




ACID

Amsterdams Chemisch Dispuut

Volume 51 | Edition 3

 Amsterdams
Chemisch
Dispuut

The Chemistry Behind Hay fever

Why Do My Eyes Turn Red and Swollen?

PhD Research: Mimi den Uijl

Toolbox for Studying the Chemistry of Light-induced Degradation

Interview with Jarl Ivar van der Vlugt

Old and New Adventures

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From the Editor

Dear reader,

It is likely that you have been at home for a couple of weeks now, dutifully keeping distance from your colleagues, friends and family. Thank you for doing so, it saves lives. Even as the epidemic seems to slow to a halt (or so I hope by the time this edition reaches you) I implore you to keep observing the rules laid out by the government. In the meantime the blad-commissie will do our very best to keep you entertained with items on the travels abroad our fellow students made, on the leenstelsel and we even included an interview with Jarl Ivar van der Vlugt before he leaves the UvA. Of course we also included plenty of nonsense like the pictures of the borrels. We hope that you take your time (now that there is plenty of it until June), lie down in the sun and thoroughly enjoy this edition.

On behalf of our entire editing team,

We wish you good health and with kind regards,
Maarten van Dorp

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From the Chair

Dear ACD'ers,

Normally, this piece would be about the things that have happened in the previous months. I would sum up the activities and highlight some of the best quotes and awesome happenings. However, something came in between. In January, news reached us about a virus in China. Nothing to worry about, because it was far away and not in our 'straatje'. Unfortunately, it reached us fast and on the twelfth of March, the ACD had to close the doors and multiple activities had to be cancelled. This was a big 'oof' for the board, the committees and participants of all activities. Examples of events which had to be cancelled or postponed are the BEC, the spring party, the ONCS, the symposium, the career day and all drinks. This cancelling of events will go on for some time.

However, the activities are not that important compared to the health of all ACD'ers, their families and their friends. I do not know what the situation will be when this periodic reaches you and you're reading this, but keeping in mind that the situation will last until at least the first of June, I want to urge you to stay inside, wash your hands, keep one and a half meter distance (or better, even more), look out for the elderly and, most importantly, stay positive. I know it is hard when you are staying inside all day to keep the smile on your face, but if you keep a positive attitude, I can guarantee you that we will endure the situation.

To help you keep smiling, the board and the committees of the ACD will try to come up with fun online activities, a replacement for the ACD-rooms in the form of a Discord channel, workout videos as a replacement of sport activities and much more. I encourage you to join all these activities. In this way, you stay in touch with your fellow study friends and you are not completely isolated from your normal life. In times like these, you realize how nice the social contact that you have in your study is and how normal things, like the ACD-rooms and the drinks, help you getting through period like this.



I don't know what the world will look like when the pandemic is over. I hope that the smiles are still on our faces and we can go on with our lives as before the corona crisis, but I also believe it will never completely be the same. I want you to think about the things that you can't do right now. Sometimes, everything will go as you have in mind and extraordinary things will seem normal, but they aren't. When you can do all those things, appreciate it. I think that we all can be happier with all the luxuries that we have. Furthermore, if this is all over, I think the SLA and all the committees will make the seventy-fifth year of our association a year to remember, a year that will get a place in our memory for the rest of our lives.

Maybe this piece is a bit cliché, but sometimes encouraging words are what people need. And if not, for me it was good to write this piece, because I have a larger smile on my face than before writing. So, this piece is encouraging for at least one person.

I want to end with the famous words of the former Minister for Medical Care, Bruno Bruins: 'Let je een beetje op elkaar!'

With kind regards,
Your chairman
Sam Hulscher

Het wel en wee van de OC part 3 – We're on a spree

Maarten van Dorp

To start off, a question for everyone who thinks that filling in the UvAQ questionnaires takes too much time and don't do it: would you take the time for rating the courses in a single mouse click with a simple good/needs improvement choice? After that first question it could be possible to give the regular in-depth feedback if you want to. Some members of the OC are suggesting that this could raise the response rate of the forms, and we were wondering if this would help.

Now, some positive news in these bleak times: the OC has a new chair! From now on professor Grossmann will be preside over the committee, and he will be open to everything you have to say about the programme. So aside from the email you can find below, if you see Grossmann at the university you could also have a chat to convey your feedback.

Of course the elephant in the room is COVID-19. Luckily, we had already had a meeting planned a week after the government closed the universities and to observe the rules of the RIVM we met virtually. Professor Fonseca Guerra was present at the meeting and gave us the following information, which, keep in mind, was before the cabinet decreed that the anti-corona measures would be extended through to June the 1st. Aside from the details you have already received in your student mail, there are few actual details on the coming months. However, there are some general rules for as long as the university is closed. It is extremely likely that all practical courses will be postponed. To make up for this there is a (slight) chance that the academic year will be extended into the summer holiday. Take-home exams, reports, and online presentations will very likely replace the regular exams, so don't expect the next period to be a breeze, as the professor also pointed out that the faculty wants to proceed with education albeit in different forms.

Other topics were also discussed during the meeting. The OER-A/B and the TER have been evaluated, and the committee has proposed several changes. For instance, OER-B article 6.2c states that it's mandatory for honour students to follow 18 EC in courses at the FNWI. We would like to see that changed or at the very least be communicated to the students. There were more changes, but I will not bore you with the minutia in this article.

Another subject the committee discussed was a part of the Regels en Richtlijnen van de Examencommissie (RRvE) that states that extracurricular courses are also counted to determine whether a student has an average score of 8 for all exams. It seems strange to us that a student who goes above and beyond the regular curriculum of chemistry could have his cum laude title stripped because the extra grade they got was not an 8 or above. Because of this we expressed that we only want the courses that fall within the curriculum to determine whether a student graduates cum laude.

Naturally we also gave our feedback on several courses with the help of the course evaluations you have filled in. Once again I will not bore you with the many details of the feedback, which you can find on the Canvas page of the course after the professor has responded by the way, but I will urge you to keep filling in the feedback forms.

Stay safe and inside, and until next edition!

OC mail: ocs-science@uva.nl

OC page: student.uva.nl/sck/content/az/opleidingscommissie/opleidingscommissie

ICT committee? Do they even do anything?

Siza Kuin

I'd like to take you on a journey into the world of ICT at the ACD. Usually when people talk about our committee, it goes something like the title of this piece. The ICT committee is definitely not one that works on the foreground of our association, but it is still very vital in keeping everything running smoothly. For example, the iPad with the ACD app needs to be updated with new features that will make the lives of our treasurers much easier. And it needs to keep running for you to be able to get your ice tea green, coke zero, man-nenliefde, twix and other refreshments.

Recently, the PromoCie was set up to create a more uniform way to promote activities and other things among our members. To support this, the website and the flatscreen in the common room needed an update. For the flatscreen, a Raspberry Pi was bought by the 72nd board for the project of programming a slideshow with images that we could upload. However, as time went on, this project got less of a priority. Last year, we managed to make a slideshow, but every image needed to be uploaded with a USB stick. This year, one of our committee members, Myrthe, convinced her boyfriend to program a slideshow for us that would take its images from a Google Drive folder. This means we are now able to very easily promote for our partners and for specific activities, and show fun pictures of previous activities!

As you might have noticed, we redesigned the layout of the website and cleaned up many pages. We are still trying to implement a feature that would enable us all to sign up and pay for activities on the website. Due to the new privacy law we need to implement this very carefully. For the people unknown with WordPress and programming this may sound pretty easy, yet it almost seems that all you do when trying new things is bump into new problems. Not knowing how to do PHP coding, our server storage being too large, error messages due to an old plug-in being outdated, backups with all files completely unorganized, accidental-

ly clicking the wrong button and deleting the entire menu, etcetera. When we think about the steps we need to take to implement something, it usually takes about double the steps when you actually try it.

