

# Additional Pictures to: Process Induced Defects in Si Chips

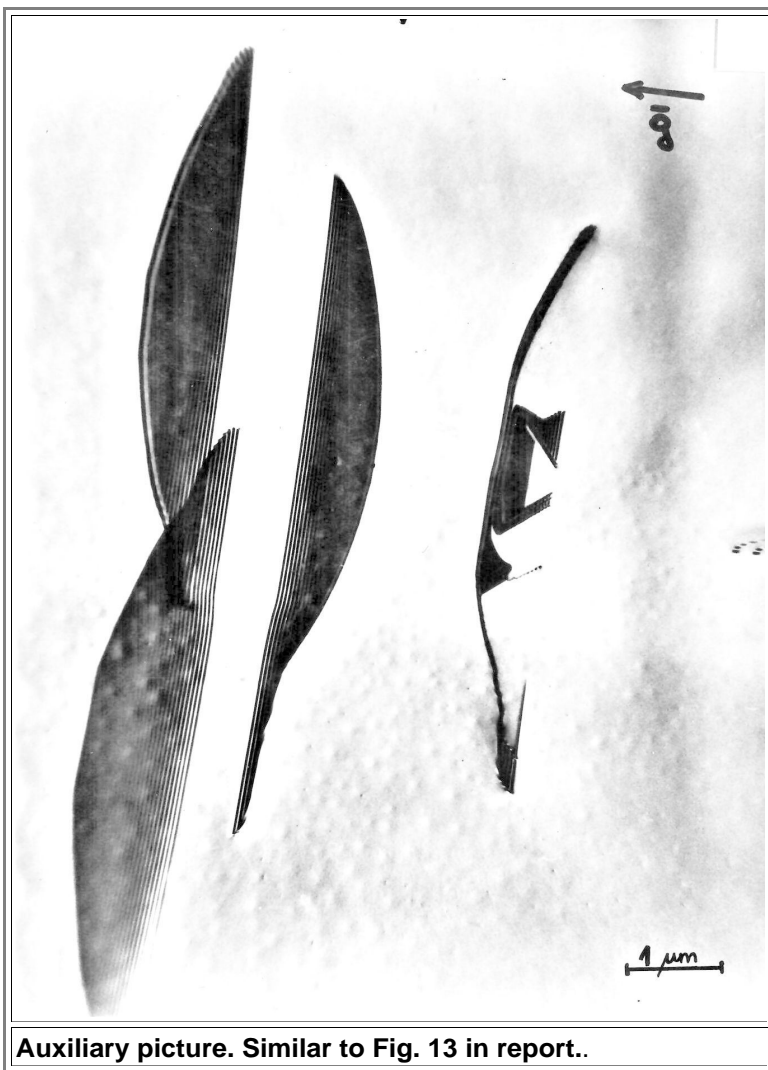
## Part 2 Auxiliary Pictures 1

### Links to

