



Ansökan

2025-08-19

2025-07401	Berggren, Magnus	VR-EXCBT
Information om sökande Projektledare: Magnus Berggren Födelsedatum: 19681125 Kön: Man Medelsförvaltare: Linköpings universitet Hemvist: Institutionen för teknik och naturvetenskap (ITN)		
Information om ansökan Utlisningsnamn: Bidrag för planering av framtida excellenskluster inom banbrytande tekniker 2025 (Vetenskapsrådet) Bidragsform: Nätverksbidrag Sökt inriktning: Banbrytande tekniker Ämnesområde utlysning: NT, MH, HS, UV		
Projekttitel: Minimal syntetisk hjärna Projektstart: 2025-10-01 Sökt beredningsgrupp: VR-EXCBT Klassificeringskod: 20599. Annan materialteknik, 10304. Den kondenserade materiens fysik, 30499. Annan medicinsk bioteknologi Nyckelord: Neuromorphics, Semiconductors, Biomimetics, Artificial intelligence, Societal impact		
Medverkande		
Medverkande forskare: Simone Fabiano Födelsedatum: 19850421 Kön: Man Land: Sverige		Dr-examen: 2012-03-26 Akademisk titel: Docent Arbetsgivare: Linköpings universitet
Medverkande forskare: Stanley Heinze Födelsedatum: 19791115 Kön: Man Land: Sverige		Dr-examen: 2009-04-30 Akademisk titel: Doktor Arbetsgivare: Lunds universitet
Medverkande forskare: Rui Liu Födelsedatum: 19840805 Kön: Kvinna Land: Sverige		Dr-examen: 2023-05-17 Akademisk titel: Doktor Arbetsgivare: Lunds universitet
Medverkande forskare: Ulrika Marklund Födelsedatum: 19770930 Kön: Kvinna Land: Sverige		Dr-examen: 2008-12-12 Akademisk titel: Doktor Arbetsgivare: Karolinska Institutet
Medverkande forskare: Anders Mikkelsen Födelsedatum: 19740117 Kön: Man Land: Sverige		Dr-examen: 2001-10-19 Akademisk titel: Professor Arbetsgivare: Lunds universitet
Medverkande forskare: Peder Olofsson Födelsedatum: 19690715 Kön: Man Land: Sverige		Dr-examen: 2008-02-08 Akademisk titel: Professor Arbetsgivare: Karolinska Institutet

Projektinformation

Projekttitel (svenska)

Minimal syntetisk hjärna

Projekttitel (engelska)

Minimal Synthetic Brain

Abstract och populärvetenskaplig beskrivning

Abstract (engelska)

This initiative will lay the groundwork for a Swedish-led "Minimal Synthetic Brain" platform—a radically new class of computing hardware inspired by the compact, efficient circuitry of insect brains. Despite their small size, insect brains can navigate, make decisions, and adapt to changing environments with remarkable energy efficiency. We aim to capture these core principles by combining complete brain maps (connectomics) with advanced nanotechnology and bioelectronics, creating artificial neural circuits that operate through electrical, chemical, and optical signals. The network brings together Karolinska Institutet (mammalian neurointegration and bioelectronic medicine), Linköping University (organic and stretchable electronics, adaptive neural interfaces), and Lund University (insect neurobiology, semiconductor nanowires, 3D circuit architectures, and medical humanities), along with experts in AI, synthetic biology, and ethics. Over six months, we will hold collaborative workshops, skill-sharing seminars, short researcher exchanges, and consultations with stakeholders to align scientific, technical, and societal perspectives including the impact on health, behavior and security of the individual and in an international perspective. The result will be a strong, interdisciplinary consortium ready to launch a multi-year excellence cluster addressing both the possibilities and the responsibilities of future synthetic brain technologies.

Populärvetenskaplig beskrivning (svenska)

Hur fungerar en hjärna – och hur kan vi bygga en artificiell version som arbetar på liknande sätt? Den mänskliga hjärnan består av omkring 85 miljarder nervceller som är sammankopplade i ett nätverk med över 100 biljoner kopplingar. Trots sin komplexitet använder hjärnan mycket lite energi och kan snabbt anpassa sig till nya situationer. Även insekters små hjärnor klarar avancerade uppgifter som navigering, minnesbildning och beslutsfattande, och gör det på ett energisnålt och effektivt sätt.

I detta projekt vill vi hämta inspiration från dessa biologiska system för att skapa en "minimal syntetisk hjärna" – ett nytt slags datorsystem som kombinerar avancerade hjärnkartor från insekter med ny nanoteknik och bioelektronik. Målet är att utveckla små, energisnåla och mångsidiga kretsar som kan kommunicera med både elektroniska och biologiska system, till exempel för medicinsk behandling av sjukdomar som påverkar nervsystemet.

Nätverket samlar forskare från Karolinska Institutet (integration av konstgjorda kretsar i nervsystemet och bioelektronisk medicin), Linköpings universitet (organiska och mjuka elektroniska material för hjärnmaskingränssnitt) och Lunds universitet (insektsneurobiologi, nanomaterial, 3D-kretsar och medicinsk humaniora), tillsammans med experter inom AI, syntetisk biologi och etik. Under sex månader kommer vi att hålla gemensamma workshops, forskarutbyten och möten med intressenter för att bygga en gemensam vision, kartlägga nödvändig infrastruktur och utforma en plan för en framtida forskningssatsning i form av ett excellenskluster.

Beräknad projekttid

2025-10-01 - 2026-03-31

Planerad användning av forskningsinfrastruktur

Planerad användning av forskningsinfrastruktur

Nej

Övriga ansökningar och bidrag

Är någon eller flera av punkterna aktuella för dig?

Ja

Motivering och redogörelse för relationen mellan de olika projekten och/eller ansökningarna (engelska)

Magnus Berggren has 3 running Vetenskapsrådet projects:

1. Printed neuromorphic hardware for artificial intelligence (2025-2029, Dnr 2024-04984, NT Project, project leader)
2. e-Gelling (2020-2025, Dnr 2020-05045, NT Project, project leader)
3. Electronic Neuro-Pharmaceuticals (2018-2025, Dnr 2018-06197, Research environment grant, project leader)

Only the first project overlaps in time and focus with the Minimal Synthetic Brain cluster of excellence. The project focuses on *printed* neuromorphics rather than integrating neuromorphics with living tissue or collaborators' semiconductor electronics (like the LU team's in the Minimal Synthetic Brain cluster). However, this first project does highlight the area of expertise in neuromorphic components for AI applications.

Planering för användning av bidraget

Planering för användning av bidraget (engelska)

Se nästa sida för bilaga.

The Minimal Synthetic Brain – Research description

Description of the research area. Understanding how 85 billion neurons and 100 trillion synapses interact to control behavior and maintain homeostasis through evolutionarily conserved neural circuits remains one of science's most profound and unsolved challenges. Neural reflexes, sensory-motor loops, and other adaptive responses operate with a level of efficiency, plasticity, and resilience that vastly exceeds today's artificial computational systems. The brain processes information through massively parallel operations using desynchronized circuits in a fully integrated hardware-software substrate, built in a 3D architecture of highly adaptive, electrochemically dynamic networks. In contrast, modern CMOS-based computing platforms rely on binary logic, von Neumann architectures, and 2D chip designs, resulting in a fundamentally different approach to computation – one that is less flexible, more energy-consuming, and poorly suited to interacting with biological systems.¹

Our project proposes a radical rethinking of this paradigm by developing a new class of computational hardware inspired by the architecture and efficiency of insect brains. Despite their small size, insect brains are capable of complex behaviors such as **navigation**, **context-aware decision making**, and **memory formation**, all with minimal energy usage and highly compact circuitry. We aim to combine full-brain connectomics of several insect species with advanced bioelectronics and nanotechnology to build an artificial neuromorphic computing system—what we term a “Minimal Synthetic Brain”.^{2,3}

To this end, we propose to integrate high-aspect-ratio III–V semiconductor nanowires^{4–6} (acting as neuron-like structures) with organic electronic polymers^{7,8}, soft electronics⁹, and drug delivery capability^{10,11} (mimicking synaptic and modulatory functions). This hybrid platform will allow electrical, optical, and chemical signaling in three dimensions, creating a dense, multifunctional system that emulates biological signal processing. These artificial neural circuits will be designed to interface directly with biological tissue and to operate at the edge, close to the site of signal origin, drastically reducing the energy and bandwidth required for communication with external processors.

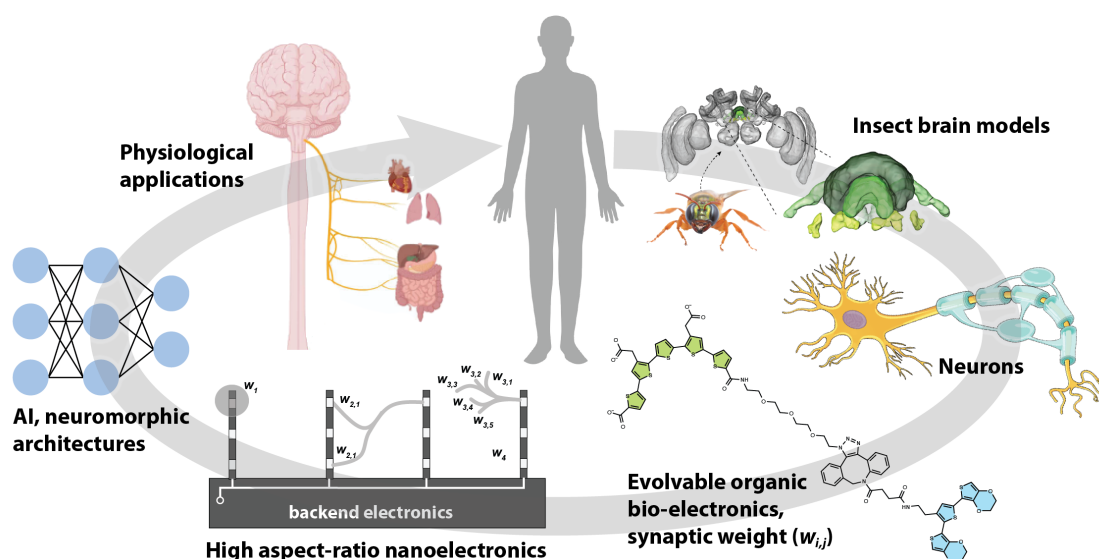


Figure. Minimal Synthetic Brain concept. Insect brain connectomics and neuronal elements guide integration with organic/soft electronics onto neuron-like nanoelectronics and coupled to AI/neuromorphics to enable electrical, chemical, and optical signaling in 3D. These systems interface with mammalian tissue for adaptive interfacing and diverse physiological applications. The cluster links LU (insect neurobiology, nanostructures), LiU (organic/soft electronics, neuromorphics), and KI (neurointegration, bioelectronic medicine) toward energy-efficient, ethically grounded synthetic brain technologies.

