



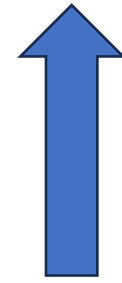
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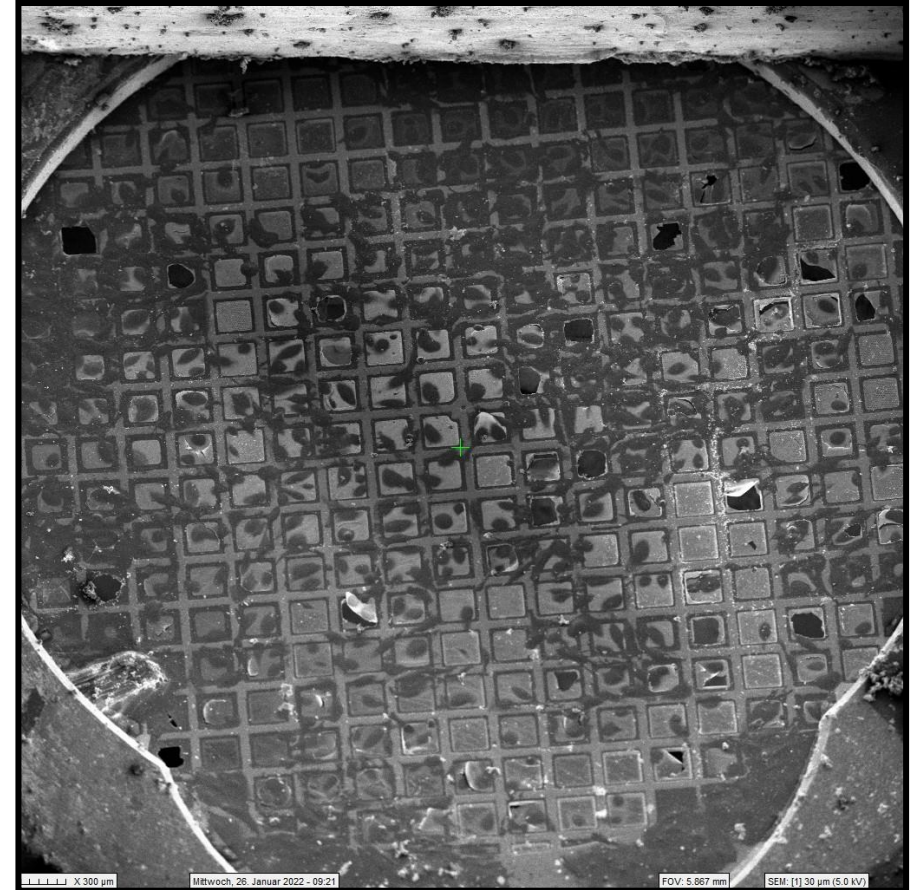
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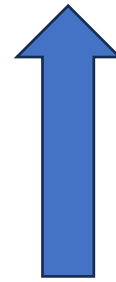
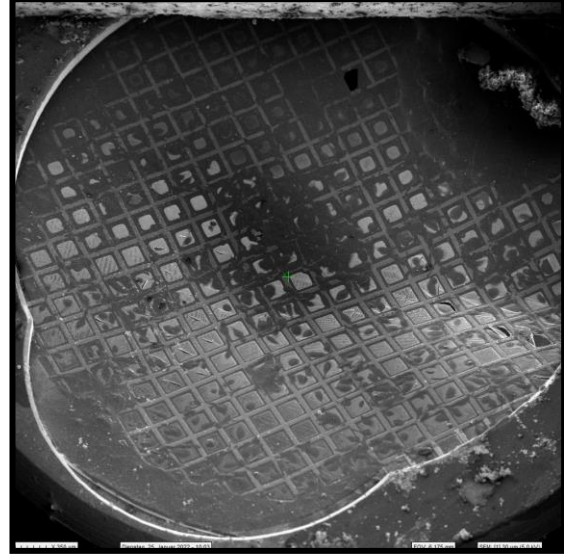
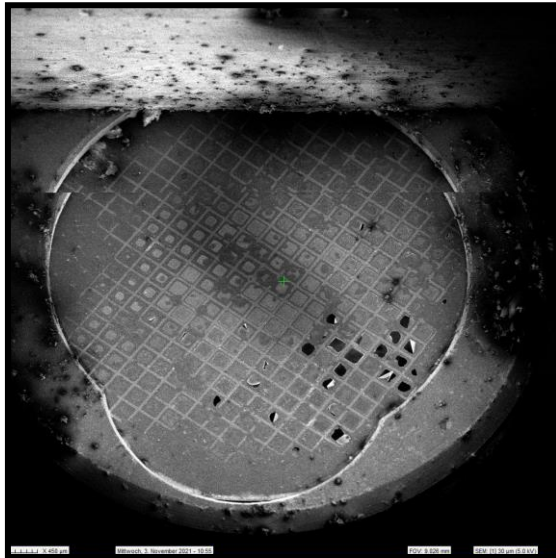
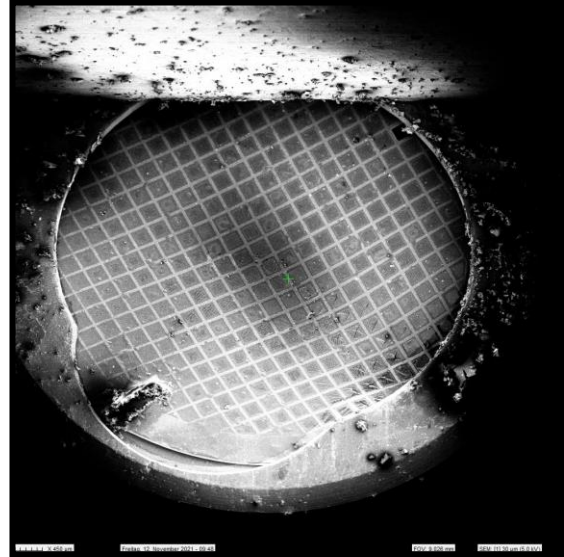
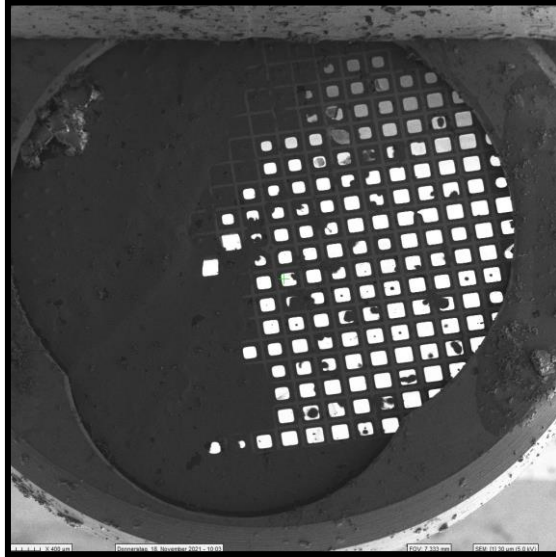
Modified autogrids for efficient cryoFIB-cryoET workflow

