



# PhD Theses

**Bjerring, Morten**, Development of solid-state NMR experiments for biological applications

**Boldt, Henning B.**, Characterization of individual domains in PAPP-A

**Holm, Allan Hjarbæk**, Base-induced Reactions

**Lykke-Andersen, Søren**, Karakterisering af interaktioner mellem GTPasen Ran og eksportfaktorer

**Mogensen, J. E.**, Studies on protein-detergent interactions using the autotransporter AIDA from *E. coli* and the lipase from *T. lanuginosus* as model proteins.

**Mogensen, Line Hummelshøj**, Viralt baserede ekspressions-biblioteker til analyse af GPCR medieret signalering

**Nielsen, Christian**, Development of two-photon sensitizers for the production of singlet oxygen

**Nielsen, Michael**, Development and use of bio-sensors for analysis of nitrite transformations in wastewaters and natural environments

**Nielsen, Rikke C.**, Krystalstrukturbestemmelse af type III natrium-afhængige fosfat transportere

**Olesen, Jens**, Type I topoisomeraser og deres potentielle anvendelse i cancerbehandling og genterapi

**Paulsen, Henrik Nørgaard**, Ultrahurtige undersøgelser af Optiske Krystal Fibre

**Pedersen, Thorkjørn Møller**,  
Tæthedsfunktionel teori i forbindelse med CO forgiftning af anode-/katodemateriale i brændselsceller

**Poulsen, Rasmus Damgaard**, Synchrotron charge density studies of metal organic frameworks

**Rasmussen, Maria Dall**, Non-stick coatings

**Sivertsen, Astrid Colding**, Application of solid-state NMR spectroscopy for biomolecular research

**Skovsen, Esben**, TWO-PHOTON SINGLET OXYGEN MICROSCOPY: Imaging biological cells in the nano-domain

**Thøgersen, Lea Sander**, Udvikling og anvendelse af kvantekemiske metoder for store molekyler.

**Thyssen, Anette**, Functional and mechanistic aspects of DNA topoisomerase II

**Vang, Ronnie**, A surface science approach to catalysis

**Østergaard, Vibe H.**, The Reaction Mechanism and Functional Domain Structure of Human Topoisomerase Ialpha

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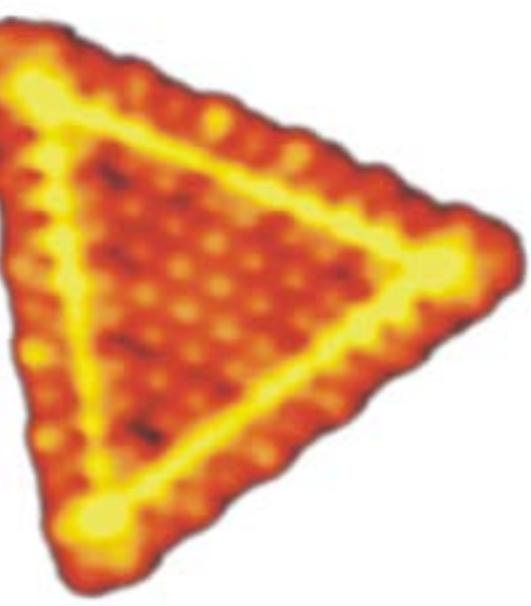
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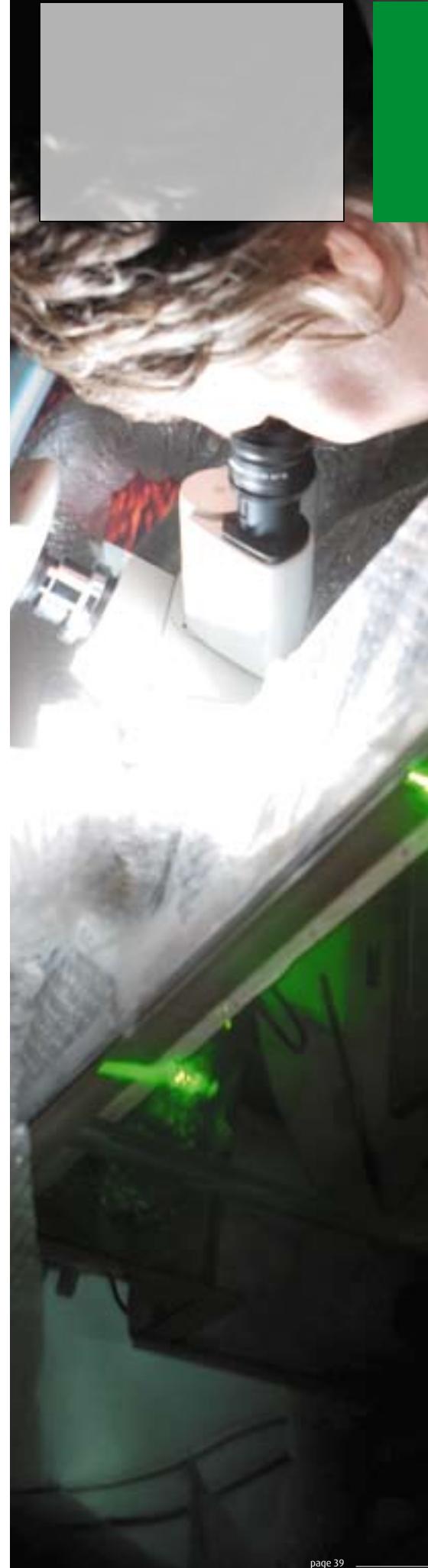
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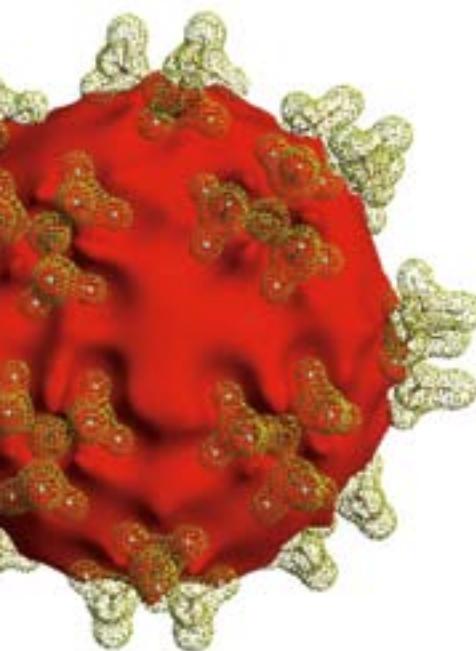


