



Newsletter Nano, Quantum & Materials Physics Research Community

Newsletter Nano, Quantum and Materials Physics Research Community, September 2023

Please find below the first edition of the new newsletter of the NWO Nano, Quantum and Materials Physics Research Community (NQMP). It contains updates from the advisory committee and information on relevant meetings, calls, and granted projects related to our field.

Do you want to introduce yourself or one of your colleagues in the upcoming newsletter? Do you have a news flash, research highlight or event of interest for the NQMP community that you would like to add to the newsletter? Submit your contribution by sending an [email](#).

What Does the NQMP Advisory Committee do?

The NQMP advisory committee ("werkgemeenschapcommissie") has the formal role of advising the Physics Round Table on aspects of the NWO research landscape related to Nano, Quantum, and Materials physics.

One of our primary tasks is to act as an interface to those working in fields related to NQMP: engaging you, listening to how things are going with you, and on the basis of this, make recommendations to the Physics Round Table, who then make recommendations to the executive board of the NWO. The Physics table expects us to have an overview of what is going on in the NQMP fields and be able to advise them on things that come down from the NWO organization on what is important for our field. At the same time, we can provide advice up to the Round Table Physics based on what we hear from you.

Our toughest challenge is engaging you: how do we get information from you on how things are going in our field so that we feed that up into the organization? We have done this with some success in the past through online community discussion meetings on topics we think are relevant to NQMP. However, we are constantly looking for ways to engage you more actively, and would really like to hear from you how we can best help!

Best regards,
on behalf of the advisory committee NQMP,
Gary Steele (TUD) and Veerle Bogaards (NWO)

NWO Advisory committee NQMP:

Dries van Oosten	UU
Emilie Kernen	Photonis
Femius Koenderink	AMOLF
Florian Schreck	UvA
Gary Steele (chair)	TUD

Harold Zandvliet	UT
Irene Groot	LEI
Jan Anton Koster	RUG
Jolijn Onvlee	RU
Oscar Versolato	ARCNL



Questionnaire for the Community

The Advisory Committee NQMP wants to engage and connect the community more actively again. We would like to hear from you what kind of engagement and activities you would be interested in as a community. You can find the questionnaire [here](#).

Grants, prizes and other news

- Nominate someone with an outstanding PhD thesis in the field of physics for the Ehrenfest-Afanassjew award! Nominations can be made until **1 October**. [Read More >](#)
- Are you or do you know an outstanding young female or non-binary physicist in the Netherlands with an overall performance that scientifically excels in any subfield of physics? Nominate them for the Minerva prize before **1 October**! [Read more >](#)

- NWO invests more than 20 million euros in scientific infrastructure, including two programmes related to nano & materials research: SHINE & PLD4Energy. [Read more >](#)
- The new call 'Research Infrastructure: national consortia' is expected to open in October. [Read more >](#)
- In the third assessment round of the National Growth Fund, 312 million has been awarded to SolarNL. This programme focuses on the development and industrialization of new solar PV technologies and ensures the development of the next generation of fully circular solar panels. [Read more >](#)
- In the third assessment round of the National Growth Fund, a maximum of 296 million has been awarded to BCC-NL. This proposal focuses on realizing a strong position for the Dutch manufacturing industry in the global battery chain, with sustainability and circularity at its core. [Read more >](#)
- Did you know the Lorentz Center also organizes mono-disciplinary workshops? The Lorentz Center is looking for organisers of (mono-disciplinary) workshops. [Read more >](#)
- On 22 November 2023, the Bèta in Bestuur & Beleid Career Day will take place. The day is aimed at Master students, PhD students and Postdocs. The registration closes on **16 October**. Please spread this in your network! [Read More >](#)

Updates from the Advisory Committee

The NQMP advisory committee wants to be in close contact with its research community. To this end, the committee finds it pivotal to update the research community on topics the committee is or has been involved in.

Summary Community Meeting 'Erkennen&Waarden'

On 11 November 2022, the last community meeting of NQMP was held. The theme was Recognition & Rewards (Erkennen & Waarden (E&W)). The people that were present were in favor. There are, however, some problems that make widespread implementation difficult. One of the current problems is that this concept is not defined clearly enough, and there are no clear guidelines on how to implement E&W successfully. This makes it difficult for institutes and universities to implement it. Currently, universities and institutes implement or interpret E&W in different ways. In some places E&W is a topic that is talked about at the management levels, but not noticeable on the work floor. In other places actions have been taken, for instance where more emphasis has been put on the importance of teaching and new positions with a focus on teaching have opened. At NWO, E&W has been integrated into assessment procedures for funding applications. This is sometimes difficult for external referees, but it is expected this is something that will take time, and people will eventually get used to.

