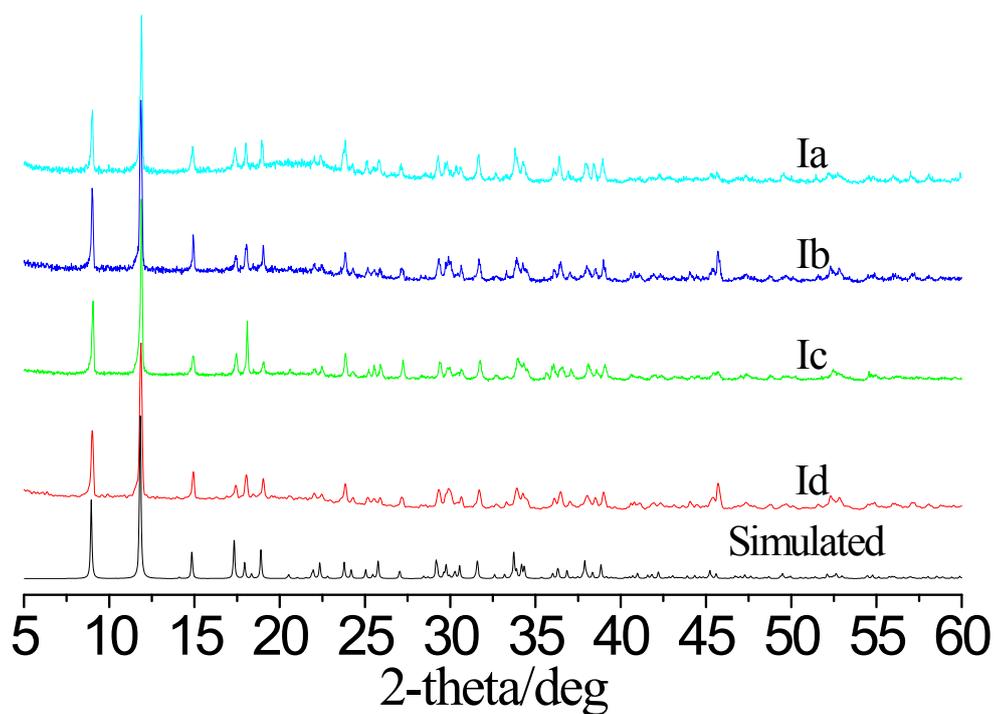


Supporting Information for

**A series of new lanthanoid thioarsenates: Insights into influence of  
lanthanide contraction on the formation of new lanthanoid  
thioarsenates**

Jian Zhou,\* Rong-Qing Zhao, Xing Liu, Tao Yang,\* Hong-Ping Xiao, Hua-Hong Zou, and Xiao-Feng Tan



