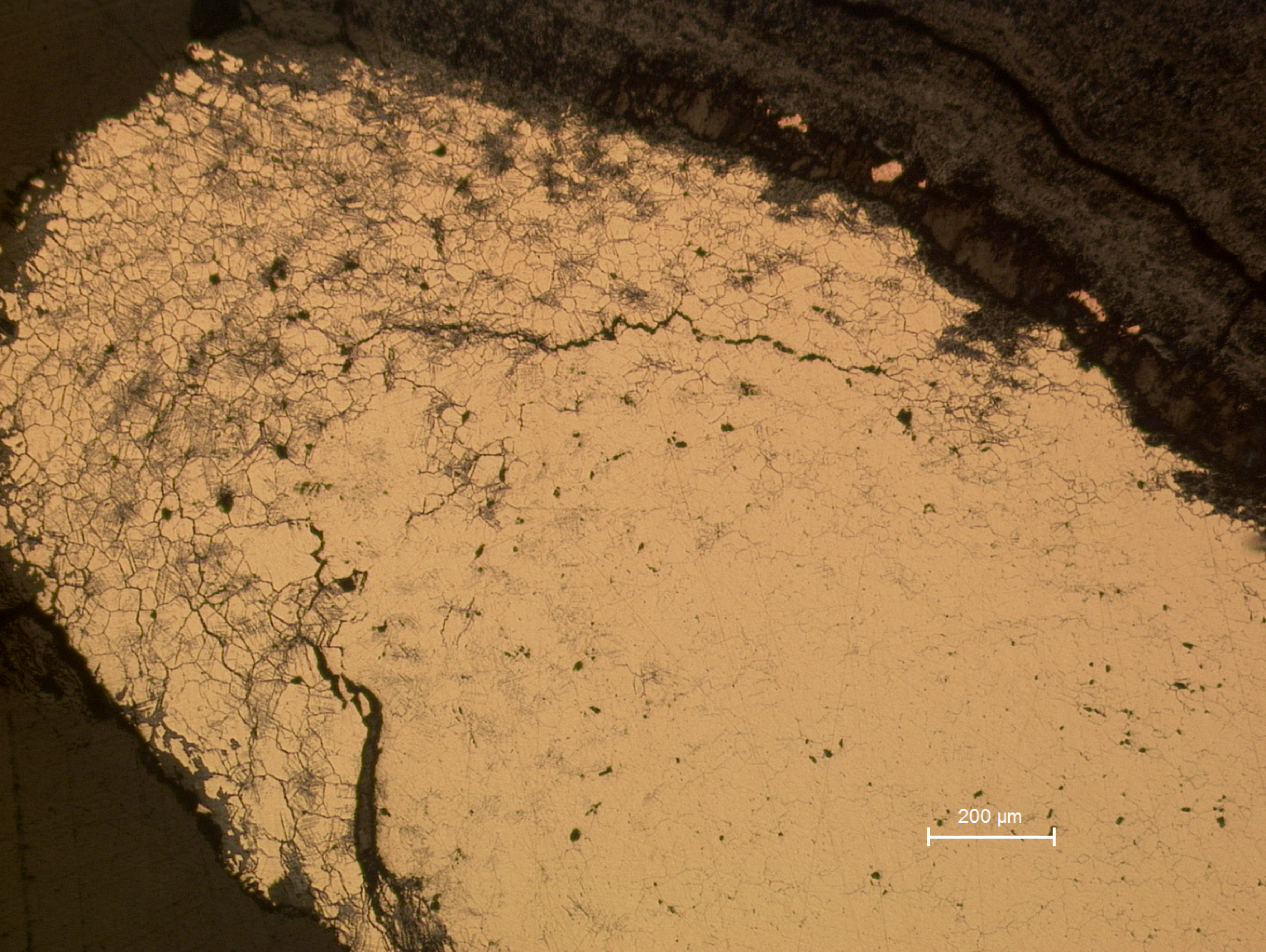


A39.5



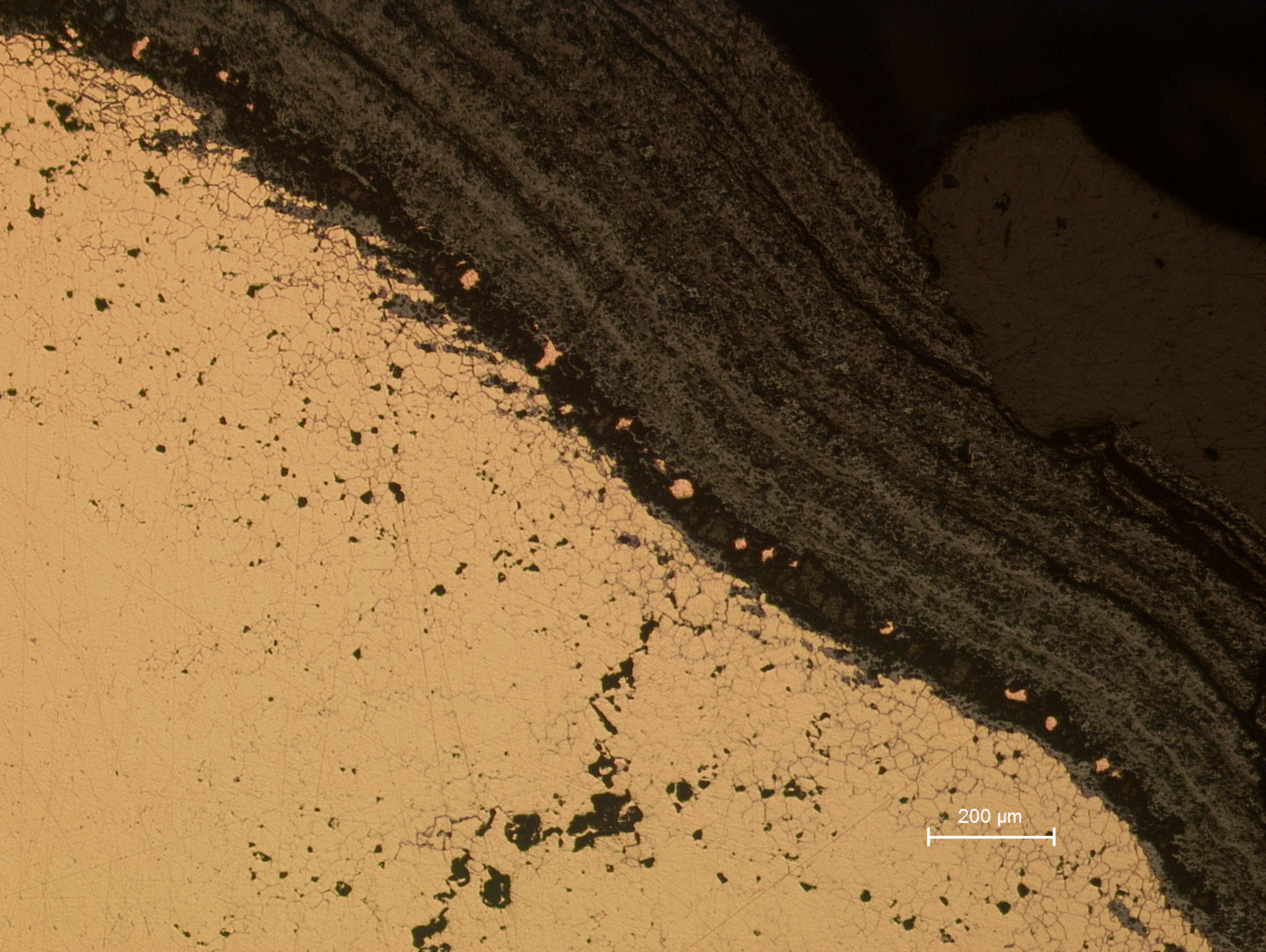
A39.6





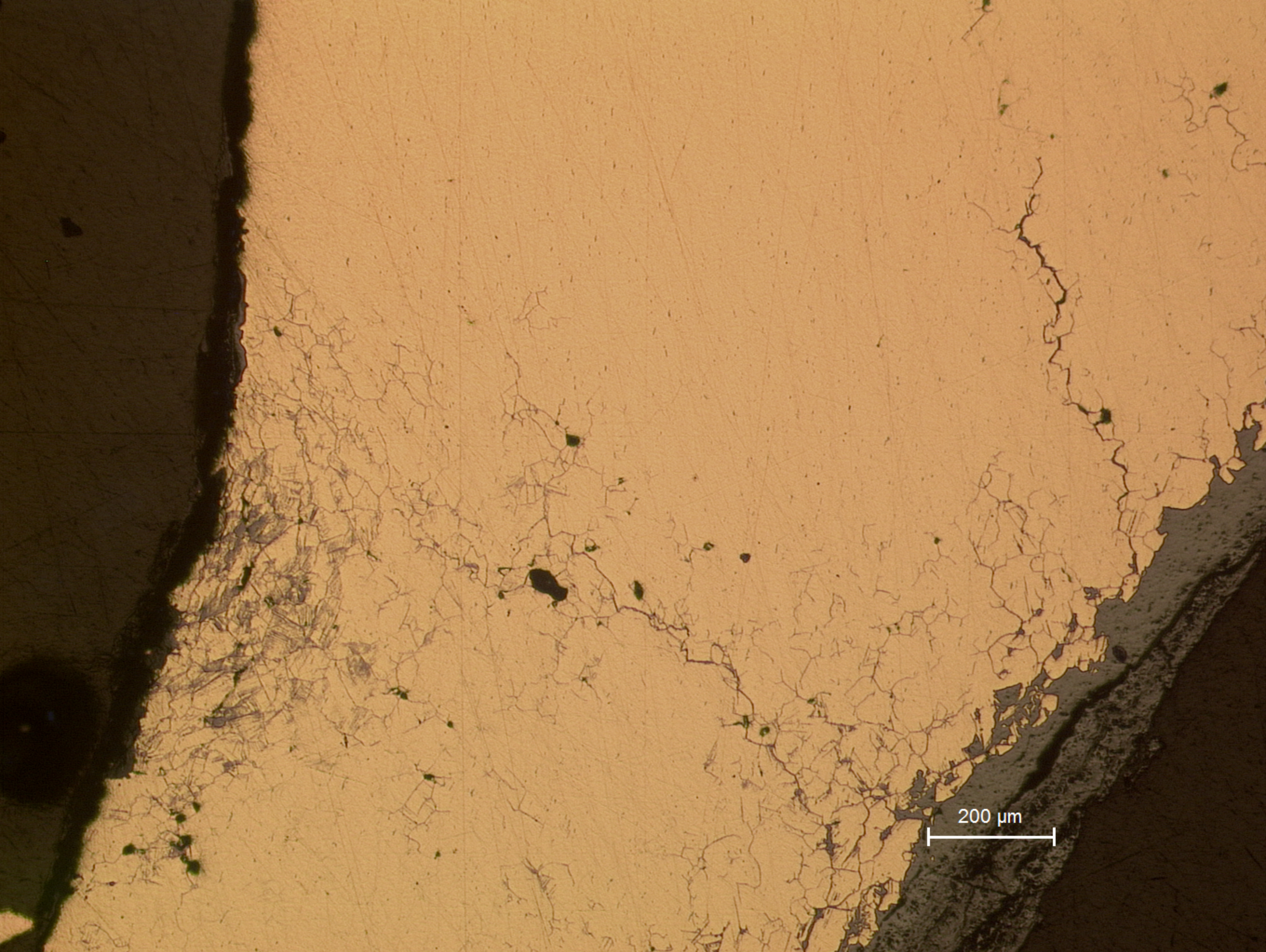
**A39.1**  
General view near an edge: intergranular and slip band corrosion; an intergranular crack follows the surface contour.





**A39.2**  
Detail of the surface: copper particles, probably redeposited by electrochemical action under layered corrosion products.

