

CV of Kristian Sommer Thygesen



PERSONAL INFORMATION

- Date of birth: 19-09-1976
- ResearcherID: B-1062-2011
- ORCID: 0000-0001-5197-214X
- Married to Mona Elmholt Thygesen. Children: 3 (2012, 2008, 2005)
- URL for web site: www.fysik.dtu.dk/English/Research/camd

EDUCATION

- 2017 Higher Doctoral Degree (Dr. Techn.), Technical University of Denmark (DTU)
- 2005 PhD in Theoretical Physics, Technical University of Denmark (DTU).
- 2002 MSc in Technical Physics, Technical University of Denmark.

CURRENT POSITIONS

- 2015 - Head of Section Computational Atomic-scale Materials Design (CAMD), DTU-Physics
- 2013 - Professor, Department of Physics, DTU

PREVIOUS POSITIONS

- 2009-2013 Associate Professor, Department of Physics, DTU
- 2006-2009 Assistant Professor, Department of Physics, DTU
- 2005-2006 Post doc, Freie Universität Berlin.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2010 – 2011 Director of NanoDTU (Umbrella organization for Nanoscience at DTU)
- 2011 - Spokesperson for the working group “*Quantum Transport in Nanostructures*” under the Psi-k European Network for Electronic Structure Theory

PUBLICATIONS (ISI Web Of Science June 2018)

- 150 publications in peer reviewed journals (11 *Highly Cited@WoS*; 2 Nature Nanotech.; 4 Nature Comm.; 7 Nano Letters; 13 Phys. Rev. Lett.).
- 8000 citations, H-index: 49, H5-index: 24 (based on citations to paper published 2013-2017)
- More than 70 invited talks at international conferences/workshops/schools

PERSONAL GRANTS

- 2018-2023 European Research Council’s ERC Consolidator Grant (2 mio. EURO)
- 2012-2016 Danish Research Council’s Sapere Aude Research Leader Grant (1 mio. EURO)

OTHER GRANTS

- EU Center of Excellence “Novel Materials Discovery Laboratory”, H2020 (5 mio EURO, Center leader Matthias Scheffler, Max Planck Institute, Berlin)
- Innovation Fund Denmark Large-scale Project “INKA- Inks for large-scale processing of polymer solar cells” (2.8 mio EURO, Project leader Eva Bundgaard, DTU Energy)
- Danish National Research Foundation’s Center of Excellence “Center for Nanostructured Graphene”, 2012-2022 (~12 mio. EURO, Center leader: Prof. Antti-Pekka Jauho, DTU NanoTech)
- Research project: “Large-scale quantum simulations and informatics in nanocatalysis”, Danish Strategic Research Foundation, 2007-2012 (0.8 mio. EURO, PI: Kristian S. Thygesen)
- Research project “Molecular Opto-Electronics”, The Danish Council for Independent Research, 2009-2012 (0.5 mio. EURO, together with ass. prof. Jakob Schiøtz from DTU Physics).
- 4 grants from The Danish Center for Scientific Computing in 2007, 2008, 2009 and 2011 (0.1-0.5 mio. EURO each)
- Post doc grant “Theoretical modeling of the electrical properties of nano-scale junctions”, The Danish Council for Independent Research, 2005-2006 (50.000 EURO, Individual grant)

ORGANISATION OF SELECTED SCIENTIFIC MEETINGS

- The CAMD Summer School on “*Electronic Structure Theory and Applications*” in 2008,2010,2012,2014,2016,2018 (attended by 80-100 international PhD students). Organized together with colleagues at DTU Physics.
- Workshop “*Quantum Transport at the Molecular scale*”, May 2012, Dublin.
- Workshop “*GPAW users and developers meeting*”, DTU May 2013.
- Symposium “*Frontiers of Electronic Structure Theory: Nonequilibrium phenomena*” at the Annual DPG Meeting, Dresden 2014.
- Symposium “*Novel 2D Materials and Heterostructures*” at the 2015 Psi-k Conference, September 6-10 2015, San Sebastian, Spain

TEACHING ACTIVITIES

- 2010 – 2012 BSc course: Quantum mechanics, 10 ECTS ([10102](#)), DTU, co-responsible
- 2006 – 2015 MSc course: Advanced quantum mechanics, 10 ECTS ([10112](#)), co-responsible
- 2014 – 2018 MSc course: Advanced solid state physics, 5 ECTS ([10305](#)), main responsible
- 2017 – 2018 BSc course: Introduction to physics and nanotechnology, 10 ECTS ([10031](#)), DTU, co-responsible
- 2016 – 2018 MSc course: Electronic structure methods in material physics, chemistry and biology, 10 ECTS ([10302](#)), main responsible

SUPERVISION

I have supervised 16 Master projects (11 cont. with PhD), 13 PhD (5 cont. as post doc) and 18 post docs.

COMMISSIONS OF TRUST

- Reviewer of ERC Starting grant proposals, German Research Foundation (DFG), the National Science Foundation (NSF)+others
- Chairman of 9 PhD evaluation committees at Department of Physics, -Photonics, and -Nanotech, Technical University of Denmark
- External opponent at several PhD committees abroad, incl. Trinity College, University of Paris, Aalto University, University of Twente, University of Leiden, University of Luxemburg

SELECTED COLLABORATORS WITH COMMON PUBLICATIONS: (person, subject, university)

- Prof. Sense Jan van der Molen, Quantum interference in molecular junctions, Leiden University, Holland
- Prof. Angel Rubio, Nonequilibrium electron transport, University of the Basque Country, Spain
- Prof. Jens Nørskov, Lithium air batteries, Stanford University, USA
- Prof. Branislav Nikolic, Thermoelectrics, University of Delaware, USA
- Director Quentin Ramasse, Electron energy loss spectroscopy, SuperSTEM, Daresbury, UK
- Prof. Frank Koppens, Optical properties of 2D semiconductors, IFCO, Barcelona, Spain
- Max Planck Director Matthias Scheffler, Computational Materials Databases, Fritz-Haber Institut Berlin, Germany