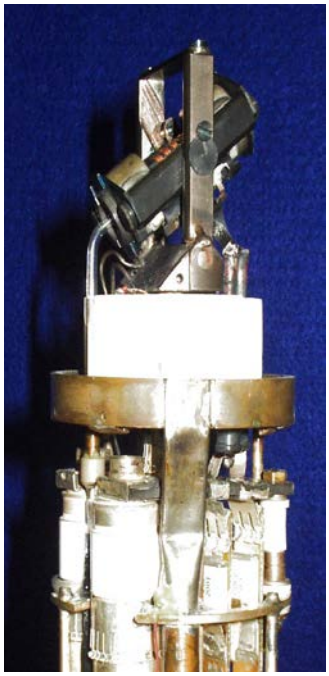
Doty High-Temperature CPMAS

in a class by itself



Simple, safe operation to 750°C
(limited to 5 kHz above 700°C)

Spinning up to 6 kHz

Double-balanced, multi-X, high-efficiency RF

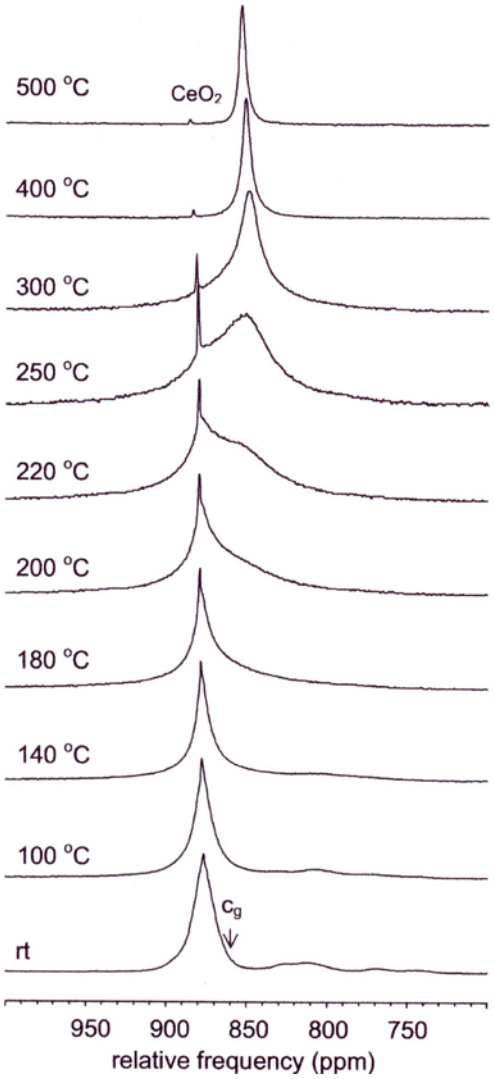
Ultra-low (<1%) thermal gradients
Silicon-nitride stator, rotor and turbine

45 kHz ^{1}H decoupling at 600°C, 500 MHz
(Double-tuned available up to 500 MHz)

Efficient heat exchanger
for maximum safety

^{70}Pt-^{30}Rh heater element for long life

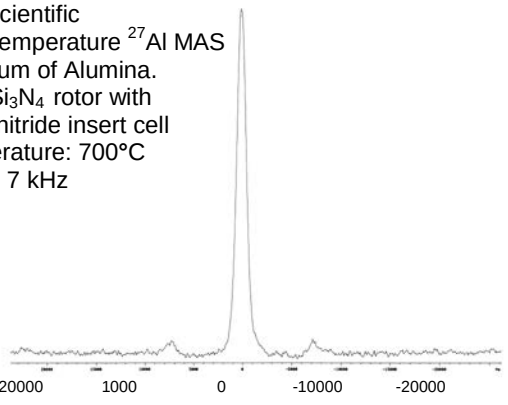
^{17}O MAS High Temp NMR spectra of 5% Y_2O_3-doped CeO_2 at 9.4 T, MAS = 5 kHz and VT from room temp to 500°C.



Note: A small narrow peak for pure CeO_2 appears to grow in the mid-temperature range because the width of the main peak is at its height in this region.

Courtesy of Namjun Kim and Jonathan Stebbins, Stanford University

Doty Scientific
High Temperature ^{27}Al MAS Spectrum of Alumina.
7mm Si_3N_4 rotor with boron nitride insert cell
Temperature: 700°C
MAS = 7 kHz



The bell-dewar construction includes alumina-dispersion-strengthened copper, a superalloy, a custom Cu-Ni alloy, Sn-bronze, and three braze alloys. A 30-hour vacuum bake-out at 620°C ensures long-term reliability.

Shrouded silicon-nitride high-temp (HT) rotors

43648 Shrouded silicon-nitride high-temp (HT) rotor ……..$ 1205
43965 Boron-nitride high-temp rotor insert for HT rotor …….. 45
7830 Zirconia high-temp rotor screw for HT rotor ……160

(US$ – Foreign prices higher, plus taxes.)