



**DUTCH
ASSOCIATION
FOR
CRYSTAL
GROWTH**

nederlandse vereniging voor kristalgroei

FACET

DACG Newsletter

Newsletter of the
Dutch Association for Crystal Growth (DACG),
section of the KNCV and the NNV.



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Table of Contents

From the editor	2
DACG Fall symposium & General Members Meeting 2026	3
Agenda DACG General Members Meeting 2026	4
DACG Spring Symposium at Symeres Weert	5
Announcement Piet Bennema Award for Crystal Growth	7
A selection of recent publications	8
Recent Theses	8
News	9
Agenda	10

DACG board

President: René Steendam (Ardena)

Secretary: Antoine van der Heijden (TNO / TU Delft)

Treasurer: Annemerel Mol (Wageningen UR)

FACET: Bart Zwijnenburg (Nobian)

Elias Vlieg (Universiteit Nijmegen)

Anne Claude (University of Amsterdam)

If you are interested in a role within the DACG just contact us: info@dacg.nl.

Cover photo

Image is colored FE-SEM scan acquired by Stefan Diller - Scientific Photography (Würzburg, Germany) using a TESCAN MIRA3 multi-detector system, from the recent Ph.D. Thesis by Ariane V. Mader. Structure width: 236.0 μm .

From the editor

Dear all,

After a long summer, autumn has arrived with a new FACET and the announcement on our fall symposium. This time we will meet at Utrecht University and one of the highlights will be presentation of Machiel Zwarts who was featured in the spring FACET. We are looking back at a successful spring meeting at Symeres in Weert.

Your ideas for the FACET are still welcome! For instance, submitting a nice cover photo is highly appreciated. It is easy to contribute to the FACET. Just send an email with your contribution to the editor via info@dacg.nl.

Looking forward to seeing you at the symposium in November!

Bart Zwijnenburg

DACG Fall symposium & General Members Meeting 2026

This symposium will be held at Utrecht University (Universiteitsbibliotheek (Boothzaal), Heidelberglaan 3, 3584 CS Utrecht) on 4 November 2026 and will be hosted by the Soft Condensed Matter & Biophysics group of the Debye Institute for Nanomaterials Science

09:30 – 09:50 *Registration and coffee*

09:50 – 10:00 *Welcome and opening*

10:00 – 10:30 *Towards crystals of crystals of nanocrystals*

Alfons van Blaaderen (Utrecht University)

10:30 – 11:00 *Asymmetric amplification in reactive chiral crystallization*

Sjoerd van Dongen (SolarFoil / AMOLF)

11:00 – 11:30 *Real-space analysis and strengthening of photonic icosahedral supraparticles*
Jesse Bückmann (Utrecht University)

11:30 – 12:00 *Three-dimensional printing of ice structures via evaporative cooling in vacuum*
Menno Demmenie (University of Amsterdam)

12:00 – 12:30 *Colloidal quasicrystals: how entropy can lead to forbidden symmetries*
Laura Filion (Utrecht University)

12:30 – 13:30 *Lunch (location: Educatorium)*

13:30 – 14:15 *General Members Meeting DACG 2026*

14:15 – 14:45 *Impact of solution stoichiometry on BaSO₄, CaCO₃ and FeS nucleation and growth*

Mariëtte Wolthers (Utrecht University)

14:45 – 15:15 *Growth and morphology of PbSe mesocrystals*

Elias Vlieg (Radboud University Nijmegen)

15.15 – 15.30 *Coffee*

15:30 – 16:00 *Key to the crystal garden*

Machiel Zwarts (art photographer)

16:00 – 16:45 *Lab visit (t.b.c.)*

16:45 – 17:30 *Drinks / nibbles*

Registration and latest information link:

<https://dacg.nl/event/dacg-fall-symposium-2026-gmm/>

Agenda DACG General Members Meeting 2026

1. Opening
2. Finalize agenda
3. Minutes Annual meeting 31 October 2025
4. Documents sent / received: report of the financial audit committee (see agenda item 7)
5. Annual Report Oct 2025 – Sep 2026
6. Modified Articles of Association
7. Financial
 - (a) Annual Financial Report DACG 1 Oct 2025 – 30 Sep 2026
 - (b) Financial Report Stichting IOCG 1 Oct 2025 – 1 Mar 2026
 - (b) Report Financial Audit Committee (Dirk Kok, Paul Tinnemans)
 - (c) Budget 1 Oct 2026 – 30 Sept 2027
8. Termination of “Stichting ICCG”
9. Young-DACG
10. DACG website
11. Board

Role	2025 – 2026	Appointment deadline
Chair	René Steendam	Step down Oct 2027
Secretary	Antoine van der Heijden	Step down Oct 2026
Treasurer	Annemerel Mol	Step down Oct 2027
FACET	Bart Zwijnenburg	Step down Oct 2029
Young-DACG	Anne Claude	Step down Oct 2026
Member	Elias Vlieg	Step down Oct 2026

Both Antoine van der Heijden (after a one-year extension of his final term) and Anne Claude will step down in October 2026. Also Elias Vlieg will step down in October 2026, but he indicated that he would be available for one extra year in his current position, so until October 2027, pending agreement of the General Members Meeting. We received a nomination from Dirk Kok for a board membership. For the Young-DACG vacancy we received a nomination from Juan Manuel Ruso Vidal to succeed Anne Claude. During the General Members Meeting the members can cast their votes for both candidates.

