# Supporting Information

# Anisotropic Conductivity in Brownmillerite-Type $Ca_2Fe_2O_5$ Observed by Measurements on Oriented Floating-Zone Grown Single Crystals

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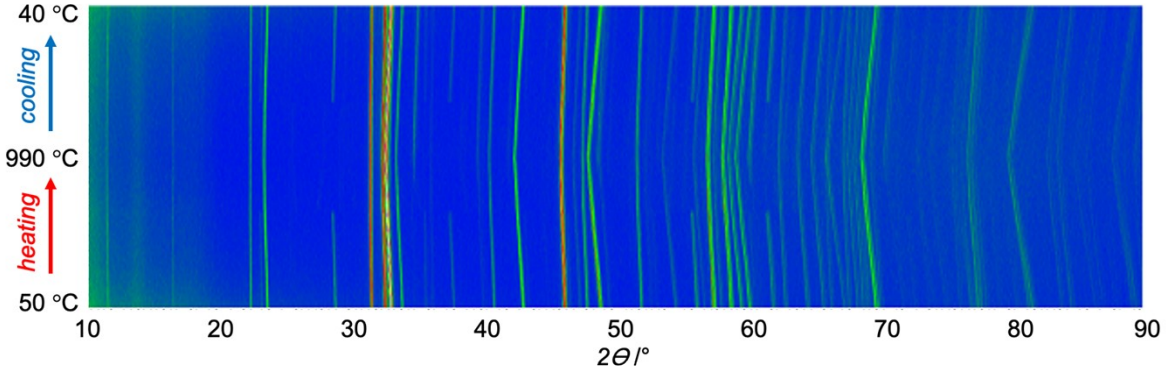


Figure S1: Surface plot of the VT PXRD patterns of polycrystalline $Ca_2Fe_2O_5$ collected in 20 °C intervals on heating (50 °C – 990 °C) and cooling (980 °C – 40 °C).

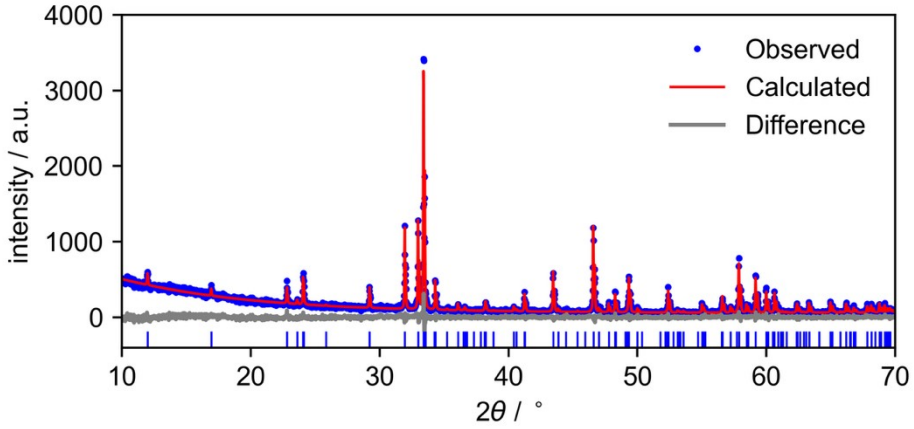


Figure S2: Rietveld fit of the PXRD pattern a ground section of the $Ca_2Fe_2O_5$ single crystal from which oriented single-domain samples were prepared for single crystal growth. The blue, red and grey curves show the observed pattern, calculated pattern and the difference curve, respectively.

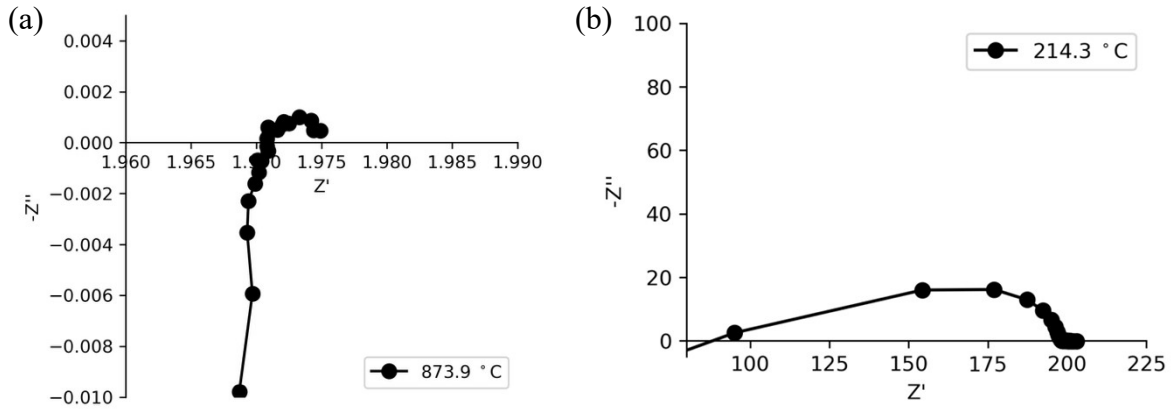


Figure S3 Nyquist plots of polycrystalline $Ca_2Fe_2O_5$ in air at (a) 873.9 °C and (b) 214.3 °C.