

VILLUM Young Investigators 2012-2017

VILLUM FONDEN



2017	Project Title	Organisation Name	Department Name	Primary Applicant	Amount Granted
1	Undersøgelse af lanthanid-ionernes unikke kemi	Københavns Universitet	Kemisk Institut	Thomas Just Sørensen	DKK 9.900.991,00
2	Om at måle uden målebånd	Danmarks Tekniske Universitet	DTU Compute	Søren Hauberg	DKK 9.719.117,00
3	Nye molekulære metoder til bekæmpelse af biller	Københavns Universitet	Biologisk Institut	Kenneth Halberg	DKK 8.490.281,00
4	Grænsebrydning inden for spredningsamplituder: etablering af en forståelse via computerteknologi (og omvendt)	Københavns Universitet	Niels Bohr Institutet	Jacob Bourjaily	DKK 7.390.515,00
5	Udvikling af to-dimensionelle materialer ved hjælp af syntetisk design	Danmarks Tekniske Universitet	DTU Kemi	Kasper Steen Pedersen	DKK 8.569.347,00
6	Elektronisk struktur på klos hold med fotoemission på nanoskala	Aarhus Universitet	Science and Technology	Søren Ulstrup	DKK 9.974.962,00
7	Omsætning i "Plastisfæren": Mikroplasts biogeokemiske skæbne i havmiljøet	Syddansk Universitet	Biologisk Institut	Nicole Rita Elisabeth Posth	DKK 9.746.336,00
8	Energieffektiv optisk kommunikation ved 2 mikrometer over kapacitetsgrænsen	Danmarks Tekniske Universitet	DTU Fotonik	Hao Hu	DKK 10.005.091,00
9	Strukturel karakterisering af uorganiske nanoclustre: Materialekemi mellem molekyler og partikler	Københavns Universitet	Kemisk Institut	Kirsten Marie Ørnsbjerg Jensen	DKK 9.998.048,00
10	Overfladeprocessers indflydelse på det Skandinavisk iskjolds udvikling og kollaps	Aarhus Universitet	Institut for Geoscience	Vivi Kathrine Pedersen	DKK 7.496.783,00
11	HiddenRisk – udforskning af menneskelige aktiviteters påvirkning af biodiversiteten i underjordiske habitater	Københavns Universitet	Statens Naturhistoriske Museum	Ana Sofia Reboleira	DKK 7.075.471,00
12	Vejen til bæredygtige protein-ressourcer i Europa: Biosyntese og transportering af lupin-alkaloider	Københavns Universitet	Institut for Plante- og Miljøvidenskab	Fernando Geu Flores	DKK 9.996.017,00
13	Ikke-naturlig udvælgelse af kulhydrat-baserede receptorer	Danmarks Tekniske Universitet	DTU Kemi	Sophie Beeren	DKK 9.998.528,00
14	Kan bølge-vekselvirkning redde fusionsdrømmen	Danmarks Tekniske Universitet	DTU-Fysik	Stefan Kragh Nielsen	DKK 7.846.488,00
15	Ny forståelse af ukendte mikrober gennem nye DNA sekventeringsmetoder	Aalborg Universitet	Institut for Kemi og Biovidenskab	Mads Albertsen	DKK 9.990.381,00
16	Spredning, differentiering og artsdannelse af fugle i øsamfund	Københavns Universitet	Statens Naturhistoriske Museum	Knud Jønsson	DKK 9.999.971,00
2016					
1	Palæogenomic insights into late Pleistocene megafauna dynamics and extinction	Københavns Universitet	Statens Naturhistoriske Museum	Eline Lorenzen	DKK 6.999.639,00
2	Novel tools for highly efficient detection of nucleic acids - going beyond amplification	Syddansk Universitet	Institut for Fysik, Kemi og Farmaci	Kira Astakhova	DKK 6.959.400,00
3	NADEC - Advanced NanoBiosensor for Rapid and Sensitive Detection of Multiple Contaminants in Food	Danmarks Tekniske Universitet	DTU Nanotech	Yi Sun	DKK 6.995.869,00
4	Big Data Bioinformatics - when biochemical signaling networks meet huge spatiotemporal OMICS data	Syddansk Universitet	Institut for Matematik og Datalogi	Jan Baumbach	DKK 6.408.150,00
5	Probing the Structures and Atmospheres of Small Exoplanets	Københavns Universitet	Statens Naturhistoriske Museum	Lars A. Buchhave	DKK 6.838.855,00
