Supporting information

Two New Bismuth Thiourea Bromide: Crystal Structure, Growth, and Characterization

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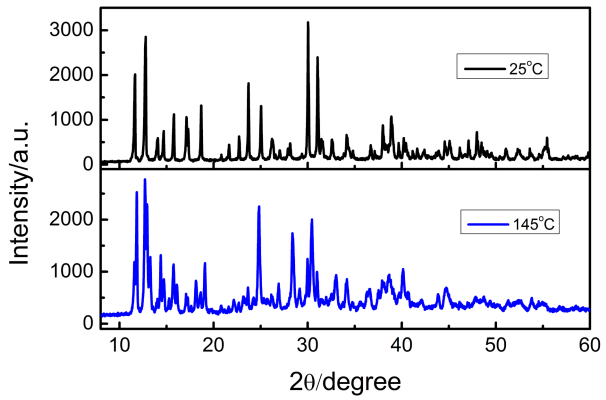

Figure S1. XRD patterns of $Bi[CS(NH_2)_2]_3Br_3$ at different temperatures.

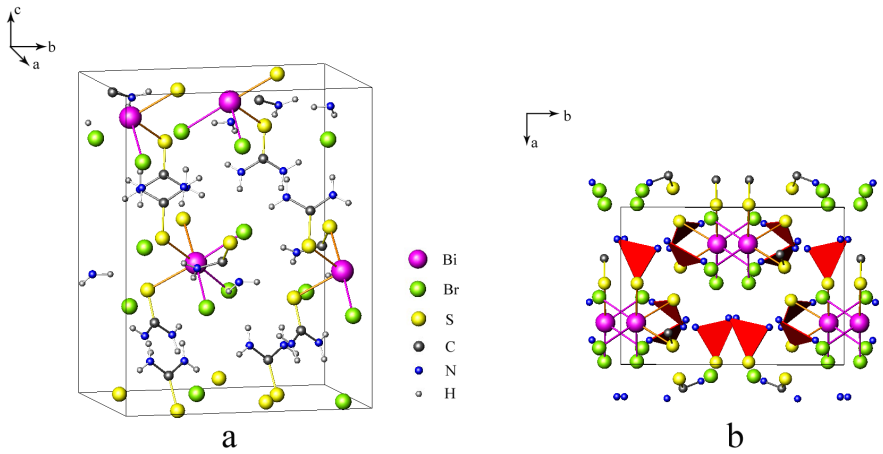

Figure S2. (a): The crystal structure of $Bi[CS(NH_2)_2]_3Br_3$; (b) The view along c axis.

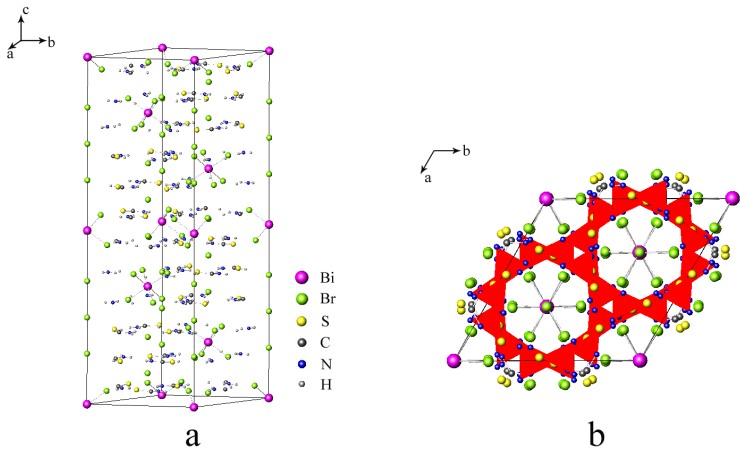

Figure S3. (a): The crystal structure of $Bi[CS(NH_2)_2H]_6Br_9$; (b) The view along c axis.