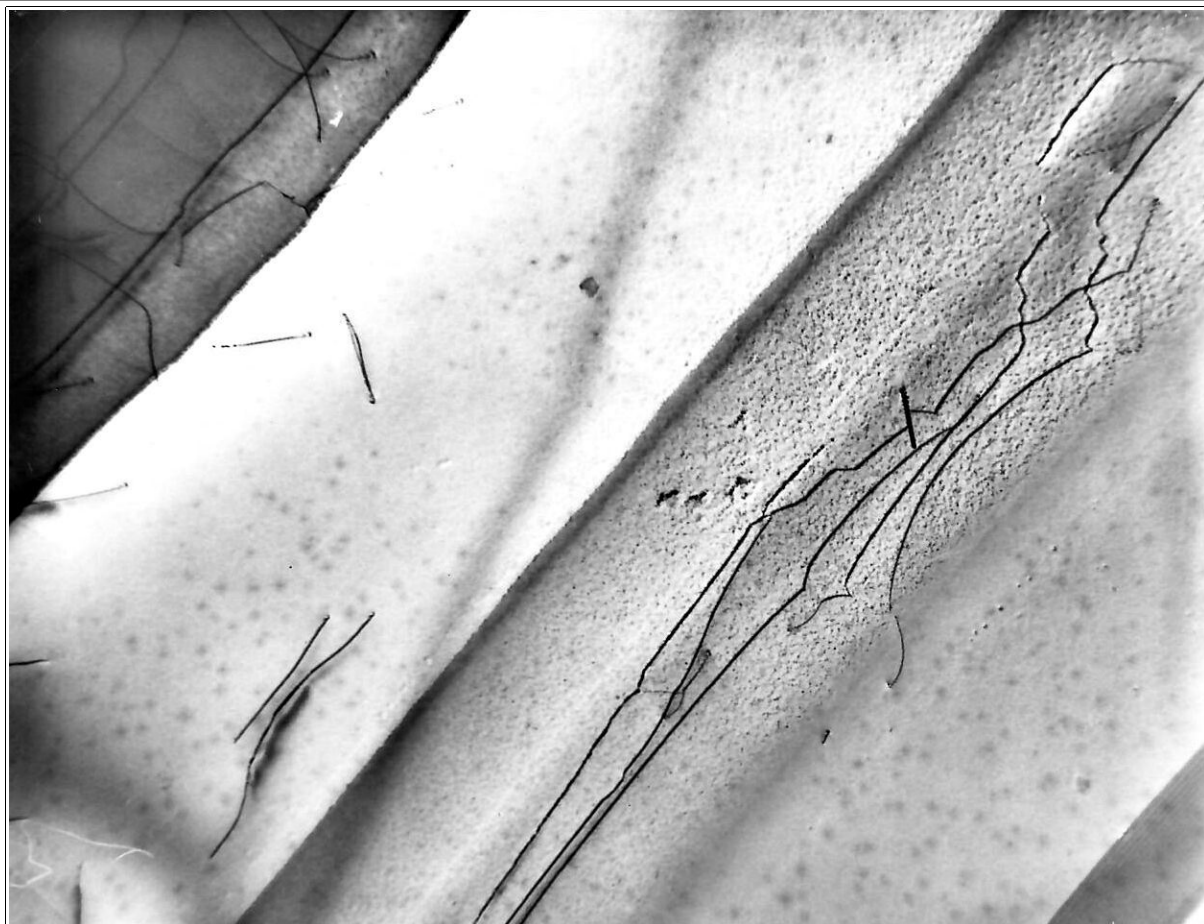
- [Auxiliary Pictures Part 1](#)
- [Auxiliary Pictures Part 3](#)

In what follows you find some auxiliary pictures illustrating some point.