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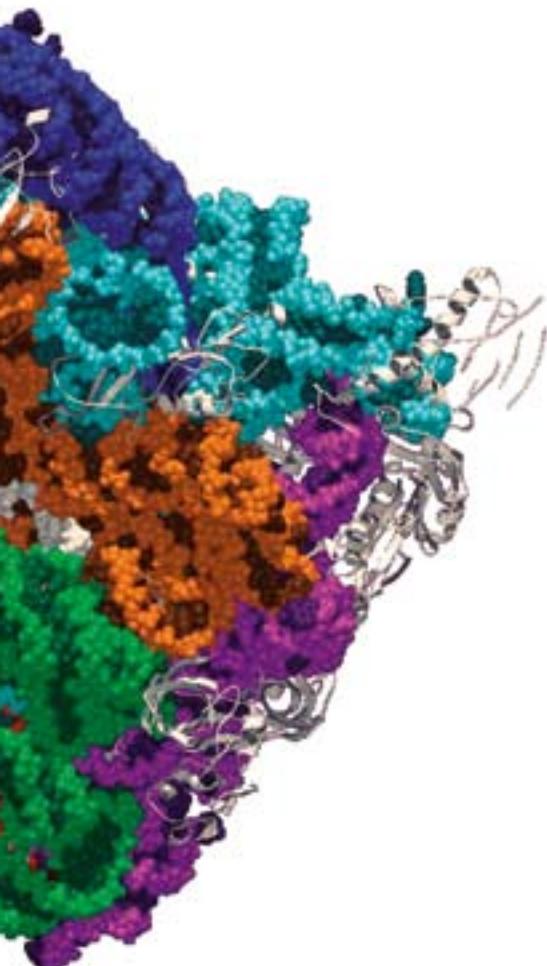
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# Awards and Patents

## Awards

Angela Fago, Novo Nordisk Fonden: Kilder til NO i hypoxiske vasodilatation

Angela Fago, Danish Natural Science Research Council: Novel functions in globin proteins: physiological, evolutionary and biomedical applications (co-applicant with Roy Weber, UA, and Frank B. Jensen, SDU)

H. Ito, M. Koefoed, P. Tiyapatanaputi, K. Gromov, J. Goater, J. Carmouche, X. Zhang, P. Rubery, T. Nakamura, K. Søballe, R. O'Keefe, E. Schwarz, Remodeling of cortical bone allografts mediated by adherent rAAV-RANKL and VEGF gene therapy, Kappa Delta award, ORS 2005

Jeppe V. Lauritsen, Lundbeckfondens Talentpris 2005

Poul Nissen, Hallas-Møller, Stipend 2005, Novo Nordisk Foundation (ca. 5 mio. DKK, 2005-2010)

T.V. Jakobsen, S. Kold, J.E. Bechtold, B. Elmengaard, K. Søballe, Topical bisphosphonate treatment increases fixation of implants inserted with bone compaction. 12 weeks canine study; Best Poster Award, Dansk Ortopædisk Selskab, Forårsmøde 2005

## Patents

F. Besenbacher, M. Foss, M.R. Duch, F.S. Pedersen: BioStructure Surface Arrays, application number PA 2005 00610 and US 60/675096, April 2005

F. Besenbacher, M. Foss, L.K. Andersen, M.R. Duch, J. Justesen, F.S. Pedersen: Biocompatible material for surgical implants, application number PA 2005 00981, April 2005.

J.C. Jensenius, S. Thiel, T. Vorup-Jensen: Recombinant human mannan-binding lectin (Explanatory title: Synthesis of recombinant human mannose-binding lectin similar to natural mannose-binding lectin). PCT (PCT/DK00/000246); USA patent application no. 09/568.143; Priority: DK, 140599  
Under review

Jan J. Enghild: Inhibition of TAFI zymogen (P1134DK01), Filed 24.11.05

T. A. Steitz, P. B. Moore, N. Ban, P. Nissen, J. Hansen, J. A. Ippolito: Modulators of ribosomal function and identification thereof, US patent 6,952,650

T. A. Steitz, P. B. Moore, J. A. Ippolito, N. Ban, P. Nissen, J. Hansen: Method of identifying molecules that bind to the large ribosomal subunit, US patent 6,947,845

T. A. Steitz, P. B. Moore, N. Ban, P. Nissen, J. Hansen: Modulators of ribosomal function and identification thereof, US patent 6,947,844

T. A. Steitz, P. B. Moore, N. Ban, P. Nissen, J. Hansen: Crystals of the large ribosomal subunit, US patent 6,939,848

# Invited Talks

**Peter Andreasen**, A novel type of synthetic inhibitor of urokinase-type plasminogen activator isolated from a phage-displayed peptide library, Xth International Workshop on Molecular and Cellular Biology of Plasminogen Activation, Washington, USA

**Peter Andreasen**, Non-covalent interactions of serpins with pro-uPA suggest novel mechanisms of regulation, Xth International Workshop on Molecular and Cellular Biology of Plasminogen Activation, Washington, USA

**Peter Andreasen**, PAI-1 as a potential therapeutic target in cancer, 4th International Symposium of Serpin Biology, Structure and Function, Cairns, Australia

**Flemming Besenbacher**, Influence of Oxygen Vacancies on Surface and Interface Reactions on the Rutile TiO<sub>2</sub>(110) Surface, IWOX 4 (Fourth International Workshop on Oxide Surfaces), Aussois, France

**Flemming Besenbacher**, Dynamics processes at surfaces studied by high-resolution, fast-scanning STM, Gordon Conference: Chemical Reactions At Surfaces, Ventura, USA

**Flemming Besenbacher**, Dynamics of nanostructures on surfaces revealed by high-resolution, fast-scanning STM, UK's Annual Scanning Probe Microscopy Meeting, Coventry, England

**Flemming Besenbacher**, Dynamics and self-assembly of organic molecules on surfaces revealed by high-resolution, fast-scanning STM, Conference on Atoms and Molecules near Surfaces, Heidelberg, Germany

**Flemming Besenbacher**, Catalysis and surface reactivity at the atomic scale studied by high-resolution STM, North American Catalysis Society, 19th North American Meeting, Philadelphia, USA

**Flemming Besenbacher**, Dynamics of nanostructures on surfaces revealed by high-resolution, fast-scanning STM, CeNS, München, Germany

**Flemming Besenbacher**, Catalysis and surface reactivity at the atomic scale studied by high resolution STM, ISSC15, Cardiff, England

**Flemming Besenbacher**, Dynamics and self-assembly of organic molecules on surfaces revealed by high-resolution, fast-scanning STM, ESF Research Conference on Biological Surfaces and Interfaces, San Feliu de Guixols, Spain

**Flemming Besenbacher**, Dynamics of nanostructures on surfaces revealed by high-resolution, fast-scanning STM, Lawrence Berkeley National Laboratories, Berkeley, USA

**Flemming Besenbacher**, Molecular Self-assembly of DNA Bases and Molecular Recognition in 2D Binary Mixtures of DNA-Base Molecules Studied by high resolution STM, International Conference on Bio-Nano-Informatics Fusion, California, USA

**Flemming Besenbacher**, Nano-scale Design of New Catalysts Based on Fundamental Insight into Surface Reactivity at the Atomic Scale, Microscopy Society of America (MSA) convention, Honolulu, Hawaii, USA

**Flemming Besenbacher**, Dynamics and self-assembly of organic molecules on surfaces revealed by high-resolution, fast-scanning STM, European Congress on Biotechnology, Copenhagen, Denmark

**Flemming Besenbacher**, Catalysis and surface reactivity at the atomic scale studied by high resolution STM, 8th International Conference on Non-Contact Atomic Force Microscopy, Bad Essen, Germany

