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Supporting information for article:

Identification of the iron oxidation state and coordination geometry in iron oxide- and zeolite-based catalysts using pre-edge XAS analysis

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XANES spectra and detailed view of the pre-edge peak

The X-ray absorption near-edge structure (XANES) spectra of the reference compounds, mechanical mixtures and mixed spectra subject to pre-edge analysis in present work are shown in Figures S1, S2 and S3.

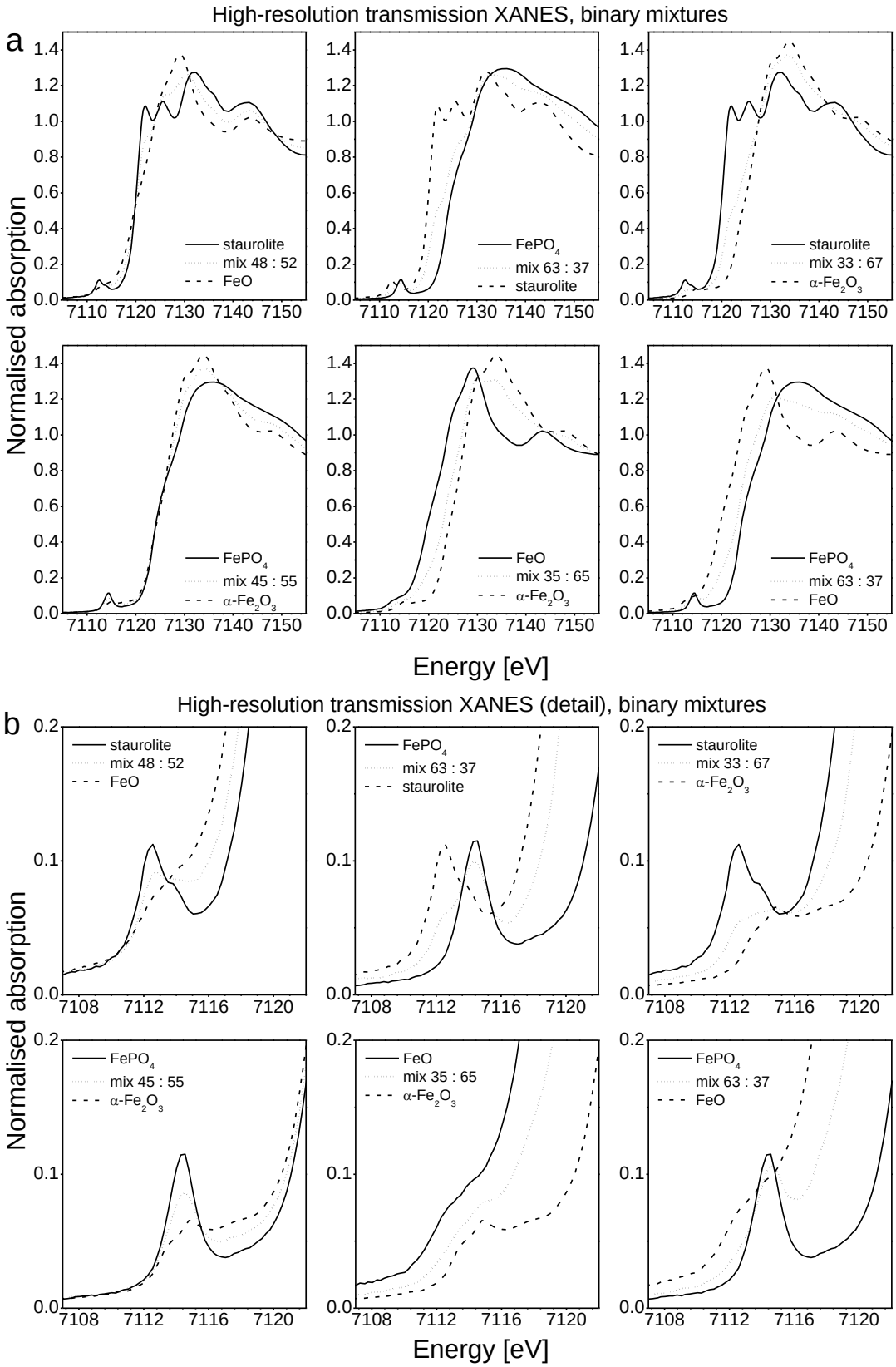

Figure S1 High-resolution transmission XANES spectra (a) and detail of pre-edge peak (b) of the reference compounds and their binary mechanical mixtures. The stoichiometric Fe proportions in the binary mixtures were determined by linear combination analysis.

