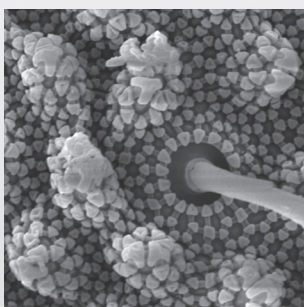
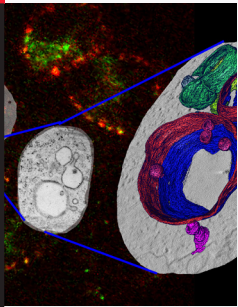


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Material
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Life Science
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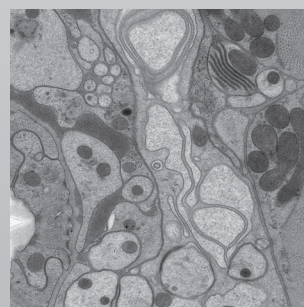
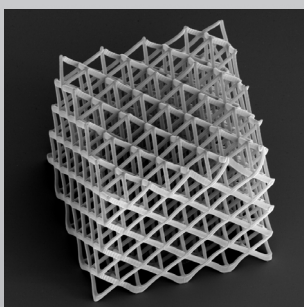
Application Note

Contrast enhancement of polycrystalline metals

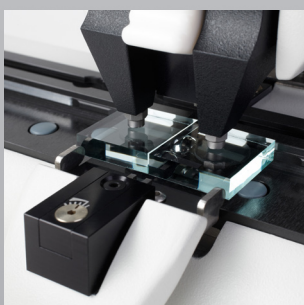
Sample Preparation for SEM

related instrument Leica EM RES102

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Manufacturing



Natural
Resources



Contrast enhancement of polycrystalline metals

PURPOSE

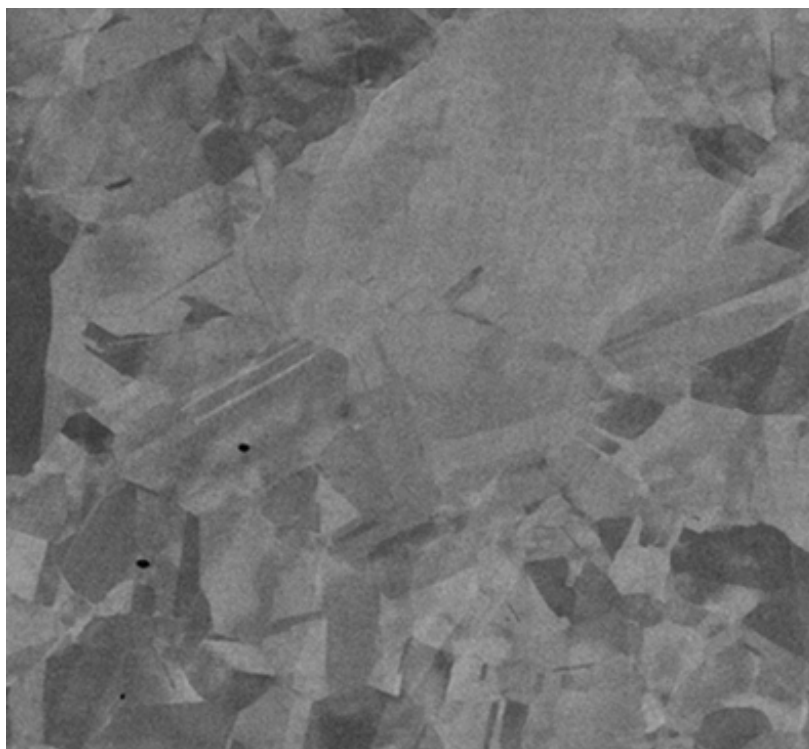
Ion milling is a perfect alternative for chemical etching, especially for polycrystalline metals, such as copper. Ion milling can be used to increase the contrast of the grain structure and their interfaces. In contrast to chemical etching the milling process is clean, safe and easy to operate. Ion energy and milling time depend on the milling rate of the metal.

