Erratum

Calibration of Fe XANES for high-precision determination of Fe oxidation state in glasses: Comparison of new and existing results obtained at different synchrotron radiation sources by A. Fiege, P. Ruprecht, A.C. Simon, A.S. Bell, J. Göttlicher, M. Newville, T. Lanzirotti, and G. Moore (February, vol. 102, p. 369–380, 2017. Article DOI: http://dx.doi.org/10.2138/am-2017-5822. Erratum DOI: https://doi.org/10.2138/am-2017-E102410.)

Figure 3 of this article was published without the key to the symbols used. We have the corrected figure below.

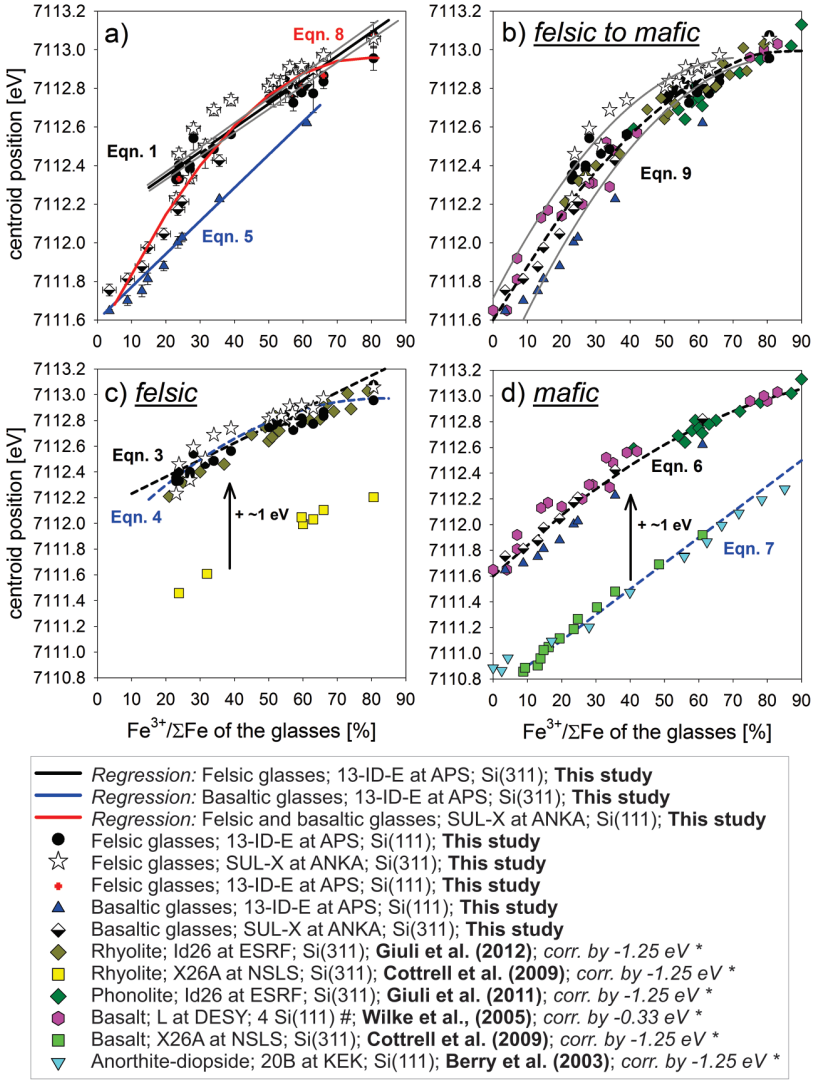

Figure 3. (a–d) Calibration trends for the determination of the Fe oxidation state in glasses based on the centroid energy of the Fe pre-edge peak. **(a)** Only results from this study. The felsic glasses cover a range of compositions from dacitic andesite to rhyolite. The red crosses are analyses from another session (the outlier marked in Fig. 1 is excluded). The gray lines provide an example for the determined uncertainties for the individual equations (here, trends are plotted for Eq. 1). **(b)** Reference glass data from three previous studies and from this study. The plotted data set covers glass compositions ranging from felsic to mafic and Fe XANES spectra were collected at four different synchrotron radiation sources (APS, ANKA, ESRF, DESY). The results of Berry et al. (2003) and Cottrell et al. (2009) are excluded (see text for details). The gray lines reflect trends for ±6% $Fe^{3+}/\Sigma Fe$. At least 64% of the compiled data with <60% $Fe^{3+}/\Sigma Fe$ are covered by this range. Here, the 64% are a minimum value since the individual uncertainties are not considered. Notice that $Fe^{3+}/\Sigma Fe$ ratios of ≥60% in magmas are rare (Carmichael 1991). **(c)** Comparison of results from Fe XANES analyses on felsic glasses performed at different synchrotron radiation sources (APS, ANKA, ESRF, NSLS). **(d)** Comparison of results from Fe XANES analyses on mafic glasses performed at different beamlines at different synchrotron radiation sources (13-ID-E at APS, SUL-X at ANKA, ID26 at ESRF, X26A at NSLS, L at DESY, 20B at KEK). *Notes:* * The centroid energies provided in the literature were corrected (*corr.*) to match our energy calibration (i.e., 7110.75 eV for the first derivative peak of a XANES spectrum collected on Fe metal foil). The regressions were predicted using KaleidaGraph and the displayed trends were labeled according to the numbering of the equations given in the text. # A Si(111) four-crystal monochromator was used by Wilke et al. (2005), which should have a similar energy resolution as most Si(311) double crystal setups. To distinguish trends/symbols see online color version.