



SCHOOL OF ENGINEERING SCIENCES IN CHEMISTRY, BIOTECHNOLOGY AND HEALTH

CBH News

Nr 1, January 2018

2019-01-21

wish you all the best for the coming year and hope everybody has had a long and nice Christmas break.

Among other things, the coming year will include a new Faculty Council for the period July 2019 – June 2023, as well as Dean of Faculty and Vice Dean of Faculty. The Faculty Council is elected in April 2019 through election among KTH's teachers.

The Faculty Council consists of thirteen members, whereof seven are teachers appointed through election in the faculty. Three of them are external members appointed by the President and three are representatives for the students, appointed by THS.

Those eligible are teachers who are professors or associate professors employed until further notice with an employment of at least 50 percent of full-time. The nominating committee will accept proposals of teachers for the Faculty Council during the coming weeks.

In the end of February, the nominating committee expects to present its proposal. In the nominating committee, among others, we find a CBH professor: Eva Malmström Jonsson, mavem@kth.se

The nominating committee thankfully accepts suggestions of teachers who could be suitable for being part in the Faculty Council (contact one of the members of the nominating committee before the end of January).

<https://intra.kth.se/en/aktuellt/nyheter/val-till-fakultetsradet-pa-kth-1.870368>

On February 11, the President and Deputy President will visit the CBH School and we will come back with a programme, but we are planning for a CBH staff meeting in the afternoon.

We will also be having CBH staff meetings in April (24, 25 and 26) at AlbaNova, on Valhallavägen and in Flemingsberg. These will replace our previous school colleges and on May 28, we are planning a school barbecue.

Many congratulations to Licheng Sun, professor in organic chemistry at the CBH School, who has been awarded the 2018 International Science and Technology Cooperation Award of P.R. China, one of China's most desirable awards for scientists.

China's National Office for Science and Technology Awards (NOSTA) awarded Licheng Sun for his important contribution in Sino-Sweden academic cooperation and exchange. The award has received media attention in China and the awarding ceremony was held at the People's Congress Hall in Beijing on January 08, 2019.

The International Science and Technology Cooperation Award of P.R. China is conferred on foreigners or foreign organizations that have made important contribution to China's science and technology undertaking.



Mikael Lindström
Head of School

Do you have news tips?

Send it to CBH News!

All news tips for CBH News should be sent to

cbh-nytt@cbh.kth.se

All contributions must be in by 12.00 on Monday the same week as CBH News is published in order to be admitted. See the current deadline at the last page.



Ask your questions to the President

It is now possible to send in questions for the President's visit on February 11.

On Monday February 11, 2019, the CBH School will be hosting KTH's President Sigbritt Karlsson and Deputy President Mikael Östling.

In the afternoon, there will be a staff meeting with the opportunity to ask questions.

Time: Mon 2019-02-11, kl 13.00

Location: K1, Teknikringen 56, Campus Valhallavägen

In order to facilitate the visit, questions to the President and Deputy President will be collected in advance and presented in a coordinated way.

E-mail your questions to CBH's Communications Manager Sabina Fabrizi,
sabina@kth.se

Financial outcome for 2018 better than expected

The CBH School's financial outcome was better than the prognosis, but despite a plus result, there are still imbalances within the school.

The financial outcome for the CBH School was 10 MSEK for 2018, which is better than the prognosticated budget for the same period, which was -11 MSEK.

The earnings landed on 1039 MSEK and the expenses on 1029 MSEK.

Despite a plus result for the school for the current period, there are still imbalances between different departments/research groups at the school.