The project will have significant implications across multiple domains: providing new understanding of neural information processing, enabling ultra-low-power neuromorphic computing, developing bioelectronic therapies for neurological and inflammatory diseases¹², and reshaping the philosophical and ethical boundaries between biology and technology. Our overarching aims are to address key questions relevant to the future of biomimetic and biointegrated technologies:

1. *How can we distill core computational principles of biological brains into a minimal, energy-efficient artificial neural systems that operate across electrical, chemical, & optical modalities?*
2. *What novel materials and architectures are needed to engineer fully integrated synthetic neural systems that are biocompatible with mammalian tissues, and how can real-time interfacing be optimized to enable adaptive modulation and physiological characterization of neural activity in vivo?*
3. *How can we ensure that emerging synthetic brain technologies – especially those interfacing with humans and animals – are developed in ways that promote equitable access, protect individual autonomy, and address societal security concerns about surveillance, control, and personal autonomy?*

Network description and mode of cooperation. To achieve this highly interdisciplinary and ambitious agenda, the project brings together a consortium of leading Swedish researchers with highly diverse and complementary expertise as well as outstanding experience in organizing new interdisciplinary environments of excellence. Competences, **co-PIs (bold)**, proposed *involved researchers (italic)*, roles, and tasks are described below. The team comprises strong, established competence – with strong national and international networks – in natural, technical, and medical sciences as well as humanities.

Karolinska Institutet (KI): Expertise in bioelectronic medicine¹³ (**P Olofsson**), and in the organization and function of mammalian neural circuits¹⁴ (**U Marklund**) in controlling visceral organs. The KI team will lead efforts to map and characterize mammalian neural reflex pathways, and to validate synthetic neural circuits both in vivo and in vitro, enabling translational relevance for bioelectronic medicine applications. KI also contributes integration with the broader healthcare-medicine-technology ecosystem through MedTechLabs, a collaborative research center focused on advancing medical technology innovations.

Linköping University (LiU): Expertise in spanning disease- and bio-responsive materials (*Peter Nilsson*), soft and stretchable electronics (*Klas Tybrandt*), organic electronic materials (**M Berggren**), and neuromorphic devices (**S Fabiano**) for neurointegration (*Daniel Simon*).^{7,8,11,15} LiU will contribute advanced materials for neural interfaces, including adaptive and bio-responsive conducting polymers, in situ polymerization strategies, controlled chemical delivery electrodes, and the design of low-power neuromorphic transducers. These capabilities will be integrated into the project's hybrid neuromorphic platform, ensuring seamless interaction between biological and artificial neural systems.

Lund University (LU): Expertise in insect neurobiology (**S Heinze**), soft matter and molecular-nanostructure integration (*Heiner Linke*), semiconductor nanostructure synthesis (*Magnus Borgström*), neuromorphic nanodevices and interdisciplinary collaboration (**A Mikkelsen**), and medical humanities (**R Liu**).⁴⁻⁶ LU will lead efforts in connectomics-driven minimal brain design, advanced 3D circuit architectures, the synthesis of III–V nanowire-based neuron-like elements and sustainable innovation. Their contributions will bridge fundamental neurobiology with cutting-edge nanotechnology, ensuring robust integration of biological insights into the synthetic platform.

The network will be extended with additional associated PIs/groups, contributing specialized expertise in computational modeling, AI, synthetic biology, and the ethical, legal, and social implications (ELSI) of neurotechnology. We will work to ensure diversity in career stage, discipline, and gender across all teams.

Cooperation will be structured around: (i) monthly cross-site research meetings; (ii) quarterly coordination and data-sharing workshops; (iii) once or twice annual thematic retreats focused on synthesis across disciplines and organizing staff exchanges (at all levels of seniority); (iv) jointly supervised PhD and postdoc researchers (between universities/groups); (v) facilitated training and access to research facilities for all cluster members (e.g., through MyFab LIMS booking or dedicated training at KI); and (vi) other mechanisms to be elaborated during the 6-month network grant phase. Management responsibilities will be distributed across institutions, with a steering committee ensuring integration of research efforts, adherence to open science principles, and dynamic reallocation of resources to foster collaboration.

Work Packages, overlapping tasks, and synergies

WP1: Comparative connectomics (Lead: LU)

- Generate full-brain connectomes from multiple insect species using high-resolution electron microscopy and advanced segmentation algorithms.
- Identify conserved neural architectures for functions such as navigation, context-dependent decision making, and adaptive control.
- Provide distilled minimal-brain blueprints to WP2 and WP4.

WP2: Hybrid neuromorphic materials platform (Lead: LU and LiU)

- Develop vertical III–V nanowire arrays as neuron scaffolds with addressable functionality.
- Integrate organic conducting polymers to mimic synaptic plasticity and to enable ionic, optical, and electrical signaling in a complete 3D brain system.
- Local fluidic delivery in nanowire lumens for in situ polymerization and molecular delivery capabilities.
- Combine nanowire transistors and polymer synapses for multifunctional neuromorphic units that can mimic the many different functions in biological brains.
- Iteratively develop materials and performance characteristics with input from WP1 and WP3.

WP3: Smart brain-machine interfaces (Lead: KI and LiU)

- Build interfaces linking peripheral nerves/ganglia & tissue with minimal synth. brain modules.
- Implement edge computing principles for local signal preprocessing, enabling closed-loop local regulation of physiology and eliminating or reducing data transfer needs.
- Validate bidirectional communication and adaptive response in vitro and in vivo.
- Incorporate biocompatible designs (WP2) to ensure stable, long-term integration.
- Leverage WP4 insights and systems to progressively augment and replace signal preprocessing components.

WP4: Neuromorphic function and modeling (Lead: LU and LiU)

- Model synthetic neural circuits based on WP1-derived architectures.
- Demonstrate inhibition, excitation, and non-linear signal integration in synthetic networks.
- Simulate multi-timescale memory functions & benchmark against biological performance.¹⁶
- Develop hierarchical minimal neural systems capable of multi-tasking.

WP5: Ethics, society, and governance (Lead: LU and KI)

- Cross-WP analysis of social, ethical, and philosophical implications of synthetic brains.

- Implementation of minimal circuits in healthcare and industrial contexts through close collaboration with healthcare units and Swedish and international companies, while strengthening academic-industry partnerships to foster social well-being and creation of a new generation of entrepreneurs utilizing these technologies and concepts.
- Recommend governance structures for equitable, ethical deployment of hybrid neurotechnologies.
- Security aspects of hybrid neuromorphic structures in a local and global context.

Forms of collaboration. Given the short, six-month duration, our collaboration will be tightly focused on defining the shared vision, selecting the most promising methods, and preparing a competitive proposal for a future cluster of excellence. Activities will be sequenced to maximize efficiency and ensure progress on the 3 key scientific questions (page 2 above).

Kick-off workshop (Month 1, all co-PIs and involved researchers in person): Two full days to frame the core scientific questions, map them to feasible methodologies, and assign initial responsibilities. We will identify knowledge gaps, harmonize disciplinary perspectives, and set milestones for the networking period.

Expert exchange series (Months 1–5, ≥2 online sessions/month): Partners present core competencies, facilities, and relevant methods, with structured discussion on integration into the three key questions. Outcomes will include shortlists of candidate materials, architectures, and experimental models.

Focused researcher exchanges (Months 2–5, 1–2 researchers/visit): Short visits (up to one week) to transfer techniques, gain hands-on experience, and evaluate method suitability for addressing the scientific questions.

Infrastructure and capability mapping (Months 1–3, led by LiU with KI & LU input): Rapid survey of equipment, laboratories, and computational resources, both locally (e.g., KI neurophysiology labs, LiU's LOE, LU's LNL) and within relevant European networks, highlighting strengths, gaps, and immediate needs.

Stakeholder mini-consultations (Months 3–4, targeted small-group format): Engaging selected industry, clinical, and policy contacts to test societal relevance, assess security and ethical implications, and gather concrete input for equitable access and agency considerations.

Closing retreat (Month 6, in person): One day to finalize the integrated research plan, confirm partner roles, and compile preparatory deliverables.

By the end of the network grant, we will have: (i) a jointly developed research roadmap addressing the 3 key questions (page 2, above); (ii) a well-defined partner structure with clear roles; (iii) documented access (and plans to facilitate future access) to critical infrastructure; and (iv) initial stakeholder alignment, including social science and humanities perspectives. These outputs will position us to launch an ambitious cluster of excellence without delay.

References

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4. *Commun. Mater.* **6**, 11 (2025).
5. *Appl. Phys. Lett.* **118**, 191107 (2021).
6. *Nano Lett.* **25**, 3085 (2025).
7. *Nat. Mater.* **19**, 13 (2020).
8. *Science* **379**, 795 (2023).
9. *Nat. Mater.* **23**, 878 (2024).
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15. *Adv. Sci.* **6**, 1801339 (2019).
16. *Neuromorphic Comput. Eng.* **3**, 042001 (2023).

Beskrivning av meriter

Meritbeskrivning (engelska)

Professor Magnus Berggren has pioneered research in the areas of organic electronics and bioelectronics, with over 25 years' experience in conceiving, leading, and delivering large, high-impact interdisciplinary research programs. He founded and directed the Laboratory of Organic Electronics (LiU), growing it to over 160 researchers across ten units, and has initiated more than 20 spin-out companies translating fundamental discoveries into societal benefit. As director of the 300 MEUR Wallenberg Initiative Materials Science for Sustainability (WISE), he leads a multi-university program involving 220+ projects, advanced infrastructure development, and strategic recruitment, demonstrating his ability to coordinate large, complex research networks.

