



ISSUE 4: March 2022

NEWSLETTER

Letter from the Editors,

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Supramolecular chemistry has been one of the most emergent fields in chemistry in the recent years. Latest progress have led to a shift in focus, from understanding the basic concepts of molecular encapsulation to pursuing the controlled uptake and/or release of molecules with the aim to identify and develop new applications in several fields such as drug delivery, catalysis or functional materials.

In this the fourth and final NOAH newsletter, we have some secondment reports from an ESR. We also have a write up on the summer school which took place in Berlin last September. It was a real delight to be able to meet in person and discuss some host guest chemistry. Thanks again to the organisers as well as the speakers which attended for the great school! We have had the exiting moment of some PhD defences from NOAH members. Congratulations to Dylan, Quentin and Daniel Sanchez Resa on obtaining their doctorate. We have included some photos from their defences. Also included are some photos from a recent outreach activity of Chiara and Pedro. Great work to all involved

As this is the final issue, we would also like to extend our thanks to all NOAH members for the great collaborations which will hopefully continue into the future. Also a special thank you to Gemma for organising the network so wonderfully it certainly would not have been easy with all that has happened in the last few years. Finally, we would like to wish everyone all the best for the future especially those who will be defending soon.



Dylan Serillon
(ESR 8)



Quentin Bouvier
(ESR 9)



Daniel Stares
(ESR 3)

Networking within NOAH

Secondment's

Secondments are key factors in PhD student' research project once they allow the ESR's to gain knowledge and training in others fields of chemistry. Here we present some testimonies of ours colleagues and their experienc-



Daniel Stares

The COVID-19 pandemic has meant there have been numerous changes to the proposed secondment schedule. I was eventually able to get underway in May 2021 with a 3-month industrial



secondment at Biolitec. Biolitec, amongst other research foci, research and develop compounds for the use in photodynamic therapy. This involves the use of porphyrins, including the already marketed Temoporfin, as use as photosensitisers to generate singlet oxygen which can kill cancer cells. The headquarters of Biolitec are based in Jena, Germany though my secondment was conducted at the research lab based at Freie Universität Berlin under the supervision of Dr. Arno Wiehe. The work during the secondment involved the synthesis of porphyrins and other related compounds for use as photosensitisers. This secondment enabled me to shift from working in front of a mass spectrometer to working in front of a fume hood doing organic synthesis again. Porphyrins require extensive purification and their colour that they produces some interesting looking columns (see below). Overall, the experience allowed me to gain further experience in organic synthesis and insight into the development of medicinal products.



My academic secondment then started. This is being undertaken in the group of Prof. Agnieszka at the institute of organic chemistry the polish academy of science (ICHO-PAN) based in the polish capital of Warsaw. I was able to work alongside Arturo for the first month who was able to help me get settled. The work involves the synthesis and characterisation of resorcinarene based capsules. In Berlin, we have analysed some peptide-based capsules from the Szumna group using mass spectrometry. The aim of the secondment is to synthesise some control compounds which I can take back with me to Berlin and study via mass spectrometry which will hopefully help us find an explanation for the previous measurements.



Secondments aren't just about science and it has been a real pleasure to be able to explore the city under relatively little covid restrictions (currently, at least!). Below left, you will see the 'old' town of Warsaw. It is not actually that old as Warsaw was almost completely destroyed during WW2. The old town is thus a reconstruction which was completed using old paintings as a guide (some of which are housed in the palace seen in the old town photo). Below to the right is a photo of the Palace of Culture and Science at night. The building was a gift from Stalin and was until recently the tallest building in Poland. If COVID permits, Warsaw (and Poland generally) is certainly worth a visit!



3rd NOAH Summer School

Berlin, Sept. 20-23 2021

After what felt like an eternity of virtual meetings, the third NOAH school was able to take place in person at Freie Universität Berlin in late September 2021.

The school was a great opportunity to learn from world leading experts on topics relating to thermodynamic and kinetic characterisation of supramolecular complexes. This included talks on determining binding data by Prof. Kate Jolliffe, Multivalent and Cooperative binding by Dr. Larissa von Krbek, ITC from Prof. Ballester, and DOSY-NMR from Prof. Yoram Cohen. Mass spectrometry was also extensively covered with talks from Prof. Schalley on mass spectrometry of supramolecular chemistry and Prof. Pagel with a great talk in ion mobility mass spectrometry. We were also able to get a glimpse into the medicinal chemistry world with talks from Dr. Arno Wiehe as well as being shown a virtual screening tool from Prof. Xavier Barril.

