

Curriculum Vitae – Andreas Dahlin

Full name: Andreas Bo Oscar Dahlin

Title: Professor

Position: Professor in applied surface science.

Birthdate: 7th November 1980 (Karlstad)

Nationality: Swedish

Marital status: Married, two children.

Affiliation: Div. of Applied Chemistry, Dept. of Chemistry and Chemical Engineering, Chalmers University of Technology

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Web of Science
ResearcherID

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ResearchGate

Google scholar

Previous Employment

Associate Professor @ Dept. of Chemistry and Chemical Engineering, Chalmers University of Technology, Göteborg, Sweden. (November 2016 – January 2021)

Assistant Professor @ Dept. of Physics, Chalmers University of Technology, Göteborg, Sweden. (March 2012 – October 2016)

Postdoc @ Div. of Bionanophotonics, Dept. of Applied Physics, Chalmers University of Technology, Göteborg, Sweden.
Group leader: Prof. **Mikael Käll** (August 2011 – February 2012)

Postdoc @ Laboratory of Biosensors and Bioelectronics, Inst. for Biomedical Engineering, Swiss Federal Institute of Technology, Zürich, Switzerland.
Group leader: Prof. **Janos Vörös** (August 2009 – July 2011)

PhD Student @ Div. of Biological Physics, Dept. of Applied Physics, Chalmers University of Technology, Göteborg, Sweden.
Group leader: Prof. **Fredrik Höök** (October 2007 – July 2009)

PhD Student @ Div. of Solid State Physics, Dept. of Physics, Lund University, Lund, Sweden.
Group leader: Prof. **Lars Samuelsson** (September 2004 – September 2007)

PhD Student @ Div. of Chemical Physics, Dept. of Applied Physics, Chalmers University of Technology, Göteborg, Sweden.
Group leader: Prof. **Bengt Kasemo** (February 2004 – August 2004)

CHALMERS



ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich



LUND
UNIVERSITY

Career Breaks

I was on parental leave for a total of slightly more than **16 months** during 2008-2020.

Academic Degrees

Professor - Chemistry, Chalmers University of Technology, Sweden (2021).

Associate Professor - Physics, Chalmers University of Technology, Sweden (2015).

Doctor of Philosophy - Bioscience with Engineering Physics, Chalmers University of Technology, Sweden (2008).

Licentiate of Science - Physics, Lund University, Sweden (2006).

Master of Science - Bioengineering, Chalmers University of Technology, Sweden (2004).

Quantitative Merits

- 64 research papers.
- 9 review papers.
- 4 book chapters.
- 1 sole author book.
- 7 graduated PhDs (main supervisor).
- 23 conference talks.
- 16 poster contributions.
- Reviewer for 70 scientific journals.
- Reviewer for 10 research funding agencies.
- Principal investigator for 10 externally funded research grants.
- Co-applicant for 2 externally funded research projects.

Awards (selected)

- ERC *Consolidator Grant* (2020).
- Swedish Foundation for Strategic Research *Framework Grant* "Materials for Energy" (2018).
- *Swedish Foundations Starting Grant* 2017 (for receiving rating "A" on ERC StG application).
- Winner of the *Science Slam* European finals (Brno 2017).
- One of the "100 coolest researchers" in Sweden (list made at the Science Festival 2017).
- Appointed *Wallenberg Academy Fellow* by the Royal Academy of Sciences (2015).
- Swedish Research Council *Young Researcher Project Grant* (2012).
- EU FP7 People Marie Curie *Career Integration Grant* (2012).
- Swedish Foundation for Strategic Research *Ingvar Carlsson Award* (2011).
- Cover page article of *Small* 2011, Issue 12.
- Swedish Research Council Postdoctoral Scholarship (2009).



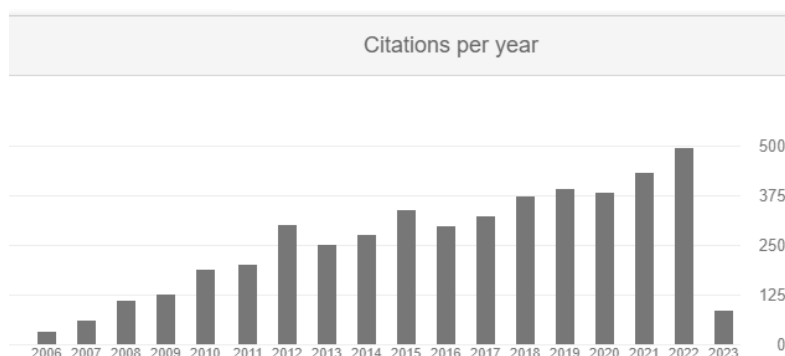
Vetenskapsrådet



STIFTELSEN för
STRATEGISK FORSKNING

Citation Metrics

Source: Google Scholar
Entries with citation data: 78
Total number of citations: 4721
h-index: 35
i10-index: 61