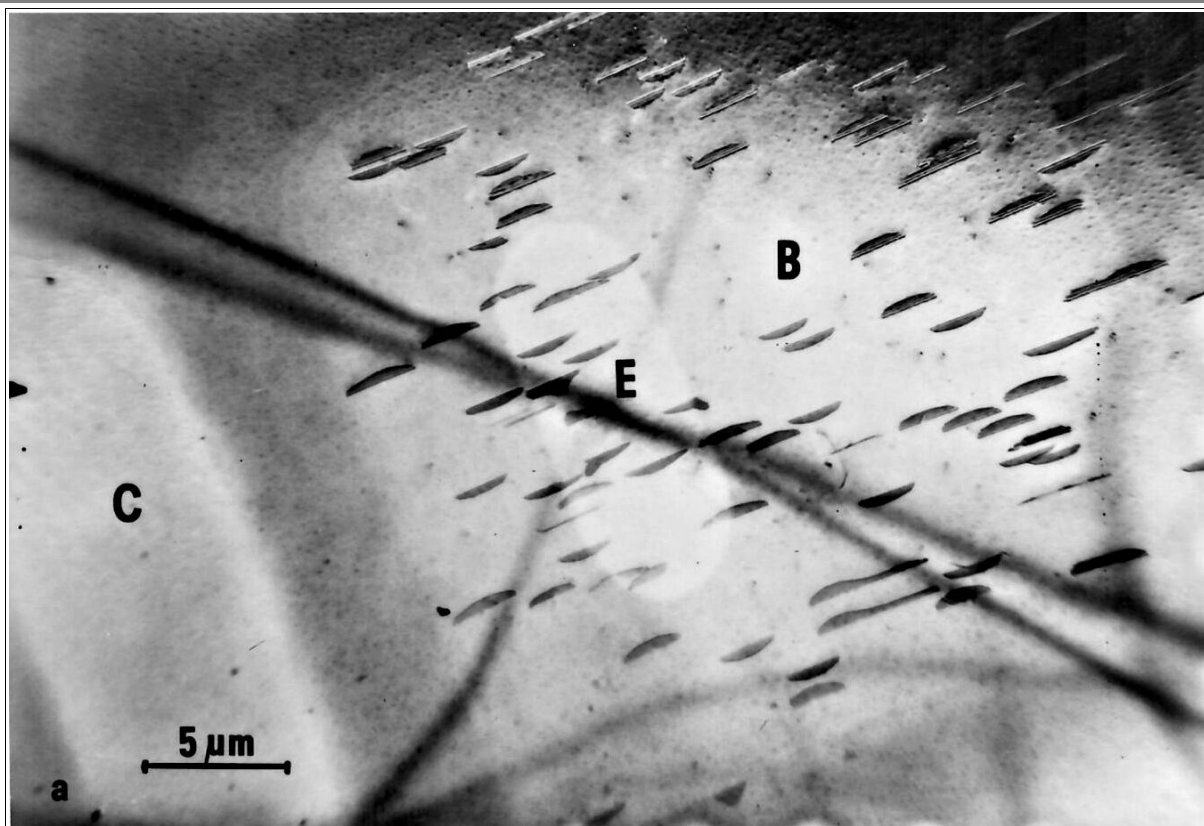
- I could illustrate one major point but, out of the goodness of my heart, will not do so. The point is:  
For any picture contained in the publication / reports, there are at least 50 or more taken but not shown- And for any picture taken, there are many observations where some feature ("stacking fault in emitter of transistor 57 in sample 19"). In other words: a lot of time was spent at the microscope (and later in the dark room developing negatives and printing pictures)