6	Type theories for reactive programming	IT-Universitetet	Sektionen for Teoretisk Datalogi	Rasmus Ejlers Møgelberg	DKK 6.439.546,00
7	Mesoscopic electron transport in correlated oxides heterostructures	Københavns Universitet	Niels Bohr Institutet	Thomas Sand Jespersen	DKK 7.000.000,00
8	Engineering highly selective heterogenous nanoparticle catalysts	Danmarks Tekniske Universitet	DTU Kemi	Søren Kegnæs	DKK 6.997.977,00
9	Marine biodiversity and ecosystem functioning: Key patterns and processes in nature	Danmarks Tekniske Universitet	DTU Aqua	Martin Lindegren	DKK 4.700.000,00
10	Gas to stars, stars to dust - tracing star-formation through cosmic time	Københavns Universitet	Niels Bohr Institutet	Georgios Magdis	DKK 4.999.257,00
11	Neutrinos on Ice	Københavns Universitet	Niels Bohr Institutet	David Jason Koskinen	DKK 4.910.549,00
12	Appl.of water vapor sorption and spectroscopy for novel characterization of surface and engineering soil properties	Aarhus Universitet	Institut for Agroøkologi	Emmanuel Arthur	DKK 4.471.427,00
13	The limits of computation	Aarhus Universitet	Institut for Datalogi	Kasper Green Larsen	DKK 5.000.000,00
14	Theory of astrophysical neutrinos and their sources	Københavns Universitet	Niels Bohr Institutet	Irene Tamborra	DKK 4.996.416,00
15	Joined at the hip: Quantifying effective concentrations in supra-molecular biological assemblies	Aarhus Universitet	Institut for Molekylærbiologi og genetik	Magnus Kjærgaard	DKK 5.000.000,00

16	Sugar export from plant leaves: From biometrics to biophysics	Danmarks Tekniske Universitet	DTU-Fysik	Kaare Hartvig Jensen	DKK 4.463.788,00
17	How does climate change impact plants and their herbivores? Eucalyptus and the Koala	Københavns Universitet	Institut for Plante- og Miljøvidenskab	Elizabeth Heather Neilson	DKK 4.993.975,00
18	Quantifying convective precipitation extremes under changing climate	Københavns Universitet	Niels Bohr Institutet	Jan Olaf Mirko Härter	DKK 6.974.592,00
19	Protein level regulation of transcription factor networks	Københavns Universitet	Institut for Plante- og Miljøvidenskab	Meike Burow	DKK 6.999.825,00
20	Topological photonic circuits	Københavns Universitet	Niels Bohr Institutet	Søren Stobbe	DKK 6.999.931,00
2015					
1	Zero-Delay Information Processing in Feedback Systems	Aalborg Universitet	Institut for Elektroniske Systemer	Jan Østergaard	DKK 5.791.024,00
2	In silico design of efficient materials for next generation batteries (Mat4Bat)	Danmarks Tekniske Universitet	DTU Energy	Juan Maria Garcia Lastra	DKK 6.997.318,00
3	Spectrum and Energy Efficient Signalling Techniques for Optical Fiber Data Communications	Danmarks Tekniske Universitet	DTU Fotonik	Juan José Vegas Olmos	DKK 6.773.802,00
4	Multispecies biofilms: Unraveling the black box	Københavns Universitet	Biologisk Institut	Mette Burmølle	DKK 6.961.662,00
5	Structure functions correlations: New insights in old premises	Københavns Universitet	Kemisk Institut	Nikos Hatzakis	DKK 6.766.341,00
6	Past and future dynamics of the Greenland Ice Sheet: What is the ocean hiding?	GEUS - De Nationale Geologiske Undersøgelser for Danmark og Grønland	-	Camilla Snowman Andresen	DKK 6.993.742,00
7	How termite farmers keep fungus crops disease-free (TREASURE)	Københavns Universitet	Biologisk Institut	Michael Thomas-Poulsen	DKK 6.690.432,00
8	HEFT: Systematic Exploration of the nature of the Higgs like Boson, and the Standard Model Effective Theory	Københavns Universitet	Niels Bohr Institutet	Michael Trott	DKK 6.992.617,00