Supervision

Student	Degree	Title of thesis	My role	Year
John Andersson	PhD	Functional polymer brush coatings for nanoscale devices	Main supervisor	2022
Justas Svirelis	PhD	Biomolecule trapping with stimuli-responsive polymer coated nanostructures	Main supervisor	2022
Marika Gugole	PhD	Electrochromic nanostructures based on tungsten trioxide for reflective displays	Main supervisor	2022
Bitva Malekian	PhD	Novel functionalized nanopores for plasmonic sensing	Main supervisor	2021
Asaad Umair	Master	Simulations and experimental study of pressure-driven volumetric flow across plasmonic nanopores	Main supervisor	2021
Gustav Ferrand-Drake del Castillo	PhD	Polyelectrolyte brush electrodes for protein capture and release	Main supervisor	2021
Sophia Thiele	Master	The influence of crosslinking on the thermoresponsive behaviour of polymer brushes	Main supervisor	2020
Gustav Emilsson	PhD	Polymer brushes inside nanopores.	Main supervisor	2018
Kunli Xiong	PhD	Electrochromic plasmonic metasurfaces for reflective displays.	Main supervisor	2017
Michael Stürenberg	Licentiate	Investigating nonlinear effects of plasmonics.	Assistant supervisor	2016
Evelyn Röder	Master	Probing the binding behavior of negative curvature sensing proteins with a nanoplasmonic sensor.	Main supervisor	2016
Viktor Ahlberg-Gagnér	Master	Strongly stretched poly(ethylene glycol) brushes on plasmonic nanopores.	Main supervisor	2015
Juliane Junesch	PhD	Novel thin film nanohole devices for plasmonic sensing applications.	Assistant supervisor	2015
Virginia Claudio	Licentiate	Plasmonic nanostructures for biosensing: Considerations for reaching single molecule resolution.	Assistant supervisor	2013
Mudassar Virk	Master	Joule heating of nanohole arrays for control of thermo-responsive polymer brushes.	Main supervisor	2013
Group of 6	Bachelor	Determination of temperature in heated nanostructures.	Main supervisor	2013

Examination

Student	Degree	University	My role	Year
Thias Floriano	PhD	Aarhus University	External examiner	2023
Olof Eskilsson	PhD	Linköping university	Committee member	2023
Tommy Dam	PhD	Lund University	Committee member	2022
Filip Cindric	MSc	Chalmers University of Technology	Examiner	2022
Oliver Jacobson Krstovic	MSc	Chalmers University of Technology	Examiner	2022
Padryk Merkl	PhD	Karolinska Institute	Committee member	2022
Lovisa Tengblad	MSc	Chalmers University of Technology	Examiner	2022
Sune Levin	PhD	Chalmers University of Technology	Committee member	2021
Shiyu Li	PhD	Uppsala University	Committee member	2021
Josefin Nissa	PhD	Linköping University	Committee member	2021
Xin Wen	PhD	Chalmers University of Technology	Committee member	2020
Vilhelm Müller	PhD	Chalmers University of Technology	Committee member	2020
Yanmo Wang	PhD	Chalmers University of Technology	Committee member	2019
Hans Dyrseli	PhD	Aarhus University	External examiner	2019
Damiano Verardo	PhD	Lund University	Committee member	2018
Hanna Camille Thomsen	PhD	University of Gothenburg	Committee member	2018
Miao Zhang	PhD	Royal Institute of Technology Stockholm	Committee member	2018
Irina Zubritskaya	PhD	Chalmers University of Technology	Committee member	2017
Bao D. Ho	Licentiate	Lund University	Opponent	2017
Da Zhang	PhD	Uppsala University	Committee member	2017
Pinar Frank	PhD	Austrian Institute of Technology Vienna	External examiner	2017
Jin Dai	PhD	Royal Institute of Technology Stockholm	Committee member	2016
Rafael Schoch	PhD	University of Basel	External examiner	2016

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Commissions of Trust

- Reviewer for the Swedish national board evaluating possible research misconduct (Npof).
- Board member in the *Area of Advance Nano* at Chalmers.
- Coordinator of teaching at the Department of Chemistry and Chemical Engineering.

Outreach

- Continuously developing my own research website with a popular science description of my work, videos of presentations, science theory etc.
- Jury member in the national semifinals for high school science project (Unga Forskare).
- Lecturer at the university for seniors in Stockholm 2023.
- Lecturer at *Researchers Night* (ForskarFredag), Falköping 2018.
- Participated in the local *Science Slam* competition in Göteborg 2017 (2nd place out of 8 competitors).
- Participated in the "science roulette" event at the Science Festival in Göteborg 4 times since 2013.
- Voluntary work with activities for children at the Science Festival in Göteborg 2002.