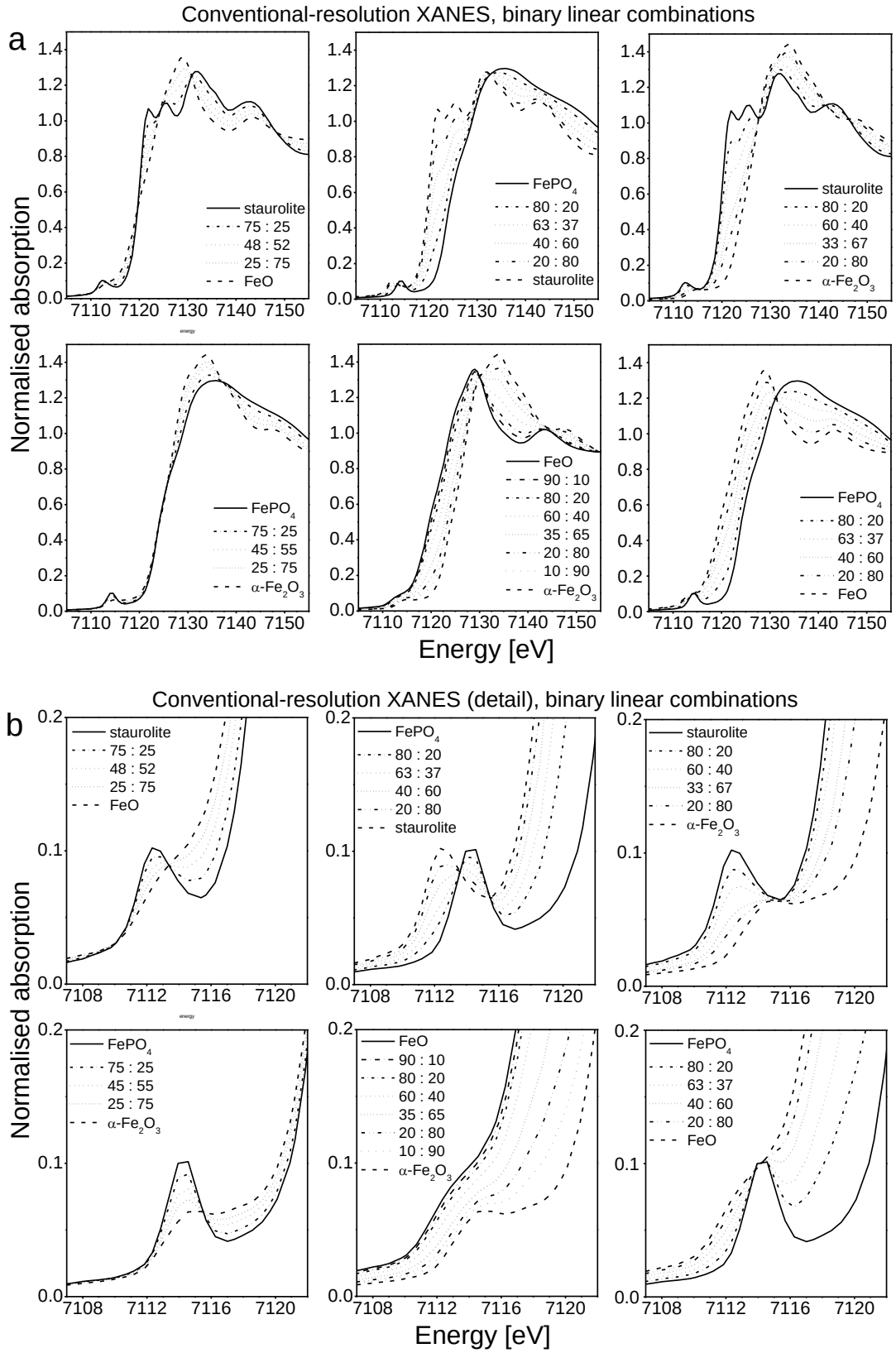

Figure S2 Standard-resolution XANES (a) and detail of pre-edge peak (b) of the reference compounds and binary mixtures. The spectra of the binary mixtures are linear combinations of the normalised XANES spectra of the reference compounds with indicated stoichiometric proportions.