9	A high-throughput screening approach for advancing the engineering of new materials	Danmarks Tekniske Universitet	DTU Nanotech	Alireza Dolatshahi-Pirouz	DKK 3.999.982,00
10	Revealing the Role of Species Interactions in Biogeography	Københavns Universitet	Statens Naturhistoriske Museum	Sally Anne Keith	DKK 3.962.678,00
11	Study of the molecular mechanisms in zinc signaling - investigating its role as a second messenger	Syddansk Universitet	Institut for Biokemi og Molekylær Biologi	Tine Engberg Thingholm	DKK 3.993.150,00
12	Solar Connections	Aarhus Universitet	Institut for Geoscience	Christoffer Karoff	DKK 3.485.816,00
13	Nuclear astrophysics at the precision frontier	Aarhus Universitet	Institut for Fysik og Astronomi	Oliver Kirsebom	DKK 2.856.349,00
14	Galactic archaeology: unraveling the history of the Milky Way	Aarhus Universitet	Institut for Fysik og Astronomi	Victor Silva Aguirre	DKK 3.995.998,00
15	Population Genomics of Bronze Age Europeans	Københavns Universitet	Statens Naturhistoriske Museum	Morten Erik Allentoft	DKK 3.927.213,00
16	Partitioned quantum teleportation of multi-photon states	Danmarks Tekniske Universitet	Institut for Fysik	Jonas Schou Neergaard-Nielsen	DKK 3.999.707,00
17	Particle seeded III-V semiconductor nanostructures: Going beyond gold for low dimensional nanostructure fabrication	Københavns Universitet	Niels Bohr Institutet	Jessica Bolinsson	DKK 2.448.206,00
18	The genetic basis of host specificity: Can pathogenic host jumps be predicted?	Københavns Universitet	Institut for Plante- og Miljøvidenskab	Henrik Hjarvard De Fine Licht	DKK 3.944.400,00
19	Shedding light on dark matter in galaxy clusters	Københavns Universitet	Niels Bohr Institutet	Claudio Grillo	DKK 3.983.134,00
20	Semi-analytical anyon models	Aarhus Universitet	Institut for Fysik og Astronomi	Anne Ersbak Bang Nielsen	DKK 3.960.739,00
21	Special geometry, torsion and symmetry	Aarhus Universitet	Institut for Matematik	Thomas Bruun Madsen	DKK 2.095.358,00
2014					
1	Identifying the genetic basis for eukaryotic speciation and genus formation using a unique high resolution DNA-compe	Danmarks Tekniske Universitet	Institut for Systembiologi	Mikael Rørdam Andersen	DKK 6.866.416,00
2	Intelligent 3D cell scaffolds for environmental applications	Danmarks Tekniske Universitet	DTU Nanotech	Stephan Sylvest Keller	DKK 6.995.115,00
3	Characterizing the regulatory circuitry of global lipid metabolism	Syddansk Universitet	Institut for Biokemi og Molekylær Biologi	Christer S. Ejsing	DKK 5.313.000,00
4	Glacial history of the Northeast Greenland icesheet and its contribution to sealevel change during the last 11.700 years	Aarhus Universitet	Institut for Geoscience	Nicolaj Krog Larsen	DKK 6.992.118,00
5	Quantum dynamics in non-equilibrium systems	Københavns Universitet	Niels Bohr Institutet	Mark Rudner	DKK 6.964.987,00
6	Quantum dot Energy level Engineering for laser applicatioNs on InP and Si platforms (QUEENS)	Danmarks Tekniske Universitet	DTU Fotonik	Elizaveta Semenova	DKK 6.977.938,00
7	Spatial Calibration and Evaluation in distributed hydrological modeling using satellite remote sensing data (SPACE)	GEUS - De Nationale Geologiske Undersøgelser for Danmark og Grønland	-	Simon Stisen	DKK 6.964.400,00
8	Quantum network of artificial atoms	Danmarks Tekniske Universitet	DTU Fotonik	Nika Akopian	DKK 3.997.067,00

9	Unlocking the potential of Monte Carlo in molecular simulation	Københavns Universitet	Biologisk Institut	Wouter Krogh Boomsma	DKK 3.989.688,00
