Alexander Huck - DTU Orbit (23/11/2018)

Huck, Alexander

Alexander.Huck@fysik.dtu.dk

Department of Physics - Associate Professor

Quantum Physics and Information Technology

Research outputs:

**Cavity-enhanced nitrogen-vacancy ensemble magnetometry**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

**Clock transition by continuous dynamical decoupling of a three-level system**
In : Scientific Reports. 8, 1, 8 p., 14807
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Contributed review: camera-limits for wide-field magnetic resonance imaging with a nitrogen-vacancy spin sensor**
In : Review of Scientific Instruments. 89, 3, 8 p., 031501
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Feasibility and resolution limits of opto-magnetic imaging of neural network activity in brain slices using color centers in diamond**
Karadas, M., Wojciechowski, A. M., Huck, A., Dalby, N. O., Andersen, U. L. & Thielisch, A. 2018
In : Scientific Reports. 8, 1, 14 p., 4503
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Nitrogen-vacancy ensemble magnetometry based on pump absorption**
In : Physical Review B. 97, 2, 6 p., 024105
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Precision temperature sensing in the presence of magnetic field noise and vice-versa using nitrogen-vacancy centers in diamond**
Wojciechowski, A. M., Karadas, M., Osterkamp, C., Jankuhn, S., Meijer, J., Jelezko, F., Huck, A. & Andersen, U. L. 2018
In : Applied Physics Letters. 113, 1, 5 p., 013502
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Narrow-bandwidth sensing of high-frequency fields with continuous dynamical decoupling**
In : Nature Communications. 8, 1, 6 p., 1105
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Nitrogen-vacancy ensemble magnetometry based on pump absorption**
Ahmadi, S., El-Ella, H. A. R., Hansen, J. B., Huck, A. & Andersen, U. L. 2017
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

**Optimised frequency modulation for continuous-wave optical magnetic resonance sensing using nitrogen-vacancy ensembles**
El-Ella, H., Ahmadi, S., Wojciechowski, A., Huck, A. & Andersen, U. L. 2017
Research output: Research - peer-review › Journal article – Annual report year: 2017
Coupling of a single quantum emitter to end-to-end aligned silver nanowires
Research output: Research - peer-review › Journal article – Annual report year: 2013

Coupling of single quantum emitters to plasmons propagating on mechanically etched wires
Research output: Research - peer-review › Journal article – Annual report year: 2013

Design and geometry of hybrid white light-emitted diodes for efficient energy transfer from the quantum well to the nanocrystals
Kopylov, O., Huck, A., Shirazi, R., Yvind, K. & Kardynal, B. 2013 In : Proceedings of SPIE, the International Society for Optical Engineering. 8625, 6 p., 862524
Research output: Research - peer-review › Conference article – Annual report year: 2013

Efficient coupling of a single diamond color center to propagating plasmonic gap modes.
Research output: Research - peer-review › Journal article – Annual report year: 2013

Large Optical Nonlinearity of Surface Plasmon Modes on Thin Gold Films
Research output: Research - peer-review › Journal article – Annual report year: 2014

Continuous-wave spatial quantum correlations of light induced by multiple scattering
Research output: Research - peer-review › Journal article – Annual report year: 2012

Coupling of a single nitrogen vacancy center to the gap modes of a dual silver nanowire system
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Erratum: Observation of Spatial Quantum Correlations Induced by Multiple Scattering of Nonclassical Light [Phys. Rev. Lett. 102, 193901 (2009)]
Research output: Research - peer-review › Comment/debate – Annual report year: 2013

Propagation of plasmons in designed single crystalline silver nanostructures
Kumar, S., Lu, Y-W., Huck, A. & Andersen, U. L. 2012 In : Optics Express. 20, 22, p. 24614-24622
Research output: Research - peer-review › Journal article – Annual report year: 2012

Controlled Coupling of a Single Nitrogen-Vacancy Center to a Silver Nanowire
Research output: Research - peer-review › Journal article – Annual report year: 2011

Controlling the Coupling of a Single Nitrogen Vacancy Center to a Silver Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Generation and Characterisation of Non-Classical Surface Plasmons
Research output: Research › Ph.D. thesis – Annual report year: 2010
Continuous-variable quantum erasure correcting code
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Quantum optical coherence can survive photon losses using a continuous-variable quantum erasure-correcting code
Research output: Research - peer-review › Journal article – Annual report year: 2010

Continuous Variables Quantum Erasure-Correcting Code
Research output: Research › Paper – Annual report year: 2009