SCHOOL OF KINETIC AND THERMODYNAMIC CHARACTERIZATION OF SUPRAMOLECULAR COMPLEXES
SEPTEMBER 20th-21st 2021 – On-line

Prof. K. Jolliffe
University of Sydney

Prof. K. Pagel
Freie Universität Berlin

Prof. P. Ballester
ICIQ

Dr. L. von Krbek
Universität Bonn

Prof. Y. Cohen
Tel Aviv University

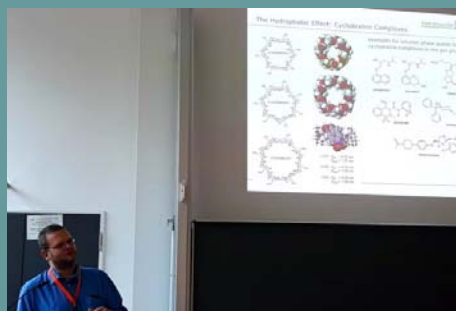
Prof. C. Schalley
Freie Universität Berlin

NOAH
HORIZON 2020
Freie Universität Berlin
Université de Strasbourg
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ESRs had the opportunity to present their recent research results over the course of two presentation sessions. It was a fantastic opportunity to discuss results in person and connect with each other. The PIs also were able to discuss with one another in a dedicated session but also continued into coffee and lunch breaks.

Soft skills weren't neglected either with sessions on career development and self-presentation from Sarah Blackford as well as an 'Industry or Academia?' round table discussion with PhDs who have gone onto pursue careers in both academia and industry.





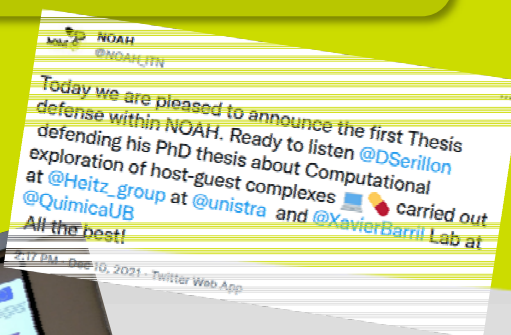
The in-person meeting also permitted social activities which just aren't possible at online meetings. This included a guided tour of Tempelhof airport the former airport which served Berlin as well as a lovely dinner at a restaurant on the banks of the Spree river.

Overall, it was a great opportunity to be able to meet in person after such a long time. A massive thank you to all of those involved in the organising and planning of the summer school.



Thesis Defences

The PhD journey has come to an end for some NOAH ESRs following the successful completion of PhD defences. Big congratulations to the new doctors. Here are some pictures from the Thesis of the first three NOAH ESRs Doctors!



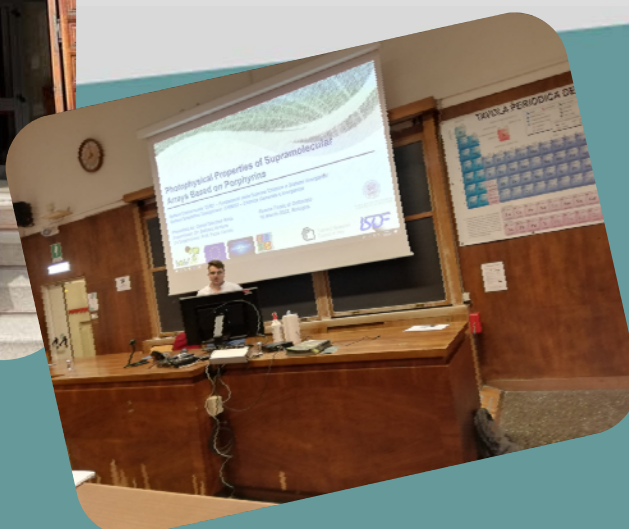
Dr. Dylan Serillon
(ESR8 UB-UNISTRA)



Dr. Quentin Bouvier (ESR9 COVESTRO-ICIQ)



Dr. Daniel Sánchez-Resa (ESR5 ISOF-CNR)



Outreach activities

Chiara and Pedro recently went to a school with their NOAH suitcase to showcase some supramolecular chemistry to the school children. They have also participated in the outreach program Crazy about Chemistry from ICIQ for highschool students. Nice work!



Upcoming events

International Symposium of Macrocyclic and Supramolecular Chemistry

June 2022

SupraChem

July 2022

International Conferences on Noncovalent Interactions

July 2022



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Beneficiaries



Partner Organizations



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