**Flemming Besenbacher**, High-resolution, high-pressure STM studies of model catalysts ECOSS23, Berlin, Germany

**Flemming Besenbacher**, Dynamics of nanostructures on surfaces revealed by high-resolution, fast-scanning STM, EMAG, Leeds, England

**Flemming Besenbacher**, Dynamics of nanostructures on surfaces revealed by high-resolution,

fast-scanning STM, TNT2005, Oviedo, Spain

**Flemming Besenbacher**, Storage of hydrogen using complex metallic hydrides Hydrogen Technology Seminar, Copenhagen, Denmark

**Flemming Besenbacher**, Nanoscience research at University of Aarhus and industrial perspectives, Temadag Nanotechnology and Health, Copenhagen, Denmark

**Flemming Besenbacher**, Nanoteknologi, DTU, Copenhagen, Denmark

**Flemming Besenbacher**, Nanoteknologi, Erhvervsakademiet Roskilde, Roskilde, Denmark

**Flemming Besenbacher**, Introduktion til Nanoteknologi: fra Nanoscience til Nanoteknologi og Funktionelle nanomaterialer: materialer med nye egenskaber, iNANO, Aarhus Universitet, Aarhus, Denmark

**Flemming Besenbacher**, From Nanoscience to Nanotechnology, and its impact on society in general and biocompatibility in particular in the 21st century, DSOL Annual Meeting 2005, Hotel Munkebjerg, Vejle, Denmark

**Flemming Besenbacher**, High-Resolution Scanning Tunneling Microscopy Studies of Surface Reactions on Rutile TiO<sub>2</sub> (110), AVS 52nd International Symposium & Exhibition, Hynes Convention Center, Boston, USA

**Flemming Besenbacher**, Dynamics of Nanostructures on Surface Revealed by High-Resolution, Fast-Scanning STM, Complutense International Meeting "Science and Society" on Nanoscience, Facultad de Ciencias Físicas, UCM, Madrid, Spain

**Henrik Birkedal**, Assembly and Nanomechanics of Collagen Type II, Materials Research Society 2005 Fall Meeting, Boston, USA

**Henrik Birkedal**, Nature's materials: structures, properties and inspiration, Materials Department,

## Invited Talks

École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland

**Henrik Birkedal**, The effects of strontium on one ultrastructure: insights from laboratory scanning small angle X-ray scattering (sSAXS), Baltic Bone and Cartilage Conference 5, Naantali, Finland

**Henrik Birkedal**, A zinc bite with a halogen smile, Yearly meeting of the Danish Chemical Society, University of Southern Denmark, Odense, Denmark

**Henrik Birkedal**, Insights into Nature's Materials from Scanning SAXS/WAXS, 35th Danish Crystallography Meeting & 7th DANSYNC Meeting, Sandbjerg Estate, Denmark

**Henrik Birkedal**, On Bites and Bones: Examples of Natures Materials, iNANO, University of Aarhus, Denmark

**Henrik Birkedal**, A halogen smile: Br and I in the jaws of Nereis, a marine worm, Materials Research Society 2005 Spring Meeting, San Francisco, USA

**Sergey I. Bozhevolnyi**, Channel plasmon polariton guiding by subwavelength metal grooves The MRS 2005 Fall Meeting, Symposium "Plasmonics – Nanoscale Optics and Photonics Based on Metals", Boston, Massachusetts, USA

**Sergey I. Bozhevolnyi**, Nanoscale Manipulation and Mega-Enhancement of Light - Utilizing Surface Plasmons, The MRS 2005 Fall Meeting, Symposium "Plasmonics – Nanoscale Optics and Photonics Based on Metals", Boston, Massachusetts, USA

**Sergey I. Bozhevolnyi**, Nanoscale light manipulation via surface plasmons, Seminar at Laboratoire des Nanostructures, ISIS, Université Louis Pasteur, Strasbourg, France

**Sergey I. Bozhevolnyi**, Plasmonic nanophotonics: Nanoscale light manipulation via plasmons, Seminar at the FOM-Institute for Atomic and Molecular Physics (AMOLF), Amsterdam, The Netherlands

**Sergey I. Bozhevolnyi**, Thermo-optic devices utilizing long-range surface plasmon polaritons, Surface Plasmon Photonics 2, Graz, Austria

**Sergey I. Bozhevolnyi**, Polaritonics: photonics based on surface plasmon polaritons, 35th Winter Colloquium on The Physics of Quantum Electronics Snowbird, Utah, USA

**Cody Bünger**, Nanoscience and Orthopaedics, Egyptian Ortopaedic Association, Cairo, Egypt

**Cody Bünger**, Management of bone metastases, GSTSG, London, England

**Cody Bünger**, Severe spinal deformities, surgical strategies, Budapest, Hungary

**Cody Bünger**, Outcomes following treatment of scoliosis, triannual congress, SICOT, Istanbul, Turkey

**Niels Egede Christensen**, Electronic structure of GaAs(1-x)N(x) and SnO under pressure, Study of Matter at Extreme Conditions SMEC, Miami, USA

**Niels Egede Christensen**, Ab initio calculations of excitons in GaN, Excited-state properties of solids, Mannheim, Germany

**Niels Egede Christensen**, Excitons in GaN, First Meeting of the North-European Nitride Consortium, Warsaw, Poland

**Niels Egede Christensen**, Alkali metals under pressure: New Phases, New Properties, 90 ann. Reunion Nacional de Fisica, La Plata, Argentina

**Niels Egede Christensen**, Ab initio calculations of optical properties including e-h correlations, Ab-initio Solid State Calculations, La Plata, Argentina

**Kim Daasbjerg**, Covalent Modification of Glassy Carbon by Grafting of Alkynyl and Aryl Radicals by Electrochemical Reduction of Iodonium Salts, 1st ECHEMS Meeting: Electrochemistry in Nanosciences Isola di San Servolo, Venice, Italy

**Kim Daasbjerg**, Elucidation of Reaction Mechanisms and Modification of Surfaces using

Electrochemical Methodologies, University of Padova, Padova, Italy

**Kim Daasbjerg**, Elucidation of Reaction Mechanisms and Modification of Surfaces using Electrochemical Methodologies, University of Copenhagen, Denmark

**Francesco d'Amore**, New insights in the biology, prognosis and management of diffuse large B-cell lymphoma (DLBCL) and follicular lymphoma (FL), Egyptian Cancer Society, Cairo, Egypt

**Francesco d'Amore**, Clinico-pathologic features, prognostic factors and new treatment options in peripheral T-cell lymphomas (PTCL), Egyptian Cancer Society, Cairo, Egypt

**Francesco d'Amore**, Zevalin-based radioimmunotherapy of NHL: potential future indications, European Workshop on Radioimmunotherapy, London, England

**Francesco d'Amore**, New strategies in the management of peripheral T-cell lymphomas, Hematology-Oncology Research Meeting, University of Nebraska Medical Center, Omaha, Nebraska, USA