His scientific track record includes seminal contributions to organic electronic ion pumps, in situ-formed bioelectronic interfaces, and neuromorphic organic devices – core technologies underpinning the Minimal Synthetic Brain concept. He has published extensively in *Science*, *Nature*, *Nature Materials*, *Nature Communications*, and *Advanced Materials*, with highly cited works in neural interfaces, mixed ion-electron conductors, and bioelectronic therapies. He has coordinated multi-partner efforts bridging materials science, neuroscience, and device engineering, with demonstrated success in integrating semiconductor nanostructures, soft organic electronics, and biointerfaces – of relevance to the proposed hybrid neuromorphic platform.

Prof. Berggren's past and present leadership roles in national academies (KVA and IVA), foundations (SSF, KAW, MWP), industry boards, steering groups (FKS-IVA), and international collaborations confirm his ability to unite diverse disciplines and stakeholders. His proven capacity to align scientific excellence with societal and ethical considerations ensures effective stewardship of the consortium towards the ambitious goals of the Minimal Synthetic Brain project.

Sökandes publikationer och andra forskningsoutputs (engelska)

Se nästa sida för bilaga.

Publications & research outputs – Magnus Berggren (PI)

1. Selection of research outputs

1. **From synthetic vesicles to living cells: Anchoring conducting polymers to cell membrane.** H Biesmans, AB Farinotti, T Abrahamsson, K Arja, C Lindholm, ..., D T Simon, C I Svensson, C Musumeci, **M Berggren**. *Science Advances* 10, eadr2882 (2025).

Main-PI of this collaboration project targeting to connect and build up electronic functionality to individual cell membranes, based on a collaboration with KI.

2. **Ion-tunable antiambipolarity in mixed ion–electron conducting polymers enables biorealistic organic electrochemical neurons.** PC Harikesh, CY Yang, HY Wu, S Zhang, MJ Donahue, AS Caravaca, J-D Huang, P S Olofsson, **M Berggren**, D Tu, S Fabiano. *Nature Materials* 22, 242-248 (2023).

A project to demonstrate specific device functionalities in organic electrochemical transistors for neuro-mimicking functionality for neuromorphic computing. Participating PI, involved in defining the project goals and hypotheses, and supported in writing the manuscript.

3. **Metabolite-induced in vivo fabrication of substrate-free organic bioelectronics.** X Strakosas, H Biesmans, T Abrahamsson, K Hellman, MS Ejneby, ..., D. T Simon, R. Olsson, **M Berggren**. *Science* 379, 795-802 (2023).

The main PI for the e-NeuroPharma project, targeting to achieve electronic-pharma functionality to combat neurodegenerative diseases. I have initiated and am guiding the research project since 6 years ago, and serving as corresponding author.

4. **Organic electrochemical neurons and synapses with ion mediated spiking.** PC Harikesh, CY Yang, D Tu, J Y Gerasimov, A M Dar, A A-Moreira, M Massetti, R Kroon, D Bliman, R Olsson, E Stavrinidou, **M Berggren**, S Fabiano. *Nature Communications* 13, 901 (2022).

A large collaboration project demonstrating novel spiking and neuromorphic characteristics, involving several research groups at LiU and LU. My role was as a collaborating PI and involved in writing the manuscript.

5. **All-printed large-scale integrated circuits based on organic electrochemical transistors.** P Andersson Ersman, R Lassnig, J Strandberg, D Tu, V Keshmiri, R Forchheimer, S Fabiano, G Gustafsson, **M Berggren**, *Nature communications* 10, 5053 (2019).

Research leader initiating and managing this collaboration project, involving RISE and several groups at LiU, and also the corresponding author.

6. **How conducting polymer electrodes operate.** **M Berggren**, GG Malliaras. *Science* 364, 233-234 (2019).

Together with George Malliaras, Cambridge, UK, I proposed and reported a generic model describing the charge polarization in polymer mixed ion-electron conductors for electronics, bioelectronics and energy applications.

7. **An evolvable organic electrochemical transistor for neuromorphic applications.** JY Gerasimov, R Gabrielsson, R Forchheimer, E Stavrinidou, DT Simon, **M Berggren**, S Fabiano. *Advanced Science* 6, 1801339 (2019).

Our first report on neuromorphic device functionality based on organic electrochemical transistors based on in situ-polymerization and depression of the channel material. Collaborating PI and co-author.

8. **Complementary logic circuits based on high-performance n-type organic electrochemical transistors.** H Sun, M Vagin, S Wang, X Crispin, R Forchheimer, **M Berggren**, S Fabiano. *Advanced Materials* 30, 1704916 (2018).

Demonstration of high-performing complementary transistor functionality including the BBL-material (n-type), involved in initiating and guiding the project and also authorship.

9. **Organic electrochemical transistors.** J Rivnay, S Inal, A Salleo, RM Owens, **M Berggren**, GG Malliaras. *Nature Reviews Materials* 3, 1-14 (2018).

As a co-author, I reported on the summary of 20+ years of work organic electrochemical transistors.

10. **Electronic plants.** Eleni Stavrinidou, Roger Gabrielsson, Eliot Gomez, Xavier Crispin, Ove Nilsson, Daniel T Simon, **Magnus Berggren**. *Science Advances* 1, e1501136, (2015).

The main-PI initiating, guiding and writing on this discovery of amalgamating electronic functionality with the Xylem vascular system and tissues of plants.

2. Relevant peer-reviewed research outputs 2017–2025

Original articles

1. M Mohammadi, J Shang, Y Li, A Rahmanudin, D Jakonis, **M Berggren**, L Herlogsson & K Tybrandt. Miniaturized Soft and Stretchable Multilayer Circuits through Laser-Defined High Aspect-Ratio Printing. *Small* **21** (2025).
2. D Hughes, AH Mousa, C Musumeci, M Larsson, MA Shameem, U Aydemir, L Schmiderer, J Larsson, **M Berggren**, F Ek, R Olsson & M Hjort. Lithography-Free Water Stable Conductive Polymer Nanowires. *Nano Letters* **25**, 3059 (2025).
3. T Arbring Sjöström, AI Ivanov, N Kiani, I Bernacka-Wojcik, J Samuelsson, H Saarela Unemo, D Xydias, LE Vagiaki, S Psilodimitrakopoulos, I Konidakis, K Sidiropoulou, E Stratakis, **M Berggren**, C Bernard & DT Simon. Miniaturized Iontronic Micropipettes for Precise and Dynamic Ionic Modulation of Neuronal and Astrocytic Activity. *Small* **21** (2025).
4. I Sahalianov, T Abrahamsson, D Priyadarshini, AH Mousa, K Arja, JY Gerasimov, M Linares, DT Simon, R Olsson, G Baryshnikov, **M Berggren** & C Musumeci. Tuning the Emission of Bis-ethylenedioxythiophene-thiophenes upon Aggregation. *Journal of Physical Chemistry B* **128**, 6581 (2024).
5. D Priyadarshini, C Li, R Rilemark, T Abrahamsson, MJ Donahue, X Strakosas, F Ek, R Olsson, C Musumeci, S Fabiano, **M Berggren**, E Olsson, DT Simon & JY

- Gerasimov. Tuning the Organic Electrochemical Transistor (OECT) Threshold Voltage with Monomer Blends. *Advanced Electronic Materials* (2024).
6. D Priyadarshini, T Abrahamsson, H Biesmans, X Strakosas, JY Gerasimov, **M Berggren**, DT Simon & C Musumeci. Enzymatically Polymerized Organic Conductors on Native Lipid Membranes. *Langmuir* **40**, 27299 (2024).
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 9. F Ek, T Abrahamsson, M Savvakis, S Bormann, AH Mousa, MA Shameem, K Hellman, AS Yadav, LH Betancourt, P Ekström, JY Gerasimov, DT Simon, G Marko-Varga, M Hjort, **M Berggren**, X Strakosas & R Olsson. In Vivo Photopolymerization: Achieving Detailed Conducting Patterns for Bioelectronics. *Advanced Science* **11** (2024).
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Cox MA, Duncan GS, Lin GHY, Steinberg BE, Yu LX, Brenner D, Buckler LN, Elia AJ, Wakeham AC, Nieman B, Domingues-Brauer C, Elford AR, Gill KT, Kubli SP, Haight J, Berger T, Ohashi PS, Tracey KJ, **Olofsson PS**, Mak TW. Choline acetyltransferase-expressing T cells are required to control chronic viral infection. **Science**. 2019 Feb 8;363(6427):639-644.

[The discovery that cholinergic T cells regulate vascular function in anti-viral responses.](#)

Caravaca AS, Tsaava T, Goldman L, Silverman H, Riggott G, Chavan S, Bouton C, Tracey KJ, Desimone R, Boyden E, Sohal HS, **Olofsson PS**. A novel flexible cuff-like microelectrode for dual purpose, acute and chronic electrical interfacing with the mouse cervical vagus nerve. **J Neural Engineering**. 2017 Jun 19

[Development and use of a microelectrode for interfacing with the mouse vagus nerve.](#)

Olofsson PS, Steinberg BE, Sobbi R, Cox MA, Ahmed MN, Oswald M, Szekeres F, Hanes WM, Introini A, Liu SF, Holodick NE, Rothstein TL, Lövdahl C, Chavan SS, Yang H, Pavlov VA, Broliden K, Andersson U, Diamond B, Miller EJ, Arner A, Gregersen PK, Backx PH, Mak TW, Tracey KJ. Blood Pressure Regulation by CD4+ Lymphocytes Expressing Choline Acetyltransferase. **Nature Biotechnology**, 2016 Oct;34(10):1066-1071.

[The discovery that human cholinergic T cells regulate endothelial function in blood vessels.](#)

Motivering av sökt budget

Motivering av sökt budget (engelska)

The fixed budget of 1.2 MSEK will be distributed across the main applicant and six co-applicants to enable the intensive six-month programme of networking, planning, and coordination. The grant will primarily cover personnel time for coordination, meetings, and preparation of the full cluster application, together with travel and meeting costs required to realize the planned activities.

A portion of the budget will be used for organizing the **kick-off workshop** (two days, all partners in person). This will cover travel and accommodation for participants from KI, LiU, LU, and associated partners, as well as venue, food, and basic workshop logistics. The kick-off is critical for establishing the shared scientific vision, aligning methods, and setting milestones.

