

Fig. S1

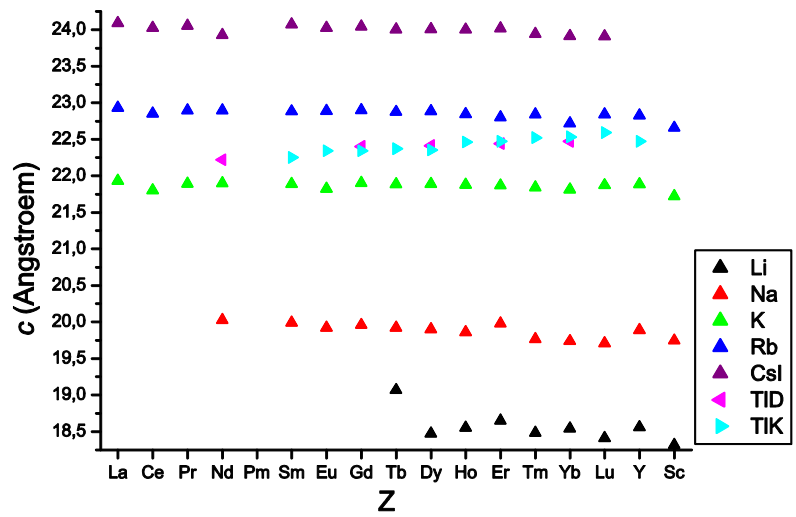


Fig. S1. The dependence of c on Z in the series of the alkaline and Tl⁺ rare-earth sulfides. (TIK and TID mean the structure determinations by Kabré *et al.* (1974) or Duczmal & Pawlak (1994), respectively - see the deposited Table 2

Fig. S2

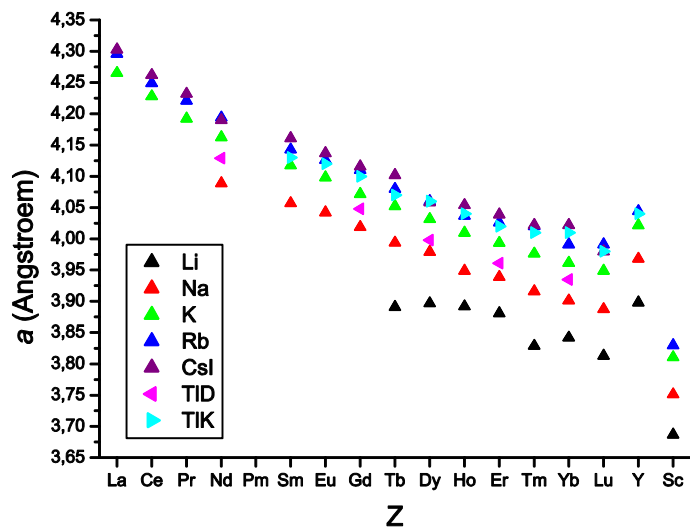


Fig. S2. The dependence of a on Z in the series of the alkaline and Tl^+ rare-earth sulfides. (TIK and TID mean the structure determinations by Kabré *et al.* (1974) or Duczmal & Pawlak (1994), respectively; see the deposited Table 2.

Fig. S3

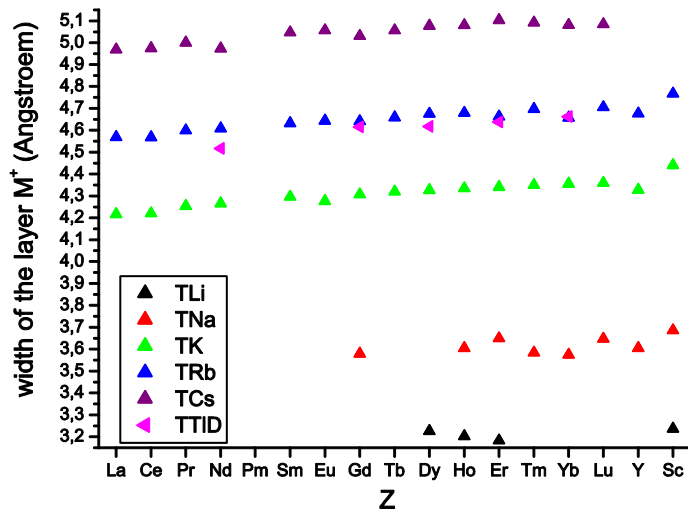


Fig. S3. The dependence of the widths of the S-S layers, which contain the monovalent cations M⁺ in the rare-earth alkaline sulfides, on Z. See the deposited Table 3. (TID means the determinations by Duczmal & Pawlak, 1994.)

