

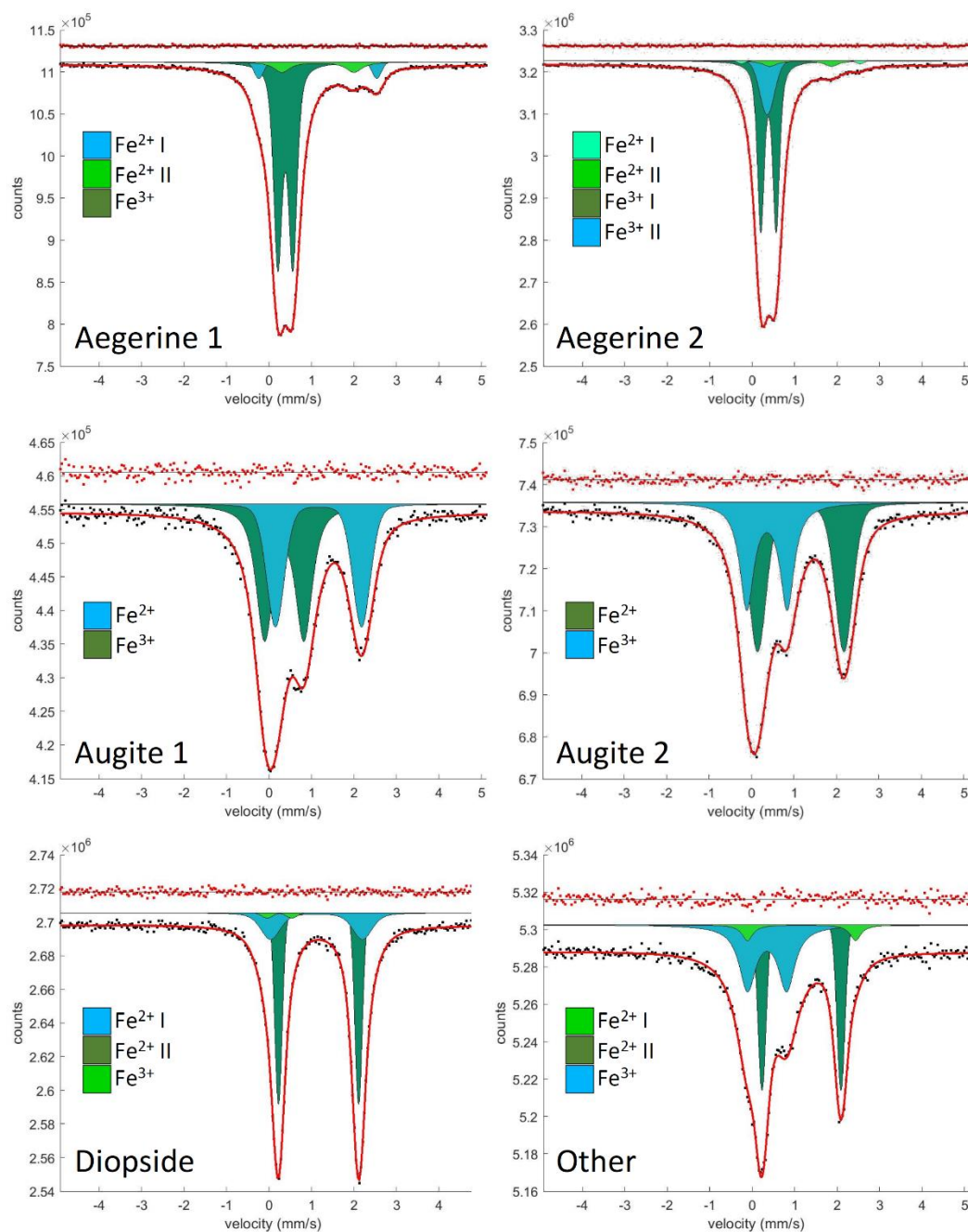
Re-evaluating stoichiometric estimates of iron valence in magmatic clinopyroxene crystals

