Electronic supplementary information (ESI) available for

An unusual fan-type polyanion with a silver cation located at the axial center, $[AgAs^{III}_2(As^{III}As^{V}Mo_4O_{18}(OH)_2)_3]^{11-}$

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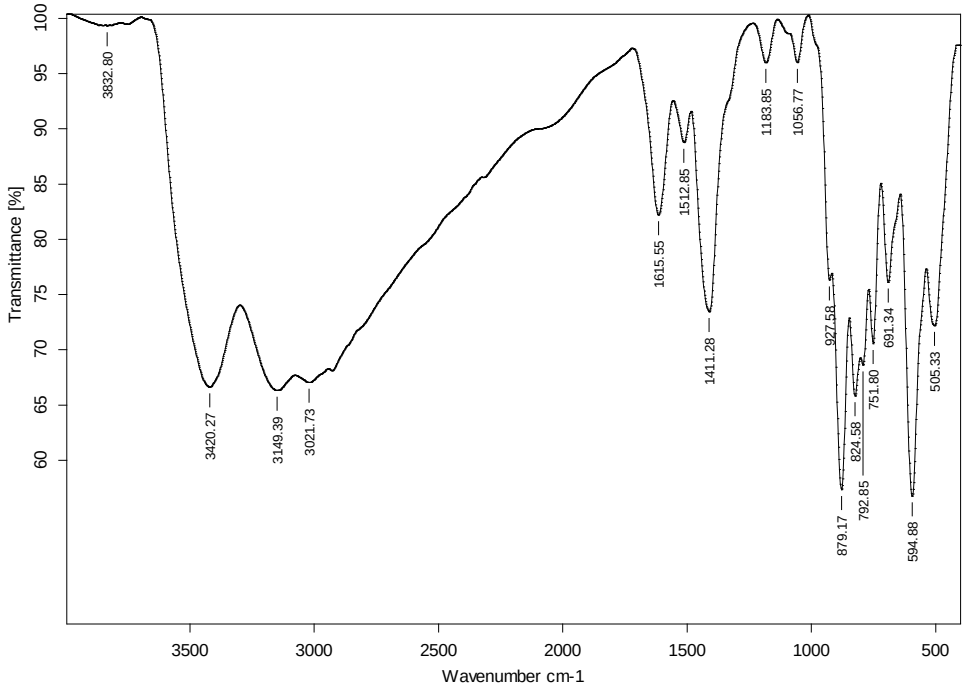
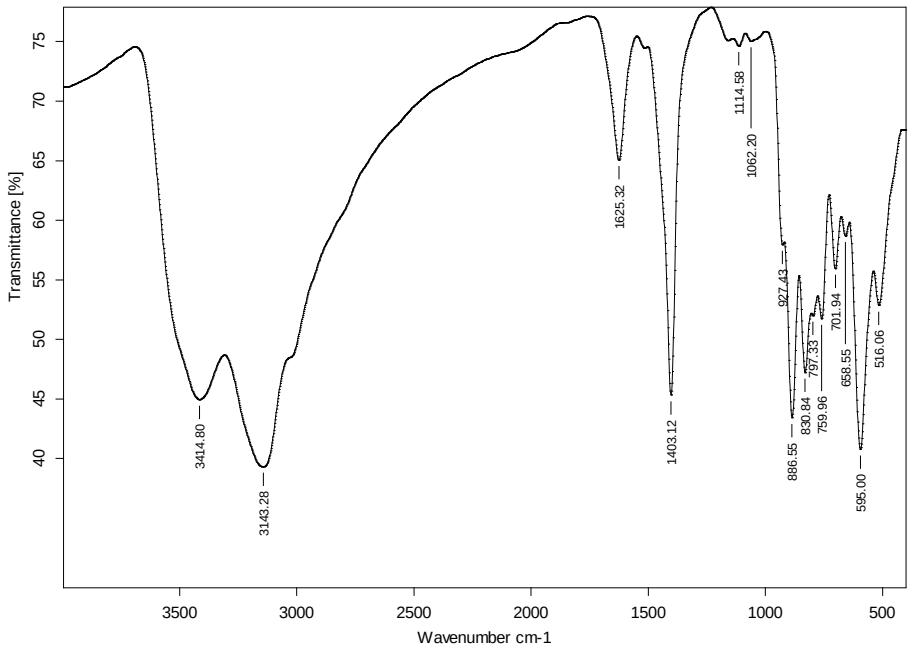
Contents