Dedicated resources are set aside for **focused researcher exchanges** (short visits of up to one week). These exchanges are central to hands-on knowledge transfer, familiarization with key techniques, and evaluation of potential collaborations. Costs here include travel, accommodation, and local hosting across partner universities.

The grant will further cover activities for **infrastructure and capability mapping**, led by LiU with input from KI and LU. This involves compiling and analyzing data on laboratories, equipment, and computational resources. Costs include coordination time and limited travel to facilities where needed.

To ensure that ethical, societal, and industrial perspectives are integrated from the outset, funds are allocated for **stakeholder consultations** with healthcare units, companies, and policy actors. These events require modest travel and meeting costs.

Finally, resources will support a **closing retreat** to finalize the research roadmap, confirm partner roles, and compile deliverables. This one-day in-person meeting requires similar support as the kick-off but on a smaller scale.

Personnel costs for each PI are modest but essential, covering the coordination, reporting, and strategic planning needed to integrate contributions across natural sciences, engineering, medicine, and humanities.

Overall, the distribution of funds reflects the purpose of the networking grant: enabling intensive, short-term collaboration across three universities and multiple disciplines to position the consortium to apply for a large-scale cluster of excellence.

CV

CV - Magnus Berggren

Projektledare: Magnus Berggren
Födelsedatum: 19681125
Kön: Man
Land: Sverige

Dr-examen: 1996-05-14
Akademisk titel: Professor
Arbetsgivare: Linköpings universitet

Doktorsexamen			
Examen	Organisation	Avhandlingens titel (originalspråk)	Handledare
10304. Den kondenserade materiens fysik, 1996-05-14	Linköpings universitet, Institutionen för fysik, kemi och biologi (IFM)		Olle Inganäs

Utbildning

Forskarutbildning		
Examen	Organisation	Namn på handledare
Doktorsexamen, 10304. Den kondenserade materiens fysik, 1996-05-14	Linköpings universitet, Sverige, Institutionen för fysik, kemi och biologi (IFM)	Olle Inganäs

Utbildning på grund- och avancerad nivå	
År	Examen
1991	10399. Annan fysik, Magisterexamen, Linköpings universitet, Sverige

Arbetsliv

Anställningar				
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
mars 2007 - Nuvarande	Professor, Tillsvidareanställning	100	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)	Önnesjö Endowment Professor, LiU, funded by Holmen Paper AB
februari 2002 - Nuvarande	Professor, Tillsvidareanställning	100	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)	Professor with tenure in Organic Electronics, LiU
januari 2009 - december 2011	Professor, Projektanställning	5	Université Paris Diderot-Paris 7, Frankrike, ITODYS	
januari 1999 - december 2001	Manager for the Printed Electronics group, Tillsvidareanställning	80	RISE Acreo AB, Sverige, Printed Electronics group	
september 1997 - december 1998	Managing director, Tillsvidareanställning	50	Thin Film Electronics AB, Sverige, Ledning	

Postdoktorvistelser		
Period	Organisation	Ämne
juli 1996 - september 1997	Bell Labs, USA, Bell Labs	10304. Den kondenserade materiens fysik

Forskarutbyten			
Period	Typ	Organisation	Ämne
januari 2017 - februari 2017	Sabbatsår	STIAS	10304. Den kondenserade materiens fysik

Uppehåll i forskningen

Period	Beskrivning
2017-02-28 - 2017-05-31	Föräldraledighet 75%
2016-12-05 - 2017-01-15	Föräldraledighet 75%

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
1999	10304. Den kondenserade materiens fysik	Linköpings universitet, Sverige, Institutionen för fysik, kemi och biologi (IFM)

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2022 - 2024	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Magnus Berggren	Projektledare	0	270 000 000
2022 - 2026	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Magnus Berggren	Medverkande	90 333 000	380 000 000
2021 - 2025	Europeiska Unionen (EU),	Magnus Berggren	Medverkande	3 356 250	31 840 362
2019 - 2022	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Magnus Berggren	Medverkande	52 000 000	160 000 000
2019 - 2024	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Magnus Berggren	Projektledare	0	27 200 000
2019 - 2024	SSF - Stiftelsen för strategisk forskning, Sverige - Annan forskningsfinansiär	Magnus Berggren	Projektledare	0	34 933 392
2019 - 2024	Europeiska Unionen (EU),	Magnus Berggren	Projektledare	0	35 528 132
2018 - 2024	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Magnus Berggren	Projektledare	0	28 220 000
2018 - 2018	SSF - Stiftelsen för strategisk forskning, Sverige - Annan forskningsfinansiär	Magnus Berggren	Projektledare	0	32 000 000
2016 - 2021	SSF - Stiftelsen för strategisk forskning, Sverige - Annan forskningsfinansiär	Magnus Berggren	Projektledare	0	34 868 872

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning

År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2019	Sverige	ERC Advanced Grant	European Research Council	ERC Advanced Grant, e-NeuroPharma
2018	Sverige	Elected member of The Royal Academy of Engineering Sciences, Class 11		
2017	Sydafrika	Fellow of the Stellenbosch Institute for Advanced Studies (STIAS), South Africa	Stellenbosch Institute for Advanced Studies (STIAS), South Africa	Fellow of the Stellenbosch Institute for Advanced Studies (STIAS), South Africa
2014	Sverige	Marcus Wallenberg Price (MWP) 2014	The Marcus Wallenberg Foundation for Promoting Scientific Research in the Forest Industry	
2012	Sverige	Wallenberg Scholar (KAW)	Knut and Alice Wallenberg Foundation (KAW)	
2011		Elected Member of the Royal Swedish Academy of Sciences, Class 8		
2006		Göran Gustafsson Price in Chemistry (KVA)		
2001	Sverige	The INGVAR (Research Leaders) grant (SSF)		
1999		Chester Carlsson Research Prize (Xerox Foundation and IVA)		
1996		Hans Werthén scholarship (IVA)		

Andra meriter		
Period	Typ av merit	Beskrivning
2015 - 2030	Director, Laboratory of Organic Electronics, LiU	Director, Laboratory of Organic Electronics, LiU
2020 - 2022	Board member, Swedish Foundation for Strategic Research (SSF)	Board member, Swedish Foundation for Strategic Research (SSF)
2017 - 2022	Chair of DCC Management Group (DMG), in the competence center Digital Cellulose Center	Chair of DCC Management Group (DMG) which is responsible for handling the research and innovation project portfolio in the Vinnova Competence Center "Digital Cellulose Center".
2018 - 2021	Board member, Royal Swedish Academy of Sciences (KVA)	Board member, Royal Swedish Academy of Sciences (KVA), representing Class 8
2013 - 2021	Chairman, Class 8 (Class for engineering sciences), Royal Swedish Academy of Sciences (KVA)	Chairman, Class 8 (Class for engineering sciences), Royal Swedish Academy of Sciences (KVA)
2018 - 2020	Board member of Marcus Wallenberg Price (MWP)	Board member of Marcus Wallenberg Price (MWP)
2016 - 2018	Managing Director of Ligna Energy	Managing Director of Ligna Energy

Period	Typ av merit	Beskrivning
2013 - 2018	Board Member, LiU University Board	Board Member, LiU University Board
2008 - 2016	Research Director, Printed Electronics Arena (VINNVÄXT/VINNOVA)	Research Director, Printed Electronics Arena (VINNVÄXT/VINNOVA)
2006 - 2013	Director Strategic Research Center for Organic Bioelectronics (SRC/SSF)	Director Strategic Research Center for Organic Bioelectronics (SRC/SSF)
2006 - 2013	Board Member, Institute of Technology, LiU	Board Member, Institute of Technology, LiU
2003 - 2008	Co-director, Center of Excellence Organic Electronics (SSF)	Co-director, Centre of Excellence Organic Electronics (SSF)
1995 - 1996	Board Member Dept. Physics, Chemistry and Biology, LiU	Board Member, Dept. Physics, Chemistry and Biology, LiU
2013	Director Government Strategic Research Area Grant in Materials Science	

CV - Simone Fabiano

Medverkande forskare: Simone Fabiano
Födelsedatum: 19850421
Kön: Man
Land: Sverige

Dr-examen: 2012-03-26
Akademisk titel: Docent
Arbetsgivare: Linköpings universitet

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10402. Fysikalisk kemi, 2012-03-26	Università degli Studi di Palermo, Italien, Department of Chemistry	Controlling molecular packing for charge transport in organic thin film devices	Bruno Pignataro

Utbildning på grund- och avancerad nivå

År	Examen
2008	10403. Materialkemi, Magisterexamen, Università degli Studi di Catania, Italien
2006	10402. Fysikalisk kemi, Kandidatexamen, Università degli Studi di Catania, Italien

Arbetsliv

Anställningar

Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare
mars 2025 - Nuvarande	Professor, Tillsvideareanställning	100	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)
april 2023 - februari 2025 (Nuvarande)	Senior Associate Professor, Tillsvideareanställning	100	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)
januari 2018 - mars 2023	Lektor, Tillsvideareanställning	100	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)
september 2015 - december 2017	Forskarassistent, Tillsvideareanställning	100	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)

Postdoktorvistelser		
Period	Organisation	Ämne
april 2012 - augusti 2015	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)	10403. Materialkemi

Forskarutbyten			
Period	Typ	Organisation	Ämne
september 2016 - december 2017	Gästforskare	Northwestern University, USA, Department of Chemistry	10403. Materialkemi
mars 2015 - april 2015	Gästforskare	Polyera Corporation	10403. Materialkemi
januari 2010 - februari 2012	Visiting PhD student	Rijksuniversiteit Groningen, Nederländerna, Faculty of Mathematics and Natural Sciences - Zernike Institute for Advanced Materials	10304. Den kondenserade materiens fysik
oktober 2007 - september 2008	Intern	Consorzio Catania Ricerche, Italien, The Laboratory of Surfaces and Interfaces - Superlab (c/o STMicroelectronics, Catania)	10403. Materialkemi
januari 2006 - juni 2006	Intern	Consorzio Catania Ricerche, Italien, The Laboratory of Surfaces and Interfaces - Superlab (c/o STMicroelectronics, Catania)	10402. Fysikalisk kemi

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation

År	Ämne	Organisation
2020	103. Fysik	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)