Utilization

- Founder and vice CEO of *Nyctea Technologies AB* (2020) for applications of electrically controlled polymer brushes (Initially 42.5% of shares). Organization number 559274-1267.
- Founder and board member of *rdot AB* (2017) for electronic paper development. Organization number 559092-9831. (All shares sold by 2022.)
- Patent on *Electrochemical drug delivery*, international PCT application P41904247PCT (filed 19 November 2020). Active patent WO2021107836A1.
- Patent on *Switchable plasmonic display device*, international PCT application PCT/SE2017/050042 (filed 18 January 2017), international publication number WO2018/135983A1. No longer active.
- Patent on *Asymmetric nanoplasmonic structures for dual sensing* (T-10-073), European patent application EP10013193.7, priority date 01.10.2010. No longer active.
- Successful commercialization of developed nanoplasmonic sensors by partnering with *Inspiorion AB* (organization number 556798-8760). Product names "wells" and "caves", including application note #22.
- Product development with *BioNavis Ltd* (Tampere, Finland), see also application note #161.

Teaching

- Main teacher and course responsible for *Surface Engineering* 7.5 ECTS credits (2018-).
- Teaching and course development in *Chemistry and Materials*, 7.5 ECTS credits (2017-).
- Teaching and course development in *Soft Matter Physics*, 7.5 ECTS credits (2013-2018).
- Teaching in *Biological Physics*, 7.5 ECTS credits (2017-2019).
- Teaching and course development in *Biotechnical Physics*, 7.5 ECTS credits (2013-2017).
- Teaching and course development in *Tools of Engineering Physics*, 10.5 ECTS credits (2012-2014).
- *As undergraduate*: Teaching in mathematics with focus on programming in MATLAB for first year undergraduate students (144 h total).
- *As Ph.D. student*: Various teaching assignments, mostly lab exercise development and supervision (5% of working time).
- *As postdoc*: Gave lectures on plasmonic biosensors at the Swiss Federal Institute of Technology, the Royal Institute of Technology in Stockholm and Chalmers University of Technology.

Research Grants (selected)

Artificial shuttle-cargo transport of proteins.

Single applicant. Total funding 3 520 000 SEK.

Swedish Research Council 2021 application/contract 2021-03968.

Single molecule analysis in nanoscale reaction chambers 2.

Single applicant. Total funding 1 999 550 EUR.

European Research Council 2020 grant agreement 101001854.

Hybrid electrochromic materials for energy saving displays.

Main applicant. Total funding 30 739 424 SEK to 3 applicants.

Swedish Foundation for Strategic Research 2018 application/contract EM16-0002.

Single molecule analysis in nanoscale reaction chambers.

Single applicant. Total funding 9 000 000 SEK.

Erling-Persson Family Foundation 2017 (Swedish ERC Starting Grant replacement).

Polymer brushes and molecular transport in nanofluidic channels.

Single applicant. Total funding 3 400 000 SEK.

Swedish Research Council 2016 application/contract 2016-03319.

Macromolecular gates in nanofluidic channels.

Single applicant. Total funding 8 500 000 SEK as "academy fellow".

Wallenberg Foundation 2015 application/contract 2015.0161.

Responsive polymers in active nanopores.

Single applicant. Total funding 2 800 000 SEK, young researcher grant.

Swedish Research Council 2012 application/contract 2012-4542.

Active nanopores.

Single applicant. Total funding 100 000 EUR as career integration grant.

EU FP7 People Marie Curie 2012 application/contract 321821.

Plasmonic antennas shine light on the nanoworld.

Coapplicant. Total funding 37 000 000 SEK to 8 applicants.

Wallenberg Foundation 2012.

Electrochemical gates in nanofluidic channels.

Single applicant. Total funding 2 950 000 SEK for starting independent research activities in Sweden.

Swedish Foundation for Strategic Research 2011 application/contract ICA10-0031.

Sensing membrane transport using electrochemistry in nanowells.

Coapplicant. Total funding 183 948 CHF for a PhD student project.

Swiss National Science Foundation 2010.

Combined electrochemical and plasmonic analysis of biomolecular reactions in nanopores.

Single applicant. Total funding 1 198 400 SEK for 2 years of postdoctoral work in Switzerland and 858 000 SEK for 1 year in Sweden.

Swedish Research Council 2009 application/contract 2009-706.

Publications: Research Papers

Polymer brushes on silica nanostructures prepared by aminopropylsilatrane click chemistry: superior antifouling and biofunctionality.

J. Andersson, J. Järlebark, S. KK, A. Schaefer, R. Hailes, C. Palasingh, B. Santoso, V.-T. Vu, C.-J. Huang, F. Westerlund, [A. Dahlin](#).*

ACS Applied Materials & Interfaces (accepted).

Comparison of electrodeposited and sputtered tungsten trioxide films for inorganic electrochromic nanostructures.

M. Gugole, O. Olsson, V. Gupta, R. Bordes, E. Ahlberg, A. Martinelli, [A. Dahlin](#).*

ACS Applied Optical Materials (accepted).

Enhanced electrochromic switching contrast in the blue by 3,4-propylenedioxyppyrole - implementation on structural colors.

O. Olsson, M. Gugole, [A. Dahlin](#).*

Nanophotonics (accepted).

All-printed multilayers and blends of poly(dioxythiophene) derivatives patterned into flexible electrochromic displays.

R. Brooke, I. Petsagkourakis, S. Majee, O. Olsson, [A. Dahlin](#), P. Andersson Ersman.*

Macromolecular Materials and Engineering (accepted).

