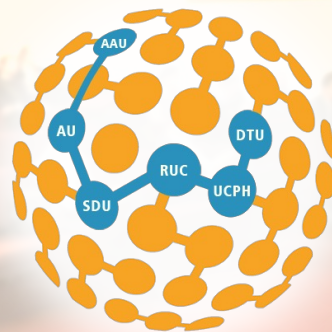


Newsletter

DANNMR



Hellos and goodbyes in the DANNMR Community

2023 - 2

The DANNMR Board thanks Ulla G. Nielsen for her engagement and welcomes Lars Porskjær

DANNMR University representative and board member **Ulla Gro Nielsen** from the University of Southern Denmark (SDU), left her position at SDU at the end of April to start at her new position at the Novo Nordisk Foundation. She will continue to co-supervise her current students until their completion of their PhD's and MSc, who will be using the 950 MHz until the next summer and her research activities will gradually close during the next few years.

“

This is not a goodbye to research and NMR from me, but an 'au revoir' and a new role. I am sure that we will be in contact.”

- Ulla Gro Nielsen (NNE)

We want to thank Ulla for her key work in the DANNMR consortium along these years and we wish her the best for this new chapter. Acknowledging her task, you will find a short article about **her research achievements** in our soon-to-come new DANNMR website.



Photo by: Júlia Díaz i Calvete

With Ulla's resignation, we also welcome our new board member Professor **Lars Porskjær Christensen** from SDU. Lars is professor of analytical chemistry and chemistry of natural substances at the Department of Physics, Chemistry and Pharmacy, Faculty of Science, SDU, where he is also head of department. He is a MSc in Chemistry (1989) and Ph.D. in Natural Substance Chemistry (1993) from Aarhus University. In addition, Lars has, among other things, been professor and head of department at the Faculty of Engineering, SDU as well as professor and vice-dean for research and innovation at the Faculty of Engineering and Natural Sciences, Aalborg University.

Lars has broad research experience within natural substance chemistry (for further information: <https://portal.findresearcher.sdu.dk/da/persons/lpc>), where the focus of his research is the development of new medicines based on bioactive substances from plants. In this context, NMR spectroscopy and other spectroscopic methods as well as computational chemistry and biological bioassays are central tools in his research.

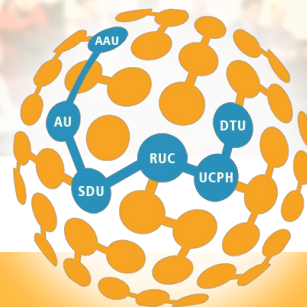
In the name of the whole community, we are very glad that you joined our consortium and we are looking forward to work with you, Lars!



Photo by: unknown

If you have any news for the DANNMR newsletter, please contact: jonatan.svendsen@bio.ku.dk

Check out our other news at: <http://dannmr.dk/research.php>



New faces in the DANNMR Community

2023 - 2

The Communication Team of DANNMR has been established

We introduce you to **Jonatan Svendsen**:

"I am a 22-year-old nanoscience BSc student at the University of Copenhagen (UCPH) and together with my colleague I am hired to restructure and improve **DANNMR's website and communication** regarding the different research fields and groups within DANNMR.

My goal is to get familiar with all the different groups within DANNMR and **interview the group leaders** for the purpose of writing a short article, which will be displayed on the DANNMR website. Furthermore, we will write a short presentation of each group, which will be displayed on the website as well.

If you have a great story to tell or news you want included in future newsletters, you are always welcome to contact me at: jonatan.svendsen@bio.ku.dk "



Photo by: Júlia Díaz i Calvete

Impact

Prof. Jørgen Skibsted is the '*Researcher of the Month*' of the Dept. of Chemistry at AU



Photo by: Júlia Díaz i Calvete

Professor **Jørgen Skibsted**, from the Department of Chemistry at Aarhus University, offered an interview talking about his field of study. Jørgen's research focuses on solid-state NMR spectroscopy and applications of this technique to understand properties of cement and concrete. He and his research group study composite cements that emit less CO₂ and develop processes that utilise end-of-life cement paste to absorb CO₂ from demolished concrete. Check this LinkedIn post and watch the video to learn more:

https://www.linkedin.com/posts/department-of-chemistry-aarhus-university_interview-with-professor-j%C3%B8rgen-skibsted-activity-7069959288596652033-CPHm?utm_source=share&utm_medium=member_desktop

Furthermore, a DANNMR article about Jørgen's research will be available soon in the new DANNMR webpage launching in the fall. Stay updated!