Handledda personer			
Handledda personer	Lärosäte (handledd person)	Roll	Antal
Doktorand	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)	Huvudhandledare	7
Doktorand	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)	Bihandledare	7
Postdok	Linköpings universitet, Sverige, Institutionen för teknik och naturvetenskap (ITN)	Huvudhandledare	23

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2024 - 2028	Europeiska Unionen (EU),	Simone Fabiano	Medverkande	5 600 000	42 500 000
2024 - 2029	Europeiska Unionen (EU),	Simone Fabiano	Projektledare	0	23 000 000
2023 - 2027	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Simone Fabiano	Projektledare	0	8 374 750
2022 - 2023	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Simone Fabiano	Projektledare	0	2 500 000
2022 - 2027	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Simone Fabiano	Projektledare	0	7 500 000
2021 - 2024	Europeiska Unionen (EU),	Simone Fabiano	Medverkande	3 375 000	31 840 360
2021 - 2024	Europeiska Unionen (EU),	Simone Fabiano	Medverkande	2 820 000	39 757 000
2020 - 2024	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Simone Fabiano	Projektledare	0	4 334 000
2020 - 2023	Olle Engkvists Foundation, Sverige - Annan forskningsfinansiär	Simone Fabiano	Projektledare	0	1 765 000
2019 - 2022	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Magnus Berggren	Medverkande	5 000 000	160 000 000

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning

År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2022	Sverige	Wallenberg Academy Fellow	Knut och Alice Wallenbergs Stiftelse	
2021	Tyskland	Rising Stars	Advanced Materials (Wiley)	
2018	Storbritannien och Nordirland	Emerging Investigator	Royal Society of Chemistry	Highlight published in Themed collection: Journal of Materials Chemistry C Emerging Investigators
2018	Storbritannien och Nordirland	European Young Chemist Award EYCA2018 Silver Medal	European Chemical Society	
2016	Sverige	VINNMER Fellow	VINNOVA	
2016	Sverige	Marie Curie Fellow	VINNOVA	
2008	Italien	Summa cum laude	University of Catania	

Andra meriter		
Period	Typ av merit	Beskrivning
2014 - 2030	Reviewer duties	Reviewer for manuscripts submitted to e.g., Nature, Nat. Mater., Nat. Nanotech., Nat. Commun., Nat. Electron., Science Adv., Science Rob., Adv. Mater., Adv. Energy Mater., Adv. Funct. Mater., Angew. Chem., Nano Lett., JACS, APL.
2015 - 2030	National and international seminars	2021 Spring 2021 Materials Graduate Program Seminar Series, Kent State University; 2018 Italian Institute of Technology, Milan, Italy; 2015 Université de Bordeaux, Bordeaux, France; 2014 ICT Acreo, Kista, Sweden; 2012 Institut für Physik und Astronomie, University of Potsdam, Potsdam, Germany; 2012 Institut für Organische Chemie, Universität Würzburg, Würzburg, Germany;
2012 - 2030	Invited talks at conferences	Since 2017, I have delivered >40 invited talks at (E-)MRS, ACS, SPIE, SSI, etc.
2016 - 2030	Publication summary	139 peer-reviewed articles in ISI-indexed journals, >10,800 citations, H-index: 56 (Google Scholar). Papers published in high Impact Factor (IF) journals, including Nature, Nat. Mater., Nat. Nanotech., Nat. Rev. Mater., Nat. Commun., Adv. Mater., J. Am. Chem. Soc., Adv. Funct. Mater., Sci. Adv., PNAS, Adv. Sci. Google Scholar profile: https://scholar.google.com/citations?user=4PeHv9cAAAAJ&hl=en
2019 - 2030	Unit leader	Unit leader (Organic Nanoelectronics), Linköping University, Sweden.
2021 - 2030	Co-founder and CSO of Westra Materials AB	In 2020, I co-founded n-Ink, a startup that emerged from the research activities of my group at Linköping University. The company develops sustainable, high-performance organic materials for printed and flexible electronics. In 2023, the company rebranded to Westra Materials AB to better reflect its long-term vision and values. I currently serve as Chief Scientific Officer and sit on the Board of Directors of Westra Materials. The company focuses on PFAS-free conductive polymers that are processable from environmentally friendly solvents, such as water, offering high conductivity and thermal stability for applications in printed sensors, capacitors, batteries, and energy-harvesting devices. Its innovations are protected by multiple patent families, particularly in the areas of eco-friendly conducting polymer inks and energy-related device applications. In 2022, the company secured a €1.5 million seed investment, followed by an additional €1 million seed+ in 2024, to support product development and scale-up.

Period	Typ av merit	Beskrivning
2022 - 2030	Associate editor	Associate editor of Frontiers in Electronic Materials
2023 - 2030	Scientific Editor of Materials Horizons (RSC)	Scientific Editor of Materials Horizons (RSC)
2016 - 2022	Patents	23 patents/patent applications
2017 - 2022	Evaluator	Evaluator of proposals for Netherlands Organization for Scientific Research (NWO), Advanced Functional Materials Center at Linköping University (Sweden), National Science Centre Poland (OSF), CAST-Qiu Shi Outstanding Young Scholar Award (China), French National Research Agency (ANR), Fondation pour la Recherche en Chimie (FRC), European Research Council (ERC), University of Cyprus (ONISILOS), Singapore National Research Foundation (NRF), German Research Foundation (DFG).
2019 - 2022	PhD Thesis Evaluator	Examiner/opponent for 18 PhD theses at several universities worldwide, including Politecnico di Milano (Italy), Universitat Autònoma de Barcelona (Spain), Università di Modena e Reggio Emilia (Italy), Linköping University (Sweden), Northwestern University (USA), University of Strasbourg (France), Eindhoven University of Technology (The Netherlands), Nanyang Technological University (Singapore), University of Basel (Switzerland), KAUST (Saudi Arabia), Stockholm University (Sweden), Monash University (Australia), University of Bayreuth (Germany), University of Surrey (UK).
2020 - 2022	Teaching activities	2020/21 Course responsible, lecturer, Organic Electronics 1 (TN1017), Linköping University, Sweden; 2019/21 Lecturer, Organic Electronics 2 (TNE104), Linköping University, Sweden; 2018 Lecturer, Organic Electronics 1 (TNE103), Linköping University, Sweden;
2020 - 2020	Conference organizer	Co-organizer of 1) 15th European Conference on Molecular Electronics (ECME 2019), 27-31 Aug 2019, Linköping (Sweden); 2) 2020 E-MRS Spring Meeting, Symposium C, 25-29 May 2020, Strasbourg (France); 3) nanoGe conference Neuromorphic Materials, Devices, Circuits and Systems (NeuMatDeCaS), 23-25 Jan 2023 (online); 4) MATSUS Fall 2023, 16-20 Oct, Torremolinos, Spain; 5) 2023 MRS Fall Meeting, 26 Nov-1 Dec 2023, Boston, USA.

Immaterialrätt

Immaterialrätt					
Typ	Datum för beviljning	Status	ID	Licensierad till annan	Produkt klassificering
Patent		Beviljad	EP3226271	Sverige - Övriga statliga myndigheter	72. Tjänster avseende vetenskaplig forskning och utveckling
Patent		Beviljad	US9318596	Sverige - Övriga statliga myndigheter	72. Tjänster avseende vetenskaplig forskning och utveckling
Patent		Beviljad	EP21153801	Ej Sverige - Universitet och högskolor	72. Tjänster avseende vetenskaplig forskning och utveckling

Typ	Datum för beviljning	Status	ID	Licensierad till annan	Produkt klassificering
Patent		Beviljad	PCT/EP2020/082815	Sverige - Företag (även statliga och kommunala bolag samt statliga affärsdrivande verk)	72. Tjänster avseende vetenskaplig forskning och utveckling
Patent		Beviljad	PCT/EP2020/082821	Sverige - Företag (även statliga och kommunala bolag samt statliga affärsdrivande verk)	72. Tjänster avseende vetenskaplig forskning och utveckling
Patent		Beviljad	EP3422450	Sverige - Övriga statliga myndigheter	72. Tjänster avseende vetenskaplig forskning och utveckling

CV - Stanley Heinze

Medverkande forskare: Stanley Heinze
Födelsedatum: 19791115
Kön: Man
Land: Sverige

Dr-examen: 2009-04-30
Akademisk titel: Doktor
Arbetsgivare: Lunds universitet

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10608. Zoologi, 2009-04-30	Philipps-Universität Marburg, Tyskland, Animal Physiology	Charakterisierung von polarisationssensitiven Neuronen des Zentralkomplexes im Gehirn der Wüstenheuschrecke (Schistocerca gregaria)	Uwe Homberg

Utbildning på grund- och avancerad nivå

År **Examen**

2005 10608. Zoologi, Diploma in Biology, Philipps-Universität Marburg, Tyskland

Arbetsliv

Anställningar				
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
september 2022 - Nuvarande	Lektor, Tillsvidareanställning	70	Lunds universitet, Sverige, Biologiska institutionen 156400	

Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
maj 2015 - augusti 2022 (Nuvarande)	Forskare, Tillsvidareanställning	100	Lunds universitet, Sverige, Biologiska institutionen 156400	
december 2012 - april 2015	Postdoktor, Tidsbegränsad anställning	100	Lunds universitet, Sverige, Biologiska institutionen 156400	From May 2013 to April 2015 funded by a Marie-Curie IEF
mars 2009 - augusti 2012	Postdoktor, Tidsbegränsad anställning	100	University of Massachusetts Medical School, USA, Department of Neurobiology	Funded by a Human Frontiers Long Term Fellowship

Postdoktorvistelser		
Period	Organisation	Ämne
december 2012 - april 2015	Lunds universitet, Sverige, Biologiska institutionen 156400	10608. Zoologi
mars 2009 - augusti 2012	University of Massachusetts Medical School, USA, Department of Neurobiology	10608. Zoologi

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
2018	106. Biologi (Medicinska tillämpningar under 3 och lantbruksvetenskapliga under 4)	Lunds universitet, Sverige, Biologiska institutionen 156400

Handledda personer			
År	Handledda personer	Lärosäte (handledd person)	Roll
2028	Doktorand, Nils Ceberg	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2027	Doktorand, Ana Zadel	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2027	Doktorand, Griffin Badalamente	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2026	Doktorand, Janka Kluge	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2025	Doktorand, Valentin Gillet	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2023	Doktorand, Marcel Sayre	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2019	Doktorand, Andrea Adden	Lunds universitet, Sverige	Huvudhandledare
2022	Doktorand, John Pisokas	The University of Edinburgh, Storbritannien och Nordirland, School of Informatics	Bihandledare