There is no overarching party who takes ownership and facilitates uniform implementation across the Netherlands. E&W needs to be fully embraced for it to be implemented well, and currently this does not seem to be the case everywhere. A party taking on a leading role could facilitate the implementation. In the current system, universities are losing talent, as for instance teachers or team scientists are not appreciated in the same way as top grant winners. This is a problem that, if implemented fully, E&W could help solve. Thus, E&W has a lot of potential, but there are still bottlenecks that need to be addressed.

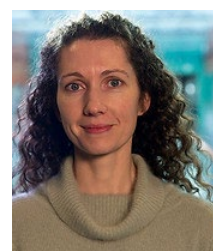


Alix McCollam and Jasper van Wezel leave the advisory committee



The term of Jasper van Wezel has ended this May. Jasper wants to share the following with the community: *"The past five years have seen the emergence and shaping of the NQMP community from its FOM predecessor; I enjoyed being part of the committee in these eventful times, and hope that in the future the NQMP committee will remain a strong and visible connection between all the great NQMP research(ers) in The Netherlands and the overarching national discussions of common scientific policy and interests." they demonstrated the community's great flexibility in dealing with both the restrictions and possibilities that came with Covid; and they exposed the need for a continued strong NQMP organization to respond to the ever changing demands and opportunities of the Dutch scientific landscape.*

Alix McCollam has left the advisory committee in April of this year, because she has started a new position as Professor of Quantum Technology at University College Cork. We want to wish her a lot of success in her new position!



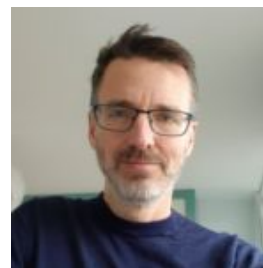
We want to thank Alix and Jasper for their contributions to the committee and the NQMP community!

Introducing: the NQMP Advisory Committee

Because it has been some time since the last newsletter was published, and new members have joined the committee since then, the advisory committee wants to (re)introduce themselves! Each newsletter a few of the current committee members will share who they are and why they joined the committee.

Gary Steele (chair)

I am a professor in the Quantum Nanoscience department at the Delft University of Technology. The research theme of my group is “quantum circuits and mechanics”, in which we aim to combine superconducting quantum technologies (high resonators, qubits, tools from circuit quantum electrodynamics) with micro-electro-mechanical resonators that we fabricate on chip in the cleanroom in Delft. Our long term goal is to use the tools of circuit QED to create coherent quantum superpositions of objects of sufficient mass to test the boundaries between quantum mechanics and general relativity.



I joined this committee several years ago just after it transitioned from the “nanocommissie”. My motivation for joining was to learn more about how NWO operates, about NQMP in the Netherlands in general, and to see how I could give back to the community. What motivates me is finding ways to engage the community, listen to what you find important, and do our best to bring this into discussions at higher levels at NWO. The recent inclusion of the chairs of the research community committees directly in the Physics round table has made a big difference in my experience. My aim the coming years is to find ways to engage you all and give NQMP a voice inside NWO.

Jolijn Onvlee



Since September 2020, I am an assistant professor in the Spectroscopy of Cold Molecules department at the Radboud University in Nijmegen. The aim of my research group is to completely understand and, ultimately, fully control chemical reactions on the molecular level. We therefore investigate reactive collisions between individual molecules and atoms in the gas phase. We use advanced experimental techniques, such as Zeeman deceleration, laser-based detection methods, and velocity map imaging, to study these reactions in extremely high detail. We often work at low collision energies (or temperatures), where quantum effects are extremely important.

I joined the NQMP committee in 2022 to represent the field of molecular & low-temperature physics. I find it interesting to learn more about NWO and the field of NQMP and find it important to not only represent our field of physics, but to also represent assistant professors and women in this committee.