Scalable reflective plasmonic structural colors from nanoparticles and cavity resonances - the cyan-magenta-yellow approach.

J. C. Blake & S. Rossi, M.P. Jonsson,* [A. Dahlin](#).*

Advanced Optical Materials (accepted).

Electrically switchable polymer brushes for protein capture and release in biological environments.

G. Ferrand-Drake del Castillo, M. Kyriakidou, Z. Adali, K. Xiong, R.L.N. Hailes, [A. Dahlin](#).*

Angewandte Chemie International Edition (accepted).

Accurate correction of the "bulk response" in surface plasmon resonance sensing provides new insights on interactions involving lysozyme and poly(ethylene glycol).

J. Svirelis, J. Andersson, A. Stradner, [A. Dahlin](#).*

ACS Sensors (accepted).

Surface plasmon resonance sensing with thin films of palladium and platinum – quantitative and real-time analysis.

J. Andersson, J. Svirelis, G. Ferrand-Drake del Castillo, T. Sannomiya, [A. Dahlin](#).*

Physical Chemistry Chemical Physics **2022**, 24 (7), 4588–4594 (article).

Simultaneous single-particle measurements of size and loading give insights into the structure of drug-delivery nanoparticles.

A. Kamanzi & Y. Gu & R. Tahvildari, Z. Friedenberger, X. Zhu, R. Berti, M. Kurylowicz, D. Witzigmann, J. A. Kulkarni, J. Leung, J. Andersson, [A. Dahlin](#), F. Höök, M. Sutton, P. R. Cullis, S. Leslie.*

ACS Nano **2021**, 15 (12), 19244-19255 (article).

Dynamically tuneable reflective structural colouration with electroactive conducting polymer nanocavities.

S. Rossi, O. Olsson, S. Chen, R. Shanker, D. Banerjee, [A. Dahlin](#), M.P. Jonsson.*

Advanced Materials **2021**, 33 (49), 2105004 (article).

Video speed switching of plasmonic structural colors with high contrast and superior lifetime.

K. Xiong, O. Olsson, J. Svirelis, C. Palasingh, J. Baumberg, [A. Dahlin](#).*

Advanced Materials **2021**, 33 (41), 2103217 (article).

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Electrochromic inorganic nanostructures with high chromaticity and superior brightness.

M. Gugole, O. Olsson, S. Rossi, M. Jonsson, A. Dahlin.*

Nano Letters **2021**, 21 (10), 4343–4350 (letter).

Evaluation of the Forsvall biopsy needle in an ex vivo model of transrectal prostate biopsy - a novel needle design with the objective to reduce the risk of post-biopsy infection.

A. Forsvall,* J. Fisher, J. Francisco Pereira Cardoso, M. Wagenius, J. Tverring, B. Nilson, A. Dahlin, O. Bratt, A. Linder, T. Mohanty.

Scandinavian Journal of Urology **2021**, 55 (3), 227-234 (article).

Control of polymer brush morphology, rheology and protein repulsion by hydrogen bond complexation.

J. Andersson, G. Ferrand-Drake del Castillo, P. Bilotto, F. Höök, M. Valtiner, A. Dahlin.*

Langmuir **2021**, 37 (16), 4943–4952 (article, cover featured).

A designer FG-Nup that reconstitutes the selective transport barrier of the nuclear pore complex.

A. Fragasso, H. de Vries, J. Andersson, E. van der Sluis, E. van der Giessen, A. Dahlin, P. Onck, C. Dekker.*

Nature Communications **2021**, 2010 (article).

Tuning the thermoresponsive behavior of surface-attached PNIPAM networks: varying the crosslinker content in SI-ATRP.

S. Thiele, J. Andersson, A. Dahlin, R.L.N. Hailes.*

Langmuir **2021**, 37 (11), 3391–3398 (article).

Large changes in protonation of weak polyelectrolyte brushes with salt concentration - implications for protein immobilization.

G. Ferrand-Drake del Castillo & R.L.N. Hailes, A. Dahlin.*

Journal of Physical Chemistry Letters **2020**, 11 (13), 5212–5218 (letter).

High contrast switching of plasmonic structural colors: inorganic vs organic electrochromism.

M. Gugole & O. Olsson, K. Xiong, J. Blake, J. Montero Amendo, I. Bayrak Pehlivan, G. Niklasson, A. Dahlin.*

ACS Photonics **2020**, 7 (7), 1762-1772 (article, supplementary cover).

Generic high-capacity protein capture and release by pH control.

G. Ferrand-Drake del Castillo, R.L.N. Hailes, Z. Adali-Kaya, T. Robson, A. Dahlin.*

Chemical Communications **2020**, 56, 5889-5892 (communication, back cover).

Optical properties of plasmonic nanopore arrays prepared by electron beam and colloidal lithography.

B. Malekian, K. Xiong, E. Kang, J. Andersson, G. Emilsson, M. Rommel, T. Sannomiya, M.P. Jonsson, A. Dahlin.*

Nanoscale Advances **2019**, 1 (11), 4282-4289 (communication).