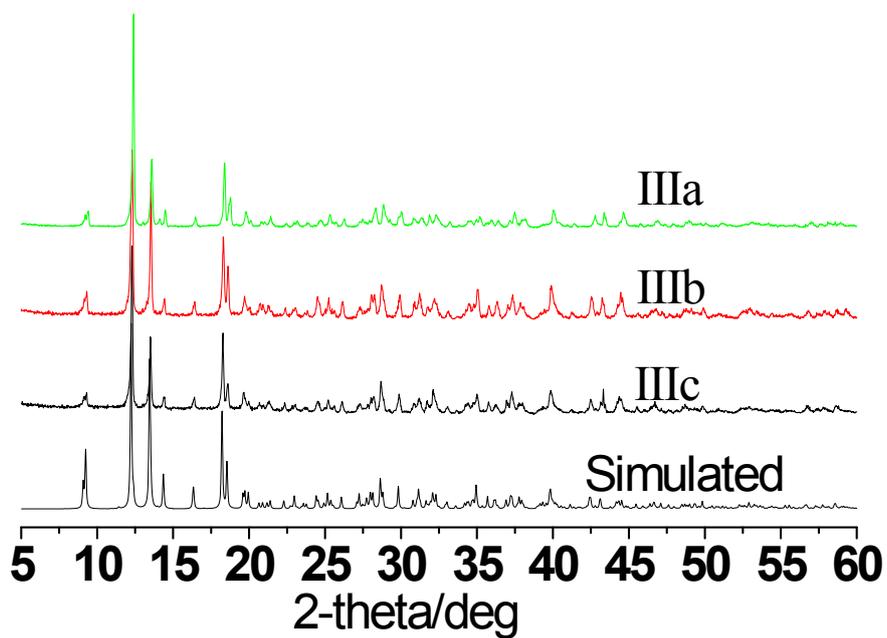
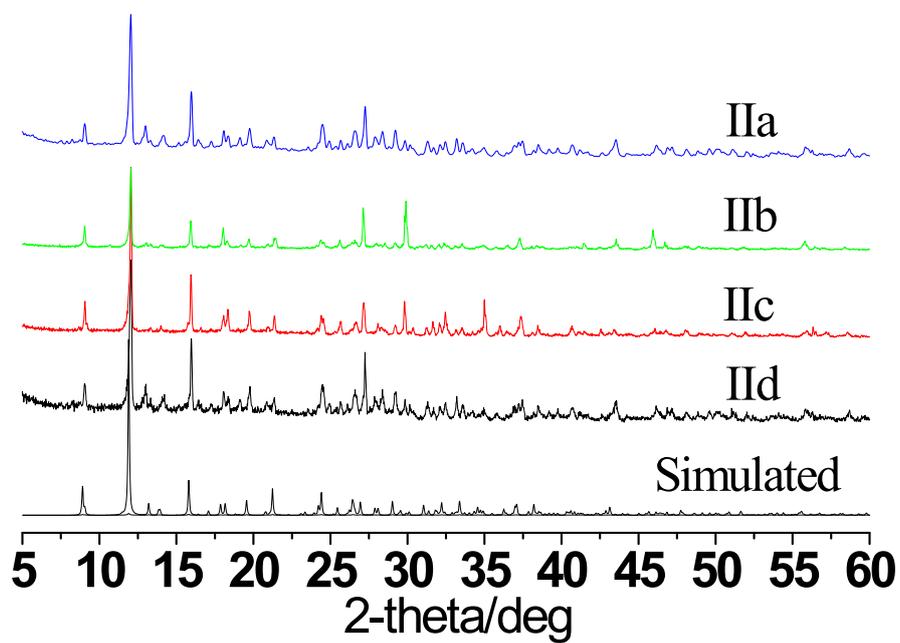
