Jochem Smit
Phd Candidate

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Nationality
Dutch
Date of Brith
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Summary My interest in mechanisms of physical law and biological machinery is what drives me to do research. I have a strong background in both Chemistry and Physics as well as programming proficiency which allows me to contribute to a broad range of interdisciplinary research projects.

Education

2019–Present **Postdoctoral researcher** *KU Leuven*

2015–2019 **Phd Student** *University of Groningen*
During my Phd I have worked on the development of synthetic probes with new functionality for fluorescence imaging, from chemical design, synthesis and photophysical characterization to applications in live-cell imaging and super-resolution microscopy.

2010–2012 **MSc Nanoscience** *University of Groningen*
Master Thesis: Organometallic Catalysis as seen by single molecule spectroscopy.

2007–2010 **BSc Physics** *University of Groningen*
Bachelor Thesis: Synthesis of PTCDA derivatives and application of organic semiconductors in transistors. (shared thesis)

2006–2011 **BSc Chemistry** *University of Groningen*
Bachelor Thesis: Synthesis of PTCDA derivatives and application of organic semiconductors in transistors. (shared thesis)

Publications

2019 **J. H. Smit**, *ColiCoords: A Python package for analysis of rod-shaped single-cell fluorescence microscopy data in Jupyter notebooks.* PLOS ONE **14**, e0217524

2019 J. H. M. van der Velde*, **J. H. Smit***, C.M. Punter, T. Cordes, *Self-healing dyes for super-resolution microscopy.* J. Phys. D: Appl. Phys, **52**, 034001

2019 **J. H. Smit**, J. H. M. van der Velde, J. Huang, V. Trauschke, S. Hendrikus, S. Chen, N. Eleftheriadis, E. M. Warszawik, C.M. Punter, A. Herrmann, T. Cordes, *On the impact of competing intra- and intermolecular triplet-state quenching on photobleaching and photoswitching kinetics of organic fluorophores.* PCCP, **21**, 3721-3733

2018 E. M. Warszawik, **J. H. Smit**, Y. Li, M. Loznik, A. Paul, T. Cordes, A. Herrmann, *Uptake and Localization of Aminoglycoside Antibiotics in Live Escherichia Coli.* Biophysical Journal **114** (3), 629a

2017 J. Kim*, **J. H. Smit***, D. K. Prusty, A. J. Musser, N. Tombros, P. C. W. Lee, A. Herrmann, M. Kwak, *Ultrasensitive Detection of Oligonucleotides: Single-Walled Carbon Nanotube Transistor Assembled by DNA Block Copolymer.* Journal of Nanoscience and Nanotechnology, **17** (8), 5175-5180

2016 J. H. M. van der Velde, J. Oelerich, J. Huang, **J. H. Smit**, A. A. Jazi, S. Galiani, K.l Kolmakov, G. Guoridis, C. Eggeling, A. Herrmann, G. Roelfes, T. Cordes, *A simple and versatile design concept for fluorophore derivatives with intramolecular photostabilization.* Nature Communications, **7**, 10144

2014 J. H. M. van der Velde, J. Oelerich, J. Huang, **J. H. Smit**, M. Hiermaier, E. Ploetz, A. Herrmann, G. Roelfes, T. Cordes, *The power of two: covalent coupling of photostabilizers for fluorescence applications.* JPC Letters, **5** (21), 3792-3798

2012 I. Stein, S. Capone, **J.H. Smit**, F. Baumann, T. Cordes, P. Tinnefeld, *Linking Single-Molecule Blinking to Chromophore Structure and Redox Potentials.* ChemPhysChem, **13**, 931-937

Research Experience

2013 **Research Assistant** *LMU Munich*
Supervisor: Prof. Dr. Wolfgang Zinth
Keywords: Ultrafast Spectroscopy, Streak Camera, Time-resolved Fluorescence, the Non-linear Optics

2012 **Research Assistant** *University of Groningen*
Supervisor: Prof. Dr. T. Cordes
Keywords: Single-molecule Chemistry, Fluorescence Microscopy, Organopalladium Chemistry

2011 **Internship** *LMU Munich*
Supervisor: Prof. Dr. P. Tinnefeld
Keywords: Confocal Microscopy, Photophysics, Single-molecule Studies, Redox Chemistry

2011 **Internship** *University of Groningen*
Supervisor: Prof. Dr. A. Herrmann
Keywords: Graphene, Carbon Nanotubes, Organic Electronics, DNA Hybrid Materials, DNA Synthesis

Teaching

2015–2016 **T.A. Thermodynamics** *University of Groningen*
Teaching of exercise classes Thermodynamics for 1st year physics students

Conferences

2018 **Bacterial Protein Export** *Leuven*
Poster Presentation: *Uptake and Localization of Aminoglycoside Antibiotics in Live Escherichia Coli*

2018 **PicoQuant Workshop** *Berlin*
Oral Presentation: *Inter – vs intramolecular photostabilization of organic fluorophores*

2018 **84th Harden Conference: Single-molecule bacteriology** *Oxford*
Oral Presentation: *Uptake and Localization of Aminoglycoside Antibiotics in Live Escherichia Coli*

2017 **Zernike Institute for Advanced Materials meeting** *Vlieland*
Oral Presentation: *Inter- vs Intramolecular photostabilization of organic fluorophores*

2016 **Dutch BioPhysics** *Veldhoven*
Poster Presentation: *Design of photostabilizer-dye conjugates and applications in super-resolution microscopy*

2015 **PicoQuant Workshop** *Berlin*
Poster Presentation: *The Power of Two: Covalent Coupling of Photostabilizers for Fluorescence Applications*

2015 **Focus on Microscopy** *Goettingen*
Oral Presentation: *A Simple And Versatile Synthesis Strategy For Intramolecular Photostabilization of Organic Fluorophores*

Fellowships and awards

2018 **FEMS**
Fellowship for attending BPE2018 conference

2010–2012 **Zernike Insitute for Advanced Materials**
Fellowship for TopMaster programme in Nanoscience

Professional Affiliations

Member of the following societies:
- Deutsche Physikalische Gesellschaft
- Nederlandse Natuurkunde Vereniging
- Biochemical Society
- Koninklijke Nederlandse Vereniging voor Microbiologie

Skills

Programming
- Python
- C++
- Mathematica

Computer
- LaTeX
- Windows
- Linux

Languages
- Dutch (native)
- English (fluent)
- German (basic)