Enzyme immobilization in polyelectrolyte brushes: High loading and enhanced activity compared to monolayers.

G. Ferrand-Drake del Castillo, M. Koenig, M. Müller, K.-J. Eichhorn, M. Stamm, P. Uhlmann, A. Dahlin.*

Langmuir **2019**, 35 (9), 3479–3489 (article).

Nanoplasmonic sensor detects preferential binding of IRSp53 to negative membrane curvature.

G. Emilsson & E. Röder, B. Malekian, K. Xiong, J. Manzi, F.C. Tsai, N.-J. Cho, M. Bally, A. Dahlin.*

Frontiers in Chemistry **2019**, 7, 1 (article, Analytical Chemistry Editor's Pick).

Detecting selective protein binding inside plasmonic nanopores: Toward a mimic of the nuclear pore complex.

B. Malekian & R.L. Schoch, T. Robson, G. Ferrand-Drake del Castillo, K. Xiong, G. Emilsson, L.E. Kapinos, R.Y.H. Lim, A. Dahlin.*

Frontiers in Chemistry 2018, 6, 637 (article).

Quantitative analysis of thickness and pH-actuation of weak polyelectrolyte brushes.

G. Ferrand-Drake del Castillo, G. Emilsson, [A. Dahlin](#).*

Journal of Physical Chemistry C 2018, 122 (48), 27516–27527 (article).

Antibody-antigen interaction dynamics revealed by analysis of single-molecule equilibrium fluctuations on individual plasmonic nanoparticle biosensors.

S.S. Ćimović, H. Šípová, G. Emilsson, L. Shao, [A.B. Dahlin](#), M. Käll, T.J. Antosiewicz.*

ACS Nano 2018, 12 (10), 9958–9965 (article).

Gating protein transport in solid state nanopores by single molecule recognition.

G. Emilsson, Y. Sakiyama, B. Malekian, K. Xiong, Z. Adali-Kaya, R.Y.H. Lim, [A.B. Dahlin](#).*

ACS Central Science 2018, 4 (8), 1007–1014 (article).

Nanoplasmonic sensing architectures for decoding membrane curvature-dependent biomacromolecular interactions.

A.R. Ferhan, J. Jackman, B. Malekian, K. Xiong, G. Emilsson, S. Park, [A.B. Dahlin](#), N.-J. Cho.*

Analytical Chemistry 2018, 90 (12), 7458–7466 (article).

Polymer brushes inside solid state nanopores form an impenetrable entropic barrier for proteins.

G. Emilsson, K. Xiong, Y. Sakiyama, B. Malekian, V. Ahlberg Gagnér, R.L. Schoch, R.Y.H. Lim, [A.B. Dahlin](#).*

Nanoscale 2018, 10 (10), 4663-4669 (communication).

Protein exclusion is preserved by temperature sensitive PEG brushes.

R. Schoch,* G. Emilsson, [A.B. Dahlin](#), R.Y.H. Lim.

Polymer 2017, 132, 362-367 (article).

Switchable metasurfaces with high chromaticity containing only abundant metals.

K. Xiong, D. Tordera, G. Emilsson, O. Olsson, U. Linderhed, M.P. Jonsson, [A.B. Dahlin](#).*

Nano Letters 2017, 7 (11), 7033-7039 (letter).

Fabrication and characterization of plasmonic nanopores with cavities in the solid support.

B. Malekian & K. Xiong, G. Emilsson, J. Andersson, C. Fager, E.M. Larsson-Langhammer, [A.B. Dahlin](#).*

Sensors 2017, 7 (6), 1444 (article).

Superior LSPR substrates based on electromagnetic decoupling for on-a-chip high-throughput label-free biosensing.

S.S. Ćimović, H. Šípová, G. Emilsson, [A.B. Dahlin](#), T. Antosiewicz, M. Käll.*

Light: Science & Applications 2017, 6, e17042 (article).

Surface plasmon resonance methodology for monitoring polymerization kinetics and morphology changes of brushes - evaluated with poly(N-isopropylacrylamide).

G. Emilsson, R.L. Schoch, P. Oertle, K. Xiong, R.Y.H. Lim, [A.B. Dahlin](#).*

Applied Surface Science 2017, 396, 384-392 (full length article).

Plasmonic metasurfaces with conjugated polymers for flexible electronic paper in color.

K. Xiong, G. Emilsson, A. Maziz, X. Yang, L. Shao, E.W.H. Jager, [A.B. Dahlin](#).*

Advanced Materials 2016, 28 (45), 9956-9960 (communication, inside back cover).

Dual-wavelength surface plasmon resonance for determining the size and concentration of sub-populations of extracellular vesicles.

D.L.M. Rupert, G.V. Shelke, G. Emilsson, V. Claudio, S. Block, C. Lässer, [A.B. Dahlin](#), J.O. Lötvall, M. Bally, V.P. Zhdanov, F. Höök.*

Analytical Chemistry 2016, 88 (20), 9980–9988 (article).