Now this is all fine and well, but what does it actually mean for YOU, our members? Our aim is for you to take in information from the ACD more efficiently and easily. We want a clear website, where everything is updated and it is clear where you can find the answer to your question. We also want a better overall look for companies to admire. And of course, to keep our current system running on the iPad so you can get your beers completely carefree.

Currently we are also working on updating the ACD app and making it work on the newly bought iPad with one of our members of merit, Rob Kunst. We hope that when we are finally able to get together again in our common room and on the 'borrel', you can all enjoy this!

Thank you for reading. I hope this was all somewhat interesting and informative. And if you have any questions or suggestions for us, please send an email to ICT@acdweb.nl.



From left to right: (first row) Jari, Hajo, (second row) Tori, Maartje, Myrthe and Siza.

The Chemistry Behind Hay Fever

Why do my eyes turn red and swollen?

Michelle van Dongen

*'But the warm sun thaws the benumbed earth,
And makes it tender; gives a sacred birth
To the dead swallow; wakes in hollow tree
The drowsy cuckoo, and the humble-bee.
Now do a choir of chirping minstrels bring
In triumph to the world the youthful Spring.'*
– Thomas Carew 'The Spring'

The Petrarchan lyric poet Thomas Carew described spring as an event of beauty and bliss which aligns with the opinion of many. Unfortunately, this season can also bring about a lot of terror for me and millions of other people around the globe.¹ As soon as this season hits time's doorstep, we have to lift ourselves in a protective bubble to enjoy the great outdoors, as the pollen accompanying spring result in red swollen eyes, a runny nose and continuous sneezing. I guess you can already guess the affliction I'm writing about? I'm referring to allergic rhinitis,² better known as hay fever. With this infliction becoming worse year after year, I thought it was time to discover what is chemically happening during hay fever season and in what ways we can reduce the symptoms.

The event leading to the hated hay fever's symptoms is the exposure of the human body to pollen, which in the case of allergic rhinitis is mistakenly identified as a threat.² These pollen have without reason been identified as antigens, leading to the production of antibodies which are complex protein structures named

immunoglobulins and will remain in the bloodstream even when the antigen has disappeared.⁴ In the case of allergic reactions, the class of immunoglobulin type E, IgE, is often produced.^{2,3} IgE is a Y shaped structure with two antigen binding sites and is different for each antigen (Figure 1).⁵ Once this IgE has been produced, this molecule attaches itself onto the cell membrane of mast cells and basophils, types of cells often found

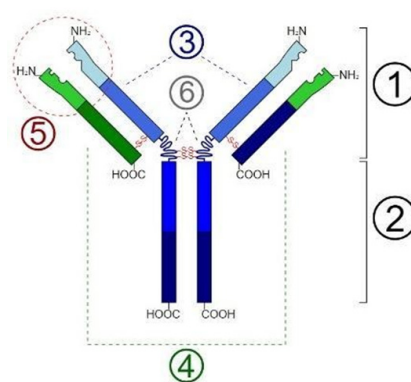


Figure 1. Schematic view of IgE with the antigen binding sites marked as 5.⁴

in the exposed sites such as the skin.² Recurrent exposure to pollen then leads to the hay fever reaction we are so familiar with, as this pollen now binds to the IgE attached to the mast cells and basophils upon which these cells release a variance of chemicals. Of these chemicals, histamine (Figure 2) is the one believed to be responsible for the allergic symptoms.^{2,3} This compound causes dilation of the blood vessels and an increased ability of blood fluids to leak out of the capillaries, resulting in the swelled tissues. Additionally, it enhances the contraction of smooth muscles, thereby stimulating the production of saliva, tears and mucus and thus creating the classic runny nose and watery eyes. I guess I will curse histamine next time I set a foot outside and can't stop crying.

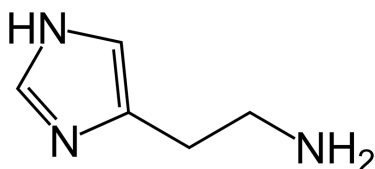


Figure 2. The chemical structure of histamine.

Fortunately, medication has been developed to battle these tiring symptoms either by inhibiting the binding sites, the H1 receptor, of histamines, blocking histamine's release from the mast cells, or by treating the hay fever symptoms themselves.² The first class are more commonly known as antihistamines (Figure 3) and

work best when taken before exposure to pollen has occurred, since they cannot unbind the histamines already bound to the H1 receptor. The second is usually in the form of sodium cromoglicate (Figure 4) used for the itchy eyes, which relieves the itchiness due to an unknown mechanism. The last are the class of corticosteroids (Figure 5) which are the most effective as they battle the inflammatory symptoms themselves, but they take several days to reach their full effect. I guess this means I should start taking my medication now then, eh?

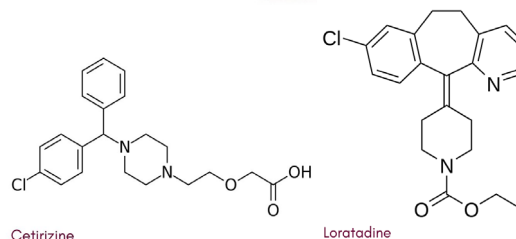


Figure 3. The chemical structures of two common antihistamines: Cetirizine and Loratadine.²

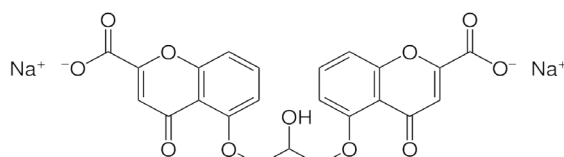


Figure 4. The chemical structures of sodium cromoglicate.

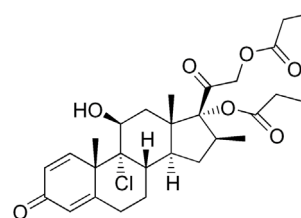


Figure 5. The chemical structure of Beclomethason, a corticosteroid used to help inflammatory symptoms.

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Wintersport: Looking Back and Ahead

Maartje van Rijn

During these very strange and uncertain corona-crisis days, I believe it is important we try to stay positive. One very obvious way of doing this is looking back at the wonderful times we have had and the wonderful times that are hopefully still to come. Even though it seems that 2020 is going to be labeled as a crappy year in the history books, there have already been many wonderful events during the first three months. One of these is of course the ACD ski-trip. Because reading is one of the many things we can do from home, I will provide you with a short walk down the ski-trip 2020 memory lane. I will look back on the ski-trip 2020 to Wildkogel and I will look forward to the ski-trip 2021 (let's just assume that this ski-trip is going to happen).

Around June of 2019, the first organizational steps for the ski-trip were taken. Several travel agencies were asked to send us some good offers for a three-day ski-trip at the end of January 2020. Rather quickly, we decided to stick with Duke Travel, who offered us a reasonably priced trip to Wildkogel in Austria. We had worked with Duke Travel before and they are very flexible, which is nice for a hectic association like the ACD. Thus, the organization was kicked off and we could start planning more details of the trip.

I will not bore you (even though you probably already are) with the details of organizing the rest of the trip, partially because it is all pretty straightforward and as we say in Dutch: 'een kind kan de was doen.' We did, however, run into a tiny problem. Even though the ski-trip 2019 had been very successful and over 40 people joined the trip, it seemed that ski-trip 2020 was not going to happen with a large group like that. In the end, we traveled with a small group of 24 people. It was still a lot fun though.