In October 2027 the board will potentially have three vacancies to be filled, depending on the re-electability of board members that step down in October 2027. DACG-members who would like to apply for a board membership **as of October 2027**, can announce themselves by sending an e-mail to the DACG secretariat (info@dacg.nl).

12. Activities 2026 – 2027
 - a. Piet Bennema Crystal Growth Award 2027: a call for nominations will be issued in October 2026
 - b. April/May 2027: spring symposium DACG at TU/e, date to be decided
 - c. October 2027: DACG annual meeting + fall symposium, date and location to be decided
13. Questions before closure of the meeting
14. Adjourn

DACG Spring Symposium at Symeres Weert

The Spring Symposium of the DACG was held at Symeres in Weert on 29 May 2026

The morning session began with Edwin Aret, who provided an overview of Symeres and its solid-state department. This was followed by Chantalle van Berkel, also from Symeres, who shared the company's approach to solid form selection, using high-throughput X-ray powder diffraction; this was illustrated with a few case studies. Although our third scheduled speaker was unfortunately unable to attend at the last minute, we were pleased that Job Gieling (UCLouvain) could step in and present his research on mechanochemistry and deracemization. Mechanochemistry does not require the use of solvents, sometimes only a small amount which acts as a lubricating agent. A few case studies were presented using resonant acoustic mixing (RAM) to successfully deracemize three different imines; the results were compared with traditional ball milling. The morning concluded with a presentation by Prof. Elias Vlieg of Radboud University Nijmegen who proposed a mechanism for crystallization pressure in which the growth of unloaded faces adjacent to the confined surface plays a critical role. These findings advance the understanding of crystallization pressure in confined spaces and contribute to the explanation and mitigation of salt-induced damage in porous materials.



*Opening by René Steendam
(Ardena, Chair DACG)*



Edwin Aret (Symeres)



Chantalle van Berkel (Symeres)



Job Gieling (UCLouvain)



Elias Vlieg (RUN)



Danny Stam (Eldico)



Yvonne Mos (Haskoning)



Denny Lamon (TU/e)



Audience

After lunch, the program resumed with Danny Stam (Eldico), who highlighted the advantages of electron diffraction in pharmaceutical development projects, illustrated by a several case studies in which traditional X-ray diffraction was unable to resolve a crystal structure. Yvonne Mos (Haskoning) followed with a presentation on Crystalactors and their use in recovering compounds from waste water through crystallization, with a case study on fluoride removal in the semiconductor industry. The final talk of the day was delivered by Denny Lamon (Eindhoven University of Technology), who presented his work on hexagonal SiGe branches, which is interesting for CMOS compatible laser applications, chem/bio sensors and LEDs, due to the fact that hex-SiGe shows a direct band gap (whereas Si and Ge each have an indirect band gap).

The event concluded with a lab tour of Symeres in Weert, followed by drinks and informal networking. We extend our sincere thanks to Sander Brugman from Symeres and his colleagues for hosting the symposium, to all speakers for their valuable contributions, and to the attendees for making this yet another memorable event.

René Steendam

Antoine van der Heijden

Announcement Piet Bennema Award for Crystal Growth

Every three years the Dutch Association for Crystal Growth DACG distinguishes a young researcher with the Piet Bennema Award for Crystal Growth for his or her high-level scientific research in the field of crystal growth. The prize is intended for the author of the best dissertation or other scientific publications (or a series thereof) that have been processed in an industrial context and are of importance similar to a dissertation. The prize consists of a certificate and a sum of money of € 1000.

Piet Bennema (1932-2016) is one of the founders of the study of crystal growth in the Netherlands. As a professor of chemistry of the solid state from 1976 until his retirement in 1998, he was affiliated with the Radboud University Nijmegen. In this period he elaborated on the theoretical concepts of crystal growth, leading to an improved understanding of the role of the bond strength in the prediction of the morphology of crystals and the role of supersaturation, two-dimensional nucleation, kinetic roughening and spiral growth during crystal growth processes. For his important contributions to the field of crystal growth, he was awarded the Frank Award in 1995 by the International Organization for Crystal Growth.

Eligible for the award are both young Dutch and non-Dutch researchers who have largely carried out their research in the scientific field of crystal growth at a Dutch university or a Dutch company. The candidate must have shown great competence as a researcher as well as scientific originality and productivity. Moreover, it must have a good understanding of the problems of the field.

