



**FIGURE 9.** (a) Variations of the relative intensity ratio of R<sub>2</sub> to R<sub>1</sub> ( $I_2/I_1$ ) at temperatures from 100–600 K at atmospheric pressure for different ruby samples. (b) Plot of the temperatures at which the maximum  $I_2/I_1$  values,  $(I_2/I_1)_{\max}$  occurred at ambient pressure vs. the Cr<sub>2</sub>O<sub>3</sub> contents of the ruby samples. (c) Relationship between  $(I_2/I_1)_{\max}$  at atmospheric pressure and  $(I_2/I_1)_0$ , the relative intensity ratio of R<sub>2</sub> to R<sub>1</sub> at room temperature and atmospheric pressure, for ruby samples with different Cr<sub>2</sub>O<sub>3</sub> contents.