Thursday January 30th, we drove all the way to Wildkogel, where we arrived on Friday morning. Even though the weather forecast seemed awful for the weekend we were staying, the weather ended up being



amazing. The sun was shining, the skies were blue. Within two hours of our arrival we were on the slopes, but first things first: coffee! After some of us had been charged up with our daily dose of caffeine, we went down the slopes. I personally thought the ski arena was absolutely amazing, but, you know, it was only my second time skiing in my life, so I can imagine that some of the more experienced athletes out there were thinking the arena could have been bigger.

The first day was finished with some well-deserved après-ski beers and some people skied back to the valley via the world-famous toboggan run, which is the largest in the world: 14 km! This slope was a personal highlight for me, I loved it.

Once everyone was back at the hotel, it became clear that dinner at 18.30u was not going to happen. There were about 200 kids running around in the hotel which also needed to be fed. Luckily, we were able to eat around 19.30u and we had some peace and quiet as well. Some people then went off the bed, because sleeping in a bus is straight-up shitty, so there was some sleep to catch up to, and others still had energy left to go out. Some Jägerbombs were consumed and people danced through their muscle strains. The next day was again filled with skiing, snowboarding, eating, drinking, more skiing and snowboarding and lots of

laughter. The sun was still shining on the second day, which was very much appreciated amongst everyone. The second evening it seemed more people were down for a party, so a large group spent the evening and night in the one and only après-ski bar in the village. Some may not remember everything about the night, but they had fun, nonetheless. I certainly did.

The last day the weather turned slightly bad. It started snowing in the late morning, which made the sight quite terrible. I personally like it when I cannot see anything, because it makes me less scared of the height. At one point, the wind started picking up too and some of the ski-lifts were shut down, so we were forced to go back to the valley. We did not lose a lot of time in the end. The skiing gears were given back to the rental place and we finished the day by having a nice dinner with the whole group in a restaurant in

town. We then drove back to lovely Science Park and of course we were stuck in traffic around Breukelen.

We have received so much positive feedback about the ski-trip and I am already looking forward to next year! For now, I am the only one left in the *wintersportcommissie*. If anyone is interested in helping me, you can contact me or send an email directly to the board: bestuur@acdweb.nl. Organizing the ski-trip is not the most complicated job and it still is a lot of fun. Next year we will also try to incorporate some of the feedback we have received on the last ski-trip and try to improve the trip even more. Hopefully, I will see many of you next year!

Stay healthy and safe everyone!

Many kisses,



The Annual PAC Symposium

Ben Kras

This year, the 26th edition of the PAC symposium was given in the Gorlaeus building of Leiden University on the 5th of March. The board of the PAC foundation has enjoyed organizing the symposium and hope you enjoyed the symposium as well.

The board

The board of this year consists of chairman Hoogers (CDL), secretary Ben Kras (ACD), treasurer Geert Schulpen (Proton), commissioner of speakers Yvette Schipper (VCSVU), commissioner of location and logistics Rijk Huisman (CDL), commissioner acquisition Dennis Nijenhuis (VCSVU) and commissioner of Web design Sander Veen (VCSVU). We all had different reasons for applying to the board. For me, the symposium of 2019 was a lot of fun to attend: the lecturers were very interesting, the organization was good and it was



a good way of spending my day. Being part of the organization of next year seemed like a great opportunity to not only learn how to organize such a symposium, but also to meet people from our sister associations.

The organization

When organizing the symposium, you would think of a lot of meetings, emails and discussions regarding location, promotion, the theme et cetera. As we all are full-time students, we had to organize the meetings in the evening. Even though it was late already, the meetings were always something to look forward to,

as they always turned out to be interesting to listen to and a lot of fun to attend. You also get to see new places: I had never visited Leiden University and Utrecht University before I joined the PAC board. After this year, I've seen the interior of both universities' science parks, as well as visited many places in Leiden I had never visited before. As the secretary, it is my job to make the notes of the meeting. It may not sound like the most interesting job there is, yet it is the job you learn the most from; it also is especially rewarding when you are unable to attend once and the vice-secretary wants you to always be present as making notes of a meeting is always an underestimated task. Furthermore, it is also the secretary's responsibility to manage the mailbox and the google drive, and when possible, assist in the organization for other positions of the board. As the secretary's function is not that time-consuming when organized properly, you usually have the time to help others where possible. Besides the meetings, we also ensured we had a fun year together. We did a lot of activities together, such as dinners, drinks and other bonding activities. Getting to know each other better also made organizing the symposium together more enjoyable.

The symposium

The day of the symposium may have only started at 9.00 for our visitors, yet to ensure that everything was set up, the members of the board were required to be present at 7.15 and the crew at 7.30. For most of us, this required us to get up early or find a place to stay in Leiden, which meant that Daan's couch was used by more people than usual. You might expect that we had a busy day ensuring everything was present at the right time while everyone was enjoying the lecturers, yet this was not the case. Everything was going as planned, without anything requiring our attention to go fine. Even Bob McLaren, the comedian, showed up at the right location this time. As a result of this, we could visit lectures as well, as could the crew. For me, this was unexpected. Therefore, a nice take-home

message for those who want to organize the PAC-symposium next year, is to have a large enough crew and to organize everything in advance, so that if something unexpected occurs, there are enough people to take control over it.

The symposium was finished with dinner at Holle Bolle Gijs, a nice restaurant in the centre of Leiden. The dinner was probably the most memorable moment of the day, as Dr Sason Shaik, one of our plenary lecturers gave a speech in which he showed his gratitude for the organization of the symposium and stated that

he had enjoyed the symposium, which we were very happy to hear.

To conclude, I enjoyed being part of the board of the PAC foundation and organizing the symposium. We are very happy to hear that all our visitors, crewmembers, lecturers and lecture hall chairmen have enjoyed the symposium and we had a lot of fun organizing it. If organizing the PAC symposium sounds like something you want to do next year, we will soon start with recruitment for the board of PAC 2021. Keep a lookout for any information we will provide.



Adventures of a Chemist Abroad

Michelle van Dongen

Hi everyone!

My name is Michelle and I'm currently a 3rd year Bachelor student. Last semester, I spent my time at the University of Toronto, St. George campus, where I followed courses for my minor period. Some of you might have read my piece about the preparations for going on exchange and the obstacles it can sometimes bring along. In hindsight, I can definitely say it was all worth it! The campus was stunning, the people amazing and there is enough to see in Canada, even just in Toronto.

I won't lie: UofT is hard work, especially when you decide to take on the full course load and challenging

higher level courses. However, the professors are usually one of the best and in the end, you have really learned a lot. Besides, if you take 4 courses (which is what is required) then it is much easier to balance everything out. I followed 5 courses on my exchange. Two were mixed 4th year undergraduate level/1st year graduate level courses, one was a 2nd year level Environmental Chemistry course and the last two were 2nd year level Antiquity courses. Aside from a love for chemistry, I also can't get enough of ancient languages and antiquity. Hence, I decided to take up my Ancient Greek again and follow a course about the life of women in antiquity.

The semesters in Canada work slightly differently: I followed these 5 courses simultaneously for 4 months. I had 5 lectures of 1 à 2 hours a week and only 1 tutorial. UofT is also known for its so-called 'UofT time', which is the 10-minute time given to get to your next class on campus. Each lecture is thus actually only 50 minutes. Personally, having 5 courses at the same time gave me a huge throwback to high school. This was enforced by the fact that your grade was not necessarily dependent on your final exam but rather on the weekly assignments, quizzes and midterms. Classes ended on the 5th of December and from that day forward I only had five finals to make my way through. Because of this 'high school' like set-up the work pressure was higher in my opinion than at the UvA. I had to learn how to divide my attention over 5 courses and had to adjust my way of learning. However, there is also a huge benefit of following all these courses for four months; I can still recall the course material and got more depth in each one of them.