FIBAutogrid and its orientation in FIB-SEM

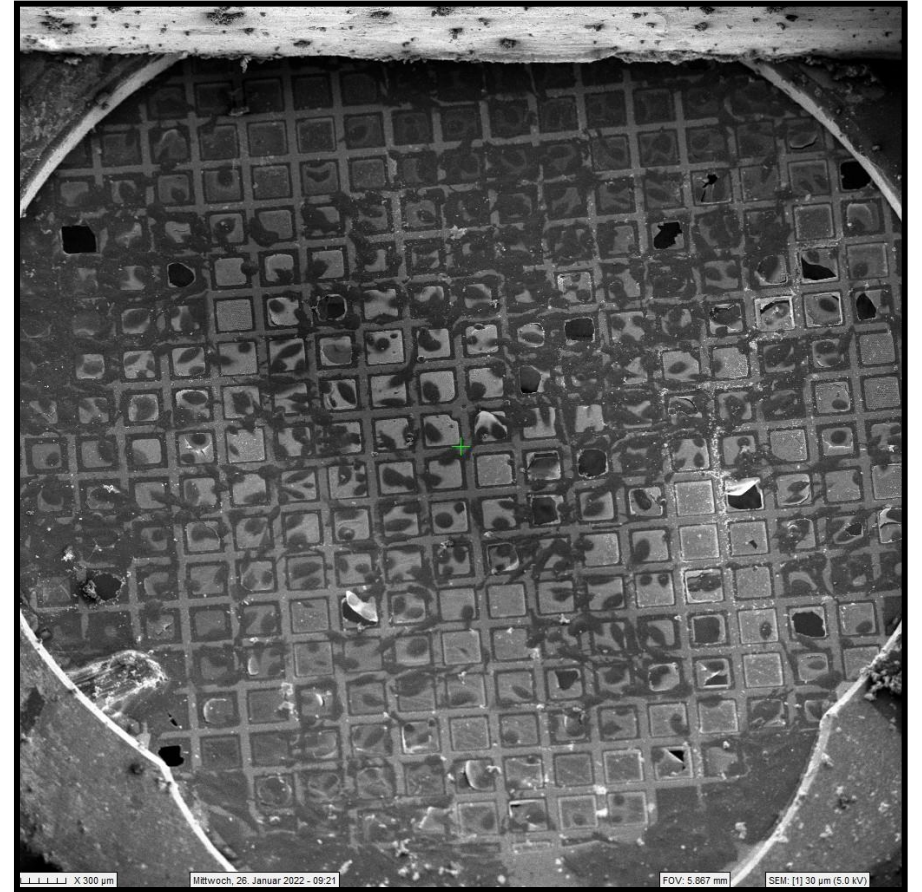


Ga⁺

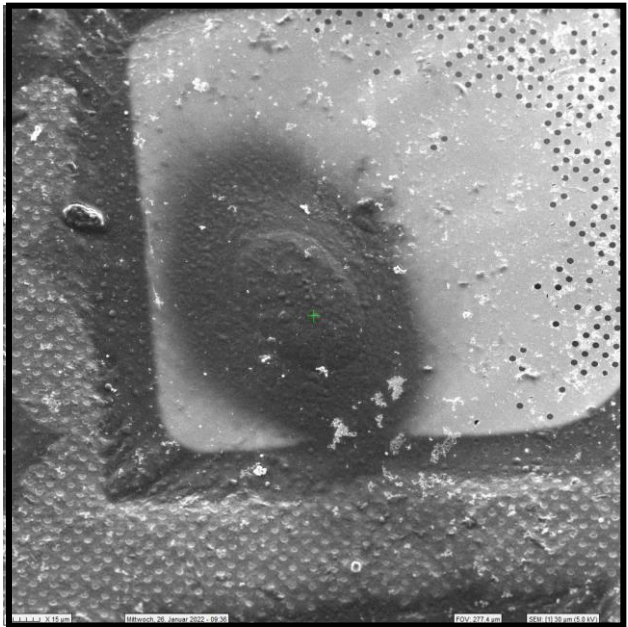




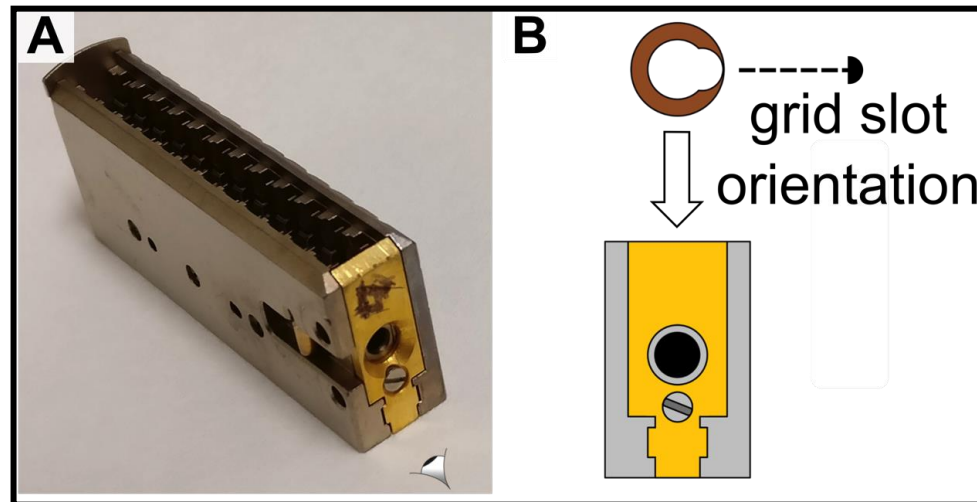
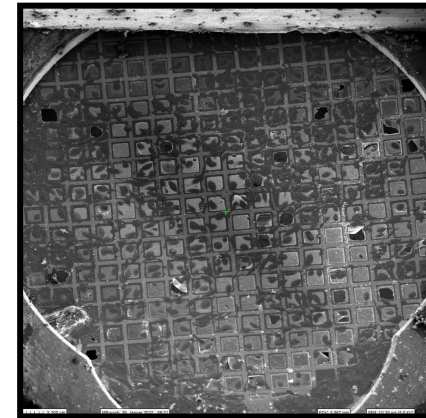
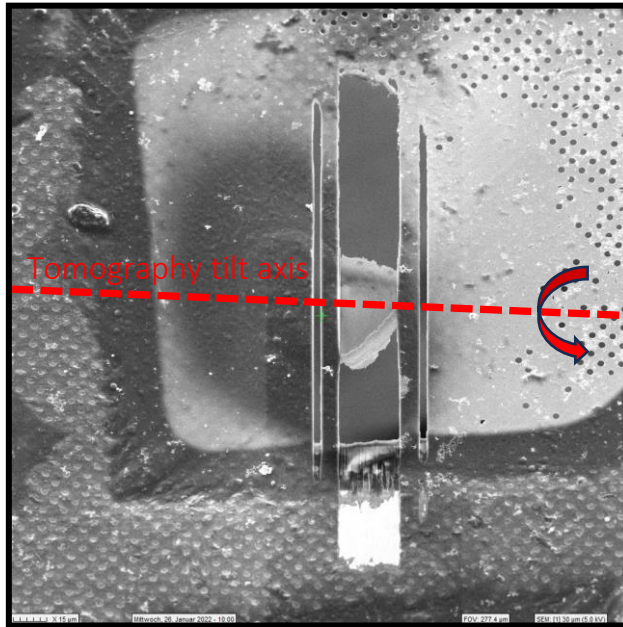
Ga⁺



Cryo transfer to Krios – orientation is important!



Ga⁺





CryoFIB-cryoET workflow - challenges

- Cryotransfers (to FIB-SEM and to TEM)
- Ice contamination
- Grid orientation

Solution: modified flat-sided FIB autogrids



Development and production



Inspired by the auto grid design of MPI Martinsried



SCHNITT A-A
MAßSTAB 20 : 1

Komplette Produktdefinition zusammen mit 3D-File 101430-B+

Toleranzierung ISO 8015
Allgemeintoleranz ISO 2768-1H

| | | | | | |
|---|--------------------|------------------------|------------|-----------|--------------------|
| Material | Kupfer EN CW 110 C | Erstellt | 16.07.2024 | feggimann | Maßstab |
| Behandlung | | Geprüft | | | |
| Beschichtung | | Freigegeben | | | |
| | | Auftrags-Nr. | | | |
| | | Status | | | |
| | | Ursprung | | Format A4 | Blatt / Anz. 1 / 1 |
| | | Ersatz für | | Rev. | B+ |
| Projektnamen / Projekt Nr. grid ring / 2272 | | CAD-System: SolidWorks | | | |
| Beschreibung / Dokument Nr. Auto loader grid / 101430 | | Plottatum: 16.07.2024 | | | |

SOLIDWORKS Lehrprodukt. Nur für Lehrzwecke.