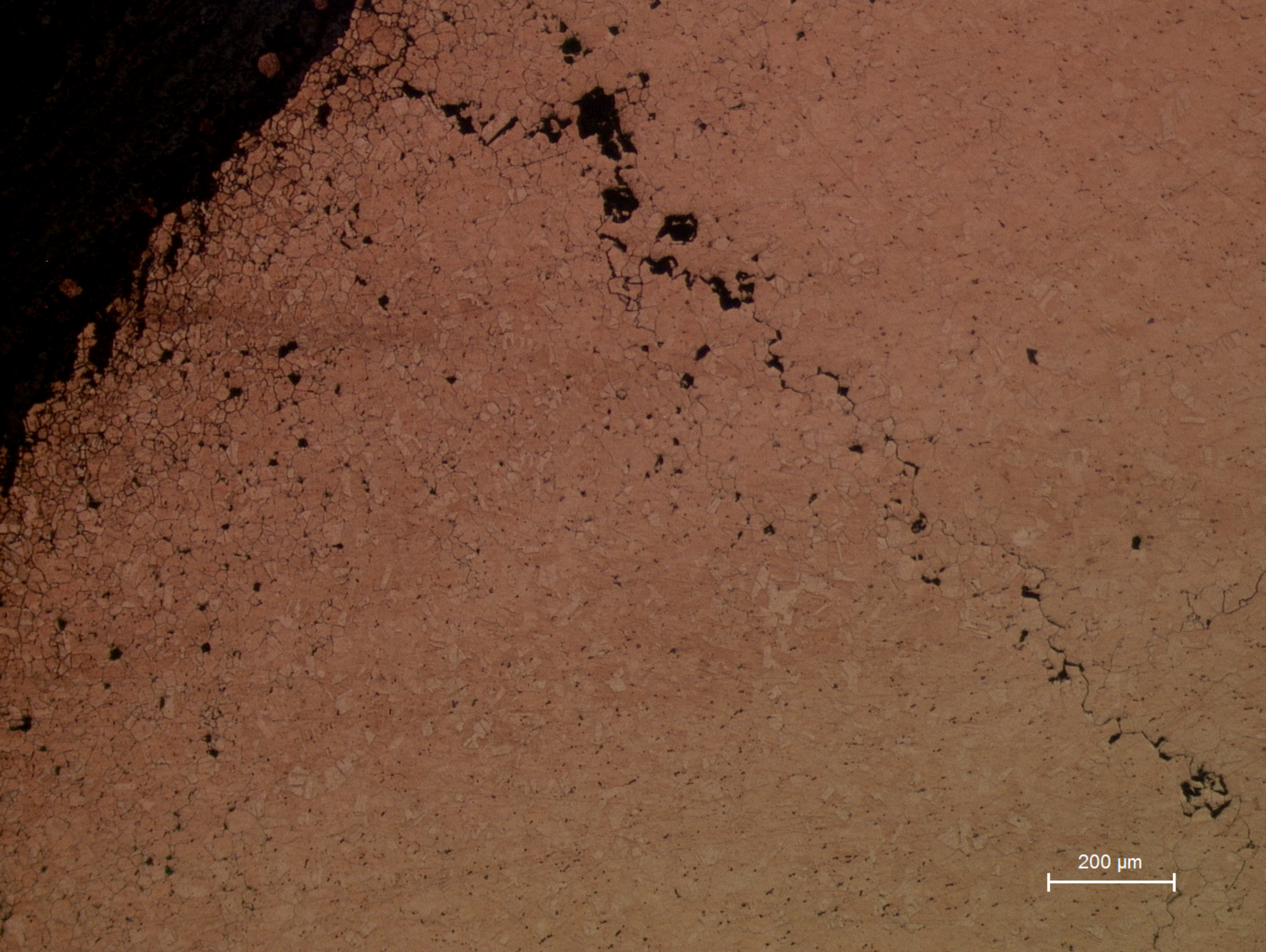




200  $\mu\text{m}$

**A39.3**  
Detail of the thinned region, showing severely deformed areas and intergranular cracks.



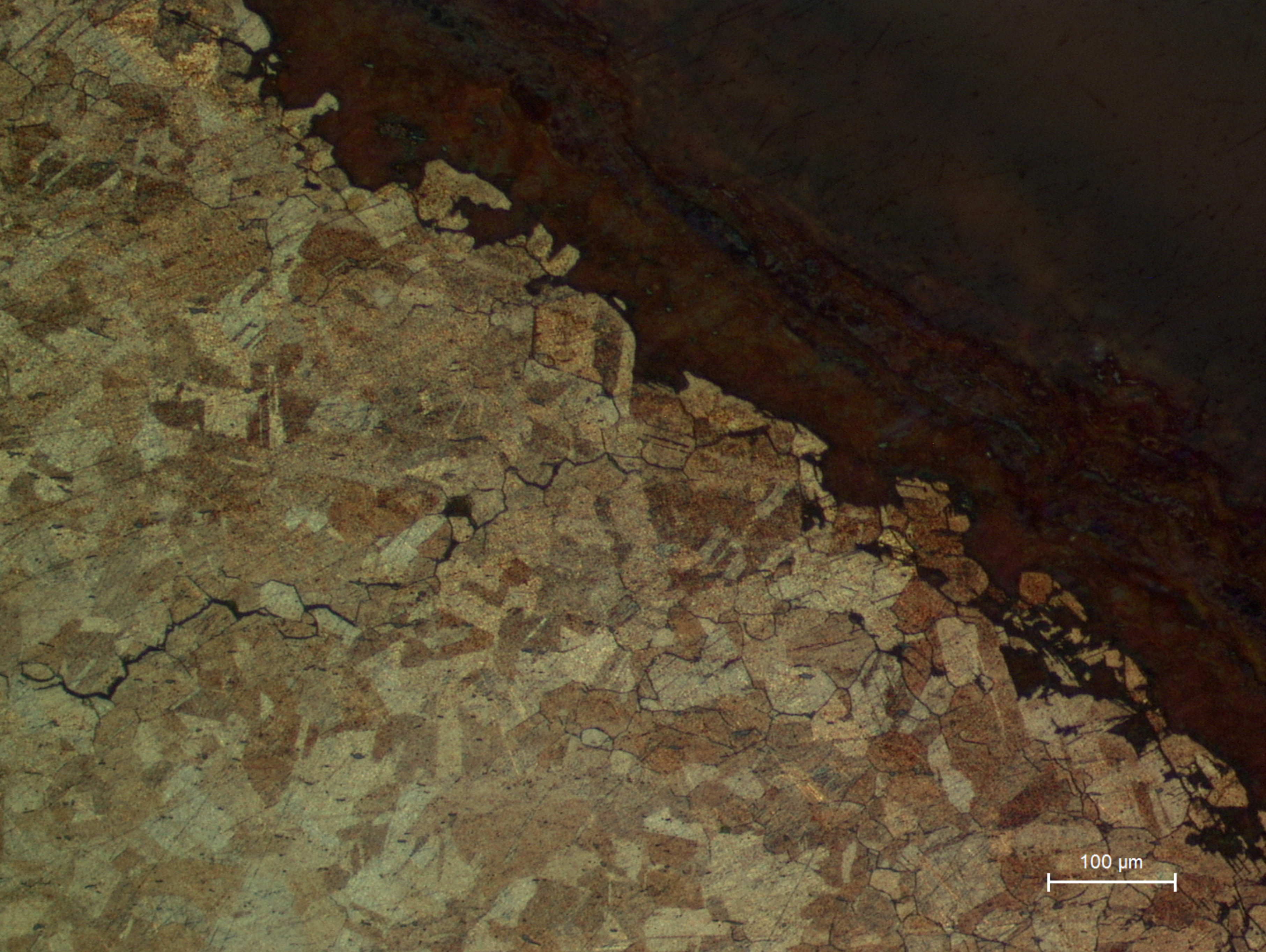


200 μm

A39.4

Detail showing regular equiaxed grains, with a relatively smaller grain size near the surface due to severe mechanical deformation in this region; intergranular cracks and voids (etchant: aqueous  $\text{FeCl}_3$ ).

