Erratum on “Complexation of radionuclide $^{152+154}\text{Eu(III)}$ with alumina-bound fulvic acid studied by batch and time-resolved laser fluorescence spectroscopy” [Sci. China Chem., 2017, 60: 107–114]

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In the above referenced publication [1], the Figure 5 and data in Table 1 are correct, but we ignored to present the final pH values of the system, which is very important to understand the properties.

Alumina-Eu(III) system. With pH increasing to 5.3, the

$n_{\text{H}_2\text{O}}$ decreases from 9 to 7 and the lifetime increases from 105 to 130, and the proposed species is speculated as $\equiv(\text{Al}-\text{O})-\text{Eu}(\text{OH})\cdot 7\text{H}_2\text{O}$. With pH increases to 5.8, one more water molecule is lost and the species is proposed as $\equiv(\text{Al}-\text{O})-\text{Eu}\cdot 6\text{H}_2\text{O}$. As the pH increases continuously to 7.9, the

Figure 5 Fluorescence emission spectra (a) and time dependence of fluorescence emission decay (b) of Eu(III) in aqueous alumina suspension at different pH values. $C(\text{Eu})=4.08\times 10^{-6}$ mol/L, $C(\gamma\text{-alumina})=0.44$ g/L, $I=0.1$ M NaClO_4 [2].

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Table 1 Spectroscopy characteristics of the Eu(III) with alumina solutions as a function of pH

Alumina-Eu(III) system				
pH	4.0	5.3	5.8	7.9
Lifetime (μs)	105	130	162	225
$^5\text{D}_0 \rightarrow ^7\text{F}_1 / ^5\text{D}_0 \rightarrow ^7\text{F}_2$	2.07	1.68	1.07	0.39
$n_{\text{H}_2\text{O}}$	9.5	7.4	6.0	4.1
Proposed species	$\text{Eu}(\text{H}_2\text{O})_9^{3+}$	a	b	$\equiv (\text{Al-O})-\text{Eu}^+ \cdot 4\text{H}_2\text{O}$

a) $\equiv (\text{Al-O})-\text{Eu}(\text{OH}) \cdot 7\text{H}_2\text{O}$; b) $\equiv (\text{Al-O})-\text{Eu} \cdot 6\text{H}_2\text{O}$.

$\equiv (\text{Al-O})_2-\text{Eu}^+ \cdot 4\text{H}_2\text{O}$ species is formed. The TRLFS analysis results are same to our previous report [2], where the sorption of Eu(III) on the same hydrous alumina was measured under the same experimental conditions. In our previous work [2], we mainly focused on the effect of humic acid and addition sequences on Eu(III) sorption to hydrous alumina, which is quite different to the contents of this paper.

The online version of the original article can be found at *Sci China Chem*, 2017, 60: 107–114, doi: 10.1007/s11426-016-0163-6.

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- 2 Wang X, Chen Z, Tan X, Hayat T, Ahmad B, Dai S, Wang X. *Chem Eng J*, 2016, 287: 313–320