Correlation measurement of squeezed light
Research output: Research - peer-review › Journal article – Annual report year: 2009

Demonstration of quadrature squeezed surface-plasmons in a gold waveguide
Research output: Research › Article in proceedings – Annual report year: 2009

Demonstration of quadrature-squeezed surface plasmons in a gold waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2009

Excitation and characterization of non-classical surface plasmon polaritons
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2009

Experimental demonstration of spatial quantum correlations in multiple scattering media
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Observation of spatial quantum correlations induced by multiple scattering of nonclassical light
Research output: Research - peer-review › Journal article – Annual report year: 2009

Spatial quantum correlations generated by multiple scattering of squeezed light
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2009

Demonstration of a Quantum Nondemolition Sum Gate
Research output: Research - peer-review › Journal article – Annual report year: 2008

Electronic noise-free measurements of squeezed light
Research output: Research - peer-review › Journal article – Annual report year: 2008
Generation of Non-Classical Surface-Plasmon Polaritons
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Demonstration of deterministic and high fidelity squeezing of quantum information
Research output: Research - peer-review › Journal article – Annual report year: 2007

Polarization squeezing with photonic crystal fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2007

Polarization squeezing with photonic crystal fibers
Research output: Research - peer-review › Journal article – Annual report year: 2007

Quantum optics in multiple scattering random media

Projects:

Quantum Optical Networks with Solid State Spins and Photons
Bergamin, M., Andersen, U. L. & Huck, A.
01/11/2018 → 31/10/2021
Project: PhD

Highly sensitive quantum magnetometry using Nitrogen-Vacancy centers in diamond
Troise, L., Andersen, U. L., Berg-Sørensen, K. & Huck, A.
15/09/2018 → 14/09/2021
Project: PhD

Quantum Thermodynamics and Quantum Information
Jørgensen, M. R., Brask, J. B. & Huck, A.
Forskningsrådfinansiering
15/09/2018 → 14/09/2021
Project: PhD

Highly sensitive quantum magnetometry using Nitrogen-Vacancy centers in diamond
Poulsen, A. F. L., Huck, A., Andersen, U. L. & Berg-Sørensen, K.
Institut stipendie (DTU)
01/09/2018 → 31/08/2021
Project: PhD

Highly sensitive quantum magnetometry using Nitrogen-Vacancy centers in diamond
Clement, J. D., Andersen, U. L., Berg-Sørensen, K. & Huck, A.
Fonde
01/08/2018 → 31/07/2021
Coherent interaction between a solid-state spin and a mechanical oscillator
Berrig, C., Huck, A. & Andersen, U. L.
Grundforskningsfonden
01/08/2018 → 31/07/2021
Project: PhD

Cavity-modified dynamics of Nitrogen-Vacancy centers in Diamond
Jensen, R. H., Andersen, U. L. & Huck, A.
Institut stipendie (DTU)
15/02/2016 → 14/03/2019
Project: PhD

Experimental solid state Nano-Optics
Boll, M. K., Andersen, U. L. & Huck, A.
Forskningsrådssponsor
01/11/2015 → 13/02/2019
Project: PhD

Improved collection efficiency of photons from NV centers for applications in magnetometry
Forskningsrådssponsor
15/12/2014 → 15/09/2018
Project: PhD

Development of measurement protocols for quantum magnetometry
Stark, A., Andersen, U. L., Huck, A., Jelezko, F., Wubs, M., Balasubramanian, G. & Maletinsky, P.
Forskningsrådssponsor
01/12/2014 → 09/02/2018
Project: PhD

Coherent Coupling of a Nitrogen-Vacancy Center to Gap Modes in Integrated Structures
Israelsen, N. M., Andersen, U. L., Huck, A., Wubs, M., Bozhevolnyi, S. I. & Jelezko, F.
Institut, samfinansiering
01/04/2012 → 13/08/2015
Project: PhD

Generation and Characterisation of Non-Classical Surface Plasmons
DTU-lønnet stipendie
01/02/2007 → 31/03/2010
Project: PhD

Entanglement Enhanced Quantum Communication and Bio-sensing
Institut stipendie (DTU) Samf.
01/09/2013 → 23/11/2016
Project: PhD

Quantum Protocols with a Colour Centre in a Microcavity
Institut stipendie (DTU) Samf.
01/09/2013 → 23/11/2016
Project: PhD
Activities:

Dansk Optisk Selskabs Årsmøde 2008
Huck, A. (Participant)
17 Jun 2008 → 18 Jun 2008
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.