Fig. S4

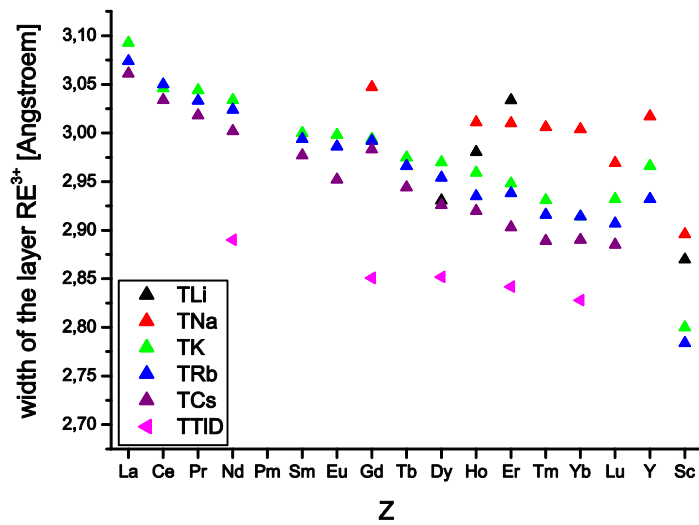


Fig. S4. The dependence of the widths of the S-S layers, which contain the trivalent cations RE³⁺ in the rare-earth alkaline sulfides, on Z. See the deposited Table 4. (TID mean the structure determinations by Duczmal & Pawlak (1994), respectively.)

Fig. S5

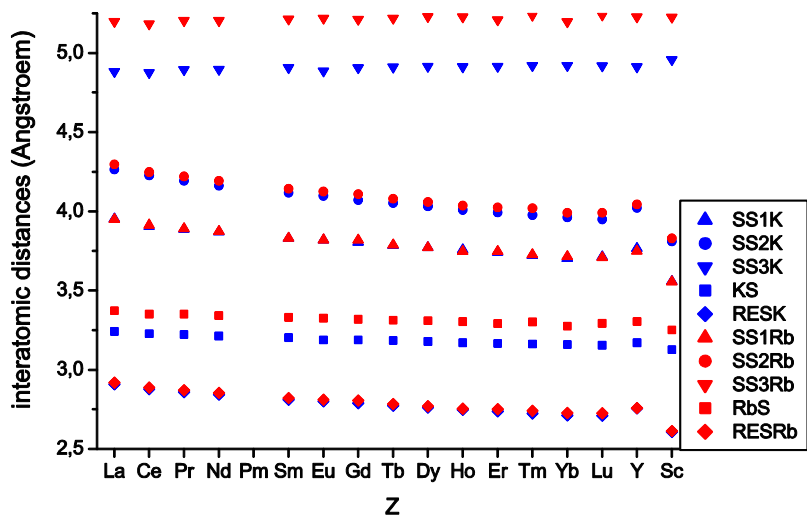


Fig. S5. Dependence of closest interatomic distances (Å) in $K+RE^{3+}S^{2-}$ and $Rb+RE^{3+}S^{2-}$ on Z. See the respective deposited Tables 5 and 6. [SS1K, SS2K, SS3K, KS and RES mean S-Sⁱ, S-Sⁱⁱ, S-Sⁱⁱⁱ, K-S and RE-S distances in the title potassium rare-earth sulfides; Rb compounds are indicated analogously.]