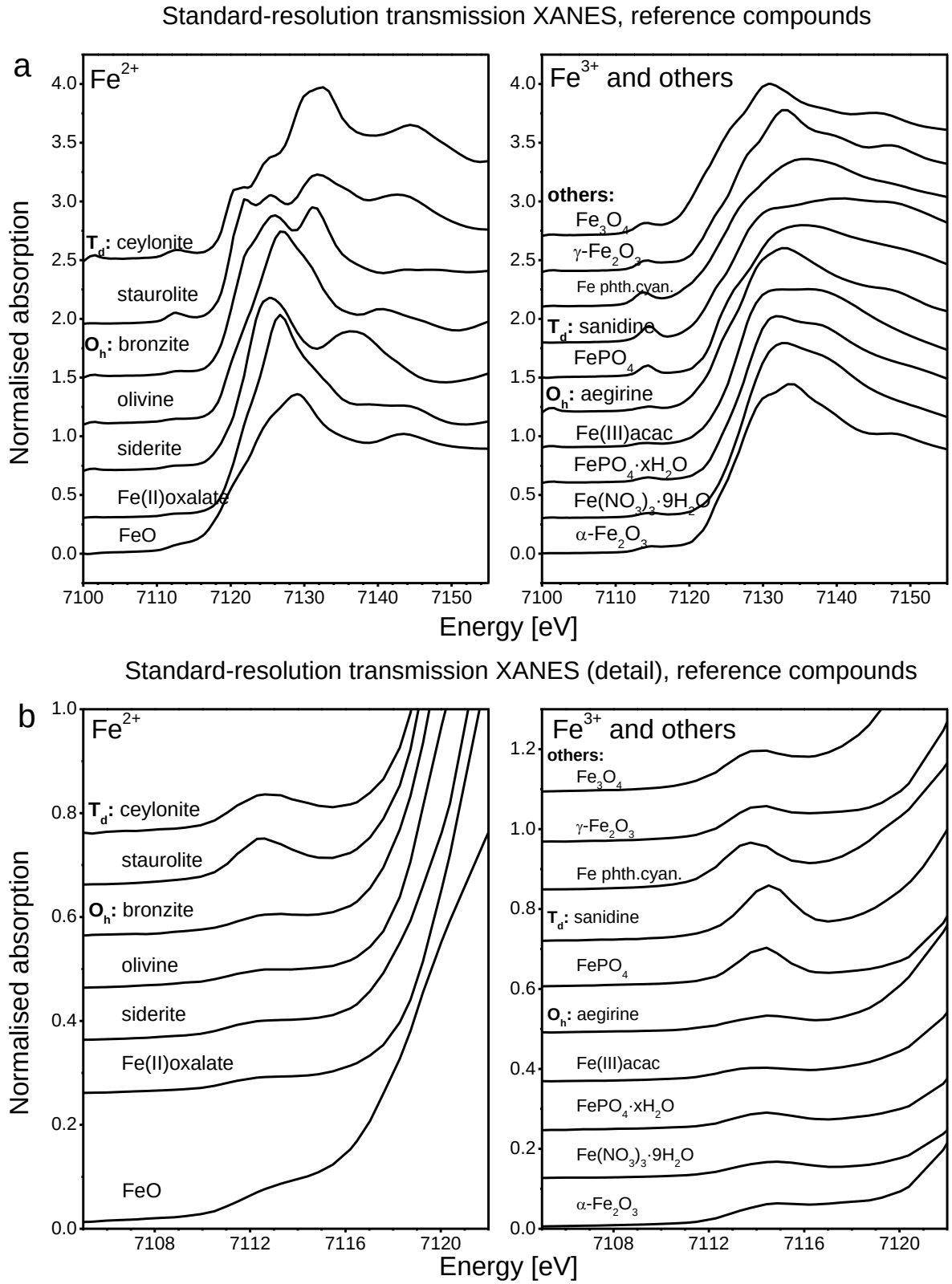

Figure S3 XANES spectra (a) and the detail of pre-edge peak (b) of all reference compounds measured with standard resolution. The Fe site specification in the compounds labelled "others" is presented in **Error! Reference source not found.**.