

Supporting Information for “The Impact of Grain-size Distributions on Magnetic Measurements”

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1. Graphical overview processing FIB-SEM data

Data processing overview

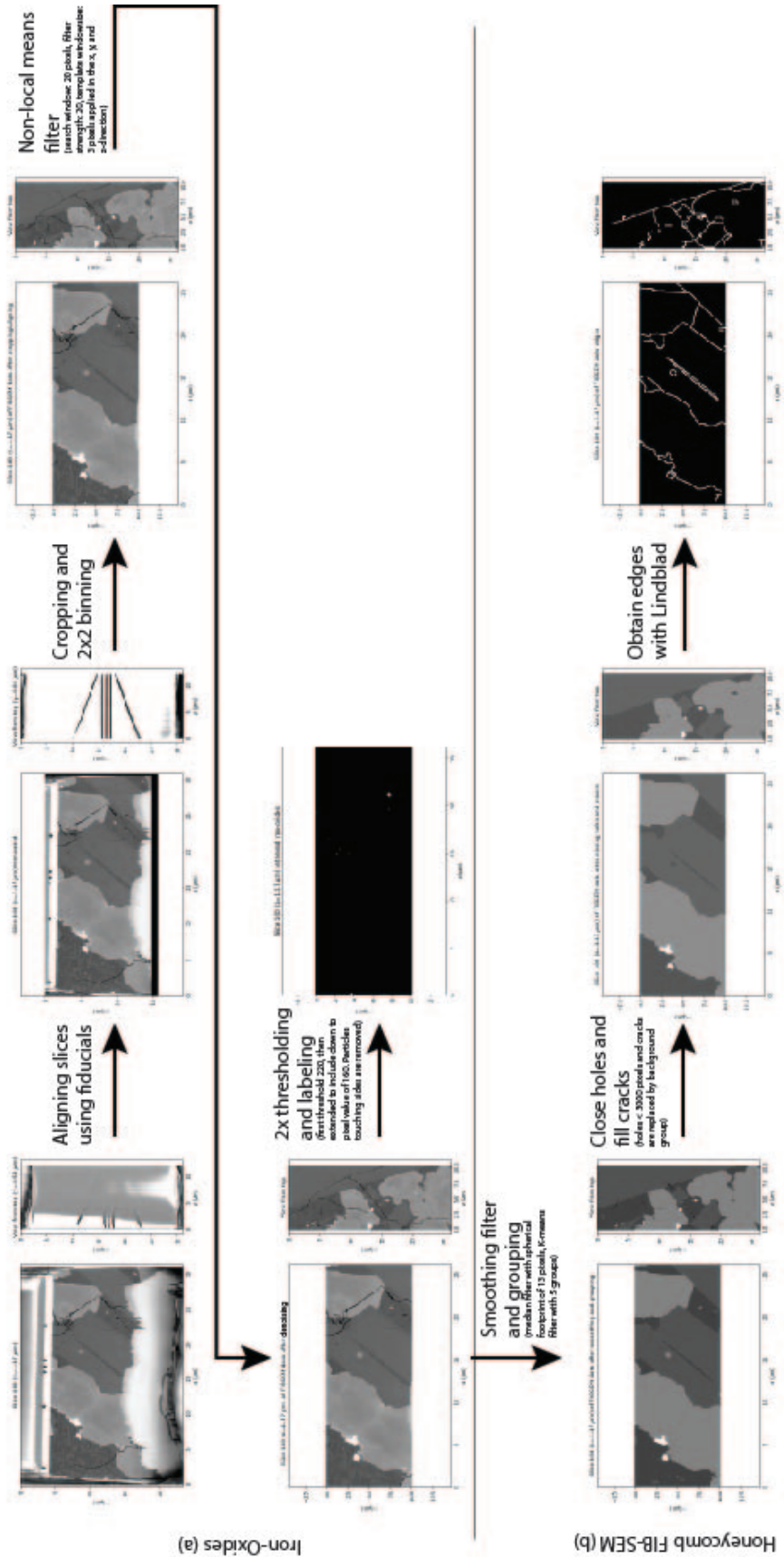


Figure S1. Graphical overview of data processing for obtaining iron-oxides and honeycomb from the FIB-SEM dataset. See section 2.2 of the main text or the repository (Out et al., 2023) for further clarification.