Another big difference with the UvA can be found in the student life which is not as active as here in Amsterdam. I think this might have something to do with the fact that the requirements to get into the master programme are pretty hard. The grades you get really matter for your application and this is noticeable in the way the libraries are still relatively full at 3 a.m. on a Friday. However, there are enough Canadians who know how to balance this and I've had enough fun movie or pub nights which I wouldn't have had without them.

A big thing at this university are the sport- and social clubs. I joined the outdoor club, as I love to hike, cycle, camp and just spend the days and night outdoors. Joining one of the clubs or associations is a great way to get to know a lot of people from the start and I'd really recommend it. Although Canadians are a bit shy in the beginning, they are also one of the friendliest people I've ever met. It is easy to feel at home in this city. And don't get me started on Toronto itself. I loved the view of the CN Tower, the skyscrapers and the hidden gothic buildings. I miss getting a coffee or Timbit at Timmies or taking an Uber to the Scarborough Bluffs with my roommates or outdoor club friends. If you are not really a city person, there is enough to see in the rest of Canada. It is fairly easy to rent a car and drive up north to the wonderful nature parks. You really can't omit a visit to Algonquin Park in the Fall! If you are still not convinced about the wonders of Canada, then I'll just say one more thing: snow. 🥰

I know it is a cliché, but my exchange really helped to unravel the direction I want to take within chemistry and made me realize how much I still want to broaden myself in languages, philosophy and culture. I was at the other side of the ocean, far away from family and friends, so I became more independent as well. I made new friends for life with whom I still skype/text/call every week and I got to experience a different culture, which is now close to my heart. Not bad for an exchange, eh?



12 | April 2020





Toolbox for studying the chemistry of light-induced degradation (TooCOLD)

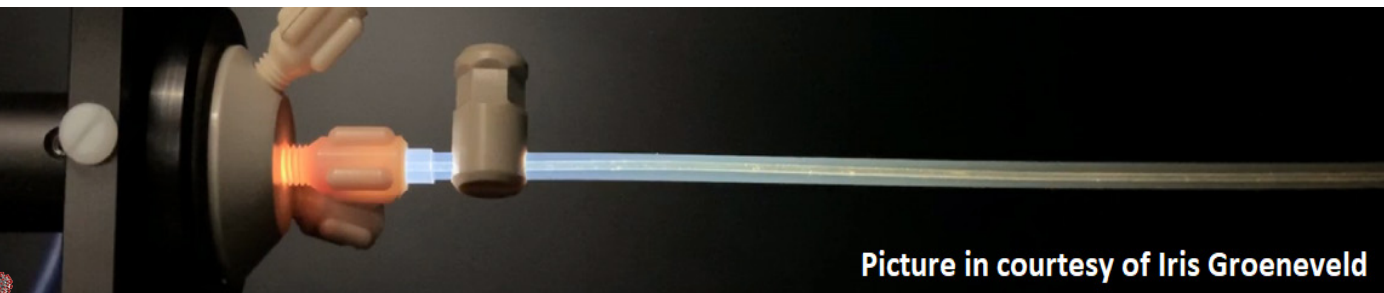
Mimi den Uijl

Many organic compounds change under the influence of light. This can be beneficial, for example when contaminants degrade in water purification processes, but it is often undesirable: when cultural-heritage objects fade, affecting their esthetical value; when healthy food ingredients (i.e. vitamins) degrade or when toxic components are formed. In the TooCOLD project (Toolbox for studying the Chemistry Of Light-induced Degradation), we aim to develop an innovative, high-resolution and fully orthogonal system to study the degradation of a wide range of mixture components under the influence of light. This system will consist of a two-dimensional liquid chromatography (2DLC) setup with a light-induced degradation (LID) cell in between in which the first dimension will separate the sample of interest and the second dimension will separate the degradation matrix. In this degradation cell, the sample is irradiated with light and during the degradation the sample is monitored. When the degree of degradation is sufficient, the degradation is stopped, and the sample is transferred to the second dimension.

This project is a collaboration between the Vrije University (VU) and the University of Amsterdam and consists of three pillars. The first one is the development of the degradation cell, which is performed in the BioAnalytical Chemistry group at the VU. The second part is the implementation of the cell in a 2DLC setup, located at the Analytical Chemistry group at

the UvA. The third part is the data-analysis, which is located at the IBED at the UvA. The project will yield tremendous amounts of data from these different sources, such as the mass spectrometer, diode-array detector, Raman, and SERSS. The first two parts are executed by two PhDs, of which the first is Iris Groeneveld and I am the latter. The third part is performed by a postdoc, Carl Eskildsen. The project aims to aid in the understanding of degradation in three disciplines: food, water and art. However, the TooCOLD setup can eventually be used for all kinds of light-degradation studies.

Here at the UvA, we look at all the different effects that the implementation of the light-degradation cell will have on a comprehensive 2DLC setup. In 2DLC, the effluent of a first-dimension separation is sampled on a second dimension. The separation becomes comprehensive when all the effluent is sampled on the second dimension, which is often established by implementing a valve in between the two dimensions. This valve guides the first-dimension effluent in one loop, while it is emptying the second loop into the second-dimension separation. Once the loop is filled and the second-dimension run is finished, the valve switches and the next loop will be filled. Comprehensive 2DLC comes with certain restrictions, since the loop filling time should be equal to the runtime in the ²D method. This often leads to a lower ¹D flow rate and a fast ²D flow rate, which will lead to higher pressures.