**Francesco d'Amore**, New antibody treatments in peripheral T-cell lymphomas: an update on safety and efficacy, International Workshop on Non-Hodgkin Lymphomas, Florida, USA

**Lars Diekhöner**, Magnetic nanostructures and single atoms: What a couple!, Seminar, Max-Planck-Institut für Mikrostrukturphysik, Halle, Germany

**Lars Diekhöner**, Nanovidenskab og –teknologi, Foredrag for Rotary-klubben, Nørresundby, Denmark

**Lars Diekhöner**, Nanovidenskab og –teknologi, Foredrag for Rotary-klubben, Aalborg Øst, Denmark

**Jan Johannes Enghild**, Thrombin activatable fibrinolysis inhibitor (TAFI), Sanofi-Aventis, Frankfurt, Germany

- Angela Fago**, Hemoglobin as a (glutathione-dependent?) nitrite reductase: a vasodilation study, International Minisymposium What's New in Oxygen Binding Heme Proteins and Red Blood Cell Physiology, Aarhus, Denmark
- Morten Foss**, Biocompatibility- from proteins to tissue, EURONANOFORUM2005 Nanotechnology and the health of the EU Citizen in 2020, EICC, Edinburgh, Scotland
- Kurt Gothelf**, DNA-Programmed Assembly of Organic Nanostructures, University of Southern Denmark, Denmark
- Kurt Gothelf**, DNA-Programmed Assembly of Organic Nanostructures, KAIST, Korea
- Kurt Gothelf**, Molecular self-assembly, iNANO Autumn School, Denmark
- Kurt Gothelf**, Molecular self-assembly, iNANO Seminar, Denmark
- Bjørk Hammer**, Adsorbate-Induced Alloy Phase Separation: CO/Au/Ni(111), Institut Seminar, Sweden.
- Bjørk Hammer**, Catalysis at three-phase boundaries, 229th ACS National Meeting, San Diego, USA
- Bjørk Hammer**, Functionalizing metal surfaces, SFB seminar, Ulm, Germany
- Bjørk Hammer**, Oxidized Pt surfaces and their reactivity, 89th International Bunsen Discussion Meeting, Hennesee, Germany
- Bjørk Hammer**, Special sites at oxide supported metal clusters: Au/TiO<sub>2</sub> or MgO, Brookhaven National Lab, seminar, Upton, NY, USA
- Bjørk Hammer**, Theoretical modelling of surface properties after exposure to high pressures of light gasses, Stuttgart, Germany
- Philip Hofmann**, The Direct Measurement of Surface Conductivity: Si(111)-7x7, 23rd European Conference on Surface Science, Berlin, Germany
- Hans J. Jakobsen**, Structure Refinement of CsNO<sub>3</sub> by Coupling of N-14 MAS NMR Experiments with WIEN2k DFT Calculations, the 26th Danish NMR Meeting', Bautahøj Conference Centre, Denmark
- Hans J. Jakobsen**, Solid-State N-14 MAS NMR Spectroscopy, the 27th International Conference on Science and Technology, Prague, the Czech Republic
- Torben Heick Jensen**, Connections between transcription, mRNP assembly and quality control in *S. cerevisiae*, ELSO 2005, Dresden, Germany
- Torben Heick Jensen**, Characterization of transcription site-associated mRNP retention in *Saccharomyces cerevisiae*, RNA 2005, Banff, Canada
- Torben Heick Jensen**, mRNP assembly and nuclear export, Gif sur Yvette, Paris, France
- Torben Heick Jensen**, NUCLEAR BIOGENESIS OF mRNP IN YEAST, ESF EURODYNA (mRNA biogenesis), Lissabon, Portugal
- Torben Heick Jensen**, NUCLEAR BIOGENESIS OF mRNP IN YEAST, NorFA 2005, RNA biology, University of Aarhus, Denmark
- Torben Heick Jensen**, Quality Control of Gene Expression - RNA Surveillance (RNAQuality), EUROCORES prep. call for RNAQuality, Brussels, Belgium
- Torben R. Jensen**, In situ X-ray scattering, investigation of hydrogen storage materials, Hot-topic talk at H-Workshop 2005, The 361. WE-Heraeus-Seminar on Hydrogen Storage with Novel Nanomaterials, Bad Honnef, Germany
- Torben R. Jensen**, renewable energy and hydrogen society, Dept. of chemistry, AU, Aarhus, Denmark
- Torben R. Jensen**, Solid State hydrogen storage - investigated by in situ powder diffraction, 35th Danish Crystallography Meeting & 7th DANSYNC Meeting, Sandbjerg Estate, Denmark
- Torben R. Jensen**, Vedvarende energisystemer - hvorledes hydrogen kan gemme vind og sol energi, Kulturhus Sløjfen, Hadsten, Denmark
- Torben R. Jensen**, renewable energy and hydrogen society, Denmark
- Torben R. Jensen**, Nano er vejen til hydrogen samfundet, forskningens døgn, AU, iNANO, Aarhus, Denmark
- Torben R. Jensen**, Hydrogen samfundet, Kystcentret Thyborøn, Denmark
- Torben R. Jensen**, renewable energy and hydrogen society, Dept. of chemistry, AU, Aarhus, Denmark
- Torben R. Jensen**, Hydrogen-samfundet - et nyt energisystem, Jysk Selskab for Fysik og Kemi, Kemisk Institut, Aarhus Universitet, Aarhus, Denmark
- Torben R. Jensen**, Hydrogen-samfundet, Dept. of Chemistry, University of Aarhus, Aarhus, Denmark
- Jørgen Kjems**, Bionanotechnology at iNANO, 15.03.2005, Odense, Denmark
- Jørgen Kjems**, ESF meeting on Functional Genomics and Disease, Nanoparticles, Oslo, Norway
- Jørgen Kjems**, HIV, Ungdommens Naturvidenskabelige Forening (UNF), Århus, Denmark
- Jørgen Kjems**, Hidden HIV, University of Amsterdam, Amsterdam, the Netherlands
- Jørgen Kjems**, Identification of targets in viral treatment, IGMM-CNRS, Montpellier, France
- Jørgen Kjems**, RNAi, DFU, Copenhagen, Denmark
- Jørgen Kjems**, Target selection and in vivo delivery of oligonucleotides, Santaris Pharma A/S, Copenhagen, Denmark
- Jørgen Kjems**, siRNA delivery, Science policy decision meeting, Helsinki, Finland
- Jørgen Kjems**, siRNA delivery, Santaris Pharma A/S, Copenhagen, Denmark
- Jørgen Kjems**, Controlling intracellular trafficking of siRNA and Plasmids using polymeric nanocarrier systems, Fluorescent proteins in drug discovery and bioimaging, San Diego, USA
- Jørgen Kjems**, Drug delivery, Frontiers meeting on nanobiotechnology, Karlsruhe, Germany
- Jørgen Kjems**, ESF Forward look on Nanomedicine, Strasbourg, France
- Jørgen Kjems**, IT in drug discovery, Aarhus, Denmark
- Jørgen Kjems**, RNA splicing in HIV-1, EURODYNA Meeting, Institute of Molecular Medicine, Faculty of Medicine, Lisbon University, Lisbon, Portugal
- Jørgen Kjems**, RNAi, ECB 12 on Biotechnology, DTU, Copenhagen, Denmark
- Jørgen Kjems**, RNAi technologies, EU-RIGHT meeting, Mallorca, Spain
- Jørgen Kjems**, Small interfering RNA delivery and gene silencing using polymeric nanocarrier systems, ESF conference, Oslo, Norway