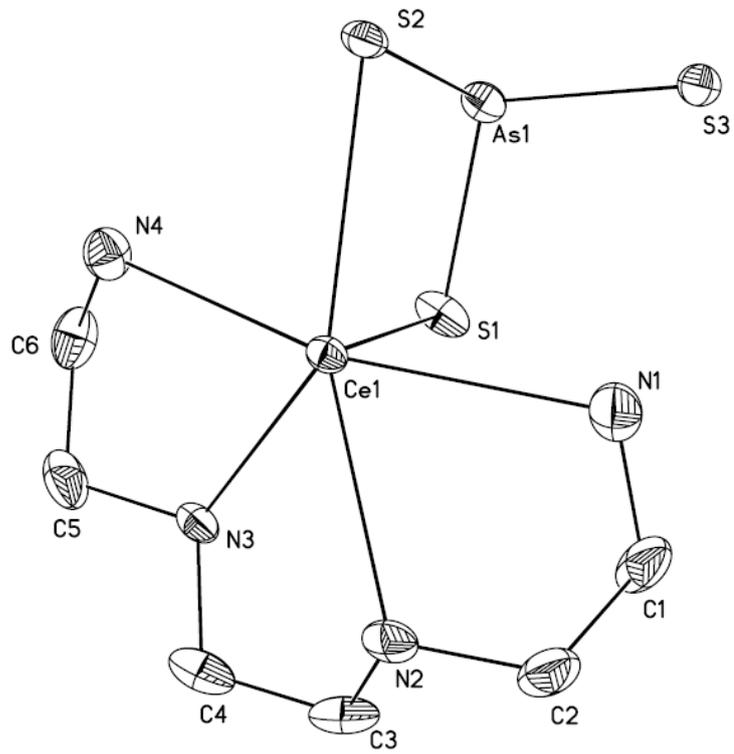
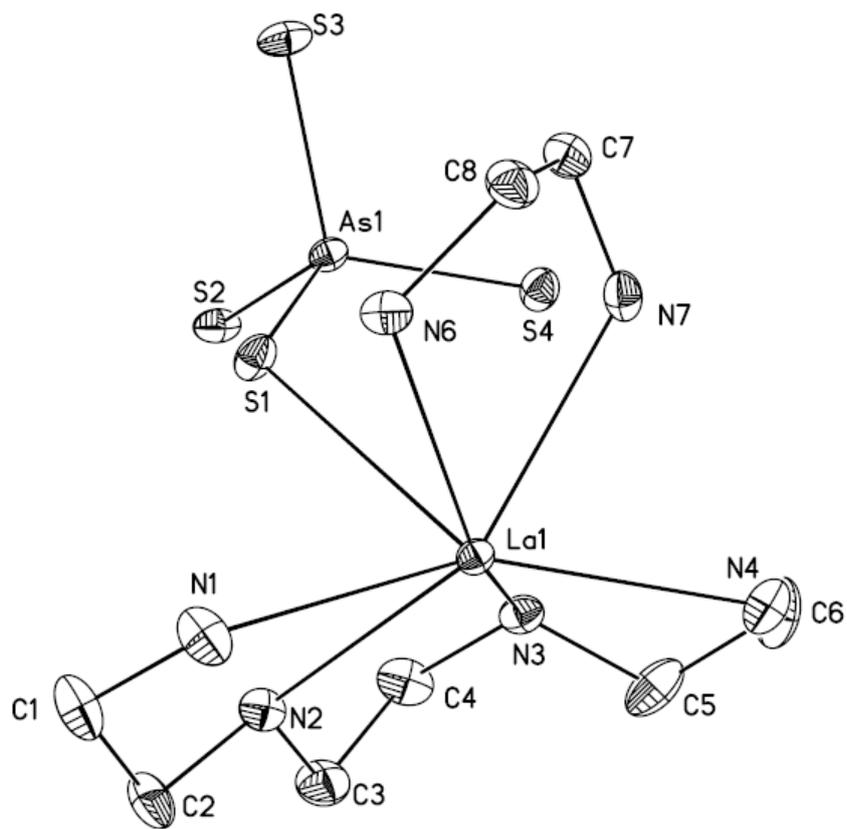