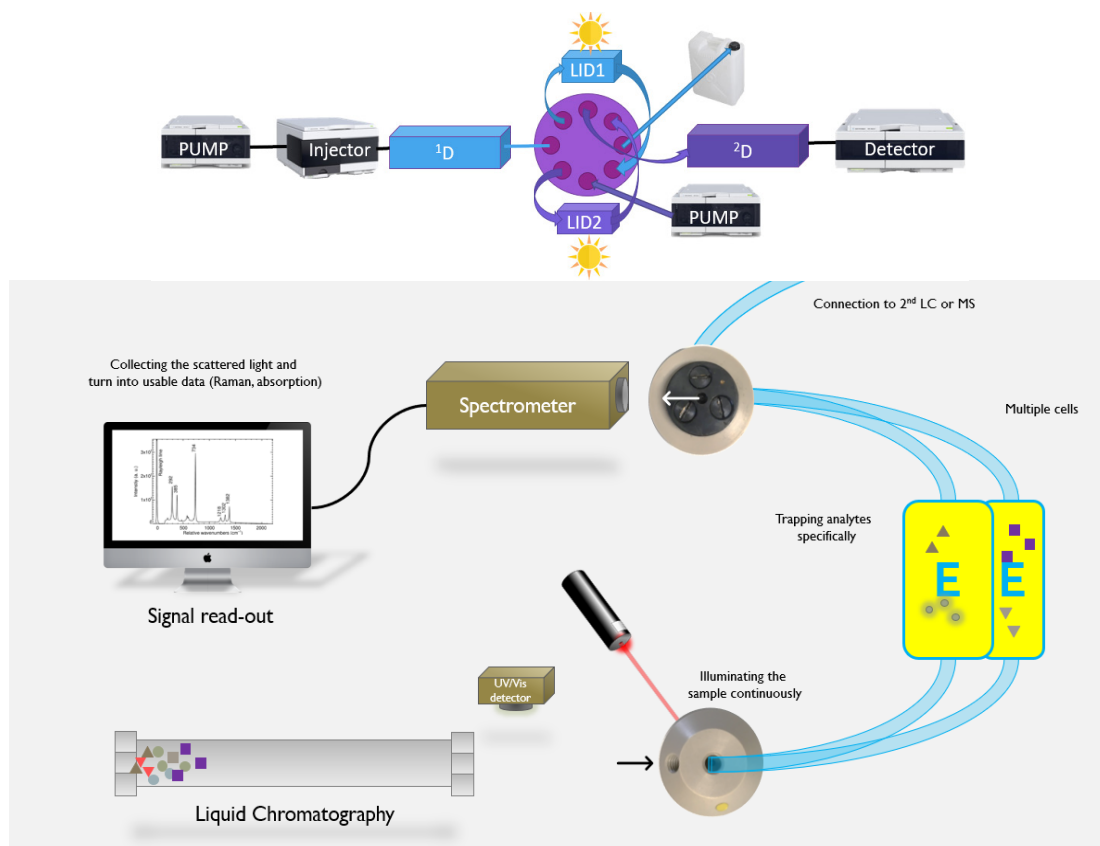
Picture in courtesy of Iris Groeneveld

Picture of the LID cell

The main goal of my PhD project at the UvA is to solve the problems that arise when the LID cell is implemented. One of these problems is, for example, making the low-pressure LID cell compatible with the high-pressure environment of the 2DLC. Another problem that we must tackle is the 2D method. In our TooCOLD setup, we aim to separate the sample mixture of interest in our first dimension before sending the selected compounds to the light cell. This means that the second-dimension separation will be performed on the degradation products that have been formed in the cell. Optimization of a 2D separation on an unknown mixture will be very difficult, which leads to the further development of scanning-gradient experiments, a retention-prediction method. In scanning gradients, two or three different gradients are performed to establish the retention parameters for the compounds of interest. In this way, the best method can be calculated from these parameters and optimization can be accelerated. The third problem that the implementation will bring is the extra-column band broadening of our analytes due to all the extra tubing. We aim to implement different forms of modulation,

such as solid-phase assisted modulation, where you trap your components in between two dimensions on a small solid-phase column, or active solvent modulation, where the components are trapped at the top of the 2D column. These forms of active modulation have already been applied to comprehensive 2DLC, but they both have their advantages and disadvantages. In this project, we aim to understand the limits of both techniques better before implementing them.

The TooCOLD project is a very broad project with applications ranging from pharmaceuticals to water purification and from food degradation to conservation of paintings. All these small molecules undergo the same photodegradation process, but in very different conditions. Finding similarities between the different fields and applying these to the TooCOLD product is challenging, since the different disciplines do not always talk the same language, but it is very fulfilling when it works! This PhD project gives great opportunities to dive into the fundamentals of two-dimensional liquid chromatography but has a big social impact as well.



Diagrams of the 2DLC setup (upper) and 2DLC setup with LID cell (lower, courtesy of Iris Groeneveld)

Niet Mijn Schuld!

Maarten van Dorp

Het overgrote merendeel van de huidige studenten kent geen ander leven dan dat onder het juk van het leenstelsel. Die woordkeuze lijkt misschien wat overdreven, en is het waarschijnlijk ook, maar toch zijn er weinig studenten die met een goed woord reppen over het 'schuldenstelsel.' Aan de andere kant zijn er geliefde (en al dan niet ironische) meme pagina's die volledig in het teken staan van het lenen bij de ogenschijnlijk goedaardige Ome Duo. Deze onenigheid over studiefinanciering is niet nieuw en voor vrijwel alle naoorlogse ministers met onderwijs in hun portfolio is het een hoofdpijndossier geweest, dus ook de huidige minister van Onderwijs, Cultuur en Wetenschap (OCW) Ingrid van Engelshoven. Nadat Van Engelshoven aan het begin van dit collegejaar aankondigde dat zij het leenstelsel wil doorlichten, was mijn interesse opnieuw gewekt: Wat ging er vooraf aan het leenstelsel en hoe zijn we zover gekomen? Als ze er zijn, wat zijn dan de problemen met het huidige systeem? Hoe verder?

Gelukkig hoef ik deze vragen niet helemaal in mijn eentje te beantwoorden. Op het moment loopt er namelijk een campagne van de LSVb en de FNV over het afschaffen van het leenstelsel genaamd #NIETMIJNSCHULD, en toen van die laatste organisatie Martijn Baart recentelijk in ons hok een babbeltje kwam maken drukte hij mij op het hart graag mee te helpen met dit artikel. Na wat mailcontact heeft hij uiteindelijk de relevante nieuwsberichten en artikelen uit het FNV archief gestuurd, waar ik enorm dankbaar voor ben.

Vroegâh

We beginnen niet bij het begin, dat ligt namelijk in de vooroorlogse studenten financiering regelingen die, alles overwegende, niet passen binnen de geschiedenis van studenten engagement na de tweede wereldoorlog.

Daarom beginnen we in 1956, toen WOII nog vers in het geheugen lag en het economische wonder van de

wederopbouw gepaard ging met de constructie van de verzorgingsstaat onder Willem Drees. Om de belachelijk snelle stijging van de kwaliteit van leven in Nederland mogelijk te maken waren er veel WO geschoolde (en technische) arbeidskrachten nodig. Het was dus zaak om de universiteiten toegankelijker te maken voor meer studenten. In lijn met de maatschappelijke trend van verhoogde sociale mobiliteit besloot het kabinet om, overigens zeer beperkte, studietoelagen beschikbaar te stellen aan minder bedeelde ouders van studenten. Het fundament van de StuFi was gelegd.

Zoals jullie in een eerder artikel over het ontstaan van de medezeggenschap hebben kunnen lezen, zorgde deze toelage er (onder andere) samen met het opgroeien van de babyboomgeneratie voor dat de universiteit veranderde van een bastion van de elite tot de relatief toegankelijke instelling die we nu kennen. Dat leverde wrijving op met de gevestigde orde van de universiteitsbesturen en in 1969 waren de bezettingen van de 'Karl Marx Universiteit' en het maagdenhuis van de UvA een feit. Als reactie hierop werden de universiteiten in 1972 met de WUB diepgaand gedemocratiseerd en naarmate de jaren 70 vorderden kregen de studentenraden en bonden het voor het zeggen. Naar hun mening (waaronder die van onze eigen ASVA) kon de StuFi niet achterblijven en zij voerden de druk op de politiek op door veel te protesteren (en rellen), met de invoering van de studiebeurs in 1986 door toenmalig premier Lubbers tot gevolg. Studenten kregen alles op een dienblad aangereikt; dit was een beurs om U tegen te zeggen. Iedereen kreeg een gift van 600 gulden per maand, gecorrigeerd voor inflatie en wisselkoers nu ongeveer 515 euro, terwijl de aanvullende beurs en de mogelijkheid renteloos te lenen bleven bestaan. Helaas wezen de hoge kosten van dit systeem er al snel op dat het niet duurzaam zou zijn.