JML and work environment

- Soon, on the school's internal pages there will be a list of the availability of restrooms, meditation rooms and possibly also other spaces. Implementation: February 2019. Responsible: Head of Administration Marie Larson.
- All kitchens and rest areas at the CBH School will receive a multicultural calendar, purchased at Adlibris. This edition is issued by Mångkulturellt centrum in collaboration with the government of Åland. Therefore, there will be some emphasis on Åland's and Swedish speaking Finland's calendar days. Implementation: January 2019. Responsible: Head of Administration Marie Larson.
- A work will be carried out towards a more inclusive Student Office by bringing up issues such as how students' rights and obligations are being communicated. Example of activity: Student counselor information or seminars at all CBH programmes in years 1 and 2 during the autumn semester of 2019, recurring activities around "soft issues". Responsible: Deputy Education Administration Manager Annelie Fredriksson.
- The work will be intensified with discussions about how we comply with KTH's core values: <https://intra.kth.se/en/anstallning/pa-lika-villkor/vardegrunden-for-vart-arbete-1.454801>. This will be carried out in many ways, both on managerial level and through and activities involving everyone at the school. Responsible: Head of School/JMLA Mikael Lindström.

Internal environmental audit with several positive observations

An internal environmental audit was conducted at the CBH School 7th and 8th November 2018. The purpose was to revise KTH's environmental management system and performance at the school.

The first part of the audit focused at the management's commitment and involvement in the environmental work. In particular, the auditors looked at the management's consideration of KTH's environmental goals in all school processes. The internal auditors placed great emphasis on revising the school's laboratory activities as well as recruitment of both academic staff and technical and administrative staff.

The second part was carried out at the Department of Protein Science, where the auditors looked at how the department management's commitment to sustainability in education and research worked. GA and PA (PRO) presented how their development work led to today's education programme, also the FA presented his work in environment and sustainability.

The auditors made several positive observations during the audit:

- that the school's theme is sustainability and that it permeates the education at the school.
- that the school has a newsletter that comes out every two weeks, both in Swedish and English.
- that the school has good control over chemicals. Especially this applies to the bar code system in KLARA and the school's routines for handling chemicals.
- that the Department of Protein Science has good awareness of sustainability issues and offer good courses on these issues.
- CBH is working to simplify so that it will be easier to have video / telephone conferences in order to reduce travel when possible.

CBH received no deviations, but got four suggestions for improvement which the school will work on in 2019.

Anna Finne Wistrand new professor at CBH

Congratulations Anna Finne Wistrand, former Associate Professor at Fibre and Polymer Technology, who recently was promoted to Professor in Polymer Technology with the specialisation Polymer Chemistry.

What do you think about having been promoted to professor?

It is obviously an important milestone being promoted to professor. On the one hand, it's a nice feeling to receive an acknowledgement that all the work you've put in has been worth something, that you have succeeded in accomplishing something. And on the other hand, I hope it will open up new doors and opportunities.

At the same time, not much is affected in the daily work, I will continue to set new objectives that include generating new valuable knowledge in my research area, to develop our education and myself as a teacher, supervisor, leader.

What is your background?

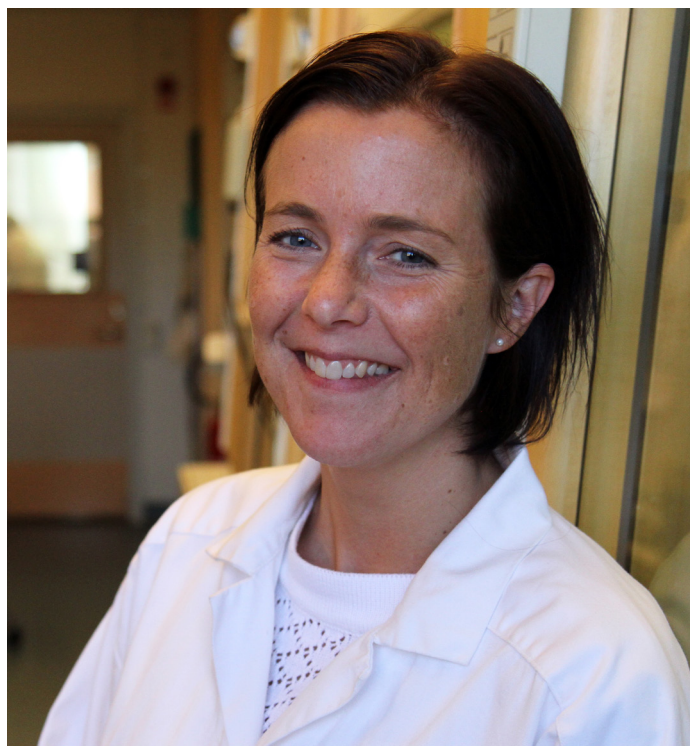
I'm essentially a KTH product, I became Master of Science in Chemical Engineering in 2000 and defended my doctoral thesis in Polymer Technology in 2003 with Professor Ann-Christine Albertsson as supervisor. Thereafter, I've seized the opportunities I've received to develop research, education and myself. I've been in research groups in Japan and the U.S, I've been Programme Director of the Degree Programme in Chemical Science and Engineering (the predecessor of Technical Chemistry) and I have been employed at companies on different occasions.