År	Handledda personer	Lärosäte (handledd person)	Roll
2017	Doktorand, Thomas Stone	The University of Edinburgh, Storbritannien och Nordirland	Bihandledare
2026	Postdok, Abel Corver	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2024	Postdok, Rickesh Patel	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2024	Postdok, Roman Goulard	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2020	Postdok, Adriana Schatton	Lunds universitet, Sverige, Biologiska institutionen 156400	Huvudhandledare
2019	Postdok, Anna Honkanen	Lunds universitet, Sverige	Huvudhandledare
2017	Postdok, David Dreyer	Lunds universitet, Sverige	Bihandledare

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2024 - 2027	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Stanley Heinze	Projektledare	0	3 800 000
2022 - 2027	Europeiska Unionen (EU),	Stanley Heinze	Projektledare	0	20 000 000
2022 - 2026	Europeiska Unionen (EU),	Anders Mikkelsen	Medverkande	4 680 000	32 000 000
2020 - 2022	Crafoord Foundation, Sverige - Övriga privata utförare	Stanley Heinze	Projektledare	0	1 200 000
2019 - 2022	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Stanley Heinze	Projektledare	0	3 200 000
2017 - 2020	Europeiska Unionen (EU),	Stanley Heinze	Projektledare	0	14 400 000
2014 - 2018	Ej Sverige - Statliga enheter,	Eric Warrant	Medverkande	4 622 995	9 245 990
2013 - 2015	Europeiska Unionen (EU),	Stanley Heinze	Projektledare	0	1 912 093
2013 - 2016	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Stanley Heinze	Projektledare	0	3 200 000
2009 - 2012	Ej Sverige - Internationella organisationer,	Stanley Heinze	Projektledare	0	1 259 407

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning

År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2009	USA	Capranica Prize for Neuroethology	International Society for Neuroethology	for my paper, Heinze and Homberg (2007), as "most outstanding in terms of scientific significance in the field of neuroethology" during the previous calendar year) [2 500 USD] (shared between two awardees)
2009	Tyskland	Best PhD thesis of the year in Biology.	University of Marburg, Faculty of Biology	The best PhD thesis of the year is awarded to two graduates of one academic year across the faculty of Biology.

Andra meriter		
Period	Typ av merit	Beskrivning
2015 - 2025	Cofounder / Chief Curator	Chief Curator / Cofounder of InsectBrainDatabase (multi-laboratory-based, international database of anatomical and functional data related to insect neurons of many species) with the aim of promoting transparency and accessibility of neuroscience data; beta-test-version accessible at www.insectbraindb.org
2014 - 2025	Peer Reviewer	Peer reviewer for grant applications of the following organizations: NSF, USA; ISF, Israel; Royal Society, UK; ASF, Austria; DFG, Germany; European Research Council (ERC); Wellcome Trust, UK; Humboldt Foundation, Germany; BBSTC, UK
2010 - 2025	Peer Reviewer	Peer reviewer for 20 scientific journals, including: Nature, Nature Communications, Nature Neuroscience, Nature Methods, eLife, PLOS Biology, PNAS, Current Biology, The Journal of Experimental Biology
2024 - 2024	Examiner	Examiner for PhD thesis of Ruairi Roberts (Feb. 2024) at the Francis Crick Institute, London, UK.
2017 - 2017	Examiner	Examiner of Master's thesis by Zachary Sheehan at Macquarie University, Sydney, Australia. (November, 2017)
2017 - 2017	Examiner	Masters thesis examiner for Mengke Han, University of Adelaide, Australia. (September, 2017)
2016 - 2017	Editor	Co-editor (with Dr. Anne von Philipsborn) for Current Opinion in Insect Science (Neuroscience section for December 2017, Volume 24)
2017 - 2017	PhD thesis pre-examiner	Pre-examiner of the PhD thesis of Juha Rusanen, University of Oulu, Finland. (December, 2017)
2017 - 2017	PhD thesis opponent	Second opponent for doctoral examination of Elena Ian at the Norwegian University of Science and Technology, Trondheim, Norway (17th of March, 2017)
2016 - 2016	Conference Organizer	Co-organizer (together with Dr. Vivek Jayaraman and Dr. Barbara Webb) of the HHMI Janelia Farm Conference: 'Central Complex IV - A new hope to understand a multifaceted brain region' (20th-23th April 2016)
2016 - 2016	Special Topic Editor	Initiator and topic editor (together with Dr. Keram Pfeiffer) of a Research Topic (online special issue) in the journal 'Frontiers in Behavioral Neuroscience': "The Insect Central Complex - From sensory coding to directing movements"

Period	Typ av merit	Beskrivning
2016 - 2016	Editorial Board Member	Editorial Board Member of 'Frontiers for Young Minds' (outreach journal)
2012 - 2012	Conference Organizer	Co-organizer (together with Dr. Vivek Jayaraman and Dr. Eugenia Chiappe) of the HHMI Janelia Conference: 'Towards a Common Framework to Study the Function of the Insect Central Complex' (15th-18th April 2012)
2008 - 2008	Invited Guest Researcher	Invited guest researcher at Janelia Research Campus (HHMI). Development of a patch-clamp approach for double recordings from polarization sensitive neurons (in the desert locust) in collaboration with HHMI-fellow Dr. Vivek Jayaraman; 05/2008-06/2008

CV - Rui Liu

Medverkande forskare: Rui Liu
Födelsedatum: 19840805
Kön: Kvinna
Land: Sverige

Dr-examen: 2023-05-17
Akademisk titel: Doktor
Arbetsgivare: Lunds universitet

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 50999. Övrig annan samhällsvetenskap, 2023-05-17	Lunds universitet, Sverige	Tinkered care: Assembling Medicine Consumption in Grey Zones	Cecilia Fredriksson

Utbildning på grund- och avancerad nivå

År	Examen
2016	60502. Kulturstudier, Master of Arts in Applied Cultural Analysis, Lunds universitet, Sverige

Arbetsliv

Anställningar			
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare
maj 2023 - Nuvarande	Forskare, Tillsvideareanställning	80	Lunds universitet, Sverige, Kulturvetskap 500300
november 2016 - april 2023 (Nuvarande)	Doktorand, Vikariat	100	Lunds universitet, Sverige, Service management och tjänstvetenskap 253211

Meriter och utmärkelser

Bidrag erhållna i konkurrens				
Period	Finansiär	Projektledare	Din roll	Totalt belopp (kr)
2024 - 2025	Erik Philip Sörensen Foundation, Sverige - Övriga privata utförare	Rui Liu	Projektledare	370 000

Priser och utmärkelser

År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2024	Sverige	Faculty travel grant	Joint faculties of Humanities and Theology	The travel grant was awarded for my conference presentation at the 16th Conference of the European Sociological Association.
2018	Sverige	Campus Vänner Scholarship	Campus Vänner	Travel grant for presenting at an international conference in Oxford, UK

Andra meriter

Period	Typ av merit	Beskrivning
2023 - 2023	Lund University Erasmus International Mobility	Funding for 2-week research visit at Stellenbosch University, South Africa in May 2023

CV - Ulrika Marklund**Medverkande forskare:** Ulrika Marklund**Födelsedatum:** 19770930**Kön:** Kvinna**Land:** Sverige**Dr-examen:** 2008-12-12**Akademisk titel:** Doktor**Arbetsgivare:** Karolinska Institutet**Utbildning****Forskarutbildning**

Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10614. Utvecklingsbiologi, 2008-12-12	Karolinska Institutet, Sverige, CMB (Institutionen för cell- och molekylärbiologi)	Regional Control of Cell Fate Determination and Neurogenesis in the Developing CNS	Johan Ericson

Utbildning på grund- och avancerad nivå

År	Examen
2002	10602. Biokemi och molekylärbiologi, Magisterexamen, Umeå universitet, Sverige

Arbetsliv**Anställningar**

Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
december 2017 - Nuvarande	Senior Forskare (Associate Professor), Tillsvidareanställning	100	Karolinska Institutet, Sverige, MBB (Institutionen för medicinsk biokemi och biofysik)	Docent 2024

Postdoktorvistelser		
Period	Organisation	Ämne
februari 2009 - maj 2010	National Institute for Medical Research, Storbritannien och Nordirland, Division for Molecular Neurobiology	10614. Utvecklingsbiologi

Uppehåll i forskningen	
Period	Beskrivning
2013-10-01 - 2015-01-12	Föräldraledighet
2010-06-01 - 2011-08-31	Föräldraledighet

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
2024	304. Medicinsk bioteknologi	Karolinska Institutet, Sverige

Handledda personer			
År	Handledda personer	Lärosäte (handledd person)	Roll
2029	Doktorand, Manuel Pinto	Karolinska Institutet, Sverige	Huvudhandledare
2026	Doktorand, Wei Li	Karolinska Institutet, Sverige	Huvudhandledare
2026	Doktorand, Ziwei Liu	Karolinska Institutet, Sverige	Huvudhandledare
2025	Doktorand, Khomgrit Morarach	Karolinska Institutet, Sverige	Huvudhandledare
2019	Doktorand, Viktoria Knoflach	Karolinska Institutet, Sverige	Huvudhandledare
2027	Postdok, Krishnanand Padmanabhan	Karolinska Institutet, Sverige	Huvudhandledare
2027	Postdok, Lauren Phipps	Karolinska Institutet, Sverige	Huvudhandledare
2026	Postdok, Sanghita Banerjee	Karolinska Institutet, Sverige	Huvudhandledare
2025	Postdok, Fernando Lopez-Redondo	Karolinska Institutet, Sverige	Huvudhandledare
2021	Postdok, Anastassia Mikhailova	Karolinska Institutet, Sverige	Huvudhandledare
2019	Postdok, Fatima Memic	Karolinska Institutet, Sverige	Huvudhandledare
2025	Student, Claudia Simonetti	University of Milan, Italien	Huvudhandledare
2025	Student, Nynke van der Schaaf	University of Groningen, Nederländerna	Huvudhandledare
2023	Student, Alicia Blåder	Stockholms universitet, Sverige	Huvudhandledare
2021	Student, Prach Techameena	Karolinska Institutet, Sverige	Huvudhandledare