10	Characterizing the differences and similarities between the genomes of industrially relevant microorganisms	Københavns Universitet	Biologisk Institut	Rute Fonseca	DKK 3.962.379,00
11	A genomic approach to study and conserve the biodiversity of the African megafauna	Københavns Universitet	Biologisk Institut	Rasmus Heller	DKK 3.591.203,00
12	Dissipative Engineering of Topological phases of matter	Københavns Universitet	Niels Bohr Institutet	Michael J. Kastoryano	DKK 3.801.700,00
13	Photocatalytic low-dimensional hybrid organic-inorganic materials	Aarhus Universitet	iNANO	Nina Lock	DKK 3.868.354,00
14	Dynamic quantum crystallography: Direct insights into the properties of crystalline materials	Københavns Universitet	Kemisk Institut	Anders Østergaard Madsen	DKK 3.990.421,00
15	A New phenomenon Yet to be resolved in ductile PLATE tearing (AnyPLATE)	Danmarks Tekniske Universitet	DTU Mekanik, Institut for Mekanisk Teknologi	Kim Lau Nielsen	DKK 1.931.688,00
16	Onset and duration of the greatest speciation event of the Phanerozoic: Were present day biodiversity levels reached	Københavns Universitet	Statens Naturhistoriske Museum	Christian Mac Ørum Mosdal	DKK 3.742.494,00
17	Novel materials for high capacity batteries - Going beyond lithium	Aarhus Universitet	iNANO	Dorthe B. Ravnsbæk	DKK 3.830.011,00
18	Primary producers under thinning ice - past responses and future projections for High Arctic Greenland	GEUS - De Nationale Geologiske Undersøgelser for Danmark og Grønland	-	Sofia Ribeiro	DKK 3.716.468,00
19	Crystallization studied by interface pinning: from ab initio to coarse grained models	Roskilde Universitet	-	Ulf R. Pedersen	DKK 3.999.200,00
20	Bridging Scales to Understand and Predict Arctic Vegetation Under Climate Change (BRISCA)	Aarhus Universitet	Institut for Bioscience	Signe Normand	DKK 3.999.906,00
2013					
1	Trusted Cryptographic Primitives	Danmarks Tekniske Universitet	Compute, Institut for Matematik og Computer Science	Christian Rechberger	DKK 6.946.086,00
2	Organic photovoltaic - materials for energy production	Danmarks Tekniske Universitet	DTU Energy	Eva Bundgaard	DKK 7.000.000,00
3	Assembling Large Molecules - Making Tools for Biology	Aarhus Universitet	Institut for Kemi	Henrik Helligsø Jensen	DKK 6.610.950,00
4	Changing Scales in Computational Materials Science	Københavns Universitet	Institut for Farmaci og Analytisk Kemi	Jacco van de Streek	DKK 6.974.491,00
5	Optical Nanoengineered Components for Highcapacity Integrated silicon Photonics	Danmarks Tekniske Universitet	DTU Fotonik	Lars Hagedorn Frandsen	DKK 6.995.290,00
6	Exploring the role of interspecies interactions in relation to development and evolutionary dynamics	Danmarks Tekniske Universitet	Institut for Systembiologi	Lars Jelsbak	DKK 6.901.441,00
7	Solar variability and North Atlantic climate during the last 1500 years	Aarhus Universitet	Institut for Geoscience	Mads Faurschou Knudsen	DKK 6.734.750,00
8	Development of new silver nanocluster fluorophores for fluorescence nanoscopy	Københavns Universitet	Kemisk Institut	Tom Vosch	DKK 5.897.568,00
9	Controlling the conductor-insulator phase transition for light	Københavns Universitet	Niels Bohr Institutet	David Garcia	DKK 3.479.547,00
10	Advanced Conductance Mapping : Multi-Metrology	Danmarks Tekniske Universitet	DTU Nanotech	Dirch Hjorth Petersen	DKK 3.720.060,00
11	Super Resolution Microscopy in Membranes and Tissue	Syddansk Universitet	Institut for Biokemi og Molekylær Biologi	Jonathan Brewer	DKK 3.662.400,00