## Invited Talks

**Jørgen Kjems**, Structure determination of HIV leader RNA by Atomic Force Microscopy and Small-Angle X-ray Scattering, RNA Society Meeting, Banff, Canada

**Martin Kristensen**, Achievements of the GLAMOROUS project on poling, BGPP, Sydney, Australia

**Martin Kristensen**, Crystal waveguide components approaching maturity for applications, photonic crystal workshop, Sydney, Australia

**Martin Kristensen**, Recent Advances in Poled Optical Fibres, IEEE-LEOS WFOPC Conference

**Arne Nylandsted Larsen**, Capacitance-transient spectroscopy on irradiation-induced defects in germanium, The 2nd ASPECT Workshop, Warsaw, Poland.

**Arne Nylandsted Larsen**, The effect of biaxial strain on impurity diffusion in Si and Sige, E-MRS Spring Meeting, Strasbourg, France

**Arne Nylandsted Larsen**, n+p-Ge diodes and irradiation induced defects, UMICORE Workshop, Bruxelles, Belgium.

**Jeppe Vang Lauritsen**, POINT-DEFECT AND ADSORBATE IDENTIFICATION ON TiO<sub>2</sub> BY NC-AFM, 13th International Conference on Scanning Tunneling Microscopy/Spectroscopy and Related Techniques (STM'05), Sapporo, Japan

**Jeppe Vang Lauritsen**, Studies of model catalyst by scanning probe microscopy, Helsinki University of Technology, Finland

**René Trolle Linderoth**, Ordering and Dynamics for a family of oligo(phenylen ethynylene)s on Au(111) studied by UHV-STM, Molecular Nano-Machines: Research Conference within the european RTN network AMMIST, Les Houches, France

**René Trolle Linderoth**, Organic molecules at surfaces studied by high-resolution STM, Symposium on Molecular Imaging and Characterization, Montreal, Canada

**René Trolle Linderoth**, Dynamics of nanostructures on surfaces revealed by high-resolution, fast-scanning STM, Trends in Nanoscience: Structure and Functions, 2005, Kloster Irsee, Germany

**René Trolle Linderoth**, Dynamics of organic molecules on surfaces studied by Scanning Tunnelling Microscop, Research network meeting on DMolecular switches, Freies Universität Berlin, Germany

**Erik Lægsgaard**, Piezoeffekten og dens anvendelse i industrielle og dagligsdagsprodukter Anvendte transducer- og sensormaterialer, Odense, Danmark

**Brian Bech Nielsen**, Hydrogen in group-IV semiconductors and its interaction with defects, International Symposium on Hydrogen in Matter (ISOHIM 2005) Uppsala, Sweden

**Niels Chr. Nielsen**, Numerical Simulations and Tools for Biological Solid-State NMR, International Symposium: Recent Trends in Solid-State NMR in Biological Systems, Bangalore, India

**Niels Chr. Nielsen**, Design of Experiments of Biological Solid-State NMR using Optimal Control Theory and Exact Effective Hamiltonian Theory, International Symposium: Recent Trends in Solid-State NMR in Biological Systems, Bangalore, India

**Niels Chr. Nielsen**, Towards the Study of Integral Membrane Proteins using Solid-State NMR Spectroscopy, Symposium on Bio-Surfaces, Hamburg, Germany

**Niels Chr. Nielsen**, The use of optimal control theory for systematic design of solid-state NMR experiments with improved performance, EUROMAR EENC 2005, Veldhoven, The Netherlands

**Niels Chr. Nielsen**, New methods for Biological solid-state NMR Designed using Optimal control and other strategies, New Solid-State NMR Methods and Structural Characterization of Materials, Indo-French Workshop, Pune, India

**Niels Chr. Nielsen**, Oriented-Sample Solid-State NMR on Peptides and Large Membrane Proteins, New Solid-State NMR Methods and Structural Characterization of Materials, Indo-French Workshop, Pune, India

**Niels Chr. Nielsen**, Applications of Optimal Control Theory for the Design of Improved Solid-State NMR Experiments, Rocky Mountain Conference on Analytical Chemistry, Denver, Colorado, USA

**Niels Chr. Nielsen**, Applications of Optimal Control Theory for the Design of Improved Solid-State NMR Experiments, Francis Bitter National Magnet Laboratory Seminar, M.I.T., Cambridge, Massachusetts, USA

**Niels Chr. Nielsen**, Solid- and Liquid-State NMR as a Probe for BioNanoTechnology, 3rd iNANO Autumnschool, Fuglsøcentret, Denmark

**Niels Chr. Nielsen**, Optimal Control Theory for the Design of Solid-State NMR Experiments & Oriented Sample Solid-State NMR on Membrane Proteins, J. W. Goethe Universität, Frankfurt, Germany

**Niels Chr. Nielsen**, Solid-State NMR and Functional Characterization of Proteins in 'Insoluble' Biological Structures, Inauguration of the inSPIN research Centre, University of Aarhus, Aarhus, Denmark

**Poul Nissen**, A modulatory ATP binding site of SERCA1a, Seminar, CEA Saclay

**Poul Nissen**, Pumping calcium ions across the membrane: structure and function of the Ca<sup>2+</sup>-ATPase" Danish Chemical Society, general meeting 2005, Denmark

**Poul Nissen**, Strukturel biologi og molekylær medicin" Annual meeting for high-school teachers in biology (gymnasielærerdag), University of Aarhus, Aarhus, Denmark

**Poul Nissen**, Large complexes and membrane proteins, International Workshop in recent advanc-

es in phasing methods for high-throughput protein structure determination, Peking, China

**Poul Nissen**, Pump Fiction – transporting calcium ions across the membrane, Seminar, Yale University, USA

**Poul Nissen**, Understanding the Structure and Function of the Calcium Pump, European Congress on Biotechnology, Copenhagen, Denmark

**Poul Nissen**, Calcium transport and proton counter-transport by the Ca<sup>2+</sup>-ATPase, Workshop on transmembrane transport, Sigtuna, Sweden

**Poul Nissen**, Pump Fiction – transporting calcium ions across the membrane”, NIH/NIDDK seminar series, Bethesda, Maryland, USA

**Poul Nissen**, Structure and function of the yeast ribosome and elongation factors, Annual meeting of the Human Frontier Science Program Organization, Bethesda, Maryland, USA

**Poul Nissen**, Structure and Function of Biological Macromolecules, Symposium for Research Centers of the Danish Natural Science Research Council (FNU), Denmark

**Poul Nissen**, Combining structural and functional data of the Ca<sup>2+</sup>-ATPase into a model, Transmembrane proteins, fourth meeting (TRAMP IV), Gothenburg, Sweden