Onder hevige protesten luidde de hervormingen van minister Ritzen tijdens kabinet Lubbers-III in 1991 een periode van gesleutel aan de StuFi in. In dat jaar

wordt namelijk het inmiddels geliefde studentenreisrecht voor het gehele jaar ingevoerd, maar wel op kosten van de student zelf, er werd voor de bekostiging namelijk gekort op de basisbeurs. Ook wil de minister de zogenoemde tempobeurs invoeren: lukt het een student niet om net wat minder dan een kwart van de te behalen studiepunten per jaar bij elkaar te sprokkelen, dan zal de gift worden omgezet in een lening. De PvdA, de partij van Ritzen zelf, weet dit voorstel nog tot 1993 tegen te houden, maar daarna moeten de studenten er toch echt aan geloven. Het volgende jaar is het nog jonge reisrecht het doelwit en komt de week-of-weekend structuur die we nu kennen tot stand.

Met het gerommel in de marge weet de minister de kosten van het systeem niet genoeg te drukken en met het begin van het eerste kabinet van Kok wordt het op z'n kop gezet. De nieuwe prestatiebeurs bedraagt 425 gulden en wordt pas een gift als de studie binnen tien jaar is afgerond. Op kleine aanpassingen en het bizarre experiment van de langstudeerboete van Rutte-I na, dat studenten die meer dan een jaar langer studeerden 3000 euro aan extra collegegeld oplegde, was dit de StuFi die uiteindelijk moest wijken voor het leenstelsel.

Het einde van de beurs

De vooravond van het leenstelsel diende zich aan met een sentiment dat ons niet onbekend voorkomt: de kwaliteit van het onderwijs en de lerarensalarissen moesten volgens Balkenende-IV omhoog. Dat geld moest ergens vandaan komen en toenmalig minister OCW Plasterk wil daarvoor in 2007 de prestatiebeurs afschaffen. Gelukkig was die beurs van langere adem dan het kabinet en wist het te overleven tot het Rutte-I van de hierboven genoemde boete.

Na de vreemde omweg besluit het volgende kabinet van Rutte, dat voor ongeveer de helft uit de PvdA bestond, dat het toch af wil van de studiebeurs en het spreekt steun uit voor een leenstelsel. In 2015 wisten ze het samen met de steun van D66 en GroenLinks te bolwerken een voorstel door de Tweede- en de Eerste-Kamer te krijgen en was het leenstelsel een feit.

Zo komen we dan uiteindelijk bij een antwoord op de vraag hoe het tot het leenstelsel is gekomen. Opval-

lend genoeg kunnen we namelijk vaststellen dat elk deel van het politieke spectrum heeft bijgedragen aan de afbreuk van de studiebeurs, van liberaal rechts en een zelfbenoemde onderwijspartij tot aan het christelijk centrum en het meest linkse links. Het is niet een kwestie van politieke kleur geweest, maar van een sluipende historische trend. In de jaren 80 bleek dat het uitkeren van studiebeurzen duur was en dat geen enkele partij bereid was de nodige investering in het WO te doen. In de jaren 90 zijn we begonnen met schaven en in de jaren 00 kwam men op het idee om het nodige geld uit de zakken van de student te halen middels leningen. En daardoor zitten we nu, pas net in de jaren 20, met de gebakken peren.

Sociaal leenstelsel

Maar zitten we wel echt met de gebakken peren? Het is een sociaal leenstelsel, dus er wordt toch rekening gehouden met minder bedeelde groepen? Daarnaast was beloofd dat al het geld dat het leenstelsel zou opbrengen terug geïnvesteerd zou worden in de universiteiten via de kwaliteitsafspraken gelden, die het ACD kent als de extra duiten die SPACie gaat krijgen (let op de overeenkomst met de wens van Balkenende-IV om dit geld te gebruiken de lerarensalarissen te verhogen). Het is dan toch niet zo'n slechte deal? Of zoals Rosanne Hertzberger haar column in het NRC betitelde: "Het leenstelsel is echt zo slecht nog niet".

Laten we daarom eens een kijkje onder de motorkap van het leenstelsel nemen. Op het moment kunnen studenten €494,34 vrij en €178,58 collegekrediet per maand lenen. Dit bedrag blijft een lening. Daarnaast kunnen studenten met minder rijke ouders gelukkig aanspraak maken op een aanvullende beurs van maximaal €403,17 die afneemt naarmate de ouders meer verdienen. Deze beurs wordt een gift als de studie binnen 10 jaar is afgerond. De lening wordt vervolgens over 35 jaar terugbetaald met maximaal 4% van het inkomen dat je verdient boven het minimumloon. De rente wordt gebaseerd op de rente van 10-jaars staatsobligaties, dat is een zeer voordelige rente. Je mag er zelfs een aantal jaar voor kiezen je afbetaling te pauzeren, de schuld wordt niet geregistreerd bij het BKR en na de 35 jaar aflossen worden restschulden kwijtgescholden. (Overigens is de lening ook overlijdensrisico verzekerd, dus als je nu gaat samenscholen

binnen 1,5 meter en een boete krijgt van 400 euro ben je waarschijnlijk toch voordeliger uit.) Zeker geen oncharmant verhaal met zulke soepele voorwaarden.

Daarnaast wordt het geld dat het leenstelsel bespaart inderdaad weer geïnvesteerd in het onderwijs. Om ervoor te zorgen dat dat geld niet stiekem in de zak van onderzoeksgroepen en bestuurders verdwijnt, moeten de universiteiten zogenoemde kwaliteitsafspraken maken over het geld. De onafhankelijke NVAO keurt deze plannen dan voordat de uni de fondsen krijgt. Het idee is dus dat studenten meer betalen, maar dan ook beter onderwijs krijgen.

Toch is dat stelsel zo sociaal niet. Zo krijgen volgens een enquête van I&O Research kinderen van middenklasse ouders het het zwaarst te verduren. Zij kunnen namelijk geen aanspraak maken op de volle aanvullende beurs, terwijl hun ouders minder bijdragen. Ook is het leenstelsel volgens de SER voor veel studenten een reden om minder snel uit huis te gaan, wederom iets waar kinderen van rijkere ouders die graag bijdragen aan een woning geen last van hebben. Daarbij kunnen kinderen die door hun ouders in levensonderhoud en collegegeld worden voorzien de lening maximaal innen, geld verdienen door het te investeren en het resulterende bedrag bijvoorbeeld gebruiken om een deel van de starterswoning mee te betalen, omdat de studielening voordeliger is dan een hypotheek. Dat is dubbel winst, want de resterende hypotheek is dan lager en dus makkelijker te verkrijgen, waardoor je aantrekkelijker bent voor de verkoper. Het lijkt socialisme voor de rijken en star kapitalisme voor de rest. Oh, en als kers op de taart levert het stelsel volgens een ander onderzoek van het

ISO voor 70% van de lenende studenten een stressvolle studietijd op. Om niet te spreken van de negatieve macro-economische effecten van een gehele generatie opzadelen met schulden.

Tot slot nog even terugkomen op de onafhankelijke controles van de NVAO op de kwaliteitsafspraken. Voor 2021 zijn die alweer door het ministerie van de baan gehaald: de universiteiten krijgen het geld ook als hun voorstellen eerder waren afgekeurd. De studenten betalen dus meer, maar krijgen dan ook niets extra's terug.

Hoe verder?

Wat mij betreft moet het leenstelsel plaatsmaken voor iets nieuws. Gelukkig zijn de hoge heren in Den Haag sinds 2015 daarover van mening veranderd. Inmiddels zijn ook PvdA en GroenLinks tegen het leenstelsel en blijven D66 en VVD over als eenzame voorstanders.