In the last few years, I've been working at Novus Scientific AB, a medical device company that does everything from polymer synthesis, fibre spinning for knitting of degradable polymers to finally selling a degradable mesh, intended as a reinforcement of soft tissue where weakness exists.

My sessions in industry have been very stimulating, in terms of knowledge and it has also increased my understanding of how a medical device is produced with regard to all the regulations and laws, but also in terms of leadership, since I feel there is a different kind of leadership in industry.

Describe your research area!

In research, I want to develop new degradable materials that can be used to regenerate new tissue. We do this by functionalizing the polymers so that the material-cell interactions become as good as possible, we create three-



dimensional structures with the help of i.a. 3D printers in which the cells shall grow and we study how the properties of the polymers change in different processes and under physiological conditions.

We work with both hard and soft tissue and right now, we have a major SSF-funded project with the aim of combining knitting and 3D printing to create degradable matrices for soft tissue. We focus primarily on breast tissue, creating a matrix that can be used after breast mastectomy.

What happens next?

As I previously mentioned, I will continue along the same path as I've done up to now, and continue developing my pedagogical skills to become a better teacher, my leadership skills to become a better leader and in terms of research, the aim is to produce new knowledge of how materials interact with tissue, develop new optimized degradable polymers and increase the collaboration between "materials and biology" so that, together, we can create new knowledge and generate innovative products.

Department day with demonstration tour at FPT

The department of Fibre and Polymer Technology had a department day on November 22nd where PhD alumni as well as collaboration partners were invited.

About 140 persons met up at K1 in the afternoon where a brief presentation of the department and the divisions were held. This was followed by a tour around the department to a series of demonstration stations showing recent on-going research activities at the department. The tour ended with an appreciated dinner at Syster och Bror.



Wood Hemicelluloses - Fundamental Insights on Biological and Technical Properties

Jennie Berglund, Fibre and Polymer Technology

Fr 2019-02-01 kl 10.00, F3



What is your dissertation about?

It is about understanding how the structure of wood hemicelluloses influences their properties.

Several aspects were considered and properties that are of both biological and technical importance such as interaction with cellulose, flexibility, stability, and solubility.

Does it have any connection to KTH's sustainability work and the global sustainable development goals?

Yes. Hemicelluloses make up about 30% of wood, a renewable resource that can be used as a raw material replacing fossil based products. However, the hemicellulose fraction in wood has a large potential to be used in a better way.

One global sustainability goal is “doing more and better with less” and research that could improve the usage of wood is therefore essential from an environmental perspective.

How can your results be used in the future?

Understanding the role between structure and properties of hemicelluloses is important for the development of new processes and products.

Hopefully, the findings in this work can act as a basis for development of new hemicellulose applications. In addition, this work helps the biological understanding of the role of hemicelluloses in the plant cell wall.

The next issue of CBH News will come out in week 6. The deadline for making contributions is on February 4 at 12.00.

Editor: Sabina Fabrizi, sabina@kth.se