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Biosensing using plasmonic nanohole arrays with small, homogenous and tunable aperture diameters.

K. Xiong, G. Emilsson, [A.B. Dahlin](#).*

Analyst **2016**, 141 (12), 3803-3810 (article, Emerging Investigator issue).

Location-specific nanoplasmonic sensing of biomolecular binding to lipid membranes with negative curvature.

J. Junesch, G. Emilsson, K. Xiong, S. Kumar, T. Sannomiya, H. Pace, J. Vörös, S.-H. Oh, M. Bally, [A.B. Dahlin](#).*

Nanoscale **2015**, 7 (37), 15080-15085 (communication).

Plasmon enhanced internal photoemission in antenna-spacer-mirror based Au/TiO₂ nanostructures.

Y. Fang, Y. Jiao, K. Xiong, R. Ogier, Z.-J. Yang, S. Gao, [A.B. Dahlin](#), M. Käll.*

Nano Letters **2015**, 15 (6), 4059-4065 (letter).

Strongly stretched protein resistant poly(ethylene glycol) brushes prepared by grafting-to.

G. Emilsson, R.L. Schoch, L. Feuz, F. Höök, R.Y.H. Lim, [A.B. Dahlin](#).*

ACS Applied Materials & Interfaces **2015**, 7 (14), 7505-7515 (article).

Influence of the evanescent field decay length on the sensitivity of plasmonic nanodisks and nanoholes.

F. Mazzotta, T. Johnson, [A.B. Dahlin](#), J. Shaver, S.-H. Oh,* F. Höök.*

ACS Photonics **2015**, 2 (2), 256-262 (article).

A thermal plasmonic sensor platform: Resistive heating of nanohole arrays.

M. Virk & K. Xiong, M. Svedendahl, M. Käll, [A.B. Dahlin](#).*

Nano Letters **2014**, 14 (6), 3544-3549 (letter).

Plasmonic nanopores in metal-insulator-metal films.

[A.B. Dahlin](#),* M. Mapar, K. Xiong, F. Mazzotta, F. Höök, T. Sannomiya.

Advanced Optical Materials **2014**, 2 (6), 556-564 (full paper, with frontispiece).

Single-particle plasmon sensing of discrete molecular events: Binding position versus signal variations for different sensor geometries.

V. Claudio, [A.B. Dahlin](#), T. Antosiewicz.*

Journal of Physical Chemistry C **2014**, 118 (13), 6980-6988 (article).

Embedded plasmonic nanomenhirs as location-specific biosensors.

K. Kumar, [A.B. Dahlin](#), T. Sannomiya, S. Kaufmann, L. Isa, E. Reimhult.*

Nano Letters **2013**, 13 (12), 6122-6129 (letter).

Optical resonances in short-range ordered nanoholes in ultrathin aluminum / aluminum nitride multilayers.

Y. Ikenoya, M. Susa, J. Shi, Y. Nakamura, [A.B. Dahlin](#), T. Sannomiya.*

Journal of Physical Chemistry C **2013**, 117 (12), 6373-6382 (article).

Simultaneous electrical and plasmonic monitoring of potential induced ion adsorption on metal nanowire arrays.

R. MacKenzie, C. Frascina, B. Dielacher, T. Sannomiya, [A.B. Dahlin](#), J. Vörös.*

Nanoscale **2013**, 5 (11), 4966-4975 (full paper).

Optical properties of nanohole arrays in metal-dielectric double films prepared by mask-on-metal colloidal lithography.

J. Junesch, T. Sannomiya, [A.B. Dahlin](#).*

ACS Nano **2012**, 6 (11), 10405-10415 (article).

Nanoplasmonic sensing of metal-halide complex formation and the electric double layer capacitor.

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A.B. Dahlin,* R. Zahn, J. Vörös.

Nanoscale **2012**, 4 (7), 2339-2351 (full paper).

Investigation of plasmon resonances in metal films with nanohole arrays for biosensing applications.

T. Sannomiya,* O. Scholder, K. Jefimovs, C. Hafner, A.B. Dahlin.*

Small **2011**, 7 (12), 1653-1663 (full paper, cover page).

Electrochemical crystallization of plasmonic nanostructures.

A.B. Dahlin,* T. Sannomiya, R. Zahn, G.A. Sotiriou, J. Vörös.

Nano Letters **2011**, 11 (3), 1337-1343 (letter).

Electrochemistry on a localized surface plasmon resonance sensor.

T. Sannomiya, H. Dermutz, C. Hafner, J. Vörös, A.B. Dahlin.*

Langmuir **2010**, 26 (10), 7619-7626 (article).

Locally functionalized short-range ordered nanoplasmonic pores for bioanalytical sensing.

M.P. Jonsson,* A.B. Dahlin, L. Feuz, S. Petronis, F. Höök.*

Analytical Chemistry **2010**, 82 (5), 2087-2094 (article).

QCM-D studies of human norovirus VLPs binding to glycosphingolipids in supported lipid bilayers reveal strain-specific characteristics.

G.E. Rydell, A.B. Dahlin, F. Höök, G. Larson.*

Glycobiology **2009**, 19 (11), 1176-1184 (article).