12	Phylogeography: Understanding ecological communities in space and time	Københavns Universitet	Biologisk Institut	Katharine Marske	DKK 3.913.125,00
13	Microbial community on the Greenland Ice Sheet as a possible factor affecting the physical behaviour of the ice sh	GEUS - De Nationale Geologiske Undersøgelser for Danmark og Grønland	-	Marek Stibal	DKK 3.999.098,00
14	Morphology and Interfaces in Organic Bulk Heterojunction Solar Cells	Aarhus Universitet	iNANO	Michael Ryan Hansen	DKK 3.613.746,00
15	The molecular mechanisms to break flower bud dormancy in fruit trees	Københavns Universitet	Institut for Plante- og Miljøvidenskab	Raquel Sanchez Perez	DKK 3.905.165,00
16	Single-molecule photothermal spectroscopy with nanostrings	Danmarks Tekniske Universitet	DTU Nanotech	Silvan Schmid	DKK 3.953.320,00
17	Oxygen Regulation on Earth - Testing Hypotheses for Early Animal Evolution	Københavns Universitet	Statens Naturhistoriske Museum	Tais Wittchen Dahl	DKK 3.123.235,00
18	Membrane interactions of heterologously expressed plant enzymes	Danmarks Tekniske Universitet	DTU Biosustain	Susanna Seppälä	DKK 3.000.000,00
19	Disentangling mutation and selection in human evolution	Aarhus Universitet	Bioinformatics Research Centre	Søren Besenbacher	DKK 2.603.353,00
2012					
1	Spatio-Temporal Filtering Methods for Enhancement and Separation of Speech	Aalborg Universitet	Institut for Arkitektur, Design og	Mads Græsbøll Christensen	DKK 6.953.640,00
2	How small animals provide clues to large scale questions	Københavns Universitet	Biologisk Institut	Katrine Worsaae	DKK 4.866.480,00

3	Investigations of the membrane thermoelectric effect for solar-heat powered hydrogen production	Aarhus Universitet	Institut for Ingeniørvidenskab	Anders Bentien	DKK 5.071.460,00
4	Layered Double Hydroxides - Functional Materials Inspired by Nature	Syddansk Universitet	Institut for Fysik, Kemi og Farmaci	Ulla Gro Nielsen	DKK 6.540.241,00
5	Approaching the ultimate capacity limits of optical communication	Danmarks Tekniske Universitet	DTU Fotonik	Darko Zibar	DKK 6.918.923,00
6	Dealing with uncertainty in low coverage sequencing data - with application for disease mapping	Københavns Universitet	The Bioinformatics Centre	Anders Albrechtsen	DKK 2.277.815,00
7	Earth Patterns	Københavns Universitet	Niels Bohr Institutet	Joachim Mathiesen	DKK 6.441.621,00
8	Plant cell walls - rapid forward genetics	Københavns Universitet	Institut for plantebiologi og bioteknologi	Jesper Harholt	DKK 3.859.530,00
9	High-pressure synthesis and characterization of novel materials	Aarhus Universitet	Institut for Kemi	Martin Bremholm	DKK 2.840.216,00
10	Arctic ecosystems under climate change: What controls emission of biogenic volatile organic compounds?	Københavns Universitet	Biologisk Institut, Terrestrisk økologi	Riikka Rinnan	DKK 6.788.095,00
11	The Origin of the Matter/Antimatter Asymmetry in the Universe	Københavns Universitet	Niels Bohr Institutet	Anders Tranberg	DKK 4.113.522,00
12	Fundamental Astrophysical Processes in Dilute Plasmas	Københavns Universitet	Niels Bohr Institutet	Martin Pessah	DKK 4.463.900,00
13	High Resolution Networks	Danmarks Tekniske Universitet	Informatik	Sune Lehmann	DKK 6.979.125,00
14	Biophysical study of cytoskeletal filaments and membrane shaping proteins in membrane protrusions	Københavns Universitet	Niels Bohr Institutet	Poul Martin Bendix	DKK 3.376.175,00
15	Combined real-time Atomic Force Microscopy and Force Spectroscopy	Aarhus Universitet	iNANO	Mingdong Dong	DKK 3.970.453,00