PROCESS PARAMETERS

Acceleration voltage:	2 kV
Gun current:	1.5 mA
Milling angle:	50°
Milling time:	3 min

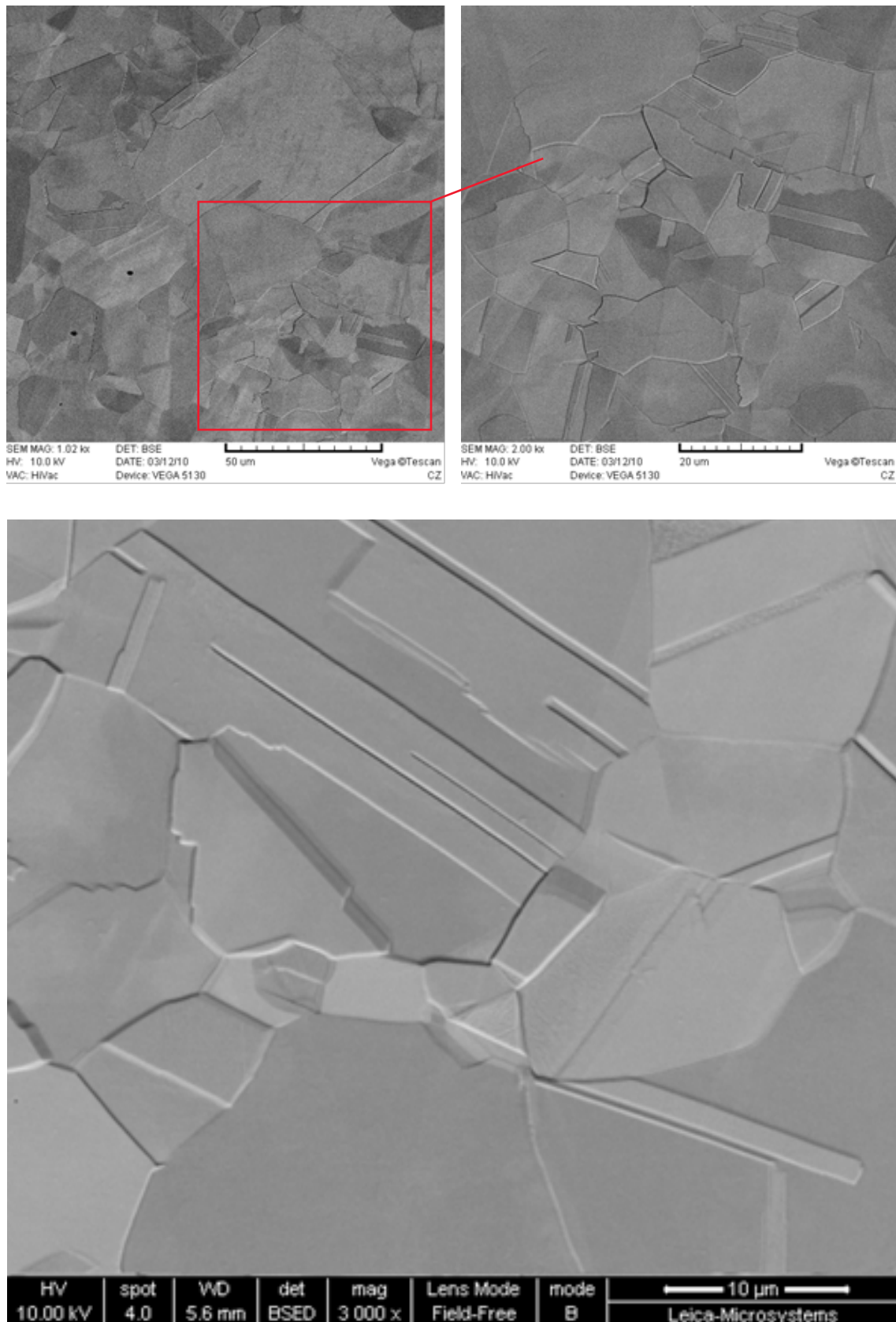
RESULTS

Copper has a high milling rate, therefore the grain structure is clearly visible after a short milling time of only 3 min.



SEM MAG: 1.03 kx DET: BSE
HV: 10.0 kV DATE: 03/12/10
VAC: HiVac Device: VEGA 5130 50 μm Vega ©Tescan CZ

Cu surface after ion beam slope cutting



Cu surface after contrast enhancement using ion milling

RELATED PRODUCTS



Leica EM RES102

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