High-resolution microspectroscopy of plasmonic nanostructures for miniaturized biosensing.

A.B. Dahlin,* S. Chen, M.P. Jonsson, L. Gunnarsson, M. Käll, F. Höök.*

Analytical Chemistry **2009**, 81 (16), 6572-6580 (article, accelerated publication).

Synchronized quartz crystal microbalance and nanoplasmonic sensing of biomolecular recognition reactions.

A.B. Dahlin, P. Jönsson, M.P. Jonsson, E. Schmid, Y. Zhou, F. Höök.*

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Nanophotonics **2013**, 2 (2), 83-101 (review).

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A.B. Dahlin,* M.P. Jonsson.

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A.B. Dahlin.*

IOS Press 2012, Advances in Biomedical Spectroscopy 4 (sole author book).

Conference Contributions (selected)

TSRC Nuclear Pore Complexes and Smart Polymers

A fully artificial nuclear pore complex using hydrogen bonds (invited speaker).

Telluride, USA, 2022.

Polymer Brushes: New Developments and Perspectives in Experiment, Theory and Applications

Poly(carboxylic acid) brushes and proteins: interactions and switchable interfaces (oral presentation).

Online 2021.

META 2021

Plasmonic electronic paper (invited speaker).

Online 2021.

EBSA 2021

Protein trapping in nanopores with macromolecular gates (oral presentation).

Online 2021.

ACS Fall Meeting

Nanoscale reaction chambers with macromolecular gates (invited speaker).

Online 2020.

IEEE Nanotechnology Materials and Devices

Macromolecular gates (invited speaker).

Stockholm, Sweden, 2019.

10th International Conference on Materials for Advanced Technologies

Macromolecular gates (invited speaker).

Marina Bay Sands, Singapore, 2019.

Molecular Plasmonics

Macromolecular gates in plasmonic nanopores (invited speaker).

Jena, Germany, 2019.

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Telluride, USA, 2018.

Gordon Research Conference – Biointerface Science

Trapping proteins in nanoscale chambers with macromolecular gates (poster presentation).

Il Ciocco, Italy, 2018.

SelectBIO - Biodetection and Biosensors

Plasmonic nanopores: Towards combined filtration and sensing (invited speaker).

Cambridge, UK, 2017.

European Material Research Society – Autumn Meeting

Plasmonic electronic paper (oral presentation).

Warsaw, Poland, 2017.

Gordon Research Conference – Biointerface Science

Capturing proteins by facilitated diffusion through macromolecular gates on plasmonic nanopores (poster presentation).

Les Diablerets, Switzerland, 2016.

Elsevier – Biosensors 2016

Location-specific nanoplasmonic detection of biomolecular interactions on lipid membranes with negative curvature (oral presentation).

3rd March 2023

Gothenburg, Sweden, 2016.

15th *Dresden Polymer Discussions*

Macromolecular gates: Polymer brushes on nanopores (invited speaker).

Meissen, Germany, 2016.

Europt(r)ode 2016

Nanoplasmonic sensors: Utilizing nanoscale geometry (invited speaker).

Graz, Austria, 2016.

Nanobiotech Montreux

Polymer-functionalized plasmonic nanopores (poster presentation).

Montreux, Switzerland, 2015.

SciX 2015

Nanoplasmonic sensors: unique applications (invited speaker).

Providence, USA, 2015.

10th *European Biophysics Congress*

Nanosieves formed by poly(ethylene glycol) brushes on plasmonic nanopores (poster presentation).

Dresden, Germany, 2015.

Micronano System Workshop

Polymer gates in nanopores (poster presentation).

Uppsala, Sweden, 2014.

European Science Foundation – Biological Surfaces and Interfaces

Polymer brush morphology at nanopore openings (poster presentation).

Sant Feliu de Guixols, Spain, 2013.

Gordon Research Conference/Seminar – Biointerface Science

PEGs in pores – the struggle for freedom (poster/oral presentation).

Les Diablerets, Switzerland, 2012.

European Material Research Society – Spring Meeting

Biosensing with nanohole arrays – The (w)hole story (oral presentation).

Strasbourg, France, 2012.

Nanoplasmonic Sensing and Spectroscopy

Plasmonic monitoring of electrochemical processes (poster/oral presentation).

Göteborg, Sweden, 2011.

European Material Research Society – Spring Meeting

Plasmonic monitoring of electrochemical processes (keynote presentation).

Nice, France, 2011.

Third International NanoBio Conference

Electrochemical processes in plasmonic nanostructures (poster presentation).

Zürich, Switzerland, 2010.

Gordon Research Conference/Seminar – Plasmonics

Electrochemical potential influence on nanoplasmonic resonances (poster/oral presentation).

Waterville, USA, 2010.

Elsevier – Biosensors World Congress 2010

Nanostructured surfaces for combined optical, mechanical and electrical sensing (poster presentation).

Glasgow, Scotland, 2010.

ETH – Functionalized Plasmonic Nanostructures for Biosensing

Combining nanoplasmonic sensors with electrochemistry (poster presentation).