**Finn Skou Pedersen**, The role of Septin 9 as an oncogene/tumor-suppressor gene in lymphomagenesis by murine leukemia virus, International Septin Workshop, Fuglsøcentret, Knebel, Denmark

**Finn Skou Pedersen**, A tumor suppressor function for NFATc3 in T cell lymphomagenesis by murine leukemia virus, 17th International Workshop on Retroviral Pathogenesis, Saint-Malo, France

**Finn Skou Pedersen**, Fusiogenic envelope proteins of endogenous and exogenous retroviruses, Meeting on cell fusion, epigenetics and cancer, Söderköping, Sweden

**Kjeld Pedersen**, Quantum well states in thin metal films, photoemission and optical second harmonic generation, Ankara University, Turkey

**Jan Skov Pedersen**, Low-resolution structure determination of proteins in solution by small-angle x-ray scattering (SAXS), Technical University of Denmark, 2nd Scandinavian, Workshop on Scattering from Soft Matter, Lyngby, Denmark

**Jan Skov Pedersen**, Low-resolution structure determination of proteins in solution by small-angle x-ray scattering (SAXS), Centre for Structural Biology, University of Aarhus, Aarhus, Denmark

**Jan Skov Pedersen**, First Annual Meeting of Marie-Curie Training of Research network ‘Self-organization in Confined Geometries, Aarhus, Denmark

**Jan Skov Pedersen**, Introduction to Small-Angle Scattering, Firenze, XX Congress of the International Union of Crystallography, Firenze, Italy

**Jan Skov Pedersen**, Studying bio-macromolecules in solution with Small-Angle Scattering, Bente Vestergaard og Lise Arleth, Danmarks Farmaceutiske Universitet, BIOSAS Conference, Copenhagen workshop on BIO-macromolecules in solution studied with Small-Angle Scattering, Copenhagen, Denmark

**Peter R. Ogilby**, The Singlet Oxygen Microscope: From Phase-Separated Polymers to a Single Biological Cell, Gordon Research Conference on Photochemistry, Smithfield, Rhode Island, USA

**Peter R. Ogilby**, The Singlet Oxygen Microscope: From Phase-Separated Polymers to a Single Biological Cell, International Symposium on the Probing of Heterogeneous Systems, Erlangen-Nuremberg, Germany

**Peter R. Ogilby**, The Singlet Oxygen Microscope: Going Where Chris always wanted to go – inside a single cell, International Symposium in Memory of C. S. Foote, Los Angeles, USA

**Peter R. Ogilby**, The Singlet Oxygen Microscope: From Phase-Separated Polymers to a Single Biological Cell, Symposium on Contemporary Topics in Chemical Physics, University of Aarhus, Denmark

**Peter R. Ogilby**, The Singlet Oxygen Microscope: From Phase-Separated Polymers to a Single Biological Cell, Winter Meeting of the Danish Chemical Society, Århus, Denmark

**Peter R. Ogilby**, The Creation and Detection of Reactive Oxygen Species in Microheterogeneous Environments, International Symposium on Redoxactive Metal Complexes, Erlangen, Germany

**Peter R. Ogilby**, Creating and Detecting Reactive Oxygen Species, Particularly Singlet Oxygen, at the Sub-Cellular Level, Plant Stress Network, International Workshop, Odense, Denmark

**Jeppe Olsen**, Properties of Quantum Dots Studied by Quantum Mechanical Methods, International Karlsruhe Nanoscience Workshop, Computational Tools for Molecules, Clusters and Nanostructures, Karlsruhe, Germany

**Jeppe Olsen**, Higher Excitations using First-order Interaction Subspaces, The 2005 Sanibel Symposium, St. Thomas Island Georgia, USA

**Jeppe Olsen**, Internal Contraction for Triple and Higher Excitations, Quantum Chemistry Applied : From H3 to Biocatalysis, An International Conference to Celebrate the 60 th Birthday of P.E.M. Siegbahn, Stockholm, Sweden

**Jeppe Olsen**, Examination of Single- and Multi-Reference Methods for the Calculation of Potential Surfaces, American Chemical Society Meeting & Exposition, Washington DC, USA

**Jeppe Olsen**, Examination of Single- and Multi-Reference Methods for the Calculation of Potential Surfaces, 13th European Seminar on Computational Methods in Quantum Chemistry, Smolenice, Slovakia

**Jeppe Olsen**, Properties of Quantum Dots Studied by Quantum Mechanical Methods. Quantum Transport and Excitations from Macro to Nanoscale: Theory and Applications, Aalborg, Denmark

**Daniel E. Otzen**, Mechanisms of membrane protein folding in lipids and detergent. Institute of Microbial Technology, Chandigarh, India

**Daniel E. Otzen**, Thermodynamics of membrane protein folding, Institute Tecnico Superior, Lisbon, Portugal

**Daniel E. Otzen**, Mechanisms of protein fibrillation, Osaka University, Japan

**Daniel E. Otzen**, Protein-detergent interactions, Osaka City University, Japan

**Daniel E. Otzen**, Folding and unfolding of membrane proteins in mixed micelles, ECB12 Conference, Copenhagen, Denmark

**Daniel E. Otzen**, Physics meets biology: Protein aggregation and deposition diseases, EMBL, Heidelberg, Germany

**Rui Pereira**, Local modes of hydrogen defects in Si:Ge and Ge:Si, 23rd International Conference on Defects in Semiconductors (ICDS-23), Awajii Island, Japan

**Niels Peter Revsbech**, Marine biotechnology and biofilm research at University of Aarhus,

## Invited Talks

Nato symposium on environmental challenges in marine biotechnology, Ålesund, Norway

**Niels Peter Revsbech**, Measurement of microbial activity at a microscale, SAME9, Symposium on Aquatic Microbial Ecology, Helsinki, Finland

**Niels Peter Revsbech**, Nitrogen cycling in Stratified Microbial Communities, Full Cycle: Microbial cycling of elements, Delft, the Netherlands

**Niels Peter Revsbech**, Det store I det små, "Husdyrgødning – guldgrube eller gravsten". Symposium arranged by SDU and DJF, University of Southern Denmark, Odense, Denmark

**Birgit Schiøtt**, Why drug discovery in academia?, Workshop on IT solutions for integrated drug discovery, Aarhus, Denmark

**Jørgen Skibsted**, Characterization of the Nanostructure of the C-S-H Phase by Solid-State 27Al and 29Si MAS NMR Spectroscopy, 107th Annual Meeting of the American Ceramic Society, Baltimore, USA

**Troels Skrydstrup**, Recent Applications of Samarium Diiodide for C-C Bond Formation via Radical Intermediates, Xth ICSN Symposium, Gif-sur-Yvette, France

**Troels Skrydstrup**, Recent Applications of Samarium Diiodide in Organic Synthesis, 14th European Symposium on Organic Chemistry, Helsinki, Finland

**Troels Skrydstrup**, Recent Applications of Sm and Pd for Carbon-Carbon Bond Formation, En-dags symposium i anledning af Prof. David Tanners 50 års fødselsdag, Danmarks Tekniske Universitet, Denmark

