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Erratum

Erratum to "Characterisation of crystalline C-S-H phases by X-ray photoelectron spectroscopy (XPS)" [Cem. Concr. Res. 33 (6) (2003) 899–911]

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We have recently reported the changes arising in the photoelectron spectra of various crystalline calcium silicate hydrates. However, we are aware of a slight difference in our approach to spectral peak fitting with that of many other authors. This difference leads to a sight but consistent discrepancy in binding energies for the Si 2p photoelectron peaks, and thus, in turn, to a similar discrepancy in modified Auger parameter values. We therefore present a new set of Si 2p binding energies and modified Auger parameter values.

In accordance with the theory, we fitted two peaks to each Si 2p spectrum. These peaks were fitted with fixed peak intensity ratios, i.e., Si $2p_{3/2}$/Si $2p_{1/2}$ of 2:1, with both peaks having the same FWHM and a fixed separation of 0.6 eV. Such stringent constraints have been used or derived by others when investigating the bonding nature of silicon compounds [1–3]. However, many other groups, including those cited in our original, fitted only one peak to their Si 2p spectra. There is a consistent discrepancy between the two approaches, and so to enable a ready comparison between our reported binding energies and those of the many other authors, we have recalculated the Si 2p binding energies, fitting only one peak to each spectrum. The new binding energies are shown in Table 1. This, in turn, has an effect upon α', the modified Auger parameter. Thus, the new α' values are also given Table 1.

Table 1
Original and revised Si $2p_{3/2}$ binding energies and modified Auger parameters

Phase	Si $2p_{3/2}$ binding energy (eV)		Modified Auger parameter (eV)	
	Old	New	Old	New
K-Phase	102.86	103.06	1712.28	1712.48
Z-Phase	102.57	102.77	1712.31	1712.51
Truscottite	102.72	102.92	1712.51	1712.71
Gyrolite	102.68	102.87	1712.59	1712.78
11 Å Tobermorite	101.66	101.85	1712.41	1712.6
Xonotlite	102.01	102.2	1712.56	1712.75
Foshagite	101.66	101.86	1712.65	1712.85
Afwillite	101.54	101.74	1712.76	1712.96
C_8S_5	101.51	101.68	1712.82	1712.99
Hillebrandite	101.63	101.83	1712.6	1712.8
α-C_2SH	101.54	101.73	1712.89	1713.08

It is important to note that in no way does this affect the validity of our conclusions. We merely want to draw attention to the different peak-fitting strategies and make the resultant discrepancy apparent.

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