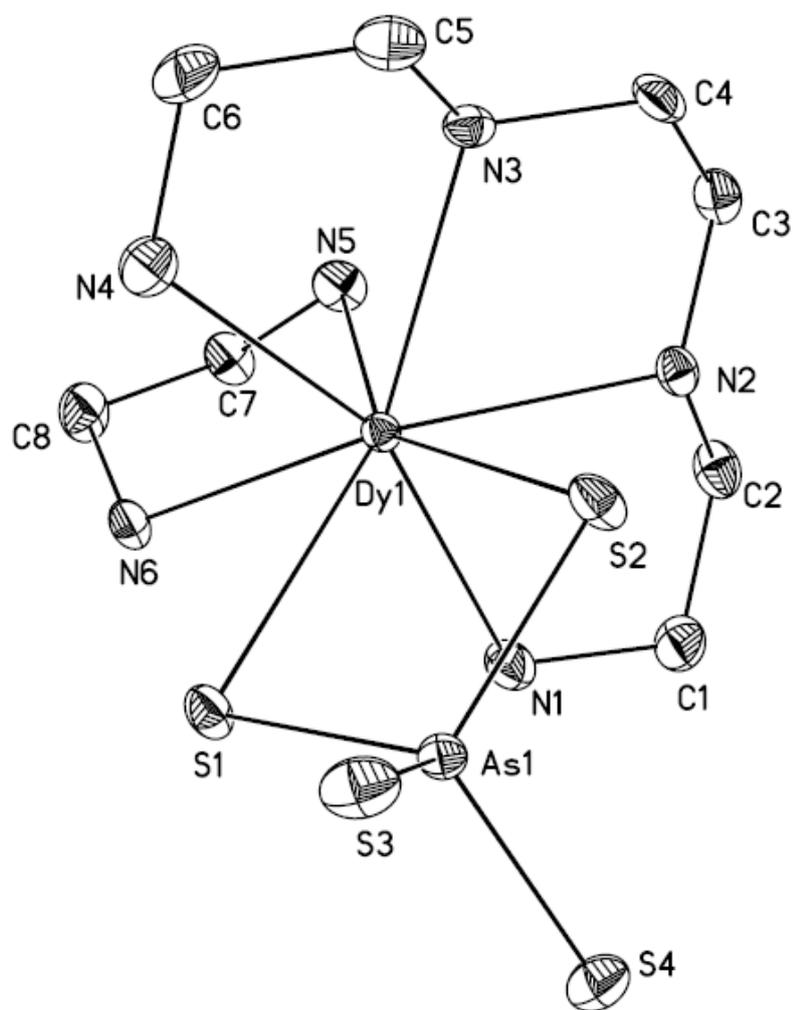
Figure S1 Simulated and experimental powder XRD patterns of all compounds.