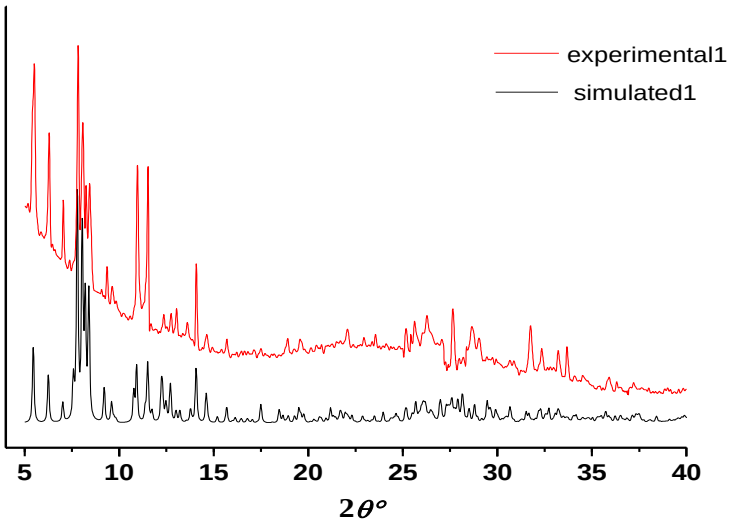


(a)

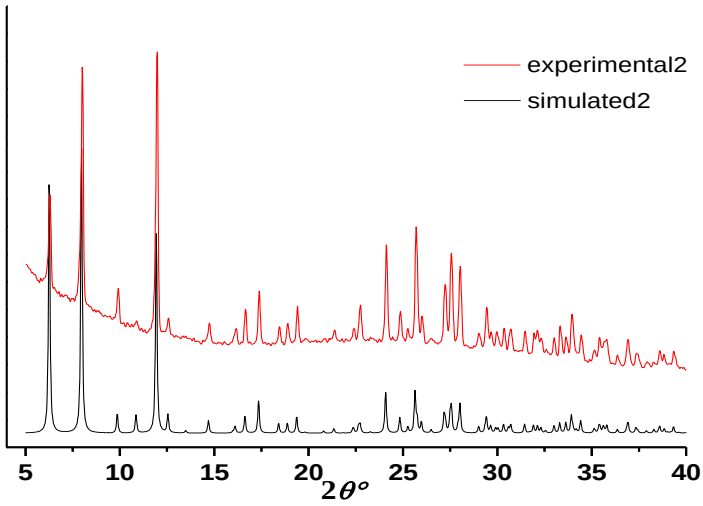


(b)

Fig. S1 (a) IR spectra of compound **1**; (b) IR spectra of compound **2**.

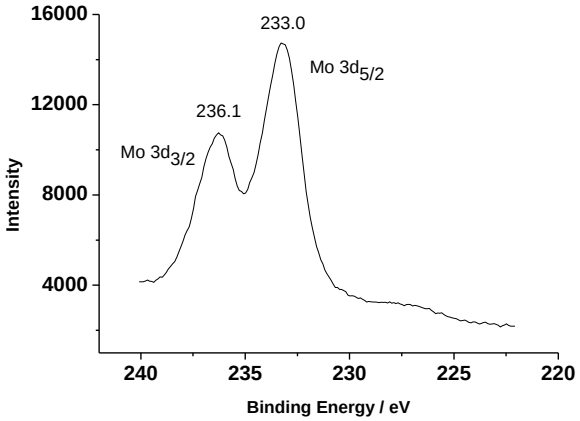


(a)

