[Ga_{10}S_{16}(NC_7H_9)_4]^2-: a hybrid supertetrahedral nanocluster

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Thermogravimetric analysis was performed using a DuPont Instruments 951 thermal analyser. Approximately 10 mg of finely ground crystals were heated under a flow of dry nitrogen over the temperature range 25-700°C at a heating rate of 5°C min\(^{-1}\). Powder X-ray diffraction data on a ground portion of the bulk samples were collected with nickel-filtered Cu-K\(\alpha\) radiation (\(\lambda=1.5418\) Å), using a Philips PA2000 powder diffractometer.

![Observed powder X-ray diffraction patterns for the bulk product of the reaction producing [C\(_7\)H\(_{10}\)N\(_2\)][Ga\(_{10}\)S\(_{16}\)(NC\(_7\)H\(_9\))\(_4\)]. The calculated powder diffraction pattern has been included for comparison purposes.](image1)

**Figure 1S.** Observed powder X-ray diffraction patterns for the bulk product of the reaction producing [C\(_7\)H\(_{10}\)N\(_2\)][Ga\(_{10}\)S\(_{16}\)(NC\(_7\)H\(_9\))\(_4\)]. The calculated powder diffraction pattern has been included for comparison purposes.

![TGA data for [C\(_7\)H\(_{10}\)N\(_2\)][Ga\(_{10}\)S\(_{16}\)(NC\(_7\)H\(_9\))\(_4\)].](image2)

**Figure S2.** TGA data for [C\(_7\)H\(_{10}\)N\(_2\)][Ga\(_{10}\)S\(_{16}\)(NC\(_7\)H\(_9\))\(_4\)].