(a)



(b)



(c)

Figure S2 The asymmetric unit of **Ia** (a), **IIa** (b), and **IIIa** (c) (H atoms bonded to C and N atoms have been omitted for clarity).

Figure S3 3-D hydrogen bonding network in **IIIa** (H atoms on C atoms are omitted for clarity).

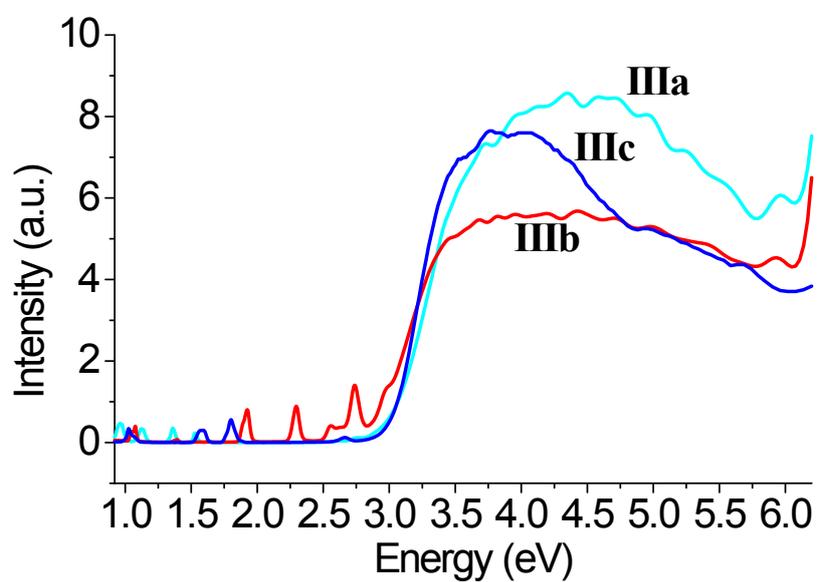
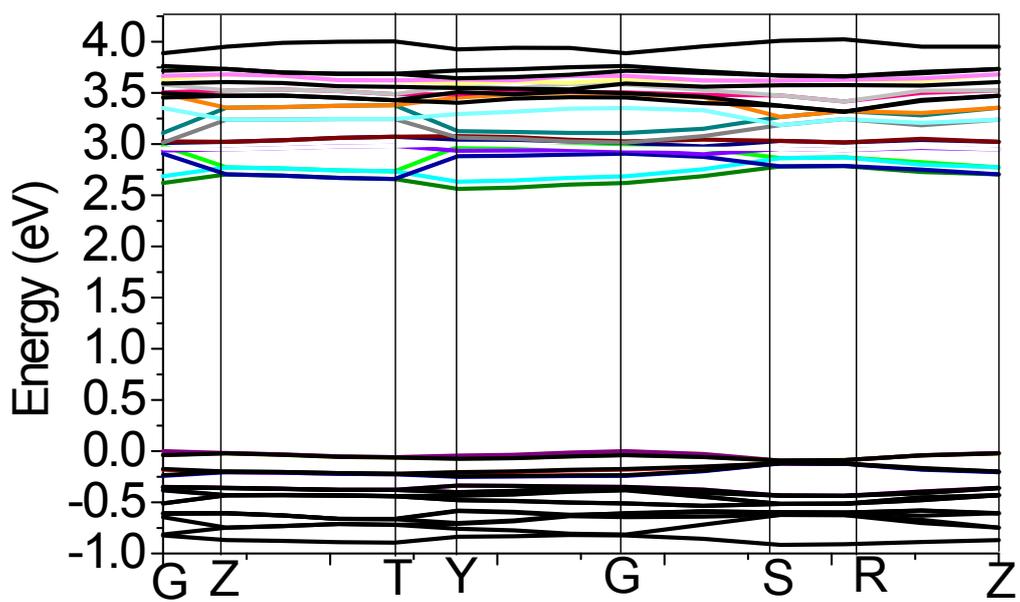
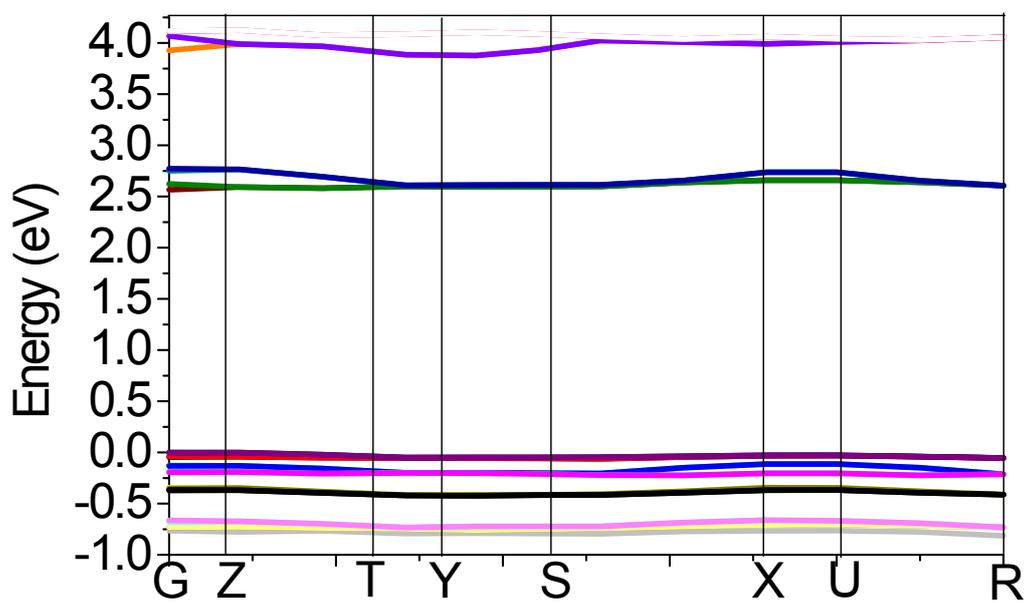


Figure S4 The solid-state UV-vis absorption spectra of **IIIa-c**.



(a)



(b)

Figure S5 The calculated band structures of **Ia** and **IIa**.