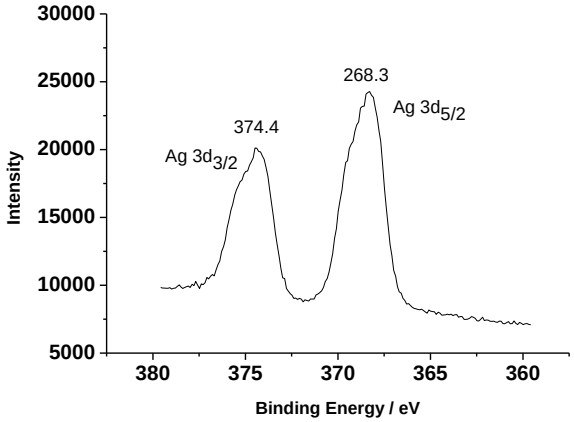


(b)

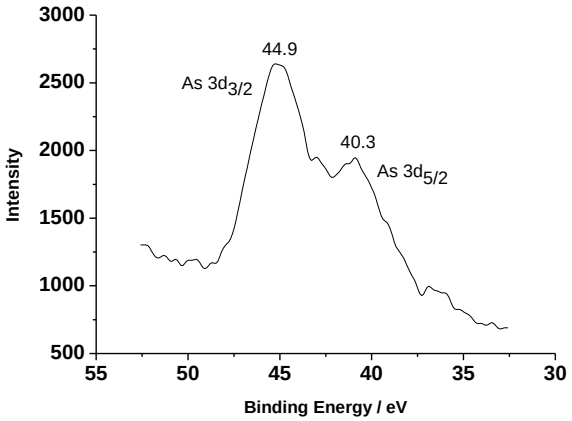
Fig. S2 (a) Comparison of the simulated and experimental XRD patterns of compound **1**;
(b) Comparison of the simulated and experimental XRD patterns of compound **2**.



(a)



(b)



(c)

Fig. S3 (a) XPS spectra of **1** for Mo $3d_{5/2}$ and Mo $3d_{3/2}$. (b) XPS spectra of **1** for Ag $3d_{5/2}$ and Ag $3d_{3/2}$. (c) XPS spectra of **1** for As $3d_{5/2}$ and As $3d_{3/2}$

