

New Horizons for Swedish Sciences: World-unique (Bio)Solids Capabilities at the national UMEU NMR facility

16th Nov. 2023: 09.30-17.00 at Kempe Lecture Hall; Umeå University, Sweden

Inauguration of world-unique combined solid-state NMR equipment (MAS CryoNMR Probe + Ultrafast MAS NMR Probe) for the next application level in sciences ranging from bio and medical sciences to novel material and environment. Equipment is installed at the Umeå University KBC NMR core facility, a national SciLifeLab and VR-RFI (SwedNMR) node.



World-unique MAS CryoProbe at Umeå University (600 MHz).

Programme:

15th Nov 18.00 Dinner with invited speakers and Umeå, Scilifelab and SwedNMR affiliates.

16th Nov Kempe Lecture Hall

Chair: Gerhard Gröbner/Juergen Schleucher

09.30-09.45 Opening by Rektor Hans Adolfsson

09.45-10.00 Inauguration of equipment at NMR laboratory.
(T. Sparrman; online at KEMPE Hallen).

Chair: Mikael Akke (Lund)

10:00-10.30 Alia Hassan (Bruker, Zuerich, CH): *MAS CryoProbe challenges, development, applications.*

10.30-11.00 Coffee and cake

11.00-11.30 Tanguy Le Marchand (Lyon, F): *¹H-detected biomolecular NMR under fast magic-angle spinning: achievements and prospects.*

11.30-12.00 Daniel Topgaard (Lund): *CPMAS cryoprobe technology enables multidimensional solid-state NMR studies of the stratum corneum at natural isotopic abundance.*

12.00-13.30 Lunch and NMR site seeing

13.30-14.00 Tomas Larsson (Rise/KTH, Stockholm): *CP/MAS ¹³C-NMR on commercial wood pulps and cellulose.*

14.00-14.30 Patrick van der Vel (Groningen, NL): *Targeting a pathogenic protein-lipid complex implicated in Barth syndrome (by ssNMR)*

14.30-15.00 Coffee and cake

15.00-15.30 Dror Warschawski (CNRS Paris, F): *Molecular-Level Description of Chlamydomonas reinhardtii's Cell Wall.*

15.30-16.00 Melinda Duerr (Cambridge, UK) *Solid-state NMR insights into how tissue mechanics influence cell behaviour.*

16.00-16.30 Barbara Perrone (Bruker, Zuerich, CH): *"Applications where the MAS CryoProbe technology made the difference: a collection of examples from collaborations with customers*

16.30-16.45 Concluding remarks

19.00- Dinner with all participants