

Supplementary Information

Porosity evolution and oxide formation in bulk nanoporous copper dealloyed from copper-manganese alloy studied by in situ resistometry

Elisabeth Hengge¹, Jakob Ihrenberger¹, Eva-Maria Steyskal¹, Ricardo Buzolin^{2,3}, Martin Luckabauer⁴, Christof Sommitsch², Roland Würschum¹

¹ Institute of Materials Physics, Graz University of Technology, Petersgasse 16, A-8010 Graz, Austria

² Institute of Materials Science, Joining and Forming, Graz University of Technology, Kopernikusgasse 24, A-8010 Graz, Austria.

³ Christian Doppler Laboratory for Design of High-Performance Alloys by Thermomechanical Processing, Kopernikusgasse 24, 8010 Graz, Austria.

⁴ Department of Mechanics of Solids, Surfaces and Systems, Faculty of Engineering Technology, University of Twente, Drienerlolaan 5, 7522NB Enschede, The Netherlands.

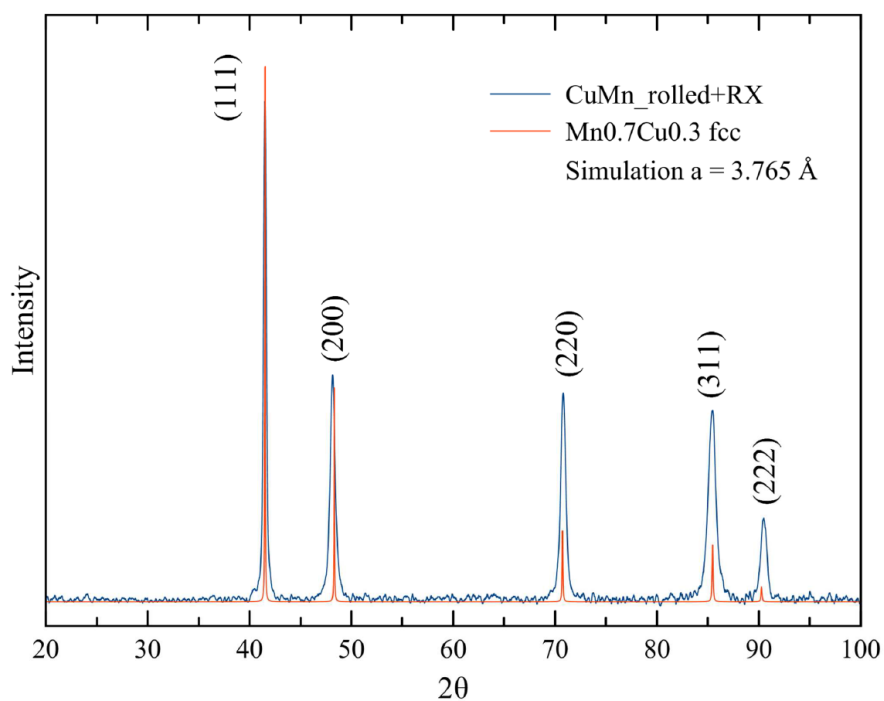
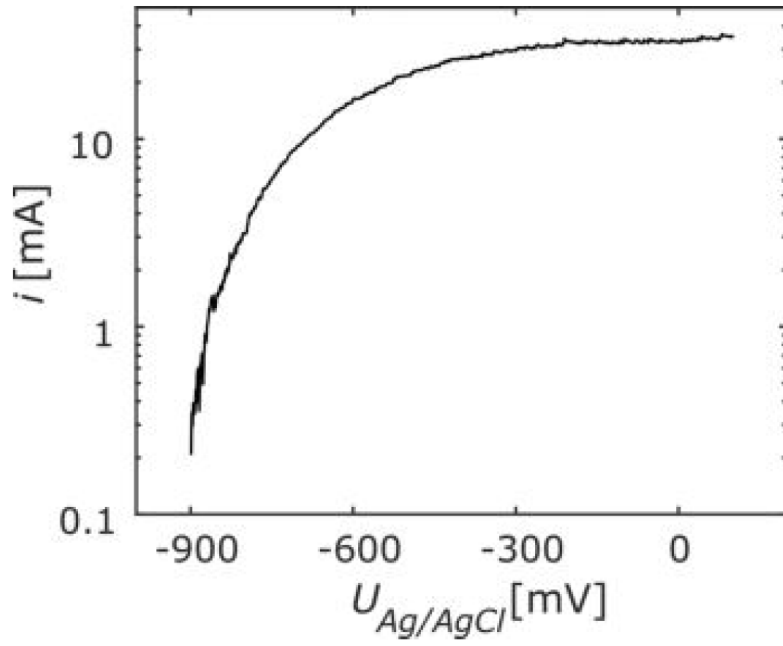
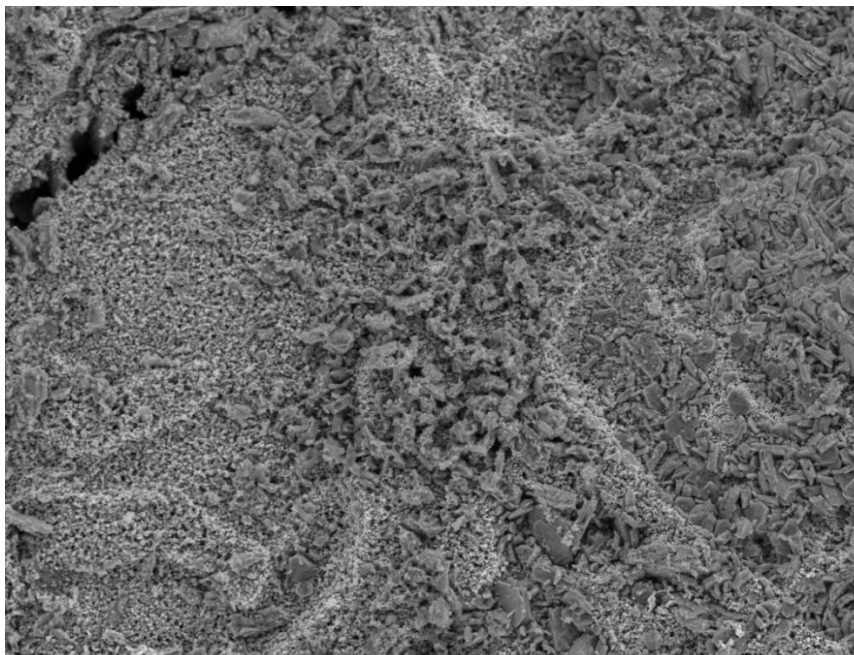