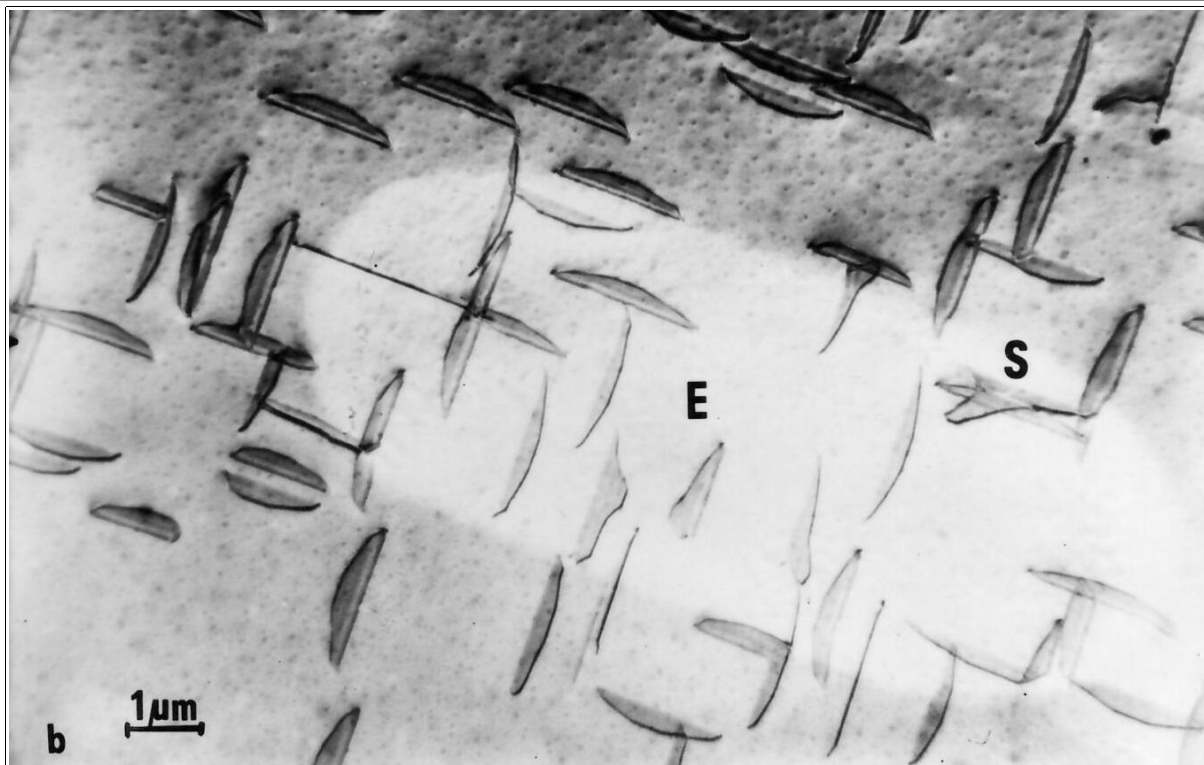
Auxiliary picture. Similar to Fig. 13 in report..



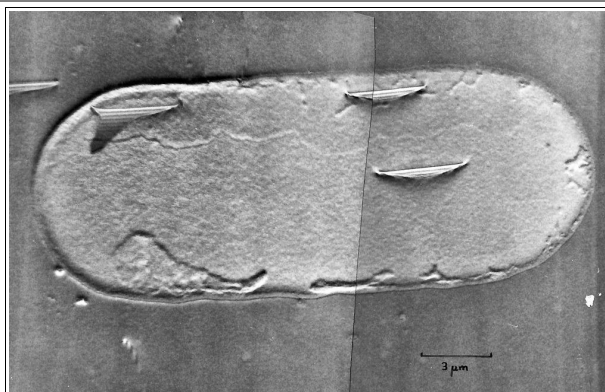
Auxiliary picture. Same sample as Fig. 13 in report.



