



DOPS Annual Conference 2018/19

**H.C. Ørsted Institute, University of Copenhagen Universitetsparken
5, 2100 København**

30. and 31. January 2019

Wednesday, January 30, 2019

Registration, coffee and bread 8:45 – 9:25

Welcome 9:25 – 9:30

Technical Session I 9:30 – 10:40

Chair:

Albert Schliesser, Niels Bohr Institute, University of Copenhagen

Terahertz Resistivity Imaging (Invited)

Peter Uhd Jepsen, Technical University of Denmark, Department of Photonics Engineering 9:30 – 9:55

In-field weed mapping in agriculture; Challenges and solutions for outdoor image acquisition (Invited)

Morten S. Laursen, Department of Engineering, Aarhus University 9:55 – 10:20

Collaborate Technology projects at NKT Photonics

Peter M. Moselund, NKT Photonics 10:20 – 10:35

Optical resonances and field-enhancement in 3D metal nanorods

Thomas M. Søndergaard, Department of Physics and Nanotechnology, Alborg University 10:35 – 10:50

Break and exhibition 10:50 – 11:10

Technical Session II 11:10 – 12:05

Chair:

Christian Nodskov, ATE-ADM

Mid-infrared OCT imaging in highly scattering samples using real-time upconversion of broadband supercontinuum" (Invited)

Christian Petersen, Technical University of Denmark, Department of Photonics Engineering 11:10 – 11:35

Towards entanglement in a hybrid negative-mass spin-mechanical system

Christoffer Bo Møller, Niels Bohr Institute, University of Copenhagen..... 11:35 – 11:50

Direct characterization of near-field coupling in gap plasmon-based metasurfaces

Volodymyr Zenin, Centre for Nano Optics, University of Southern Denmark..... 11:50 – 12:05

Lunch and exhibition..... 12:05 – 13:00

Product Presentations 13:00 – 13:50

Chair: *Finn Mengel, Mengel Engineering*

Companies to present: Nanor, Azpect, NKT Photonics, Thorlabs, Acal BFI, Hamamatsu.

Break and exhibition 13:50 – 14:30

Technical Session III 14:30 – 15:45

Chair:

Asger Jensen, NKT Photonics

Towards scalable quantum-photonics devices based on epitaxially grown quantum dots

Tommaso Pregnolato, Niels Bohr Institute, University of Copenhagen.....14:30 – 14:45

HIGH PULSE ENERGY SUPERCONTINUUM MULTISPECTRAL PHOTOACOUSTIC TOMOGRAPHY

Oyewole Benjamin Efunbajo, Technical University of Denmark, Department of Photonics Engineering 14:45 – 15:00

Plasmonics: Perspectives & limitations (Invited; DOPS senior prize)

Sergey I. Bozhevolnyi, Centre for Nano Optics, University of Southern Denmark 15:00– 15:30

Lasers and optical methods for diagnosis and treatment of eye diseases (Invited)

Michael Larsen, Department of Clinical Medicine, University of Copenhagen 15:30– 16:00

Posters, exhibition, snacks & beer..... 16:00 – 18:00

Dinner at the Panum Institute 18:00 – 20:00

After-dinner-lecture: A quantum internet of photons..... 20:00 – 21:00

Anders S. Sørensen, Niels Bohr Institute, University of Copenhagen

Thursday, January 31, 2019

Registration, coffee and bread 8:15 – 9:00

Technical Session IV 9:00 – 10:20

Chair:

Sigrid Skovbo Adersen, OFS

Nonlinear Optics for Ultra-Fast, Broadband and Energy-Efficient Optical Communications (Invited)

Leif K. Oxenløwe, Technical University of Denmark, Department of Photonics Engineering 9:00 – 9:25

Optical trapping, heating and bio-medical applications of HOT nanoparticles (Invited)

Lene Oddershede, Niels Bohr Institute, University of Copenhagen 9:25 – 9:50

Optical properties of titanium nitride films under low temperature

Larissa Vertchenko, Technical University of Denmark, Department of Photonics Engineering 9:50 – 10:05

Few Mode Fibers

Lars Grüner-Nielsen, Technical University of Denmark, Department of Photonics Engineering 10:05 – 10:20

Break and exhibition 10:20 – 10:50

Technical Session V 10:50 – 12:00

Chair:

Thomas Søndergaard, Aalborg University, Department of Physics and Nanotechnology

High Power Laser Welding With Customized Beam Patterns (Invited)

Morten Kristiansen, Aalborg University 10:50 – 11:15

A new microscopic toolbox harnessing the forces of light - a tribute to the 2018 Nobel Prize in physics (Invited)

Ada-Ioana Bunea, Nanolab, Technical University of Denmark 11:15 – 11:40

Towards a on-demand single-photon source for quantum repeater application at room temperature

Karsten B. Dideriksen, Niels Bohr Institute, University of Copenhagen 11:40 – 12:00

Lunch and exhibition 12:00 – 13:15

Chair:

Asger Jensen, NKT Photonics

Ultra-high resolution optical coherence tomography for delineating the dermo-epidermal junction in the skin

Niels Møller Israelsen, Technical University of Denmark, Department of Photonics Engineering..... 13:15 – 13:30

RIN evolution in all-normal supercontinuum generation

Etienne Genier, NKT Photonics 13:30 – 13:45

Quantum Measurement and Control of a Mechanical Resonator

Massimiliano Rossi, Niels Bohr Institute, University of Copenhagen 13:45 – 14:00

DOPS Junior and poster award ceremony:

14:00 – 14:30

Closing remarks 14:30 – 14:35