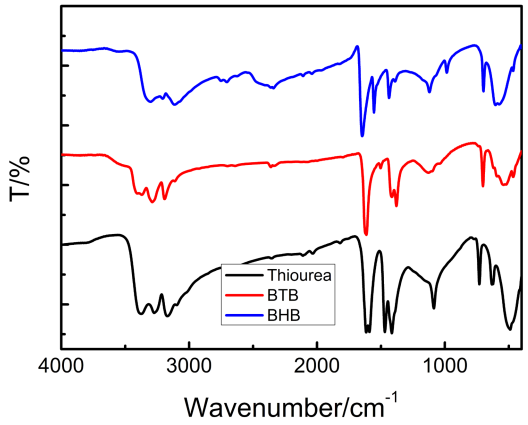

Figure S4. The FTIR spectra of $Bi[CS(NH_2)_2]_3Br_3$ and $Bi[CS(NH_2)_2H]_6Br_9$.

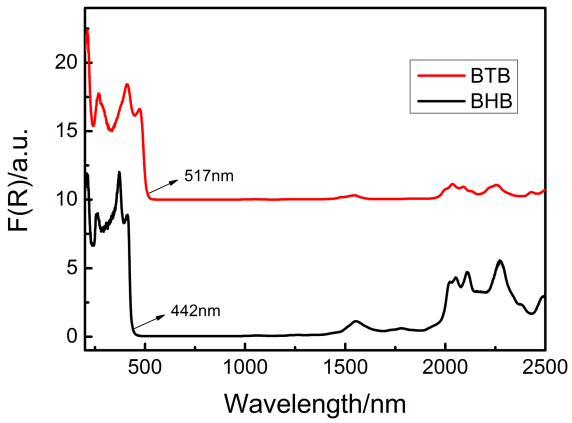

Figure S5. The diffuse reflection spectra of $Bi[CS(NH_2)_2]_3Br_3$ and $Bi[CS(NH_2)_2H]_6Br_9$.

Table S1. Assignment of FTIR spectra for BTB and BHB

Thiourea(cm^{-1})	BTB (cm^{-1})	BHB (cm^{-1})	Assignment
3169, 3272, 3375	3192, 3287, 3383	3114, 3207, 3305	N–H stretching vibration
1616	1615	1646	N–H deformation vibration
1415	1380	1390	C=S stretching vibration

1086	1125	1120	N–H rocking vibration
			C=S stretching vibration
731	703	700	C=S stretching vibration
490	467	465	C–N deformation vibration

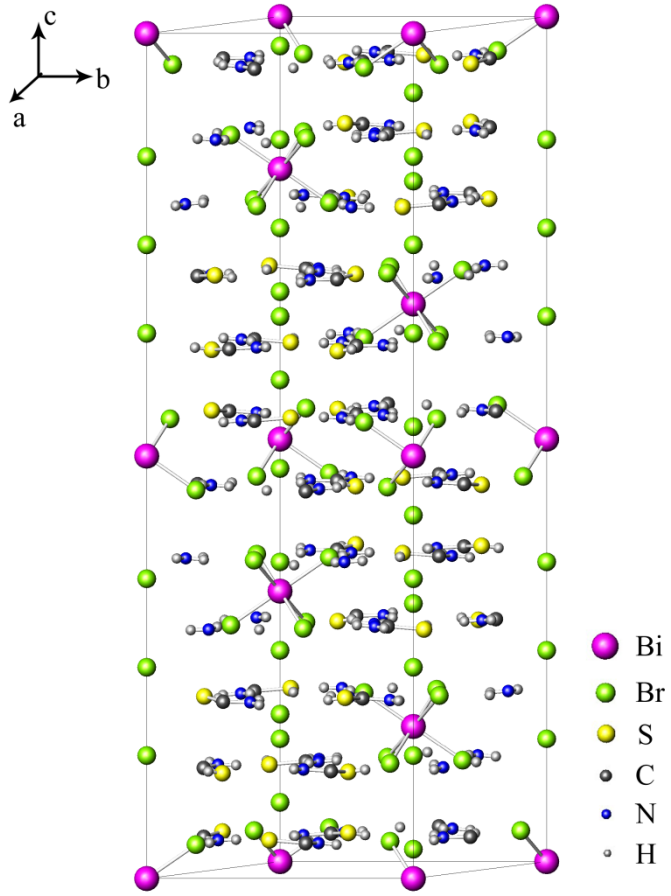

Figure S3a: The crystal structure of $Bi[CS(NH_2)_2H]_6Br_9$.