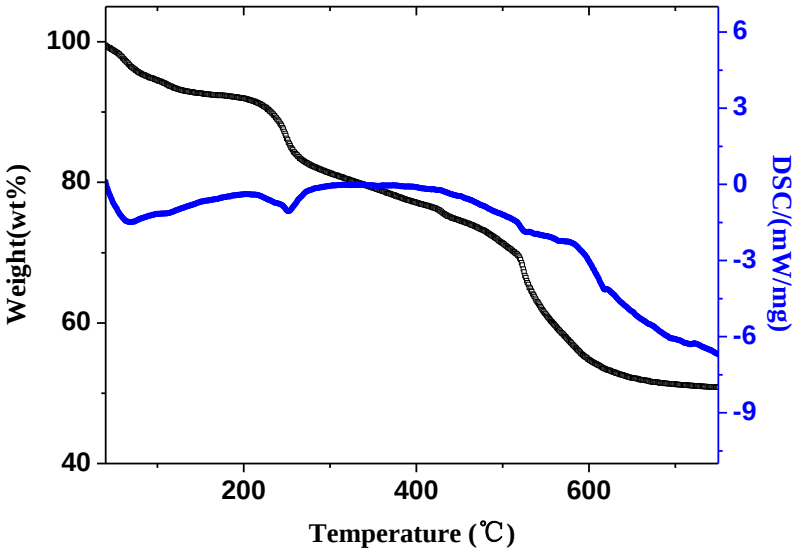


Fig. S4 (a) TG-DSC curves of compound **1a**

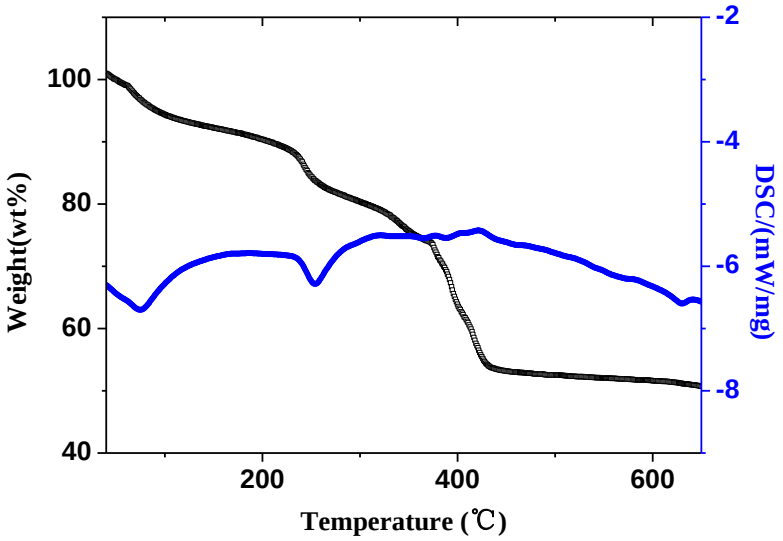
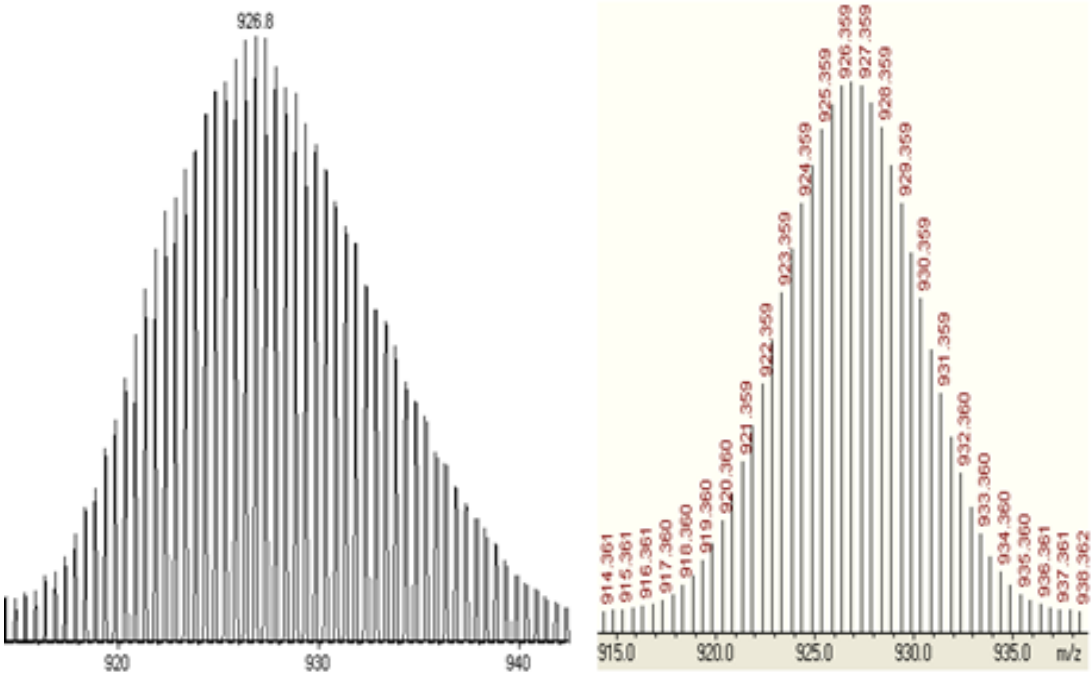
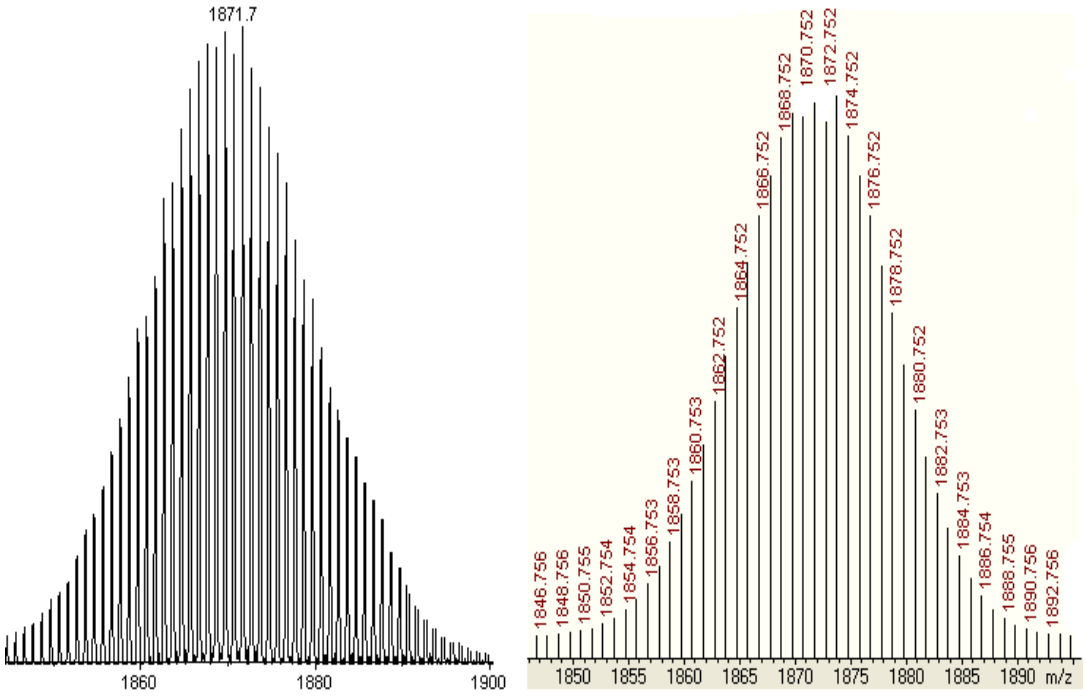