Fig. S6

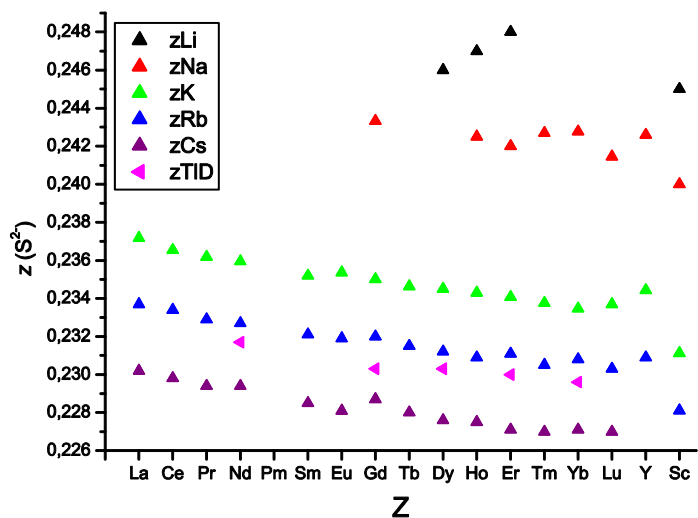


Fig. 6. Dependence of $z(S^{2-})$ in $M^+RE^3+S^{2-}$ on Z . See the deposited Table 7. (TID mean the structure determinations by Kabré *et al.* (1974) or Duczmal & Pawlak (1994), respectively.)

Fig. S7

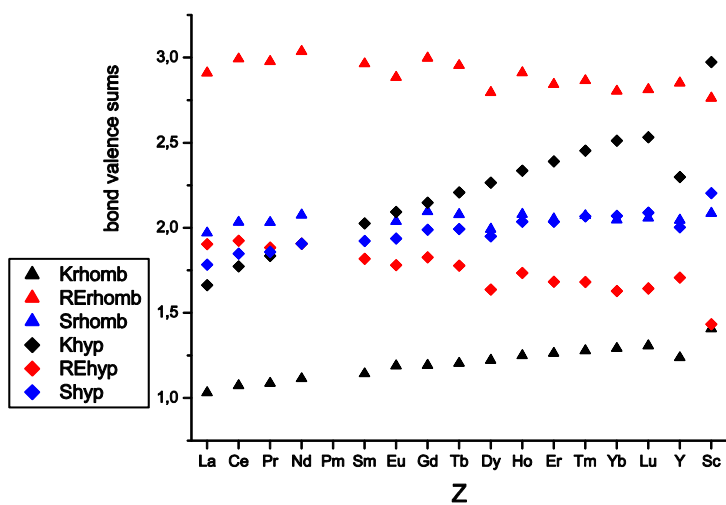


Fig. S7. The bond valence sums (Brese & O'Keeffe, 1991) in the real-existing rhombohedral and the hypothetical cubic $K^+RE^{3+}S^{2-}$. See the deposited Table 8.)

Fig. S8

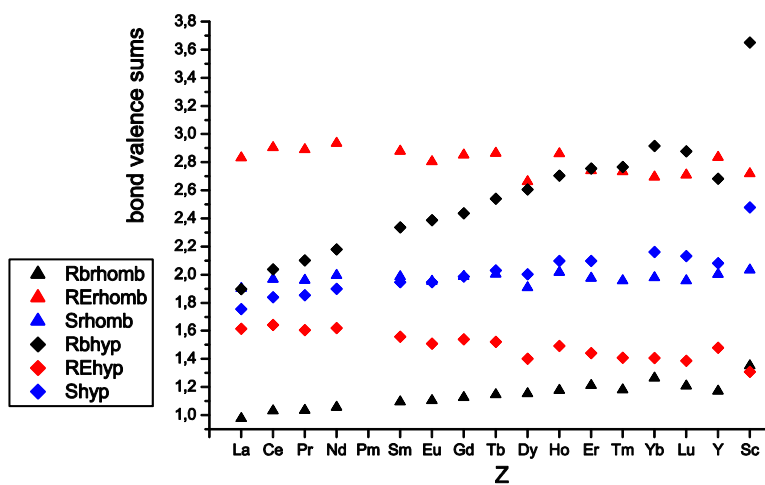


Fig. 8. The bond valence sums (Bresle & O'Keeffe, 1991) in the real-existing rhombohedral and the hypothetical cubic $Rb^+RE^{3+}S^{2-}$. See the deposited Table 9.