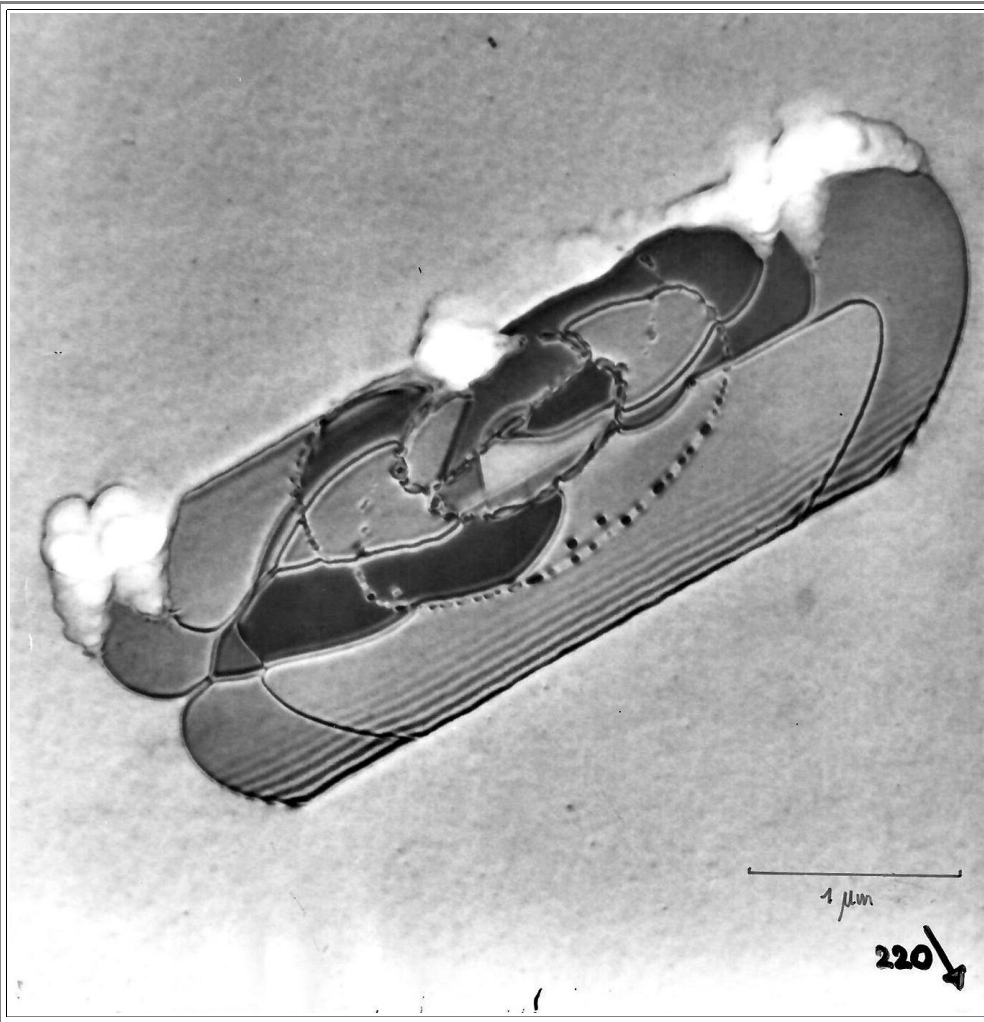
Auxiliary picture. Similar to Fig. 18 in the report and Fig. 5 in the publication.  
Small stacking faults only in the emitter region, Only one of two types is visible



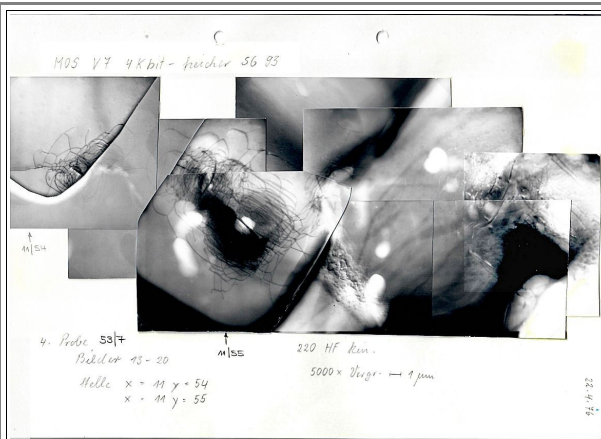
**Auxiliary picture. Similar to Fig. 18 in the report and Fig. 5 publication; as above.**  
 Small stacking faults only in the emitter region, Both types are visible, including a "sailing boat" stacking fault



**Auxiliary picture. Similar to Fig. 18 in the report and Fig. 5 publication; as above.**  
 There is a deadly "sailing boat" stacking fault in the emitter



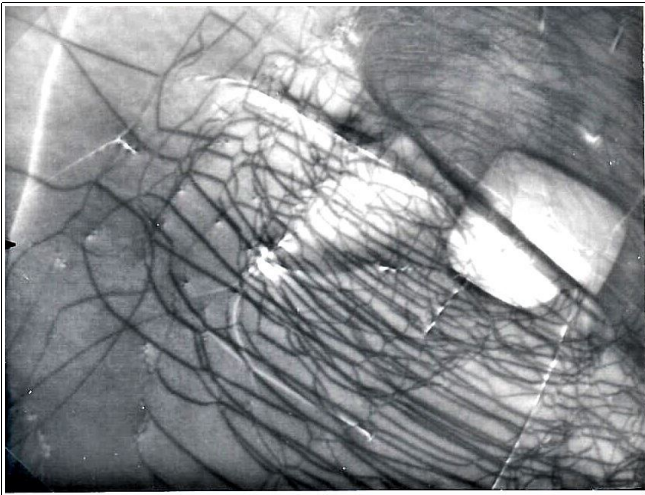
**Auxiliary picture. Similar to Fig. 54 in Report..**