Ascona, Switzerland, 2010.

Gordon Research Conference – Biointerface Science

Combining nanoplasmonics with lipid membranes (poster presentation).

Aussois, France, 2008.

China-Sweden Workshop on Nanoscience and Technology

Nanoplasmonic apertures for biosensing applications related to lipid membranes (invited speaker).

Beijing, China, 2008.

European Science Foundation - Biological Surfaces and Interfaces

Combining localized surface plasmon resonance with artificial lipid membranes (poster presentation).

Sant Feliu de Guixols, Spain, 2007.

Second Nanowire Symposium – Life Science

A nano-optical sensor for studies of lipid-membranes (oral presentation).

Lund, Sweden, 2006.

Gordon Research Conference – Biointerface Science

Localized surface plasmon resonance sensing of lipid membranes (poster presentation).

Les Diablerets, Switzerland, 2006.

American Chemical Society - Spring Meeting

Extinction spectroscopy for sensors based on localized surface plasmon resonance (oral presentation).

Atlanta, USA, 2006.

Max Planck Institute for Physics - Functional Solid Supported Biomolecular Lipid Membranes

Localized surface plasmon resonance sensing of reactions confined to lipid membranes (poster presentation).

Ringberg, Germany, 2005.

Reviewing Assignments

- **Nature Materials**
- **Nature Communications**
- **Proceedings of the National Academy of Sciences of the United States of America**
- **Science Advances (AAAS)**
- **Scientific Reports (Springer Nature)**
- **Nano Research (Springer Nature)**
- **Nano Letters (ACS)**
- **ACS Nano**
- **Journal of the American Chemical Society (ACS)**
- **Chemistry of Materials (ACS)**
- **Analytical Chemistry (ACS)**
- **Langmuir (ACS)**
- **Journal of Physical Chemistry Letters (ACS)**
- **Journal of Physical Chemistry C (ACS)**
- **Biomacromolecules (ACS)**
- **Molecular Pharmaceutics (ACS)**
- **ACS Applied Materials and Interfaces**
- **ACS Applied Polymer Materials**
- **ACS Photonics**
- **ACS Sensors**
- **ACS Omega**
- **Angewandte Chemie (Wiley)**
- **Advanced Materials (Wiley)**
- **Advanced Functional Materials (Wiley)**
- **Advanced Optical Materials (Wiley)**
- **Small (Wiley)**
- **Particle & Particle Systems Characterization (Wiley)**
- **Annalen der Physik (Wiley)**
- **Chemistry - An Asian Journal (Wiley)**
- **Physical Review Applied (APS)**
- **Chemical Communications (RSC)**
- **Nanoscale Horizons (RSC)**
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- **Lab on a Chip (RSC)**
- **RSC Advances**
- **Analyst (RSC)**
- **Green Chemistry (RSC)**
- **Journal of Materials Chemistry B (RSC)**
- **Materials Horizons (RSC)**
- **Biomaterials Science (RSC)**
- **Photonics and Nanostructures - Fundamentals and Applications (Elsevier)**
- **Sensors and Actuators B: Chemical (Elsevier)**
- **Colloids and Surfaces B: Biointerfaces (Elsevier)**
- **Electrochemistry Communications (Elsevier)**
- **Micron (Elsevier)**
- **Applied Surface Science (Elsevier)**
- **Analytical and Bioanalytical Chemistry (Springer)**
- **Plasmonics (Springer)**
- **Bionanoscience (Springer)**
- **Nanoscale Research Letters (Springer)**
- **Biointerphases (AVS)**
- **Applied Physics Letters (AIP)**
- **Nanotechnology (IOP)**
- **Journal of Applied Physics (IOP)**
- **Journal of Optics (IOP)**
- **Journal of Physics D: Applied Physics (IOP)**
- **Science and Technology of Advanced Materials (IOP)**

- **Nanophotonics (de Gruyter)**
 - **Journal of the Optical Society of America B**
 - **Optics Express (OSA)**
 - **Optical Materials Express (OSA)**
 - **Biomedical Optics Express (OSA)**
 - **Expert Review of Molecular Diagnostics (Informa Healthcare)**
 - **Sensors (MDPI)**
 - **Biosensors (MDPI)**
 - **Current Nanoscience (Bentham)**
 - **Progress in Electromagnetics Research**
 - **Nanotechnology and Nanomaterials (InTech)**
 - **Journal of Nanophotonics (SPIE)**
 - **IEEE Photonics**
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- **United States Israel Binational Science Foundation**
 - **National Science Foundation (USA)**
 - **The Netherlands Organisation for Scientific Research (NWO)**
 - **M.J. Murdoch Charitable Trust (USA)**
 - **Knut & Alice Wallenberg Foundation (Sweden)**
 - **The Royal Society (UK)**
 - **Engineering and Physical Sciences Research Council (UK)**
 - **FWF Austrian Science Fund**
 - **Deutsche Forschungsgemeinschaft (Germany)**
 - **Human Frontier Science Program (France)**