New optimised design, developed in collaboration with AMF



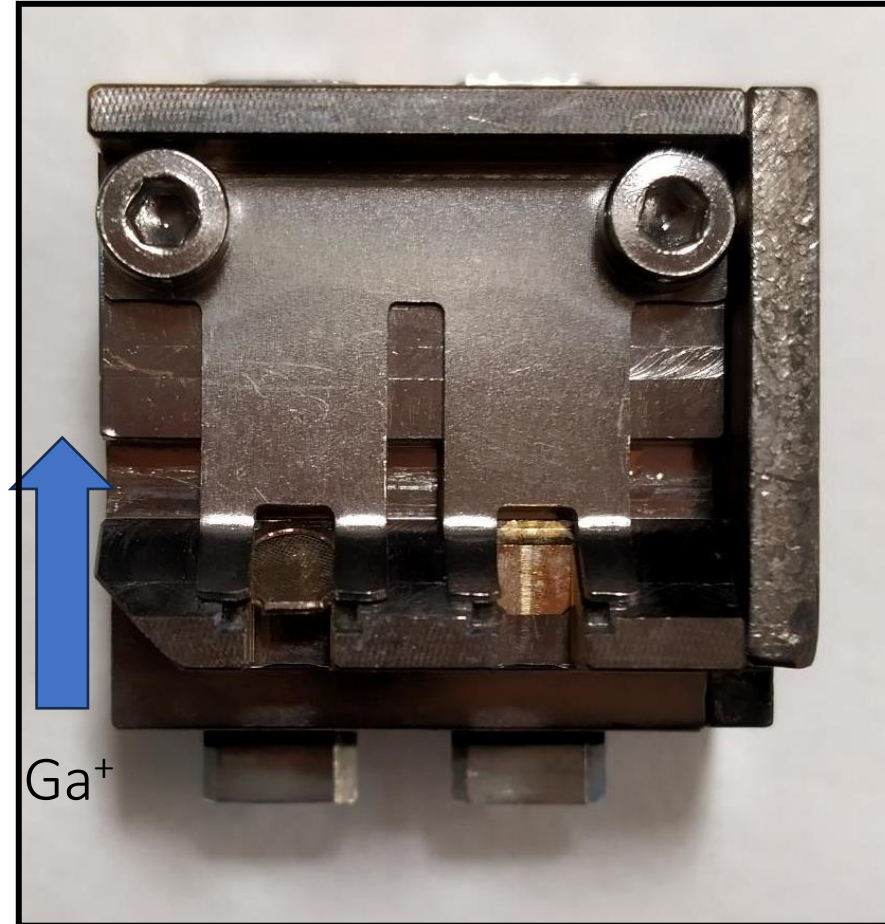
Manufactured by the physics workshop UZH