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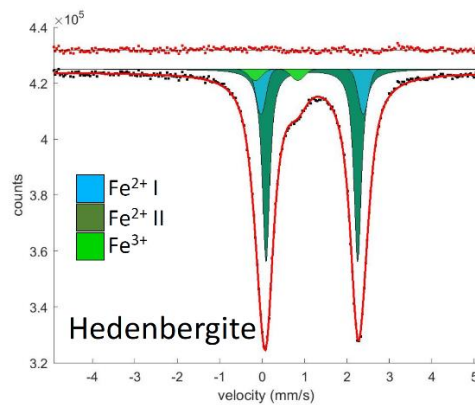
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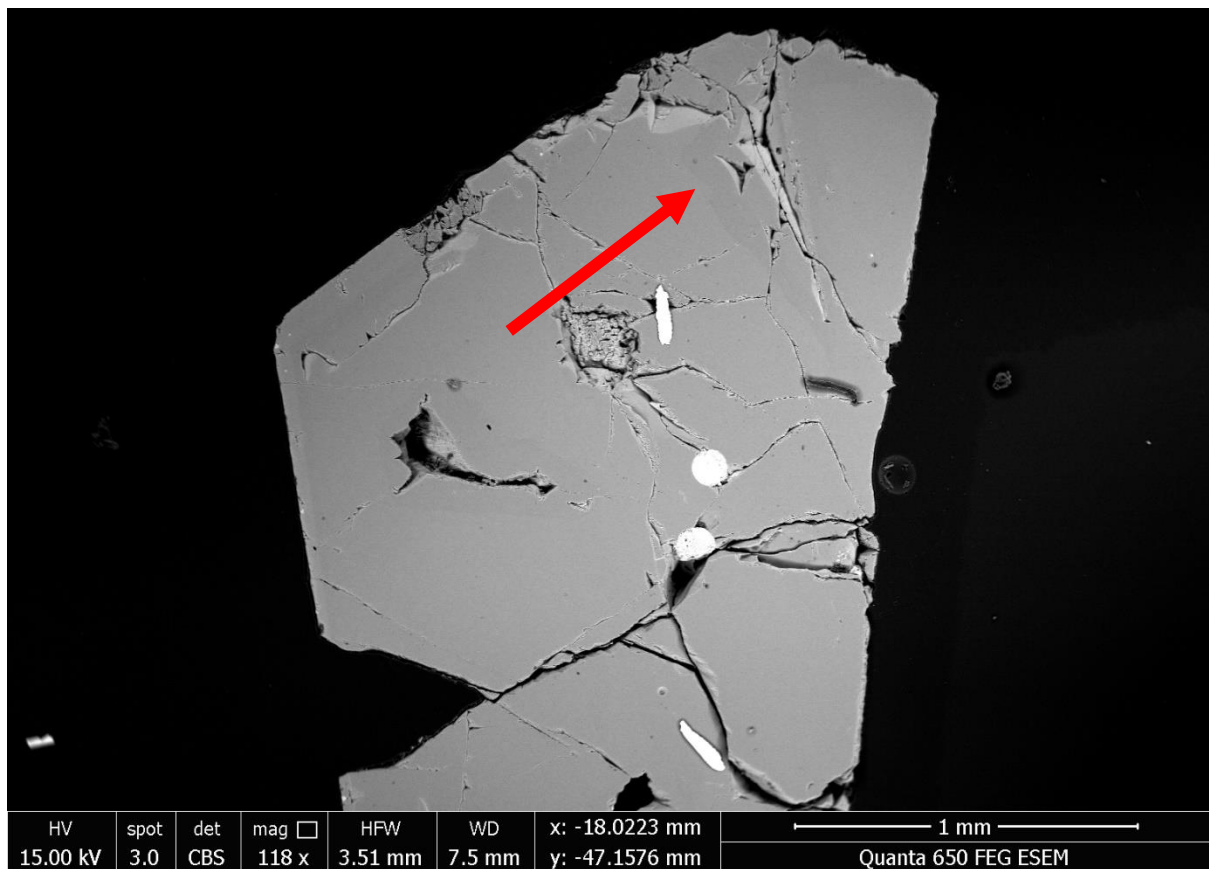
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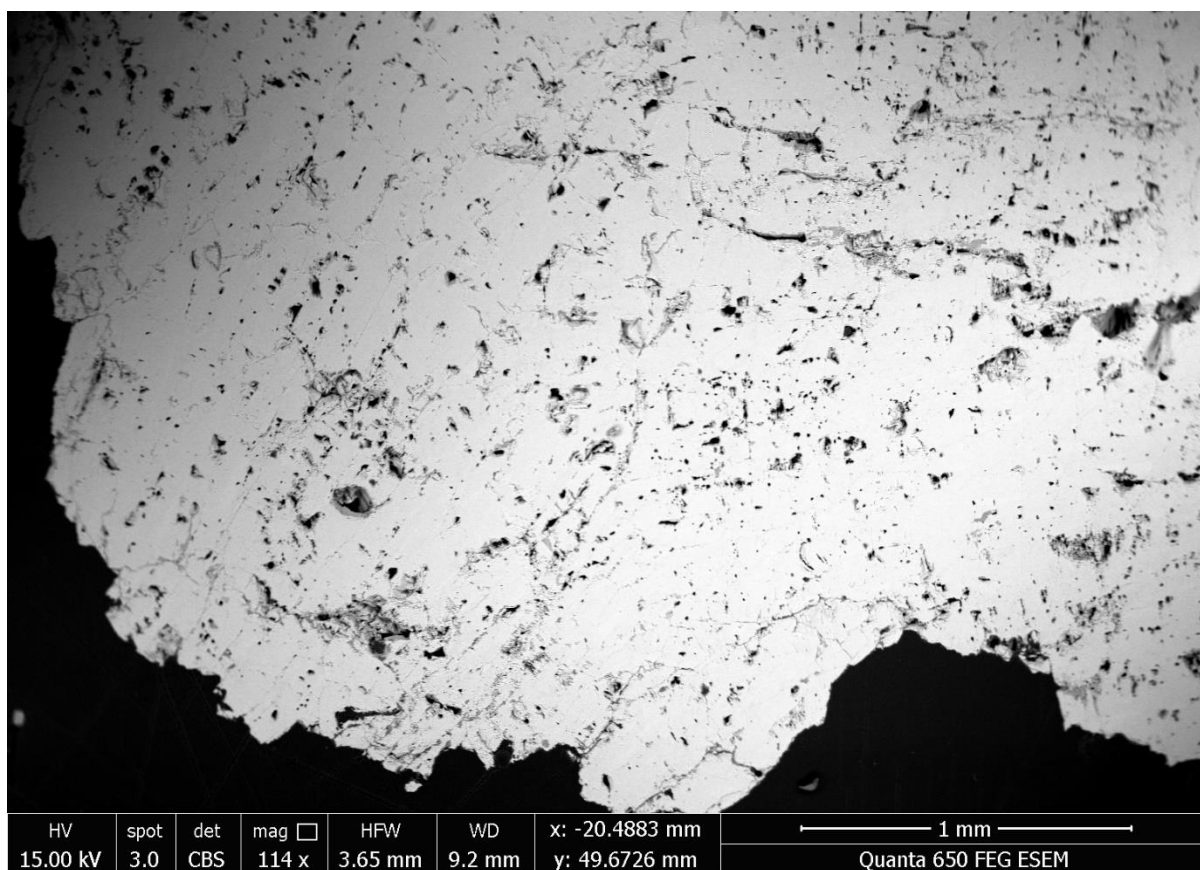
Supplementary Figure 1 MossA fits to Mössbauer spectra collected from six end-member and single crystal clinopyroxenes showing the high quality of fits (red lines to black dots) and small residuals (red dots).



Supplementary Figure 2 A MossA fit to a Mössbauer spectra collected from an additional end-member clinopyroxene showing the high quality of fits (red lines to black dots) and small residuals (red dots).



Supplementary Figure 3 Backscattered electron (BSE) image of Augite 1 showing weak compositional zoning revealed in subtle changes in BSE intensity. Occasional Fe-Ti oxide inclusions are visible as bright spots.



Supplementary Figure 4 Backscattered electron image of the hedenbergite sample showing compositionally homogenous crystals intergrown on a range of scales