Hier komt de campagne #NIETMIJNSCHULD weer om de hoek kijken. Om het huidige systeem te vervangen heeft de campagne een drietal eisen: terugkeer van de basisbeurs, compensatie voor de studenten uit het leenstelsel en de investeringen in het onderwijs die in de jaren 80 en 90 uitbleven. Zullen al deze eisen als dusdanig worden ingewilligd? Niet noodzakelijk, maar als genoeg studenten zich aansluiten is het ze in Den Haag geraden het in hun partijprogramma's van de volgende verkiezing te zetten.

Natuurlijk zijn jullie allemaal vrij te doen en laten wat jullie willen, ik heb in ieder geval mijn naam aan de petitie op www.nietmijnschuld.nl toegevoegd.

#NIETMIJNSCHULD



Old and New Adventures

an interview with Prof. Ir. Jarl Ivar van der Vlugt

Michelle van Dongen

In our relatively small community of chemists here at the UvA, gossip spreads fast and word reached us that associate professor dr. ir. Jarl Ivar van der Vlugt was about to leave our scientific community after 11.5 years of hard work in our Supramolecular and Homogeneous Catalysis group. Having been part of our community for such a long time, we couldn't let him leave without giving him a proper goodbye. And what is a better way of saying farewell than giving him an interview in our ACiD?

Jarl Ivar did his PhD in coordination chemistry and homogenous catalysis at the TU Eindhoven and continued with a postdoc at the University of Illinois in functional bioinorganic chemistry. He then travelled to Germany to work on research regarding bio-inspired molecular material science and returned to the Netherlands in 2007 to start his independent research at the TU Eindhoven. In 2008, he relocated to the University of Amsterdam as assistant professor in the HomKat research group. His independent research, mostly based on cooperative catalysis with non-inno-

cent ligands and bioinspired small molecule activation, has led to 15 papers in 'internationally top-tier journals' and more are still on the way.

Career path to the UvA

With 11.5 years of research in Amsterdam, I was curious to what brought him to our university in the first place. He admitted that he never was a true participant of career development, but rather made use of the opportunities once they presented themselves. After his PhD, he travelled to the United States and to Germany with the vision of deepening his chemistry knowledge. He wanted to participate in new research and discover a new field. By travelling to different countries, he had the opportunity to compare and contrast different research cultures simultaneously. In his opinion, you can try to plan your career, but in the end you always have to remain flexible: if something comes your way, you have to find a way to deal with it ad hoc. During his time as a researcher so far, he has discovered that everything is a voyage of discovery and that a thick skin is necessary to be part of the

academic world. You learn what possibly works and you definitely learn what doesn't work at all. Rejection is more prominent than success, but this slight chance of success and the feeling accompanying the accomplishment is what makes our profession according to Jarl so exciting and fun. I couldn't agree more.

The highlights at the UvA

His enthusiasm about his profession already hinted at a wonderful time at the HomKat group, but I was still really curious about the best aspects of it all. What will he remember the most and what will he miss? Regarding his research, he wouldn't be able to choose a favorite topic: every research project has been dear to him, especially those which he started with self-assembled money and has carried out with help of his students, PhD'ers and postdocs. He loves seeing the evolution of the research lines, the discovery of what works and what doesn't while conducting research. However, what he loved the most about his time at the HomKat group was not necessarily the research results themselves, but rather experiencing of and aiding in the development, the personal growth, of the researchers during their time at the group. Especially during a PhD, someone learns how to become an independent, confident researcher and Jarl Ivar loves helping them to get the best out of themselves. According to Jarl Ivar, we deliver two 'products' as a university: knowledge and people. The knowledge we save in the form of articles, reviews etc., but the people we send out to the world. He is, in a way, prouder of the researchers he sent out into the world than the research results accompanying them, although it is the results he uses afterwards.

Another thing he liked a lot during his time here was the ambiance of the HomKat group: people were like one big family and all worked together closely. This family did change in composition over time. When he started, the group was filled with approximately 60% internationals, but now he believes the group entails 70% of Dutchies. This did change the dynamics of the group, as conversation topics switched from global to more local themes. However, this change in dynamics, every 4 year, is what makes working in a group exciting as well according to Jarl Ivar. Every 4 years, you start in a slightly new environment with only a few

constants. However, this group, this family, always remained the Dutch 'gezellig', sometimes even a bit too much.

Jarl also mentioned that he will remember the positive development the research group experienced upon moving from Roeterseiland, where he started 11.5 years ago, to Science Park. He called Roeterseiland very Dutchly a big 'ratjetoe', a hodgepodge in English. After two years of working there, he still didn't know where all of his colleagues were situated. How differently it is on Science park: everyone is stationed near each other and in close contact with each other. According to Jarl Ivar, HIMS has become more of a unity. A drawback of the move was the disappearance of the 'Roetertoeter', the famous 'borrelruimte' of the ACD which reminded Jarl of his own version in Eindhoven, the Aufbau. The Brainwave doesn't really work for him, but he is glad that there is still a space where we all can get together to socialize and talk about something else than work.

Changes over the years

This reflection on his time at the UvA also made me wonder if he had noticed any changes about himself over the years. Jarl confessed to not being the best at self-reflection which was immediately the first thing he offered to have learned about himself. He also discovered that he likes teaching more than he thought he would. He still finds carrying out research more interesting than teaching, but the difference between them has become less. He liked experiencing the changes in the student population over the years. Every year is a new challenge: how do you get the most out of the group? He also learned how to become a 'people manager'. As an (associate) professor you can't do everything by yourself anymore and you have to trust the results and insights of other people. You are busy with directing and communicating with people and suddenly have to solve the puzzle of indirect required data.

To remain on the educational front, I asked him if he also noticed any significant difference between the students of 2020 and 11 years ago and Jarl answered that students are different every year. Fundamentally, students are still the same, although we are now more

'phone addicted' than in the past. Jarl mentioned that he even had a student walking out of his tutorial, because he had to catch that Pokémon (you gotta catch 'em all right?). Jarl also noticed that students choose more courses related to digital knowledge, such as programming and computational chemistry courses. He himself remains a fervent advocate of manual chemistry. According to Jarl Ivar, every chemist should be able to work in the lab: adding reagents together and knowing how to analyze the outcome. Lab work will always be the core element of chemistry in Jarl's opinion.

Jarl Ivar's future job

After all this reflection, I asked the question most of us are probably dying to know: where is he going and what is he going to do? Jarl has been granted a position as a professor at a chemical research institute at the Carl von Ossietzky University of Oldenburg in Germany. At the time of the interview he was about to start in 1.5 weeks, but he will continue as guest researcher at the UvA until 2022. In Oldenburg, he will have two labs which he can arrange to his taste and due to Germany's progressive research funding he will always have a few positions for promovendi to carry out research with. This progressive research funding was one of the driving forces to come to Germany, as well as his curiosity into finding out what it is like to build up and lead a research group from scratch. His new workplace also provides a classical chemistry bachelor and master taught in German and he will be teaching the first-year students our equivalent of 'Bouwstenen van de Chemie'. I asked whether his German was good enough and he said that the university thought it was sufficient, so he guessed it was. I don't doubt it.

He plans on continuing research started here in Amsterdam on cooperative catalysis with non-innocent ligands and bioinspired catalysis. Classically, organometallic chemistry is rather focused on the metals themselves and the ligands are considered to be there for stabilization. Some metals favor one electron chemistry, other metals two electron chemistry. The question is how to switch this preference. A trick might be to give the ligands a more dominant role in the reaction, a way to activate the substrate. Another

idea is to start working on two metal center reactions, like enzymes have already mastered. In short, enough ideas for the coming years.