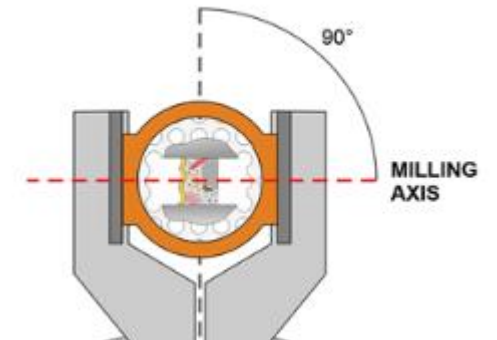
Implementation



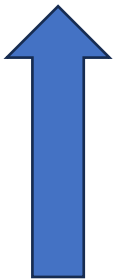
Flat-sided FIB autogrids



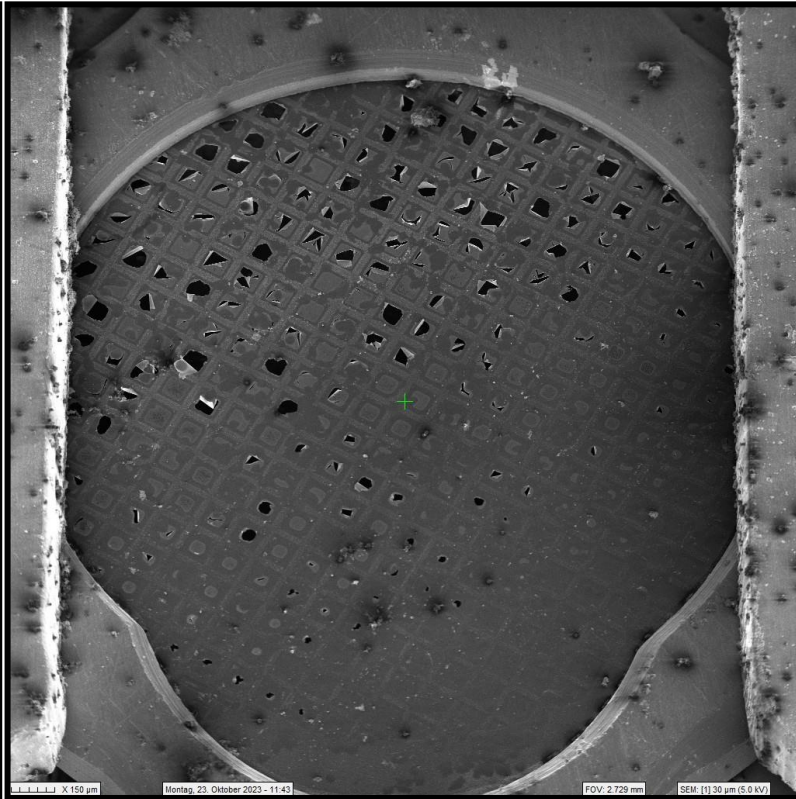
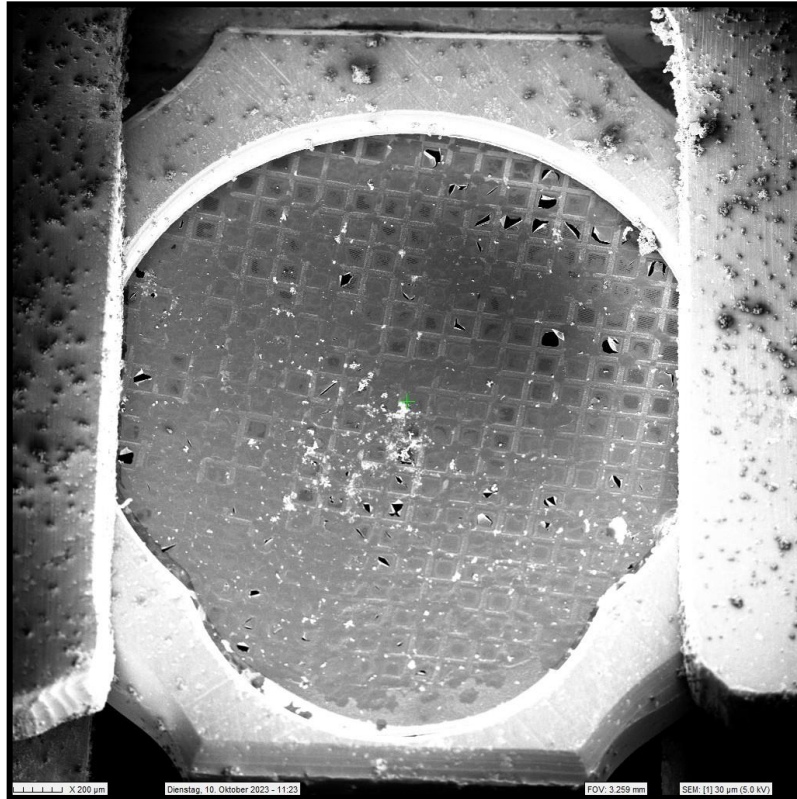
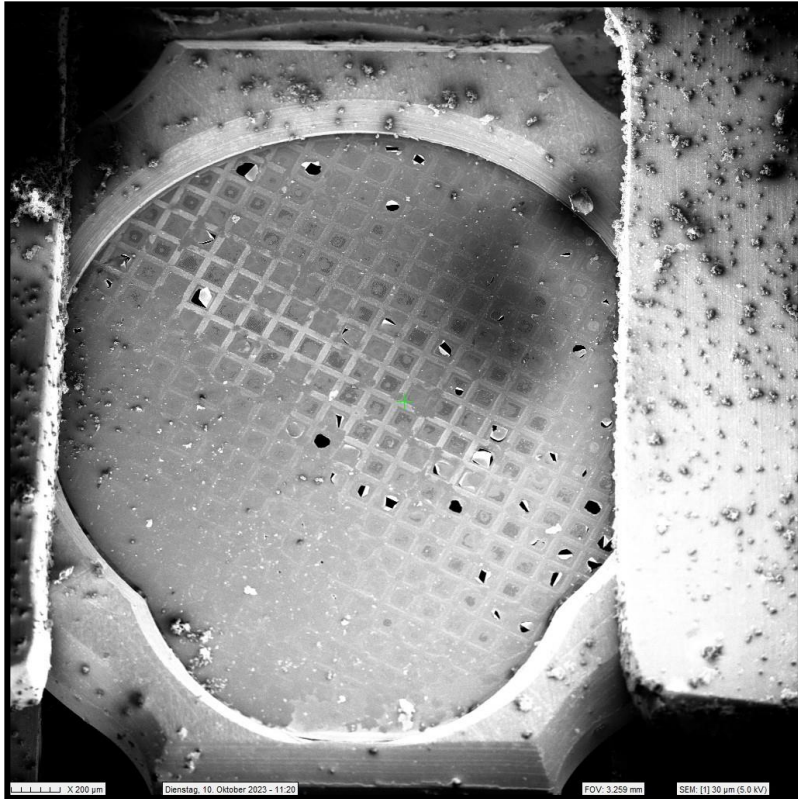
modified, flat-bottom FIB-SEM cryo shuttle