For candidates who want to be considered on the basis of their dissertation, the latter must have been successfully defended at a Dutch university in the three years prior to the closing of the submission deadline (1 May 2024 – 30 April 2027). For academic publications, it also applies that these must have been published for the most part in the preceding three-year period.

Supervisors can nominate candidates by means of a letter of recommendation together with the thesis (hard copy or pdf) or other scientific publications, as well as a motivation. The nomination must be submitted in triplicate to the secretary of the DACG.

The submission period for the Piet Bennema Award for Crystal Growth is from 1 October 2026 to 30 April 2027.

A selection of recent publications

Pingping Cui, Vikram Korede, Rohan P.Y. van Tooren, Nagaraj Nagalingam, Runze Wang, Qiuxiang Yin, Antoine E.D.M. van der Heijden, Herman J.M. Kramer, Hüseyin Burak Eral, Influence of Nanoparticle Properties on Non-Photochemical Laser-Induced Nucleation. *Crystal Growth and Design* (2026), 26(1), 144-154.

<https://doi.org/10.1021/acs.cgd.5c01080>

Tijn Vernooij, H. Tunç Çiftçi, Noushine Shahidzadeh, Bart Weber (2026). Amorphous CaSO₄ nanocrystal deposits for friction and wear reduction at silicon interfaces. *Wear* (2026), 586, Article 206457.

<https://doi.org/10.1016/j.wear.2025.206457>

Thijs H. Besseling, Berend van der Meer, Bing Liu, Laura Filion, Arnout Imhof, Alfons van Blaaderen, An equilibrium rotator glass-forming phase for long-ranged repulsive colloidal rods. *Nat Commun* 17, 2410 (2026).

<https://doi.org/10.1038/s41467-026-70295-5>

Anne C. Claude, Hannelore Derluyn, Jorik van de Groep, Noushine Shahidzadeh. A multi-scale study to unravel the dehydration mechanism of hydrated salts. *arXiv:2608.30469* (2026)

[10.48550/arXiv.2608.30469](https://arxiv.org/abs/2608.30469)

Jonas Veenstra, Jack Binysh, Vito Seinen, Roger Solé Borràs, Rutger Naber, Damien Robledo-Poisson, Andres Hunt, Wim van Saarloos, Anton Souslov, Corentin Coulais, Wave coarsening drives time crystallization in mechatronic metamaterials. *Nature* (2026).

<https://doi.org/10.1038/s41586-026-11163-6>

Recent Theses

Ariane V. Mader, Controlling complex crystallization. From dendrites to spherulites and beyond
Ph.D. Defense: 18 June 2026

Promoter: Wim L. Noorduin

This thesis investigates how complex crystal morphologies can emerge from simple inorganic systems under mild, aqueous conditions. It demonstrates that structural complexity does not require biological templates or extreme environments, but can arise from the interplay of kinetics, diffusion, additive interactions, and sequential growth.

News

Open Technology grant for Noushine Shahidzadeh - 12 May 2026

UvA-IoP physicist Noushine Shahidzadeh is one of the co-applicants for the project “Effective chemical barriers against rising damp (CHEMBARIDA)” that has been awarded an Open Technology Programme Award by the Dutch Research Council (NWO). The main applicant for the project is Barbara Lubelli, and the other co-applicant is Martin Tenpierik, both from TUDelft. The project aims to improve rising damp management to protect buildings and inhabitants.

Minister Rianne Letschert wears hat and shoulder ornament inspired by Wim Noorduyn’s research – 12 September 2026

This year at the opening of the parliamentary year (Prinsjesdag) Minister of Education, Culture and Science Rianne Letschert wears a spectacular hat and shoulder ornament. Both of them are inspired by the microscopic structures studied by group leader Wim Noorduyn (AMOLF/UvA), which look remarkably like tiny flowers under a microscope. Artist and designer Malou Beemer translated these shapes, normally invisible to the naked eye, into wearable art.



Top view of the hat worn by Minister Rianne Letschert. Image: NWO, Hilbert Krane

Agenda

- 4 November 2026 DACG Fall Meeting, Utrecht University
<https://dacg.nl/event/dacg-fall-symposium-2026-gmm/>
- 23-24 February 2027 DECHEMA/VDI Group Crystallization Annual Meeting, Aachen
<https://lnkd.in/ew3zESiK>
- 14-16 June 2027 BRIDGE Delft, Netherlands
<https://dacg.nl/event/4547/>
- 14-17 June 2027 11th World Salt Symposium, Dublin, Ireland
<https://worldsaltsymposium.com/>
- July 25-28, 2027 9th European Conference on Crystal Growth (ECCG-9), Potsdam, Germany
<https://www.encg.info/events.html#>