

Thermal expansion of Zirconia

Experimental:

Sample : Zirconia.

Sample length : 19.90 mm.

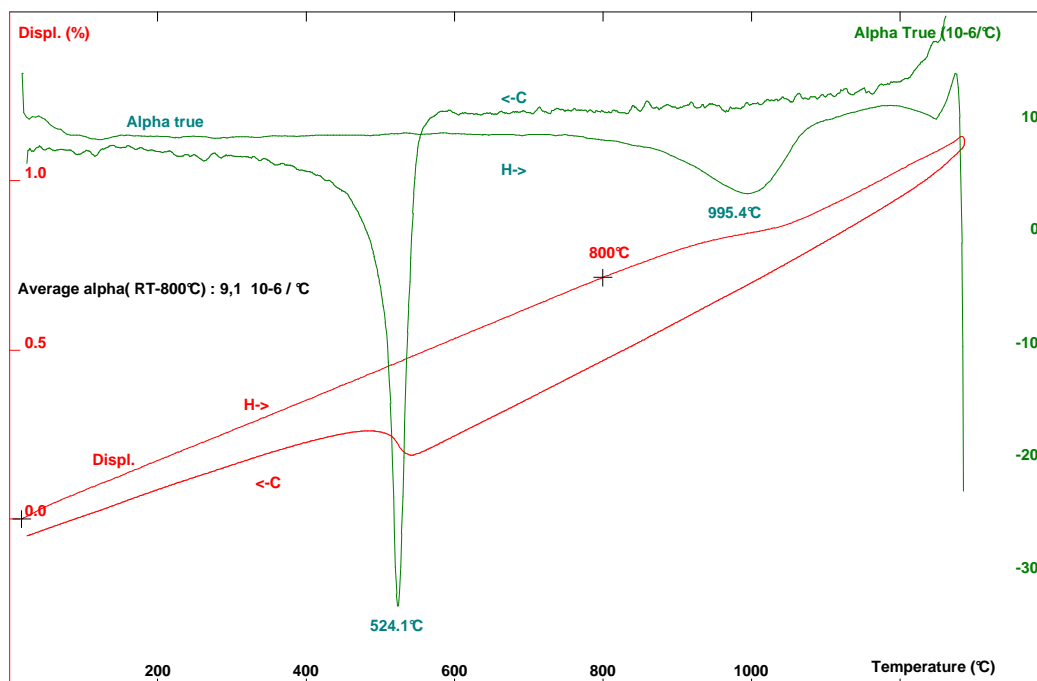
Alumina flat ended probe.

Gas : helium.

Heating from 20°C up to 1300°C at 1.5 K.min⁻¹.

Cooling from 1300°C down to 20°C at 0.5 K.min⁻¹.

The same experiment without sample is also carried out (blank).



Conclusion:

The expansion of the sample is corrected from the blank and from the alumina as the material of the probe and sample holder tube.

During the heating the average coefficient of expansion between 20°C and 800°C is $9.1 \cdot 10^{-6} / ^\circ\text{C}$.

Instrument:

Setsys Evolution TMA
-150°C to 2400°C



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