Facilitated transfer to Krios



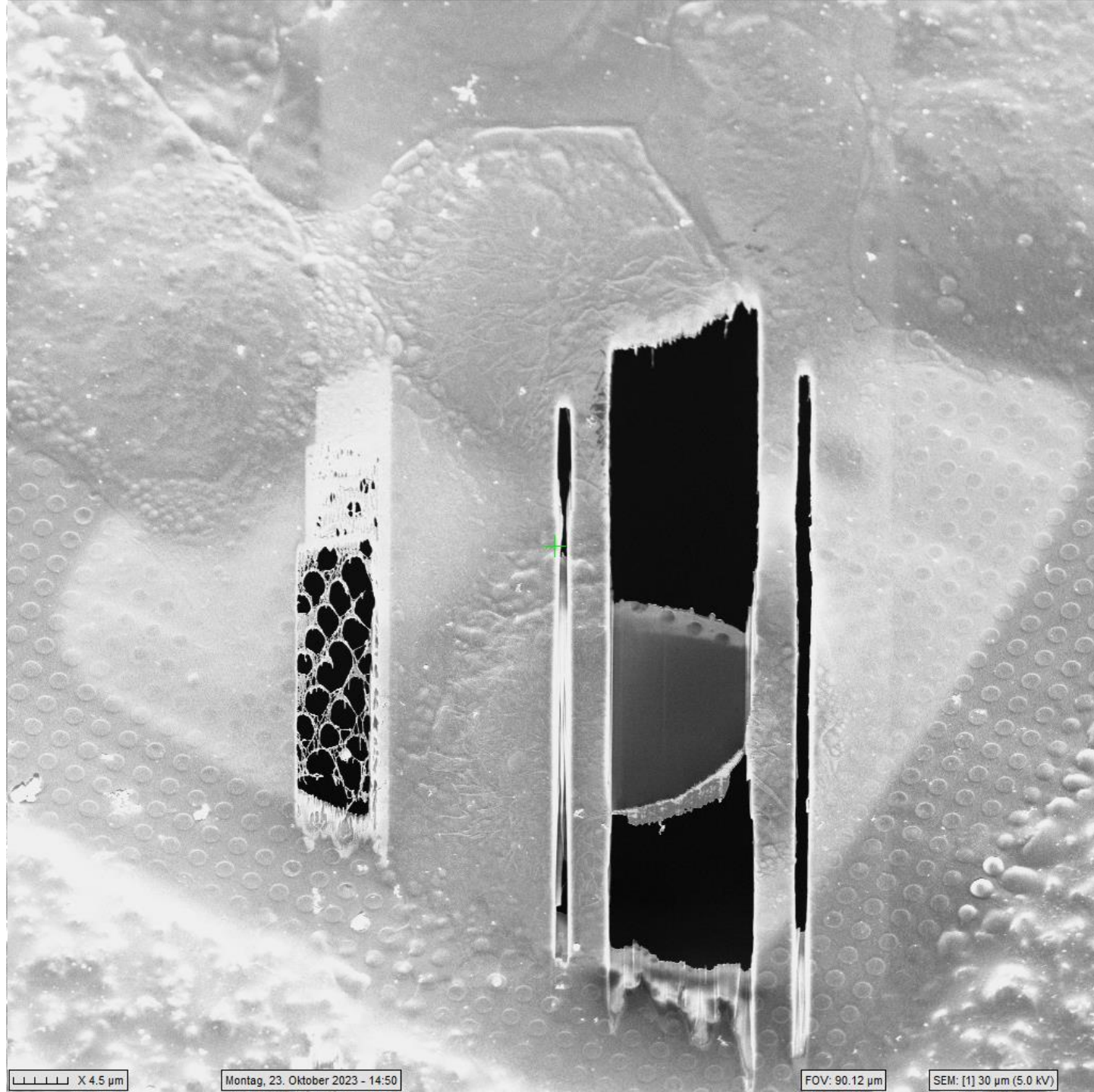
Ga⁺





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||||| X 4.5 μm