År	Handledda personer	Lärosäte (handledd person)	Roll
2020	Student, Amelie Joly	Ecole Normale Supérieure de Lyon, Frankrike, Biology Department	Huvudhandledare
2020	Student, Graziella Tabacaru	Karolinska Institutet, Sverige	Huvudhandledare
2016	Student, Lynn Pieters	Leiden University, Nederländerna	Huvudhandledare
2014	Student, Marjan Abbassi	Stockholms universitet, Sverige	Huvudhandledare
2013	Student, Rebecca Sadler	The University of Manchester, Storbritannien och Nordirland	Huvudhandledare

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2025 - 2029	Karolinska Institutet, Sverige - Universitet och högskolor	Ulrika Marklund	Projektledare	0	1 324 000
2025 - 2027	Hjärnfonden, Sverige - Annan forskningsfinansiär	Ulrika Marklund	Projektledare	0	1 600 000
2023 - 2027	Karolinska Institutet, Sverige - Universitet och högskolor	Ulrika Marklund	Projektledare	0	6 000 000
2023 - 2027	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Ulrika Marklund	Projektledare	0	7 600 000
2022 - 2027	Europeiska Unionen (EU),	Ulrika Marklund	Projektledare	0	20 000 000
2021 - 2025	NIH-R01, Ej Sverige - Statliga enheter, USA	David Linden	Medverkande	5 330 000	21 060 000
2021 - 2025	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Emma Andersson	Medverkande	7 500 000	40 100 000
2021 - 2024	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Ulrika Marklund	Projektledare	0	4 800 000
2009 - 2010	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Ulrika Marklund, Vassilis Pachnis	Projektledare	0	666 000
2009 - 2009	Ej Sverige - Internationella organisationer,	Ulrika Marklund, Vassilis Pachnis	Projektledare	0	140 000

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2022	Sverige	ERC Consolidator Award	European Union	Dissecting a step-wise principle of cellular diversification to instruct regeneration in the enteric nervous system

År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2009	Sverige	Knut & Alice Wallenberg Postdoctoral Award in Nano/Microscience	Knut and Alice Wallenberg	Postdoctoral Salary during postdoctoral training at NIMR, London, UK

Andra meriter		
Period	Typ av merit	Beskrivning
2020 - 2027	Deputy Study Director	Deputy Director for PhD education at the Department for Medical Biochemistry and Biophysics.
2017 - 2026	Board Member SWEDBO, President (2021-)	Elected President for "Svenska Utvecklingsbiologer", Swedish Developmental Biology Organisation.
2013 - 2025	Peer-reviewer for scientific journals	Ad hoc Peer-reviewer (79 manuscript reviews): Science, Cell, Nature (10 times), Nature Cell Biology (2 times), Nature Communications (2 times), Nature Ageing, Nature Neuroscience (3 times), Developmental Cell, Cell Reports, EMBO J, EMBO Reports, Elife, J. Neuroscience, Gut, Stem Cells Translational Medicine, Cellular and Molecular Gastroenterology and Hepatology (CMGH, 2 times), Communications Biology, Frontiers in Cell and Developmental Biology, Comput. Struct. Biotech J, Int. J. Molecular Sciences, Scientific Reports, Stem Cells and Development, Stem Cells, PLOS Genetics, Neuroscience, Neuroscience Letters, Journal of Clinical Medicine, Neurobiology of Disease, Zoological Research, Cellular and Molecular Life Sciences, Experimental Neurology, J. Molecular Histology, Animals, Neuroscience, Toxics, JOVE, NPJ Parkinson's disease, BMC Developmental Biology, Gut Microbes,
2016 - 2025	Invited Speaker at International Conference/Meetings	Invited speaker to 30 international conferences/meetings in the past 10 years. Key Note Speaker: (2023) KI-Mayo Clinic Annual Meeting, Mayo Clinic, Rochester, US (September) Keynote Speaker (2022) International Society for Autonomic Neuroscience, Cairns, Australia. Featured Speaker (2022) Symposium on the ENS and GI control, Melbourne, Australia, Keynote speaker (2021) Invited Virtual Seminar (hosted by the committee of the corona-postponed 6th Symposium on Development of ENS) (2021) Belgian week of Gastroenterology, Belgium, 800 participants. (2021) Digestive Disease Research Center Annual Meeting, Vanderbilt University, Nashville, US, Keynote speaker (2019) EMBO Symposium, Keynote speaker, Vienna, AT
2020 - 2025	Opponent/Reviewer of Thesis abroad	• Thesis Reviewer. Heikki Virtanen, University of Helsinki, Finland May, 2025 • Opponent at PhD defence. Guendalina Bergonzoni, University of Trento, February 2025 • Opponent at PhD defence. Franck Boismoreau, IBENS Paris, France, November, 30th 2020 • Opponent at PhD defence, Laurina Porokuokka. University of Helsinki, Finland May, 2020
2019 - 2025	Grant Reviewer outside own university	• Grant Reviewer for the Israelian Science Foundation (2019) • Reviewer for National Science Foundation, US (2022) • Grant Reviewer for Strategic Resource the Medical Faculty of Umeå University, Sweden (2024) • Grant Reviewer Boehringer Ingelheim Exploration Programme, Germany (2024)
2018 - 2025	Dissertation Committee Member	Dissertation Committee Member 5 times
2011 - 2025	Half-time PhD Evaluation reviewer	Reviewer of Half-time for 14 PhD students at Karolinska Institutet and Uppsala University.
2019 - 2022	Editor	Scientific Editor at "Neural Development" (neuraldevelopment.biomedcentral.com)
2020 - 2022	Collaboration with Industry	Establishing collaboration with NGM Biopharmaceuticals (CA, USA) on a pilot study of neurotrophic receptors in the enteric nervous system
2015 - 2022	Seminar series Moderator	Organizer and moderator of intra-departmental seminar series and retreat.

CV - Anders Mikkelsen

Medverkande forskare: Anders Mikkelsen
Födelsedatum: 19740117
Kön: Man
Land: Sverige

Dr-examen: 2001-10-19
Akademisk titel: Professor
Arbetsgivare: Lunds universitet

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10304. Den kondenserade materiens fysik, 2001-10-19	Aarhus Universitet, Danmark, AU	Crystallographic studies of clean and alkali covered metal and semiconductor surfaces	David Adams

Utbildning på grund- och avancerad nivå

År	Examen
1999	10304. Den kondenserade materiens fysik, Kandidatexamen, Aarhus Universitet, Danmark

Arbetsliv

Anställningar			
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare
maj 2011 - Nuvarande	Professor, Tillsviareanställning	80	Lunds universitet, Sverige, Fysiska institutionen 156131

Postdoktorvistelser		
Period	Organisation	Ämne
december 2001 - oktober 2004	Lunds universitet, Sverige, Fysiska institutionen 156131	10304. Den kondenserade materiens fysik

Uppehåll i forskningen	
Period	Beskrivning
2009-01-01 - 2009-04-22	Parental leave

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
2005	103. Fysik	Lunds universitet, Sverige, Fysiska institutionen 156131

Handledda personer			
Handledda personer	Lärosäte (handledd person)	Roll	Antal

Handledda personer	Lärosäte (handledd person)	Roll	Antal
Doktorand	Lunds universitet, Sverige, Fysiska institutionen 156131	Huvudhandledare	17
Doktorand	Lunds universitet, Sverige, Fysiska institutionen 156131	Bihandledare	10
Postdok	Lunds universitet, Sverige, Fysiska institutionen 156131	Huvudhandledare	16
Student	Lunds universitet, Sverige, Fysiska institutionen 156131	Huvudhandledare	24

Bidrag erhållna i konkurrens				
Period	Finansiär	Projektledare	Din roll	Totalt belopp (kr)
2024 - 2025	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Anders Mikkelsen	Projektledare	1 000 000
2024 - 2029	VINNOVA - Verket för innovationssystem, Sverige - Annan forskningsfinansiär	Anders Mikkelsen	Projektledare	36 000 000
2022 - 2026	Europeiska Unionen (EU),	Anders Mikkelsen	Projektledare	35 000 000
2020 - 2023	US Office of Naval Research Global (ONR), Ej Sverige - Statliga enheter, USA	Anders Mikkelsen	Projektledare	2 500 000
2020 - 2024	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Anders Mikkelsen	Projektledare	5 900 000
2020 - 2024	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Anders Mikkelsen	Projektledare	4 334 000
2015 - 2020	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Anders Mikkelsen	Projektledare	18 000 000
2013 - 2017	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Anders Mikkelsen	Projektledare	4 800 000
2010 - 2016	Europeiska Unionen (EU),	Anders Mikkelsen	Projektledare	13 000 000
2010 - 2013	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Anders Mikkelsen	Projektledare	2 511 000

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2016	USA	Elected Fellow of the American Vacuum Society (AVS)	American Vacuum Society (AVS)	
2010	Belgien	ERC starting/consolidator grant of 1.4MEUR	European Research Council	
2006	Sverige	Steen von Friesen physics prize	The Royal Physiographic Society	Physics price given out every 3rd year of 60000SEK

Andra meriter		
Period	Typ av merit	Beskrivning
2024 - 2027	Leadership	Chair of MAX IV, ESS, Science Village development innovation and research council of Region Skaane
2021 - 2027	Leadership	Director for the NanoLund Interdisciplinary National Strategic Area Nanoscience center (>440 researchers and students).