Florian Schreck

I am professor in the Quantum Gases & Quantum Information group at the University of Amsterdam. Our research group uses ultracold strontium gases for quantum sensing, simulation and computing. We are building continuously operating optical clocks and atom laser interferometers, overcoming the limitations imposed by the traditional time-sequential way of preparing ultracold gases. We are also using a new type of ultracold molecule (RbSr) and arrays of single Sr atoms for quantum simulation and computing. Furthermore we are trying to bring ultracold quantum technology to the market by collaborating with companies. I joined the NQMP committee end of 2021 in order to support the NQMP community and NWO.



Events, Meetings and Workshops

Are you organising or do you know a meeting of interest for the NQMP community and would you like to have it included in this list? Please send us [an email](#).

What	When	Where
46th Annual Meeting NNV AMO	10 - 11 October 2023	Hotel Zuiderduin, Egmond aan Zee
NWO Insight Out	2, 9 & 16 November 2023	Online (2 & 9 November) and in Van der Valk, Utrecht (16 November)

MaterialenNL Conference	12 December 2023	Papendal, Arnhem
NWO Physics 2024	22 and 23 January 2024	NH Koningshof, Veldhoven
WomenNetPhysics	22 March 2024	Utrecht

Projects granted by NWO

The projects listed are the projects granted by NWO that have a connection with Nano, Quantum or Materials Physics. Please follow the links for full granting information. Did we miss your project? Please send us [an email](#).

NWA-ORC - Read More >

Criminal InvestigationDX - advanced diagnostics for criminal investigations based on innovative micro/nano technology
Official secretary on behalf of the consortium: dr. ir. M.L. Bennink (Saxion University of Applied Sciences)

Consortium: Saxion University of Applied Sciences, Ministry of Security and Justice, University of Twente, Wageningen University & Research, VU Amsterdam, Amsterdam UMC - location AMC, Nytor BV, Salvitat B.V., Beleef!Media, Benchmark, Center for Safety and Digitization (CVD), Public Prosecutor's Office (OM), National Police, Pervatech, Micronit BV, Novel-T, D Andrea&Evers.

Vidi - Read more >

Unlocking non-reciprocal superconductivity using quantum materials - Prof. dr. M.N. Ali (TUD)

Super-resolution for dancing electrons - Prof.dr. Albert Dr. P.M. Kraus (ARCNL)

"Catch A Wave" – Directing Energy- and Charge-Transfer in Soft Materials - Dr. L. Leppert, (UT)

Unravelling the origin of disorder during self-assembly - Dr. J.M. Meijer, (TU/e)

Challenging the limits of magnetism by fluctuations - Dr. J.H. Mentink (RU)

At the Quantum Edge - Dr. J.J. Renema (UT)

Veni - Read more >

Searching for physics beyond the Standard Model with quantum-entangled ions - Dr. L.S. Dreissen, (VU)

On the move: Imaging propagating spin waves in two-dimensional magnets - Dr. S. Kurdi, (RUG)

Exploring fundamental mechanism of nonreciprocal superconductivity using 2D heterostructures - Dr. H. Wu (TUD)

Pathways to Quantum Advantage in Intermediate-Scale Quantum Devices - Dr. J.T. Young (UvA)

Open Competition M - Read more >

Discovering new chemistry on colorful nanostructures - Dr. Andrea Baldi & dr. Annemarie Huijser (VU/UT)

Better ultra-soft elastomers through defects control - Dr. Andrea Giuntoli (RUG)

Simulations using molecules, not simulations of molecules - Dr. Tijs Karman (RU)

Open Competition XS - Read more >

In Search of Sustainable Magnesium-based Thermoelectric Materials - Dr. S. (Siddhant) Kumar (TUD)

Observing objects that evade light - Dr. E. de Wit, Dr. O.S. (Femi) Ojambati (UT)

Rubicon - Read more >

Mathematics at the speed of light - Dr. A. Cordaro -> UvA-AMOLF -> USA -> Harvard University -> 24 months

Diodes for spin-polarized supercurrents - Dr. R. Fermin -> LEI -> United Kingdom -> University of Cambridge -> 24 months



Contact

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 NWO Den Haag, Laan van Nieuw Oost-Indië 300, 2593 CE Den Haag

Do you have a news flash or research highlight of interest for the Dutch NQMP community that you would like to add to the newsletter? Send us an email.

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Website: <https://www.nwo.nl/nano-quantum-and-materials-physics-nqmp>

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