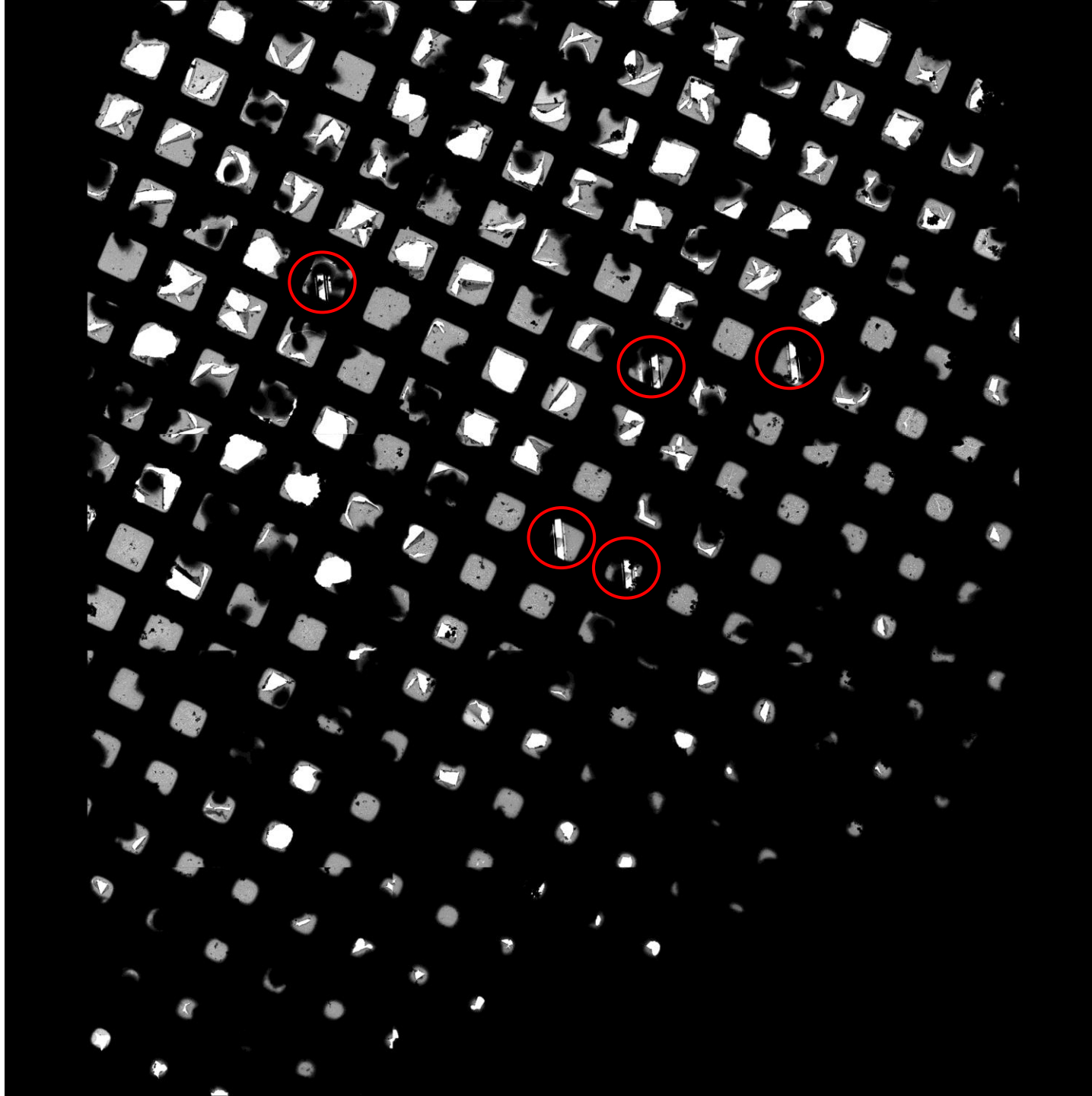
Montag, 23. Oktober 2023 - 14:50

FOV: 90.12 μm

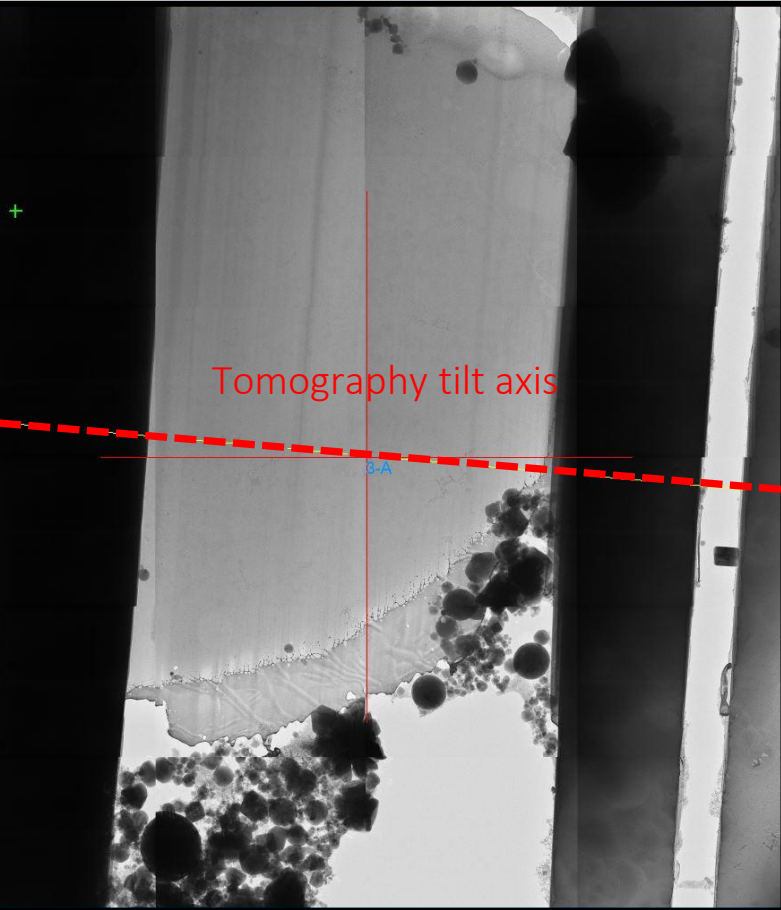
SEM: [1] 30 μm (5.0 kV)