**Auxiliary picture .Relates to Fig. 50 uin the report and Fig. 2a) in the publication.**

This is a page from our documentation records. It also illustrates the problems with the very high contrast due to thickness variations and how much work was necessary in the dark room to come up with a composite like this.





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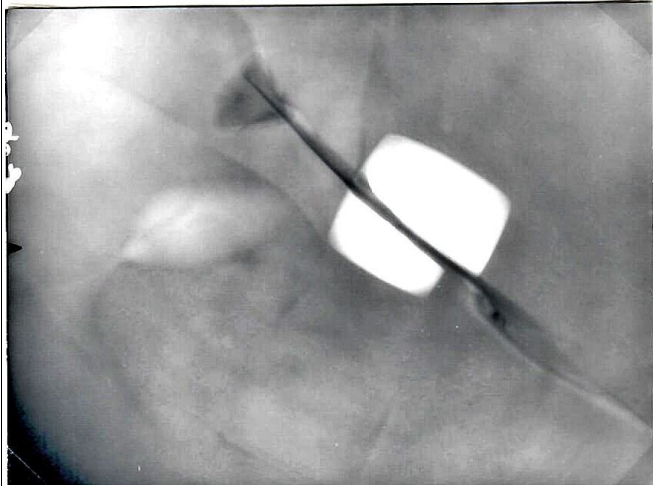
1. Probe

220 HF kin.

$x = 11$   $y = 55$  Zentrum

14 000  $\times$  Vergr.

1  $\mu$ m



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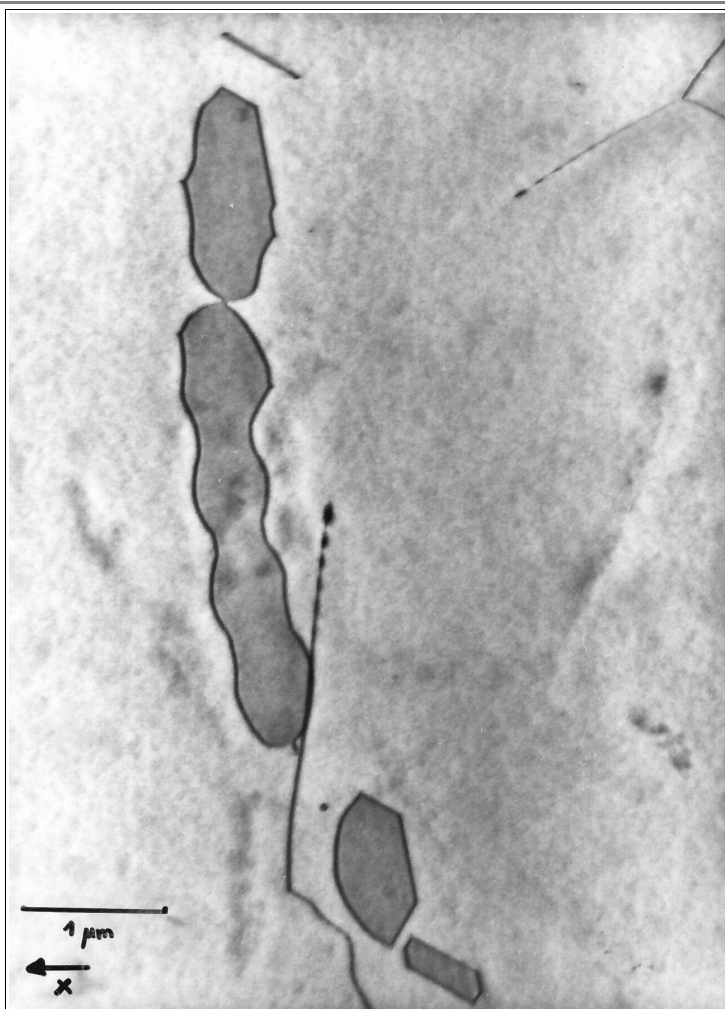
2. 220 HF kin.

