

## IN THIS ISSUE:

### 3 New Doty Probes:

- Z Gradient Probe to 300°C
- Fluorine Quad MAS H/F/X/Y
- WB Ultra-Range MAS and MAS-DNP

New ENC Suite at Asilomar – *Surf and Sand*

## DEAR COLLEAGUE,

**NEW!** That is the key word for us this year. A new published paper in *Concepts in Magnetic Resonance*, three new NMR probes, and a new suite at the ENC.

This significant paper, *Guide to Simulating Complex NMR Probe Circuits*, is now available online, open access

<https://onlinelibrary.wiley.com/doi/full/10.1002/cmr.a.21463>

We are presenting three new NMR probes to the ENC. Laura Holte will be presenting a technical poster on the H/F/X/Y probe. Look below for more details on these exciting new probes.

We welcome you to join us in a new location. Our Asilomar suite, **Surf and Sand**, is near Merrill Hall. Still good ice cream, and great probes.

Our MRI friends might remember that at the last ENC we presented new, large size, double-tuned MRI coils. (Still pretty new.) <http://dotynmr.com/introducing-a-new-generation-of-double-tuned-mri-coils/>.

David and Judy Doty

## UPCOMING CONFERENCES

### 60<sup>th</sup> ENC, April 7-12

Asilomar, Pacific Grove, California, USA

<https://www.enc-conference.org>

### 27th ISMRM, May 11-16

Montreal, Quebec, Canada

<https://www.ismrm.org/19m/>

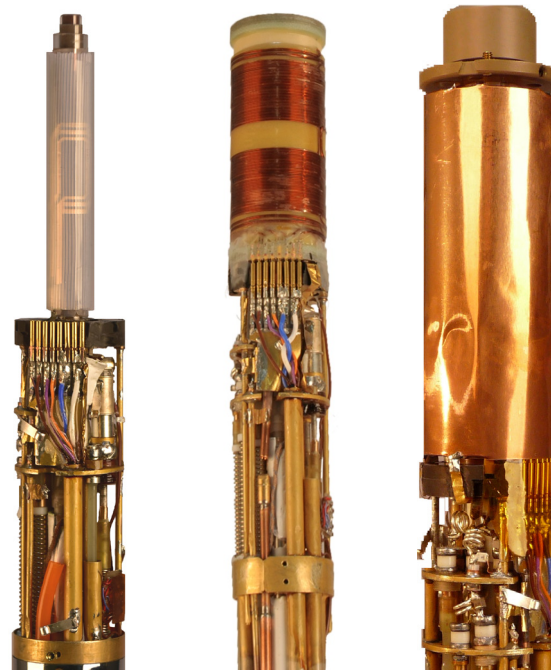
### Alpine Conf on MR in Solids, Sept. 15-19

Chamonix-Mont-Blanc, France

<https://alpine-conference.org/>

## NEW – Liquids PFG Z Gradient Probe with Temperatures up to 300°C

Most only see the outside of NMR probes. Let's look "behind the curtain" at our new NB HT liquids PFG probe with powerful Z gradients. (NB or WB probes available.)

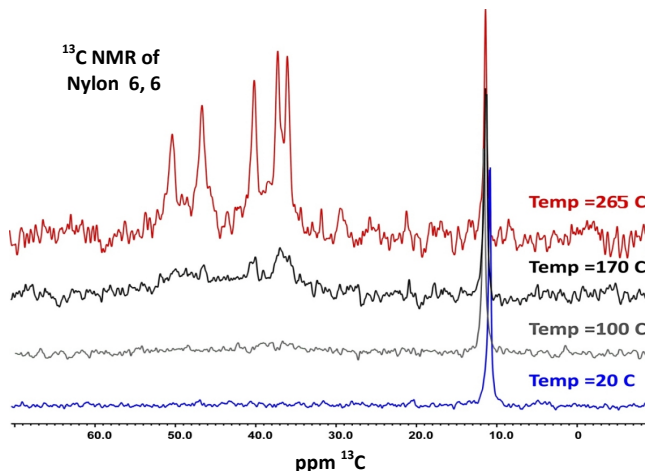


Probe with RF Coils and tuning elements.

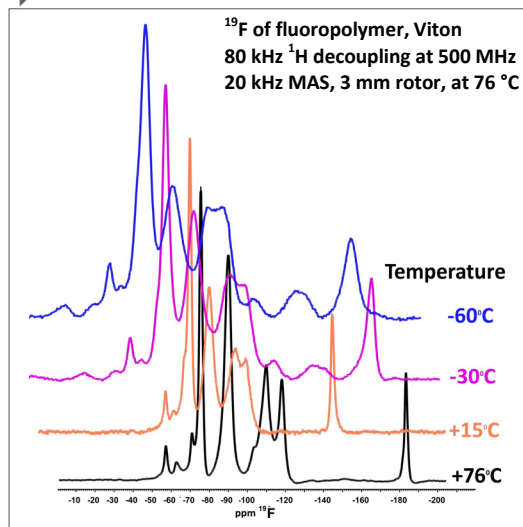
Probe with gradient coils added.

Probe with shielded gradients.

- Extended Temperature (XVT) to +300°C
- For liquids including macro molecules
- Improved shielding for low <sup>1</sup>H background
- 5 mm sample coil
- Pulsed gradient >1000 G/cm
- Many tuning options: H/X/lock, H/C/N/lock



## NEW – H/F/X/Y Quad MAS

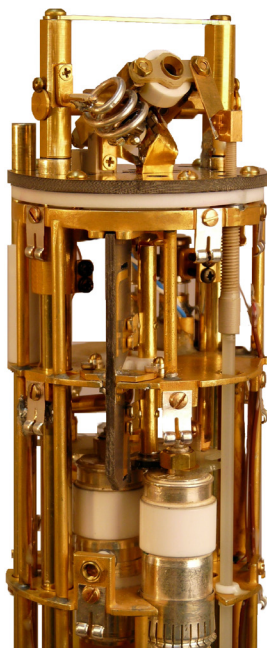


The first probe is a NB 500 MHz probe with a 3 mm sample spinner. A higher field version with a fast-MAS 1.3 mm spinner is being developed.

### Fluorine Quad H/F/X/Y HR-Solids

- 4 Efficient, high power RF channels
- Dedicated <sup>19</sup>F and <sup>1</sup>H channels for <sup>1</sup>H and <sup>19</sup>F operation simultaneously
- 2 Broadband channels, X/Y
- Enables <sup>1</sup>H and <sup>19</sup>F high-power decoupling (and <sup>2</sup>H decoupling on the X Channel)
- Extended VT range: NB -150 to +150 °C

See the poster at the ENC



## NEW – WB Ultra-Range MAS or MAS-DNP

- Broad Temperature Range  
-180 °C to +250 °C (ultimately higher)
- Broad Tuning Range <sup>31</sup>P to <sup>103</sup>Rh
- Double-Tuned <sup>1</sup>H/X or Triple-Tuned <sup>1</sup>H/X/Y
- Broad Range of Spinner Options  
7 mm, 5 mm, 4 mm, or 3 mm
- For WB magnets, 300 MHz to 850 MHz
- DNP Compatible – with microwaves from the top
- Sample Eject Option is available with 3 mm

(Note: We first introduced this probe last summer in design stage.)

## NEW – ENC Suite: Surf and Sand

Open 7:00 to 11:00 each evening - Sunday through Wednesday.