**Troels Skrydstrup**, Recent Applications of Samarium Diiodide for C-C Bond Formation via Radical Intermediates, Pacifichem, Honolulu, Hawaii, USA

**Troels Skrydstrup**, Recent Applications of Sm

and Pd for Carbon-Carbon Bond Formation, Ecole Polytechnique, Palaiseau, France

**Kjeld Søballe**, Fælles årsmøde DSMM, DFFMT og Danske Fysioterapeuter, "Nye kirurgiske principper", Århus, Denmark

**Kjeld Søballe**, Ganz periacetabular osteotomy in acetabular dysplasia, EHS Meeting, 7th EFORT Congress, Lisbon, Portugal

**Kjeld Søballe**, Perioperative measures for pain relief and early rehabilitation, 7th EFFORT Congress, Lisbon, Portugal

**Kjeld Søballe**, Classification of Femoral Defects and Revision with Structural Allograft, Advances in Total Hip Arthroplasty, Rigshospitalet, Denmark

**Kjeld Søballe**, Minimally Invasive Total Hip Two Incision Approach, Advances in Total Hip Arthroplasty, Rigshospitalet, Denmark

**Kjeld Søballe**, Vorteile der HA-Beschichtung bei der unzementierten Knieenderprothetik, 54th Annual Congress NOV 2005, Hamburg, Germany

**Kjeld Søballe**, Ganz periacetabular osteotomy in acetabular dysplasi, International Hip Society, Closed Meeting, Vienna, Austria

**Kjeld Søballe**, Hvad kan man gøre, når man har fået slidigt, kirurgi, Gigtforeningen, Frederiksberg Rådhus, Denmark

**Kjeld Søballe**, HA Coating – useful or not, Hydroxy-Apatite Ceramic 20, London, England

**Kjeld Søballe**, Nye aspekter inden for hoftekirurgi (ledbevarende kirurgi samt minimal invasive teknik, Staff meeting, Århus Sygehus, Nørrebrogade, Denmark

**Kjeld Søballe**, Minimal invasiv hoftekirurgi, Lægedag Århus, Scandinavian Congress Center, DK

**Kjeld Søballe**, Ortopædien i fremtiden – tværfaglig forskning inden for ortopædkirurgi, Afd. E's Temadag, Skejby Sygehus, Denmark

**Kjeld Søballe**, Accelreret patientforløb i hofte- og knæsektoren – ny postoperativ smertebehandling, Afd. E's Temadag, Skejby Sygehus, Denmark

**Thomas Vorup-Jensen**, New ligands for αXb2 integrin, MRC Immunoochemistry Unit, University of Oxford, England

**Thomas Vorup-Jensen**, The innate immune system, polymer surfaces, and cell adhesion, Bioneer A/S, Hørsholm, Denmark

**Thomas Vorup-Jensen**, Creative destruction (of protein structure): new ligands for the leukocyte cell surface receptor αXb2 (CD11c/CD18) integrin, LEO Pharma A/S, Ballerup, Denmark

**Thomas Vorup-Jensen**, MBL structure and function, NatImmune A/S, Copenhagen, Denmark

**Thomas Vorup-Jensen**, Creative destruction (of protein structure): new ligands for the leukocyte cell surface receptor αXb2 (CD11c/CD18) integrin, iNano Seminar series, University of Aarhus, Denmark

**Thomas Vosegaard**, Towards the study of large membrane proteins using oriented-sample solid-state NMR" and "Numerical calculations and tools for biological solid-state NMR, Recent trends in solid-state NMR in biological systems, Bangalore, India

**Thomas Vosegaard**, Average Hamiltonian Theory, Euromar / EENC, Veldhoven, The Netherlands

**Thomas Vosegaard**, One week course of solid-state NMR, 15th Jyväskylä Summerschool, Jyväskylä, Finland



# Colloquia

## iNANO Annual Meeting

**January 19**, Ulrich Gösele, Max-Planck-Institut of Microstructured Physics, Halle, Germany, "Nano-silicon à la carte"

**January 19**, Carsten Werner, Dept. of Biocompatible Materials, Leibniz Institute of Polymer Research, Dresden, Germany, "Self assembly for the design of biomimetic materials"

**January 19**, Allan S. Hoffman, Department of Bioengineering, University of Washington, USA, "Smart polymer switches in separations, diagnostics and drug delivery"

**January 19**, Omar M. Yaghi, Department of Chemistry, University of Michigan, USA, "Nanoporous metal-organic frameworks designed for hydrogen storage"

**January 19**, Christoph Gerber, National Center of competence in Research, University of Basel, Switzerland, "Nanomechanics as a toolbox for the small"

**January 19**, Mauro Ferrari, Department of Biomedical Engineering, The Ohio State University, USA, "Nanomedicine"

## iNANO Colloquia, Aarhus

**January 14**, Arto Urtti, Dept. of Pharmaceutics, University of Kuopio, Finland, "Glycosaminoglycans inhibit cellular gene delivery with liposomal and polymeric nanosized carriers: physico-chemical and biological aspects"

**January 14**, Birger Lindberg Møller, The royal veterinary and agricultural University, Denmark, "Metabolic engineering of cyanogenic glucoside synthesis and plant-insect interactions"

**January 21**, Modern Trends in Chemistry Aarhus Winter Meeting. Organized by the Danish Chemical Society.

**January 28**, Jørgen Skibsted, University of Aarhus, Denmark, "Solid-State NMR studies of nanostructures in cement-based materials"

**February 2**, Henrik Birkedal, Dept. of Chemistry & iNANO, University of Aarhus, Denmark,

"On Bites and Bones: Examples of Natures Materials"

**February 18**, Andrew J. Turberfield, University of Oxford, UK, "DNA Self-Assembly and Molecular Machinery"

**February 25**, Mischa Bonn, Leiden University, Germany, "Biosurface Spectroscopy"

**April 1**, Daniel Otzen, University of Aalborg, Denmark, "The changing faces of glucagon fibrillation: structural and energetic polymorphism"

**April 15**, Peter Hinterdorfer, Johannes Kepler University of Linz, Austria, "Sensing single molecule recognition with the atomic force microscope"

**April 19**, Joel S. Miller, Department of Chemistry, University of Utah, USA, "New Chemistry and New Materials for this Millennium: Molecule-based Magnets and Molecule-based Electronics"

**April 29**, Jan J. Enghild, University of Aarhus, Denmark, "Proteome analysis of the human cornea"

**May 13**, Xiao-Dong Su, Life Science College, Peking University, China, "A high-throughput, cost-effective structural genomics platform"

**May 20**, Mette Ebbesen, University of Aarhus, Denmark, "Ethics in Nanotechnology – starting from scratch?"

**May 27**, Wolfgang Pompe, Technische Universitaet, Dresden, Germany, "Molecular bio-engineering of metallic nanostructures"

**September 9**, Michael Lisby, University of Copenhagen, Denmark, "Nanobiotechnologies for studying DNA damage response in live cells"

**September 16**, Teresa Neves-Pedersen, Aalborg University, Denmark, "Photonic Biosensors: using light to create oriented as well as spatially defined multi-protein/DNA sensor arrays"