2. Normalized depth-particle size trend line for visibility of individual iron-oxides

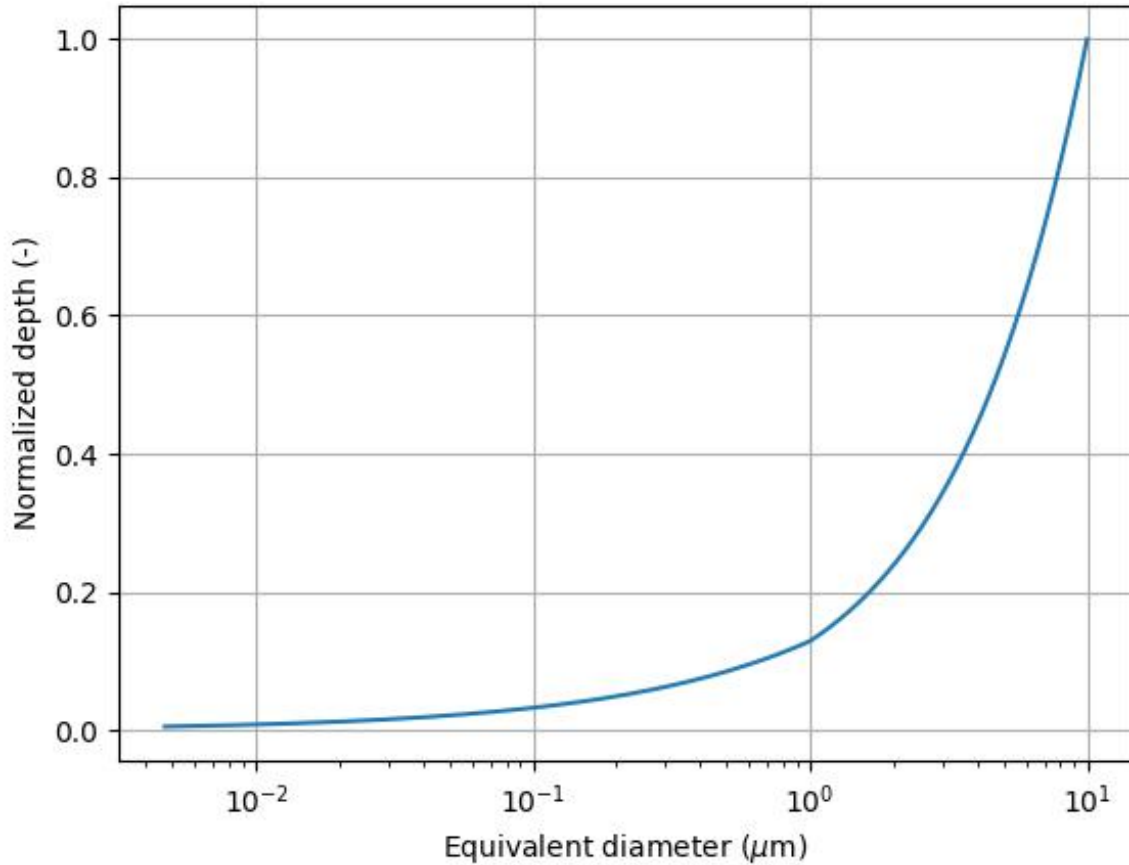


Figure S2. Plot showing the normalized depth until which a certain grain size is just visible above the noise level of a QDM or SQUID. For example, a $10\ \mu\text{m}$ grain is visible until a depth of about $250\ \mu\text{m}$ in a sample before its surface expression is lower than a noise level of $5\ \text{nT}$. However, a grain of $100\ \text{nm}$ is only visible until a depth of $\sim 8\ \mu\text{m}$, so it is almost 30 times more likely to see the surface expression of a $10\ \mu\text{m}$ grain than that of a $0.1\ \mu\text{m}$ grain.