Solid-state NMR has the advantage that it can probe both crystalline and amorphous materials [such as cements]
- Jørgen Skibsted, AU

DANNMR committed to Education

Course in NMR Spectroscopy offered at the University of Copenhagen

The UCPH offers a 7.5 ECTS Master level course on the background theory of NMR Spectroscopy. This course led by Kaare Teilum is part of the MSc programme in Biochemistry and the MSc programme in Physics. In the following page, we include a flyer with more details and the link to the official course description. Feel free to distribute it to students that might find interest in this course!



NMR SPECTROSCOPY

7.5 ECTS Master level course

Have you ever wondered why an NMR spectrum looks the way it does?

This course gives you the background theory to understand how NMR works and why NMR spectra look the way they do. In the course you will learn about solution NMR experiments that allow you to:

- assign chemical shifts of small molecules, peptides and proteins
- measure diffusion rates and resolve molecules in complex mixtures
- measure nuclear spin relaxation rates

and you will get an introduction to solid-state NMR and its difference to solution state NMR.

You will learn how an NMR spectrometer works and how the data must be processed to give spectra you can analyze. You will also learn about nuclear spins, chemical shifts, scalar and dipolar couplings, relaxation, and multi-dimensional spectroscopy.

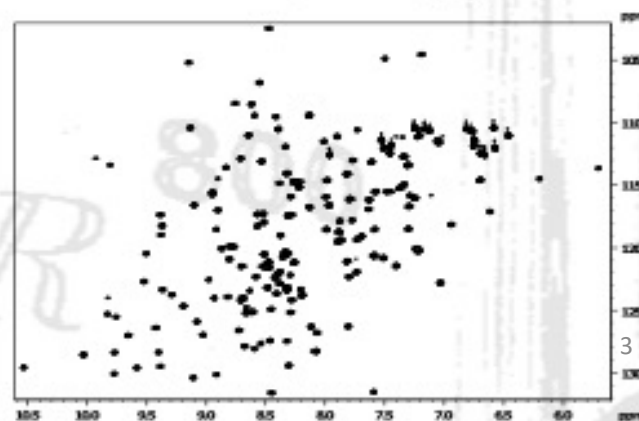
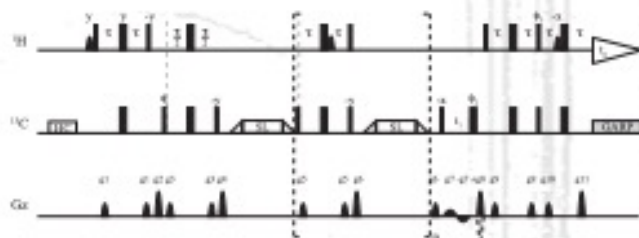
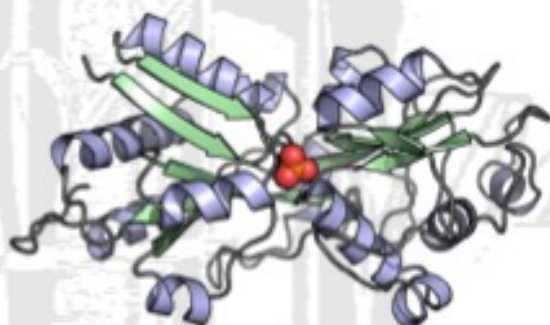
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More information:

<http://kurser.ku.dk/course/nbik16001u/>

Course responsible:

Kaare Teilum, kaare.teilum@bio.ku.dk



Expected & Unexpected Reactions During PET Depolymerization by Neutral Hydrolysis – Process Optimization by qNMR.

Researchers from Aalborg University investigated the chemical reactions occurring during **neutral hydrolysis with subcritical water**, a process especially promising since it avoids any organic solvents or other additions to the reaction mixture that would post a problem during downstream processing. Using **quantitative NMR**, the researchers from the Dept. of Energy and the Dept. of Chemistry and Bioscience at Aalborg University investigated desired and undesired reactions during neutral hydrolysis of PET over time at different temperatures. The results show an optimum temperature and treatment time, where a product with a **high potential for recycling** can be achieved with **low energy consumption**. This research was published in March in the journal Green Chemistry.

Green Chem., 2023, **25**, 2711-2722. <https://doi.org/10.1039/D2GC04831K>



Carlsberg 800 NMR
spectrometer at Carlsberg

On Wednesday May 31st the Carlsberg 800 NMR spectrometer at the NMR Center DTU was taken off field and is now warming up. After the summer vacation, it will be moved out of the NMR building. What will happen to the magnet have not been decided yet.



Carlsberg 800 NMR spectrometer at DTU. Photos: Charlotte H. Gotfredsen