14 000  $\times$  Vergr.

1  $\mu$ m

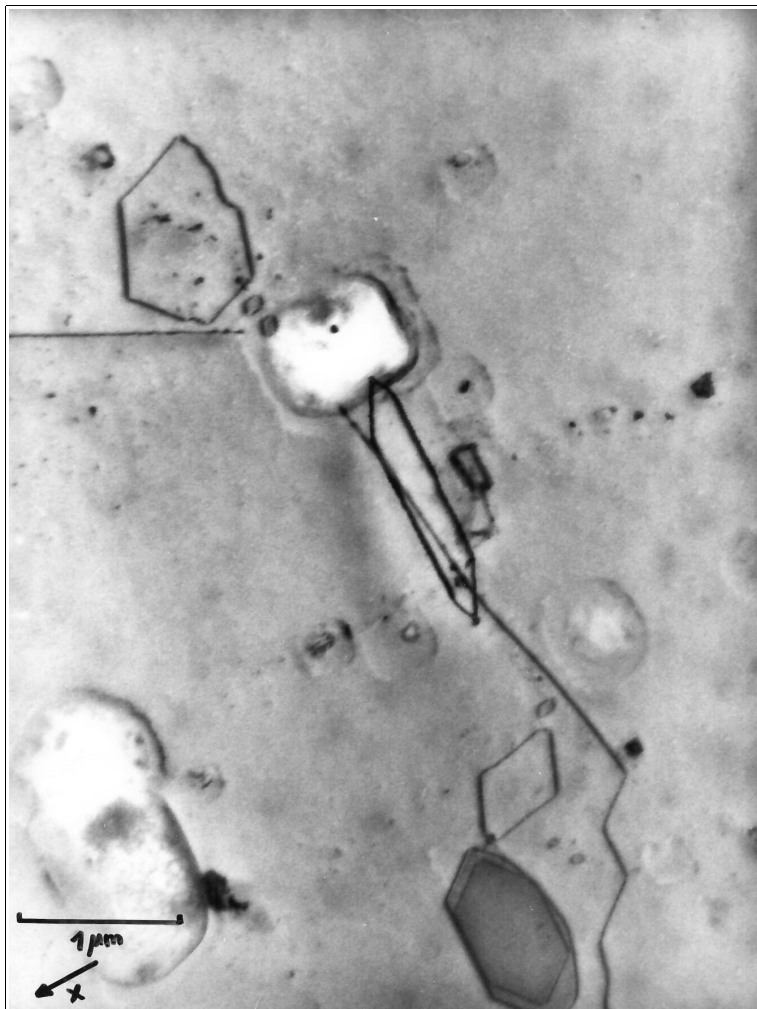
Reflex nicht richtig angeregt

Auxiliary picture. Details to the picture above.