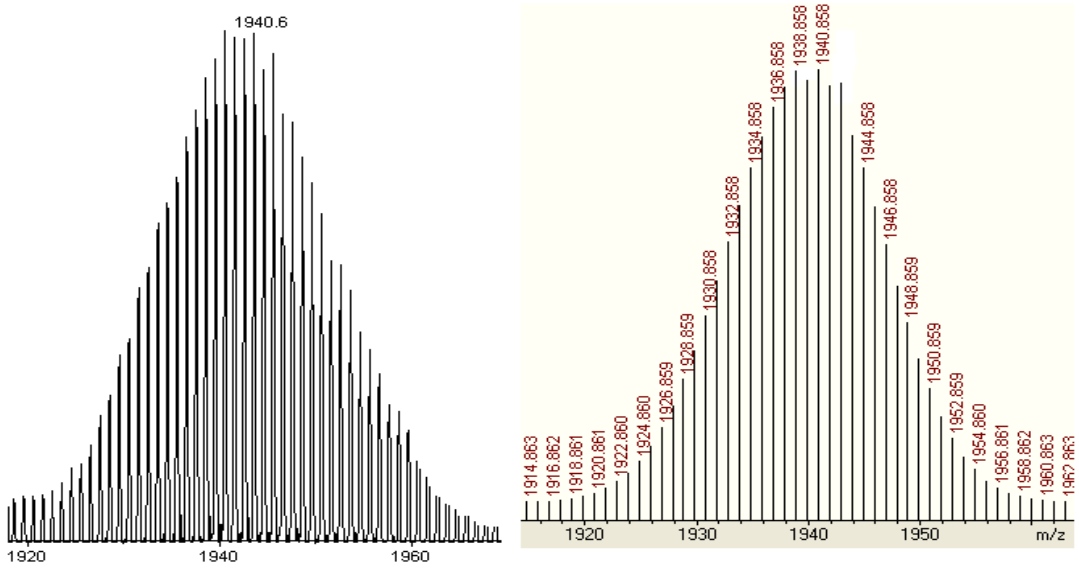
Fig. S4 (b) TG-DSC curves of compound **1b**