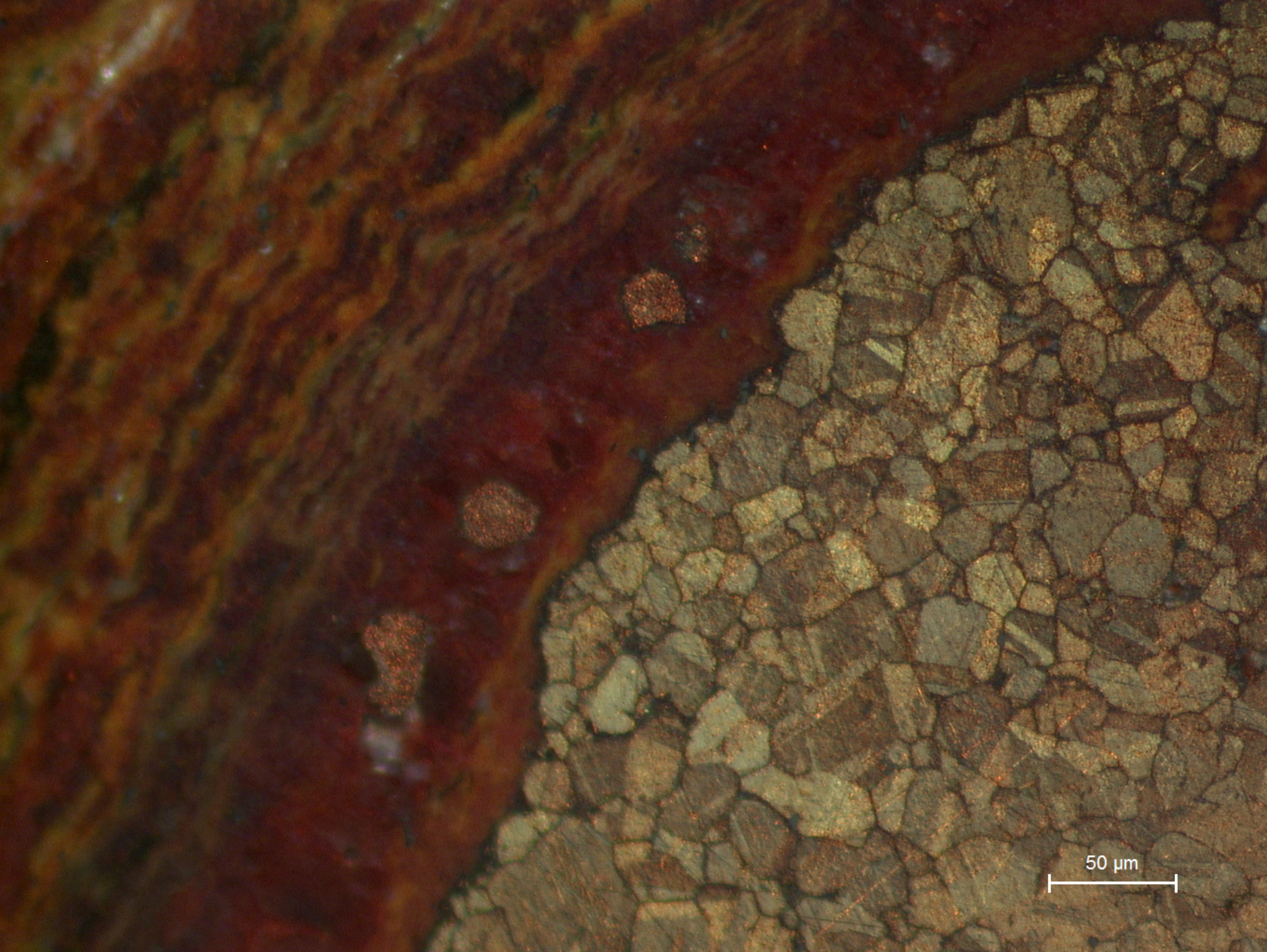




100  $\mu\text{m}$

**A39.5**  
Detail showing annealing twins inside the grains and intergranular corrosion (etchant: aqueous  $\text{FeCl}_3$ ; viewed under bright field illumination).





50  $\mu\text{m}$

**A39.6**  
Detail showing stratified corrosion products with included metallic copper particles (etchant: aqueous  $\text{FeCl}_3$ ; viewed under bright field illumination).