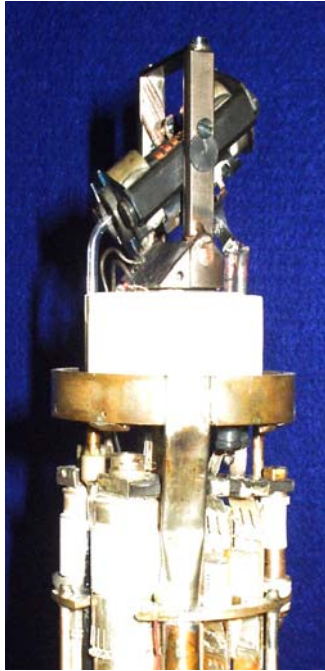


Doty High-Temperature CPMAS

in a class by itself

7 mm rotor, 7 kHz MAS at 700°C



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

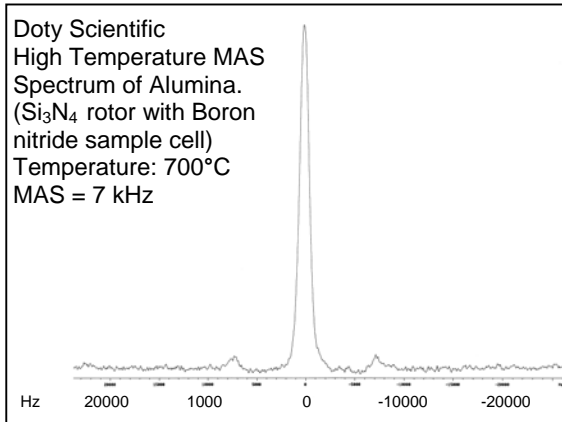
Ultra-low (<1%) thermal gradients
Silicon-nitride stator, rotor and turbine

Simple, safe operation up to 800°C
(limited to 5 kHz above 700°C)

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

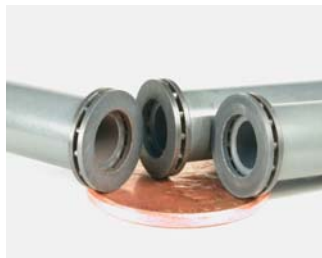
Efficient heat exchanger
for low heater-power requirements

⁷⁰Pt-³⁰Rh heater element for long life



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.

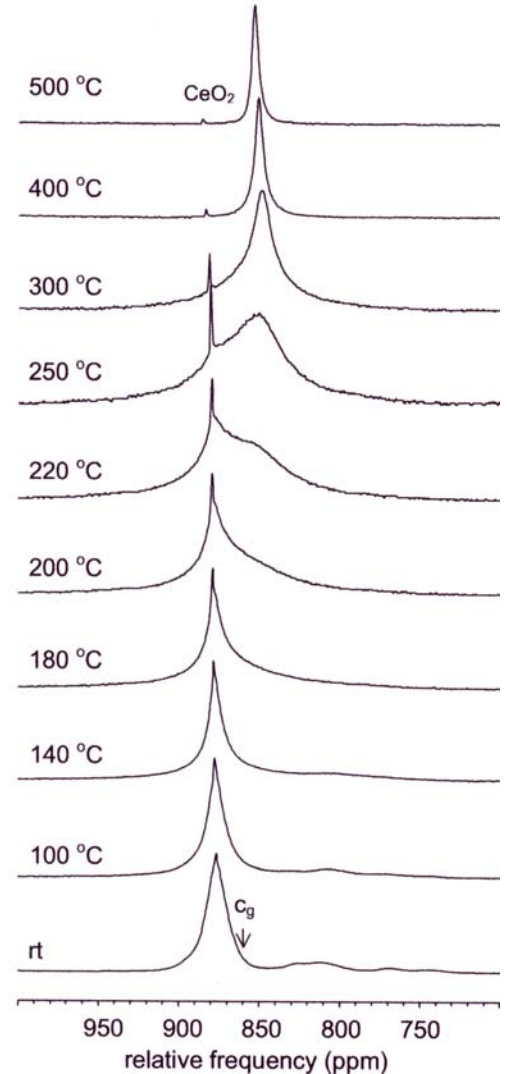
**Shrouded silicon-nitride
high-temp (HT) rotors**



- # 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 rotor160

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

¹⁷O MAS High Temp NMR spectra of 5% Y₂O₃-doped CeO₂ at 9.4 T, MAS = 5 kHz and VT from room temp to 500°C.



Note: A small narrow peak for pure CeO₂ 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