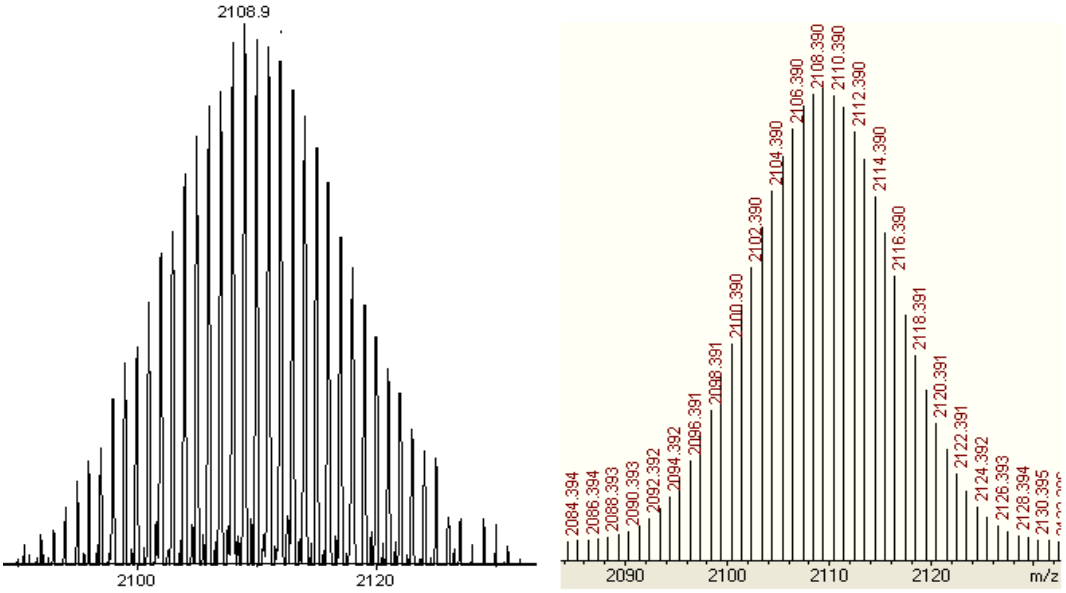
(a) $[H_7K_3(As_2Mo_4O_{18}(OH)_2)_2]^{2-}\cdot H_2O$ *m/z* = 926.8



(b) $[H_7K_3NH_4(As_2Mo_4O_{18}(OH)_2)_2]^{-}\cdot H_2O$ *m/z* = 1871.7



(c) $[H_3K_3(NH_4)_5(As_2Mo_4O_{18}(OH)_2)_2]^{-}\cdot H_2O$ *m/z* = 1940.6



(d) $[K_3NaAgAs^{III}_4As^{V}_2Mo_8O_{36}(OH)_4]^{-}$ *m/z* = 2108.9

Fig. S5 Comparison of the experimental (left) and simulated isotopic envelope (right) for the peak at (a) *m/z* = 926.8; (b) *m/z* = 1871.7; (c) *m/z* = 1940.6 and (d) *m/z* = 2108.9.