SnS$_2$ nanocrystals were successfully synthesized by a hydrothermal reaction between SnCl$_4$·5H$_2$O and (NH$_2$)$_2$CS at 140–200°C. The process was simple and easy to control. The as-prepared SnS$_2$ was characterized by XRD, IR, XPS and TEM. The Raman spectra of SnS$_2$ nanocrystals showed a slight red-shift in comparison with those of bulk materials.