**September 23**, Peter R. Ogilby, University of

Aarhus , Denmark, "Creation and Detection of Singlet Oxygen with Sub-Cellular Resolution"

**September 30**, Bruce Milthorpe, USNW, Australia

**October 14**, Kurt Gothelf, University of Aarhus, Denmark, "Molecular self-assembly"

**October 21**, Fraser Stoddart, University of California Los Angeles, USA, "An Integrated Systems-Oriented Approach to Molecular Electronics"

**October 28**,Yves Dufrenes, Université catholique de Louvain, Belgium, "AFM force spectroscopy of biosurfaces: from single molecules to living cells"

**November 4**, David Phillips, Hofmann Professor of Chemistry, Senior Dean, Imperial College of London, UK, "Time-resolved fluorescence imaging studies in biological systems"

**November 11**, Miquel Salmeron, Berkley, USA, "Nanoscience and technology: Building new materials atom by atom"

**November 18**, Thomas Vorup-Jensen, Department of Medical Microbiology, AU

**November 25**, Jens Nørskov, DTU, "The Hydrogen Society"

**December 2**, Ole Hindsgaul, Carlsberg Laboratory, Denmark, "Introduction of labels into biomolecules using solid-phase reagents"

**December 9**, Leonid Gurevich, Section for Biotechnology, AAU, Denmark

iNANO specialized colloquia, Aarhus

**January 12**, Thomas Schmidt, Physics Department, Leiden University, Germany, "Single-molecule microscopy for cell biology"

**January 19**, Omar M. Yaghi, University of Michigan, USA, "Nanoporous metal-organic frameworks designed for hydrogen storage"

**January 26**, Dr. Dylan Jaytilaka, Department of Chemistry, University of Western Australia,

# Colloquia



Australia, "Wavefunctions derived from X-ray experiment: General philosophy, and review of past work, and future directions"

**February 3**, Poul Nissen, Dept. of Molecular Biology, University of Aarhus, Denmark, "The functional cycle of a cation pump"

**February 7**, Dr. Paweł Sikorski, Physics Department, Norwegian University of Science and Technology, Trondheim, Norway, "Amyloids and biopolymers. Solving crystal structures of semi-crystalline polymers by use of fibre X-ray diffraction"

**February 17**, Kiyoshi Asakawa, University of Tsukuba and the Femtosecond Technology Research Association, Japan, "Fusion of quantum dots and photonic crystals - the application to ultra-fast all-optical switch"

**March 1**, Christian Bombis, Institut für Schichten und Grenzflächen ISG 3 Forschungszentrum Jülich GmbH, Germany, "STM studies of 2D-nanostructures: Monoatomic, high Au islands on Au(100) and the self-assembling system oxygen on Cu(110)"

**March 2**, Arnd Baurichter, Physics Dept. SDU, Odense, Denmark, "From dust grain catalyst for hydrogen and organic molecule formation in the interstellar space to hydrogen storage material: The system hydrogen on graphite"

**March 9**, Kiril Tsemekhman, Dept. of Chemistry, University of Washington, USA, "Self-consistent implementation of self-interaction corrected DFT and of the exact exchange functionals in the plane-wave DFT"

**March 11**, Kell Mortensen, Danish Polymer Centre, Risø, Denmark, "Block Copolymer Melts and Networks, Shear-Induced Texture and Shear-Induced Phase Transitions"

**March 18**, Nikolay Buzhynskyy, Lab. of Molecular Imaging and Nano-Bio-Technology University of Bordeaux, France, "Formation of supported proteolipidic layers, studied by QCM-D and AFM"

**March 30**, Roland Krämer, Universität Heidelberg, Germany, "Oligonucleotide - Metal Complex"

Conjugates: Synthesis and Applications"

**April 5**, Alexander Shluger, University College London, UK, "When solids approach the defect size: modelling at the edges"

**April 11**, Kristian Thygesen, Dept. of Physics, Technical University of Denmark Wannier Functions

**April 12**, Heiz Ulrich, Technische Universität München, Germany, "Clusters on surfaces: Matter in the non-scalable size-regime"

**April 21**, Jean Pinson, Alcminer, France, "Electrografting of conductive and semiconductive surfaces by reduction of diazonium salts"

**May 2**, Alan C. Luntz, University of Southern Denmark, Denmark, "How adiabatic is activated adsorption?"

**May 4**, Wael Mandouh, Dept. of Chemistry, Lab. Photochemistry and Spectroscopy, Katholieke Universiteit Leuven, Belgium, "Two-dimensional Cyclic Structures As Templates At The Nanoscale"

**August 24**, Toyaki Eguchi and Toshu Ann, The University of Tokyo, Japan, "High resolution Imaging of Surface Structure and Potential Profile by Atomic Force Microscopy"

**September 20**, Paul Ellis, Pacific Northwest National Laboratory, "67Zn and 25Mg Solid-State NMR Spectroscopy of Systems of Biological Interest. A Low Temperature Solid State NMR Experiment"

**September 22**, Jean-Paul Booth, Nicolas Bulcourt, Garrett Curley, Ecole Polytechnique, Palaiseau, France, "Production and destruction of reactive species in a dual frequency capacitive plasma in Ar/C4F8/02"

**September 26**, Markus Niederberger, Max Planck Institute, Germany, "Nonaqueous Routes to Crystalline Metal Oxide Nanoparticles: Formation Mechanisms, Assembly and Application in Gas Sensing"

**October 17**, Dietmar Stalke, Institut für Anorganische Chemie, Universität Göttingen,

Germany, "Hypervalency - Experimental Charge Density Uncovers a False Concept"

**October 18**, Professor Alan Pinkerton, University of Toledo, USA, "X-ray crystallography - from structure to thermodynamics"

**October 13**, Professor Bonnie A. Wallace, Department of Crystallography, Birkbeck College, University of London, UK, "Synchrotron radiation circular dichroism spectroscopy: a new tool for structural and functional genomics"

**November 3**, Professor Thomas H. Foster, University of Rochester, USA, "Physical Determinants and Optical Signatures of Photodynamic Therapy"

**November 15**, Peter Kingshott, Senior Scientist, Danish Polymer Centre, Risø National Laboratory, "Playing with Surface Chemistry to Try and Stop Proteins, Cells and Bacteria from sticking"

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**September 9**, V. Renugopalakrishnan, Harvard, USA, "Protein-based memory: Next wave in information storage"

**September 28**, Sergey Bozhevolnyi, Harvard, USA, "Nano-plasmonics"

**October 12**, Ib Chorkendorff, DTU, Denmark, "Production and conversion of hydrogen on alloys and inorganic compounds"

**October 26**, Thomas Garm Pedersen, Aalborg University, Denmark, "Optical properties of carbon nanotubes"

**November 11**, Peter Wahl, MPI-Stuttgart, Germany, "Electronic correlation effects at metal surfaces"

**November 23**, Anja Boisen, DTU, Denmark, "Micro and nanomechanical systems for label-free detection"

**December 7**, Thomas Tauris, Herlufsholm, Denmark, "Physics of radio pulsars"