I asked him about the differences between Germany and the Netherlands and he remarked that we could better ask him that again in two years. He hasn't experienced Germany's educational culture as a professor yet, but he does know that students and professors there are more formal than here, and that the bachelor provides a broader educational program without much freedom in courses. You have to master it all. He expects that students won't walk into his office that easily or make small talk after a lecture. It is a small institute which makes him believe that the feeling of 'we're in this together' becomes even more prominent. Different research groups work closely together, and he is looking forward to that synergy. Some wise words to end

Lastly, I asked him if he had some last advice for us ACD'ers. He pointed out the value of taking on something outside of your study to develop your 'soft skills'. How do you work with other people? How do you plan and organize activities/events? These skills become more important than chemistry knowledge itself outside academia and are therefore handy to master. He always participated in the Eindhoven's version of the ACD, but it doesn't necessarily have to be a study association. Another advice he has for us, is to always make the most of your freedom in choosing courses. Don't try to follow one straight path, don't take on courses in one area, but try different things and make the most of your time as a student. He also advocates going abroad, as this will help you become independent in a whole new culture. He wants us to know that people are welcome in Oldenburg, as he plans on setting up an exchange program with the UvA and other university. So, if you are interested in his research, don't hesitate to contact him.

The blad committee certainly hopes to hear more about Jarl Ivar in two years, perhaps through another interview or through one of the students participating in research under his supervision. We wish him the best of luck and times with his new position in Oldenburg!

Chemistry vs. Dutch language and Culture

Michelle van Dongen

Once again, a student of another discipline will be asked about his/her views on chemistry students, and vice-versa. This edition, we stray far away from our comfort zone and talk to a student of Dutch Language and Culture.

The Dutch Language and Culture student on Chemistry

First of all, what is your name and why do you study Dutch Language and Culture?

J: My name is Janneke and before I started my study of Dutch Language and Culture, I did another study, Gezondheid en Leven at the VU, but I found this one too one-sided, too beta. I then started to ask myself what I liked doing and what I was good at which turned out to be reading and writing. I joined a 'Meeloopdag' of Dutch Language and Culture with the Dutch thought of 'Nooit geschoten is altijd mis.' (In English: nothing ventured, nothing gained) I really enjoyed this day, so I enrolled myself with the mind set 'Ik zie wel waar het schip strand.' (In English: I will see where the road takes me.)

What do you think chemistry entails?

J: Poe, difficult question. I never looked at the study myself, but I think that you start from the basic knowledge which you obtained in high school and that you then focus more on the background of that knowledge and look at where everything comes from. From that point, you move towards the details and the bigger picture: how can you use this knowledge internationally and how do you apply this to the production of materials.

Who is 'the' chemistry student?

J: The image I have of a chemistry student is nowadays more of a girl than a boy. She would be a girl with big curly hair and glasses who would be more sportive and more alert than other beta students such as physics or mathematics students. She would be less introverted and more extraverted, still rather spontaneous and a

bit more 'gezellig' than the rest of the diehard betas.

How do chemistry students overestimate themselves?

J: By believing that beta science is better than alpha. You really overestimate yourself there. I believe that 75% of the chemistry students wouldn't be able to follow an alpha study. Chemistry is 'jullie straatje' (it's right up your alley), it is what you guys are good at and that is awesome. However, you can't act like alpha has nothing to add to the world and does not provide guidance. Providing guidance is exactly what alpha studies do.

What are Dutch Language and Culture students better at than chemistry students?

J: I think we are better in the interpretation of both spoken and written texts. We perform more close readings and analysis. I believe you guys rather gather the pieces of a text you need at that moment and that the rest of the text fades into the background. We try to see the bigger picture, view the text more as a whole and also take into account that it is written by different people, with different concepts and in different times. Additionally, we get courses in 'Language control' in which you learn about argumentation and the text's validity. You need the whole text for this and not only the piece you find most useful.

What are chemistry students better at?

J: First of all, drinking. More seriously, I think that you guys are better at creating structure in your thoughts, because you have to think more orderly, more in different steps, for your practica, reports and set-ups. Our approach can be much more chaotic and criss-cross, as it doesn't really matter.

What do chemists do all day?

J: They read a lot of articles and figure out procedures for experiments. I believe you are busier with the preparation of drawing structures, setting up your experimental work than that you are really busy in the lab.

The Chemistry student on Dutch Language and Culture

What is your name and why do you study chemistry?

E: I'm Emma and I study Chemistry, because I wanted to do something with a fundamental science. I liked chemistry the most of all the beta sciences and I also really liked that you were allowed to do lab work with this study.

What do you think Dutch Language and Culture entails?

E: I think lots of reading, literature analysis, lots of writing. I don't know exactly, just a lot of reading and writing.

Who is 'the' Dutch Language and Culture student?

E: In my opinion, there are two types of Dutch Language and Culture students. The first type loved reading books and thought 'I want to make this my profession, reading the whole day.' The second type of student wanted to be a journalist, walk around with a weird hat and push microphones under people's noses.

How do Dutch Language and Culture students overestimate themselves?

E: Well, I would say they overestimate themselves in

their 'coolness', to the extent to which they study hard. I have the feeling that they walk around in Amsterdam's city centre with the attitude 'look at me being a fancy student', while we are all at home truly studying. Although, I don't believe I would be able to sit around and read all day. I wouldn't be able to take on an alpha study.

What are they better at than chemistry students?

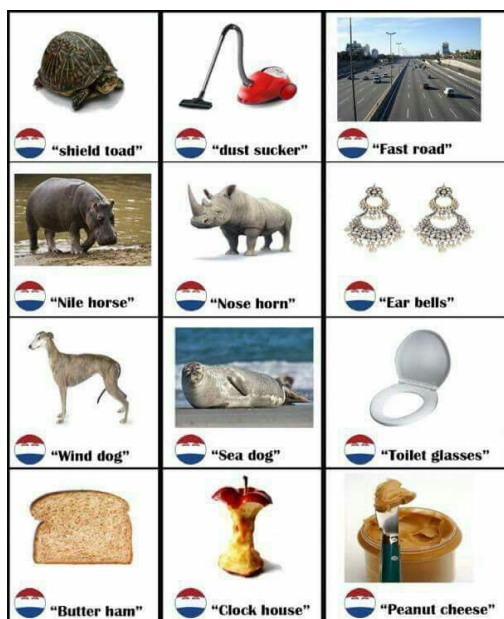
E: Obviously, writing. Chemistry students have a tendency to make incomprehensible sentences full of jargon. I hope Dutch Language and Culture students do know how to write.

What are chemistry students better at?

E: I believe that we are better at the analysis of the world around us and that we do not get carried away by emotion. If I connect Dutch Language and Culture students to journalists and the media, I would say they are more focussed on the hype, what other people are saying. We are more down to earth and focussed on how the world really works, the cold hard facts. I am generalising now though.

What do Dutch Language and Culture students do all day?

E: Sitting in a café or on the windowsill, while drinking coffee and reading books.



In dutch you don't say "I love you", you say "godver mijn klote fiets is alweer gejat" which is like "our hearts will be together forever, even when we're apart", I love that. Such a beautiful language.

Smaakmatrix

Inspired by the Parool

Scientific

C2W has a live update
on Covid-19

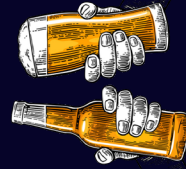
Enjoying more sleep
and/or finally having a
decent sleep rithm



Friday the 13th was
indeed a horrible
day due to Covid-19
measures

The Olympic games
and Songfestival
have been cancelled

Drinking alone at
home is now socially
responsible and does
not make you an
alcoholic



Production of
Corona beer has
been stopped



Beer-related

Horrible

All you hear
about is
Corona all
day (every
day)