Fig. SI-1: XRD spectrum of the copper-manganese (CuMn) alloy used for dealloying.



SI-2: Polarization curve of MnCu alloy recorded from -900 mV to +100 mV (vs.Ag/AgCl) in 0.1 M HCl at a scan rate of 0.5 mV/s.



← 10 μ m →

SI-3: SEM image of sample M-2 showing the inhomogeneous morphology of the porous structure.

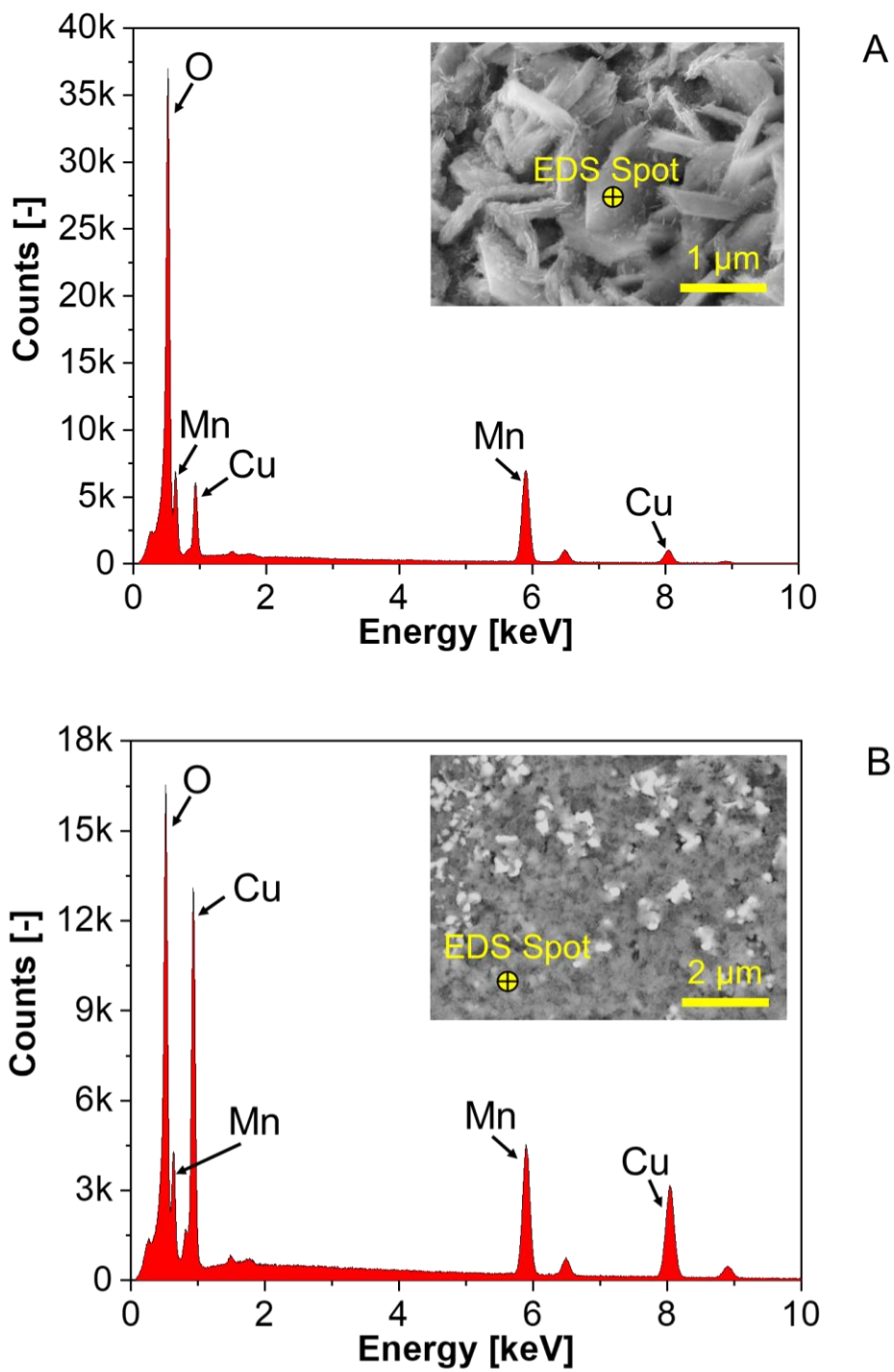


Fig-SI-4: EDS spectra of point analysis on the porous structure for sample M-2. The inset shows the region, which was chosen for the analysis. A represent a spectrum from the platelet-structure, B from a spectrum from the pore structure.