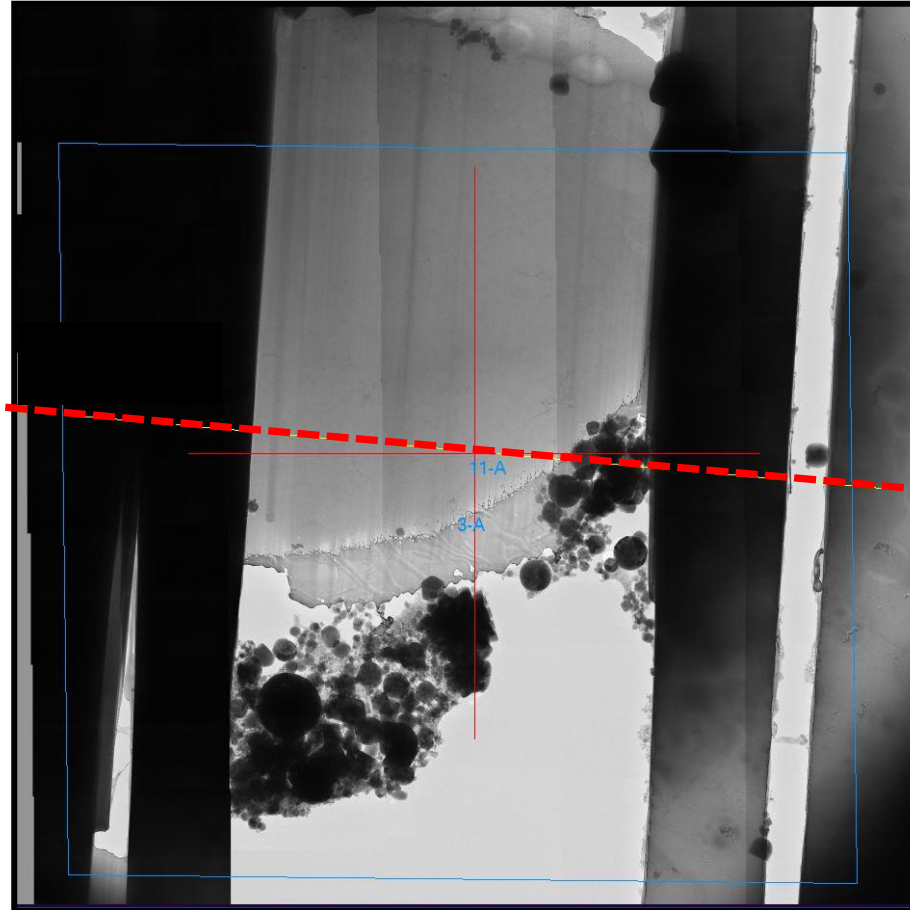
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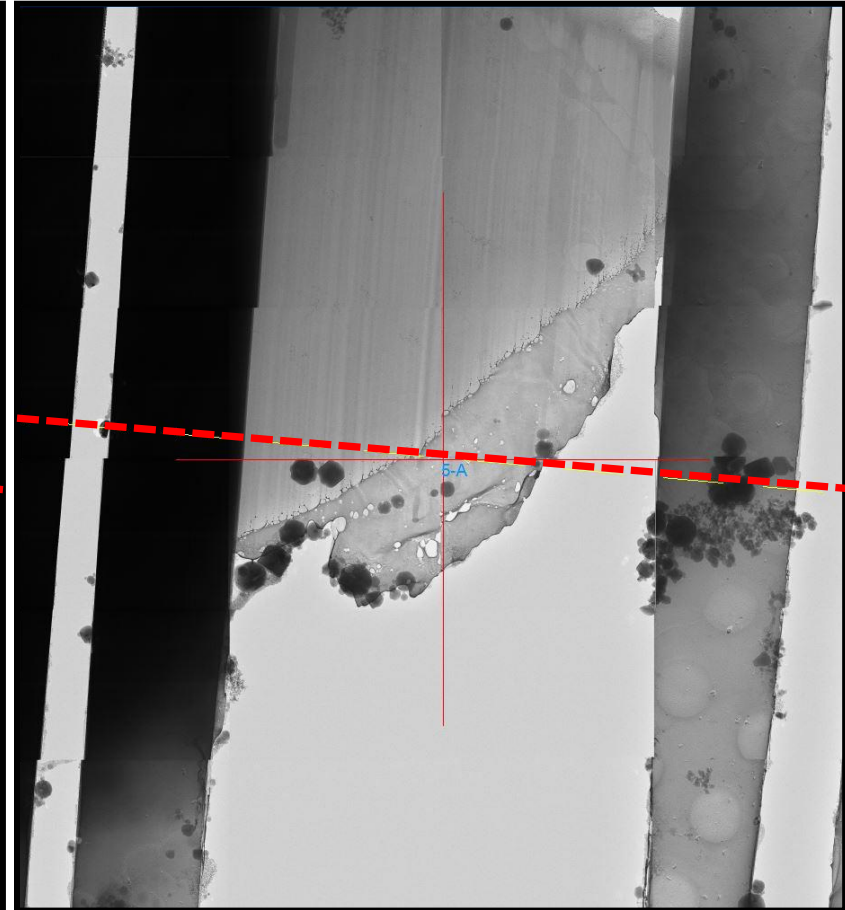
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0°



Same lamella at 30°



0°