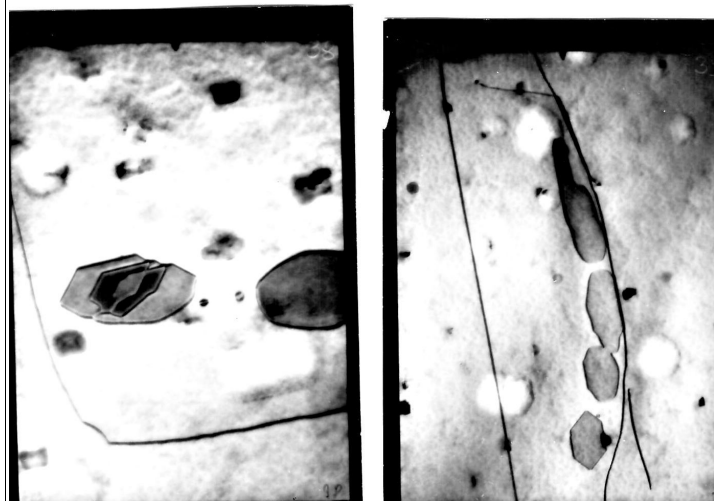
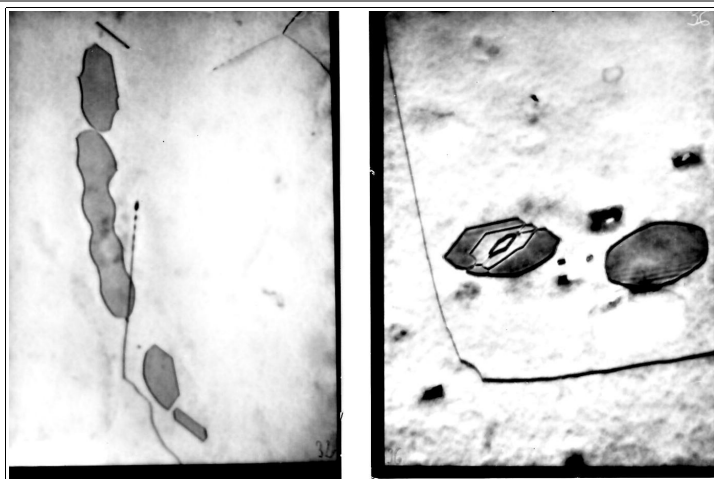
**Auxiliary picture.**

Illustrating what an excess of point defects (l.e. interstitials from oxidation) plus stress can do if there is some nucleation..

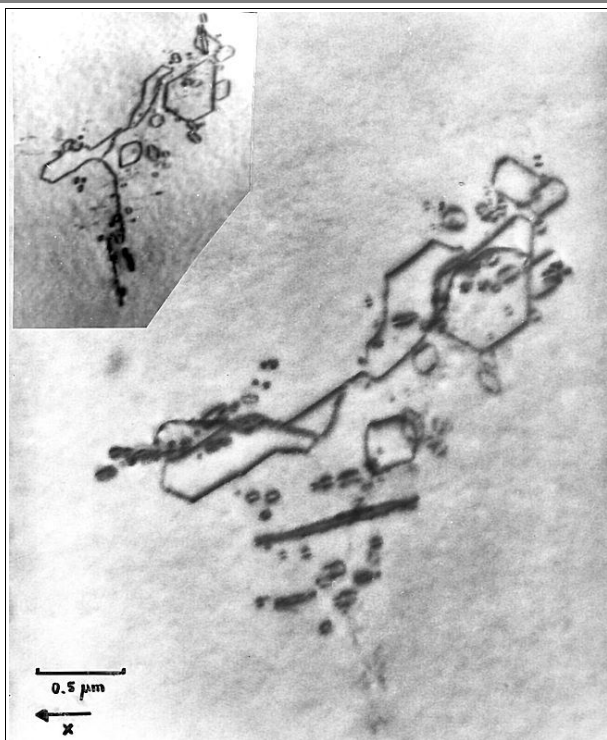


**Auxiliary picture. .**

Same as above



**Auxiliary picture. .**  
Same as above. Page from our "scrap book"



**Auxiliary picture. .**

Same as above. Probably metal precipitates.  
Illustrating that ultimately nucleation controls almost everything and that the nuclei are often if not always small metal precipitates.  
The inset shows the cluster under different diffraction conditions.

**Links to**

- [Auxiliary Pictures Part 1](#)
- [Auxiliary Pictures Part 3](#)