Period	Typ av merit	Beskrivning
2008 - 2025	Leadership	2024- Director Vinnova Competence Center Sentio 2022- Coordinator for Lund Technical Faculty profile area Nanoscience and Semiconductor Technology (~400 people) 2022- Coordinator for European Innovation council project InsectNeuroNano 2021- Director of the NanoLund National Strategic Nanoscience center (~400 people) 2021- Member of the board of the HELIOS Helmholtz doctoral school 2019-2021 Vice-director of NanoLund 2016-2021 Head of division of Synchrotron Radiation Research (>50 employees) 2015-2019 Co-director of the NanoLund National Strategic Nanoscience center 2012-2013 Completed 2 year course "Tomorrows research leaders" at Lund University 2008-2017 Board member, Dep. of Physics, Lund University (Re-elected 2010, 2013)
2011 - 2024	Evaluation and research development assignments	2024 Evaluation for Professor promotion Uppsala University 2024 Evaluation of Associate Professor position Copenhagen University 2021- Member of University Reference Group (URG) Wallenberg WISE initiative for Lund U. 2020 Opponent at Phd Defense Århus University & at PhD defense Karlstad University 2019 Expert council of Lund University on MAX IV and ESS 2014 Expert evaluator for a Docent (Assoc. Prof) promotion at Linköping University 2013 The opponent at Ph.D defense of M. Ahola-Tuomi, Turku University, Finland 2011-2014 Member of Ph.D Qualifying committee UC Santa Barbara for J. Kawasaki
2010 - 2024	Leadership	Spokesperson for the NanoMAX MAX-IV synchrotron beamline (funded 2011).
2008 - 2024	Project and research evaluation	2021,2024 Expert reviewer for Horizon FetOpen project 2023 Evaluation committee leader KAW WISE project grants 2023 Röntgen Ångström project grant review Swedish Research Council 2021 Expert reviewer of the iMAT center at Århus University 2015-2021 Project grant evaluation Cond. Mat & AMO committee Swedish Research Council 2016- Editorial board (Condensed matter Physics) Nature Scientific Reports 2012-2014 Project grant evaluation Material Science committee Swedish research council 2019- Proposal review Spring 8 Synchrotron 2012-2020 Proposal review committee Swiss Light Source & French synchrotron SOLEIL 2008-2024 Reviewer for Science, Nature, Nano Letters, Chem. Phys.Lett., Nature Comm., New Journal of Physics, Small, Nanotechnology, Surface Science, Ultramicroscopy, and others. 2008-2024 Proposal reviews for national research agencies in USA, China, Switzerland, Germany, Canada, Greece, Austria as well as ERC.
2008 - 2023	Meeting coordination and comities	2023 Main project applicant for EuroNanoForum 2019 Chair of surface science program part at IVC 21 --- 2016- Program Committee 58th Electronic Materials Conference --- 2015 Symposium chair at Euromat 2015 --- 2014 Program com. 32nd International Conference Physics of Semiconductors (ICPS) --- 2013,2016 Program com. of 11th & 12th Int. Conf. on the Structure of Surfaces (ICSOS) --- 2013,2015 Coordinating Lund Linneaus summerschool on advanced tools of nanoscience --- 2013 Coordinating SCANDEM session on microscopy at large scale facilities --- 2013 Coordinating workshop on Experimental opportunities at the NanoMAX beamline --- 2011 Program chair of the 38th Phys. and Chem. of Semicond. Interfaces conference --- 2009 Chairman of the LUXC workshop on Nanoscience using advanced light sources --- 2008- Program com. of the Conference series: PCSI (40th conference 2012) ---

Immaterialrätt

Immaterialrätt

Typ	Datum för beviljning	Status	ID	Licensierad till annan	Produkt klassificering
Patent	2012-07-03	Beviljad	US8212237 B2	Sverige - Företag (även statliga och kommunala bolag samt statliga affärsdrivande verk)	26. Datorer, elektronikvaror och optik
Patent	2009-12-10	Beviljad	US200903013 89 A1	Sverige - Företag (även statliga och kommunala bolag samt statliga affärsdrivande verk)	26. Datorer, elektronikvaror och optik

CV - Peder Olofsson

Medverkande forskare: Peder Olofsson

Födelsedatum: 19690715

Kön: Man

Land: Sverige

Dr-examen: 2008-02-08

Akademisk titel: Professor

Arbetsgivare: Karolinska Institutet

Utbildning

Forskarutbildning		
Examen	Organisation	Namn på handledare
Doktorsexamen, 30199. Andra medicinska och farmaceutiska grundvetenskaper, 2008-02-08	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Göran Hansson

Utbildning på grund- och avancerad nivå	
År	Examen
1996	302. Klinisk medicin, Läkarexamen/motsv, Uppsala universitet, Sverige

Arbetsliv

Anställningar				
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
januari 2024 - Nuvarande	Professor, Tillsvidareanställning	100	Karolinska Institutet	
januari 2021 - Nuvarande	Avdelningschef, Tillsvidareanställning	0	Karolinska Institutet	
februari 2020 - Nuvarande	Scientific Director MedTechLabs SCBM, Tillsvidareanställning	100	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	MedTechLabs Stockholm Center for Bioelectronic Medicine

Postdoktorvistelser		
Period	Organisation	Ämne
oktober 2009 - september 2012	The Feinstein Institute for Medical Research, USA	30199. Andra medicinska och farmaceutiska grundvetenskaper

Forskarutbyten			
Period	Typ	Organisation	Ämne
mars 2002 - juni 2002	Doktorandutbyte	Institutet för Genetik och Molekylär Biologi	30108. Cell- och molekylärbiologi

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
2018	301. Medicinska och farmaceutiska grundvetenskaper	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)

Handledda personer				
År	Handledda personer	Lärosäte (handledd person)	Roll	Antal
	Student	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	10
2029	Doktorand, Jeromine Vacquie	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2026	Doktorand, Qi Guo	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2026	Doktorand, Wanmin Dai	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2024	Doktorand, Ting Liu	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2022	Doktorand, Alessandro Gallina	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2021	Doktorand, April Caravaca	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2020	Doktorand, Emily Brück	Karolinska Institutet, Sverige	Huvudhandledare	
2016	Doktorand, Leif Söderström	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2012	Doktorand, Ali Elmabsout	Örebro universitet, Sverige, Institutionen för Hälsovetenskap och Medicin	Bihandledare	
2010	Doktorand, Olga Ovchinnikova	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Bihandledare	
2027	Postdok, Maxime Villet		Huvudhandledare	
2026	Postdok, Peter Holicek		Huvudhandledare	

År	Handledda personer	Lärosäte (handledd person)	Roll	Antal
2022	Postdok, Osman Ahmed	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2021	Postdok, Leif Å Söderström	Karolinska Institutet, Sverige	Huvudhandledare	
2021	Postdok, Vladimir Shavva	Karolinska Institutet, Sverige, MedS (Institutionen för medicin, Solna)	Huvudhandledare	
2020	Postdok, Laura Tarnawski	Karolinska Institutet, Sverige	Huvudhandledare	

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2025 - 2027	Hjärt-Lungfonden, Sverige - Annan forskningsfinansiär	Peder Olofsson	Projektledare	0	4 500 000
2024 - 2026	Hjärt-Lungfonden, Sverige - Annan forskningsfinansiär	Peder Olofsson	Projektledare	0	15 000 000
2024 - 2025	WASP-DDLS joint call, Sverige - Universitet och högskolor	Henrik Hult & Peder Olofsson	Medverkande	2 000 000	4 000 000
2024 - 2028	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Peder Olofsson	Projektledare	0	6 100 000
2024 - 2026	ALF-medel, Sverige - Övriga statliga medel	Peder Olofsson	Projektledare	0	1 800 000
2023 - 2026	KI - Karolinska institutet, Sverige - Annan forskningsfinansiär	Peder Olofsson	Projektledare	0	1 480 000
2021 - 2023	Hjärt-Lungfonden, Sverige - Annan forskningsfinansiär	Peder S Olofsson	Projektledare	0	3 000 000
2020 - 2025	MedTechLabs (KTH, Karolinska Institutet, Stockholm Region), Sverige - Universitet och högskolor	Peder Olofsson	Projektledare	0	15 000 000
2020 - 2025	SSF - Stiftelsen för strategisk forskning, Sverige - Annan forskningsfinansiär	Magnus Berggren, Peder Olofsson et al	Medverkande	6 750 000	35 000 000
2015 - 2020	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Peder Olofsson	Projektledare	0	9 100 000

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2016	USA	Excellence in Research Award	Northwell Health	
2010	Sverige	Olof Norlander Memorial Award	Karolinska University Hospital	

Andra meriter

Period	Typ av merit	Beskrivning
2015 - 2021	Faculty member, Institutes for Bioelectronic Medicine, The Feinstein Institutes for Medical Research, New York	Faculty member, Institutes for Bioelectronic Medicine, The Feinstein Institutes for Medical Research, New York
2014 - 2020	Co-chair&organizer of the 1st, 2nd, 3rd and 4th Bioelectronic Medicine Summit	The bi-annual event held in New York 2014, 2016, and 2020 and in Stockholm in 2018 were co-founded, co-chaired, and co-organized by me, and I was a speaker at 3/4 of the meetings.

Immaterialrätt

Immaterialrätt					
Typ	Datum för beviljning	Status	ID	Licensierad till annan	Produkt klassificering
Patent	2024-12-16	Beviljad	SE546588C2	Nej	21. Farmaceutiska basprodukter och läkemedel
Patent application filed Sept 8th 2017		Beviljad	PCT/US2017/5 0589	Nej	21. Farmaceutiska basprodukter och läkemedel

Registrera**Villkor**

Ansökan ska förutom av den sökande även signeras av behörig företrädare för medelsförvaltaren. Företrädaren är vanligtvis prefekten vid den institution där forskningen ska bedrivas men beror på medelsförvaltares organisationsstruktur.

Signering av den *sökande* innebär en bekräftelse av att

- uppgifterna i ansökan är korrekta och följer Vetenskapsrådets instruktioner
- eventuella bisysslor och kommersiella bindningar har redovisats för medelsförvaltaren och att det där inte framkommit något som strider mot god forskningssed
- de tillstånd och godkännanden som krävs finns innan forskningen påbörjas, exempelvis tillstånd från Läkemedelsverket eller godkännande från Etikprövningsmyndigheten respektive djurförsöksetisk nämnd
- sökande kommer att följa samtliga övriga villkor som gäller för bidraget.

Signering av *medelsförvaltaren* innebär en bekräftelse av att

- den beskrivna forskningen eller forskningsstödande verksamheten kan beredas plats vid medelsförvaltaren under den tid och i den omfattning som anges i ansökan
- den sökande kommer vara anställd vid medelsförvaltaren under den tid som ansökan avser
- medelsförvaltaren godkänner kostnadsberäkningen i ansökan
- medelsförvaltaren kommer att följa samtliga övriga villkor som gäller för bidraget.

Ovanstående punkter ska ha diskuterats mellan parterna innan företrädaren för medelsförvaltaren godkänner och signerar ansökan.