NOBEL SYMPOSIA

Chemistry and Physics of Heavy and Superheavy Elements
Bäckaskog Castle, Sweden, May 29th -June 3rd 2016

NS160 - Programme

SUNDAY MAY 29th

Arrival

11:00-17:00 Registration at *Gamla Biskopshuset*, Lund

15:00-17:00 Reception at *Gamla Biskopshuset*, Lund

15:15 Göran Bexell, former Vice-Chancellor, Lund University
The 350-year Anniversary of Lund University (15 min)

17:15 Bus transfer to Bäckaskog Castle

19:30 DINNER

MONDAY MAY 30th

9.00-10.35 INTRODUCTION
Discussion Leader: D. Rudolph

D. Rudolph, Lund University
Welcome

P. Pyykkö, University of Helsinki
Does the Periodic Table of Elements Look Alright? (35+10 min)

M. Leino, University of Jyväskylä
Production and Properties - Towards the Island of Stability (35+10 min)

10.35-11.00 COFFEE

11.00-12.25 NUCLEAR STRUCTURE
Discussion Leader: S. Åberg

P.-H. Heenen, University of Brussels
Beyond Mean-field Correlations and the Description of Superheavy Nuclei (25+5 min)

R.M. Clark, LBNL Berkeley
Decay Spectroscopy of Heavy and Superheavy Nuclei at LBNL (25+5 min)

U. Forsberg, Lund University
Recoil-α(-α)-fission Events Observed in the Reaction $^{48}Ca+^{243}Am$ (20+5 min)

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12.25 LUNCH

15:00-16.30 NUCLEAR STRUCTURE
Discussion Leader: A. Sobiczewski

J. Dobaczewski, University of York
Density Functionals for Heavy and Superheavy Nuclei (25+5 min)

R.-D. Herzberg, University of Liverpool
In-Beam Spectroscopy of Heavy and Superheavy Nuclei (25+5 min)

F.P. Heßberger, GSI Darmstadt
Nuclear Structure of the Transactinides – Investigated by Decay Spectroscopy (25+5 min)

16.30-17.00 COFFEE

17:00-18.25 FISSION BARRIERS
Discussion Leader: W. Nazarewicz

A. Lopez-Martens, CSNSM Orsay
Stability and Synthesis of Superheavy Nuclei: Winning the Battle Against Fission (25+5 min)

P. Möller, Los Alamos
The Limits of the Nuclear Chart as Set by Fission and Alpha Decay (25+5 min)

J. Khuyagbaatar, GSI Darmstadt
Fission in the Landscape of the Heaviest Nuclei: Some Recent Examples (20+5 min)

19.00 DINNER

TUESDAY MAY 31st

9.00-10.15 PRODUCTION AND REACTIONS
Discussion Leader: J.V. Kratz

M. Schädel, GSI Darmstadt
Prospects of Heavy and Superheavy Element Production via Inelastic Nucleus-nucleus Collisions - from ^{238}U + ^{238}U to ^{18}O + ^{254}Es (35+10 min)

A.K. Nasirov, FLNR Dubna
Entrance Channel Effects in Superheavy Element Production (25+5 min)

10.15-10.45 COFFEE

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10.45-12.15 PRODUCTION AND REACTIONS
Discussion Leader: H. Sakai

W. Loveland, Oregon State University
Characterizing the Mechanism(s) of Heavy Element Synthesis Reactions (25+5 min)

D. Hinde, ANU Canberra
Quasifission in Heavy and Superheavy Element Formation Reactions (25+5 min)

M. Kowal, NCNR Warsaw
Fusion-fission Probabilities, Cross Sections and Structure Notes of Superheavy Nuclei (25+5 min)

12.15 LUNCH

15.00-16.35 ATOMIC STRUCTURE
Discussion Leader: M. Itkis

E. Eliav, Tel Aviv University
Atomic Theory – Models and Methods (35+10 min)

T. Sato, JAEA Tokai
Ionization Potentials of the Heaviest Actinide (20+5 min)

M. Laatiaoui, Helmholtz Institute Mainz
Laser Spectroscopy of Nobelium (20+5 min)

16.35-17.00 COFFEE

17:00-18.40 INTERFACES
Discussion Leader: C. Fahlander

M. Block, GSI Darmstadt
High-precision Mass Measurements and Advanced Ion-manipulation Techniques (35+10 min)

L.G. Sarmiento, Lund University
Nuclear Spectroscopy with Geant4: The Superheavy Challenge (20+5)

K. Rykaczewski, ORNL Oak Ridge
The ORNL Actinide Materials and a New Detection System for Superheavy Nuclei (25+5 min)

19.00 DINNER

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WEDNESDAY JUNE 1st ("public session", press participation possible)

9.00-10.15 DISCOVERY ASPECTS
Discussion Leader: L. Öhrström

S. Hofmann, GSI Darmstadt
The Discovery of Elements 107 to 112 (35+10 min)

K.E. Gregorich, LBNL Berkeley
How Reliable Are Isotopic Assignments of Alpha-decay Chains? (25+5 min)

10.15-10.40 COFFEE

10.40-12:05 DISCOVERY ASPECTS
Discussion Leader: L.-I. Elding

J. Reedijk, Leiden University & IUPAC
Rules and Regulations for Validation, Assignation and Name giving of Newly Discovered Chemical Elements (15+10 min)

C. Jarlskog, Lund University & IUPAP
Procedure Around Naming New Elements (10+5 min)

V. Utyonkov, FLNR Dubna
The Discovery of Elements 113-118 (35+10 min)

12.10-13:00 (Local) PRESS CONFERENCE

12.30-14.00 LUNCH

14:30-18.00 EXCURSIONS

19.00 DINNER

THURSDAY JUNE 2nd

9.00-10.30 CHEMISTRY
Discussion Leader: P. Armbruster

A. Türler, University of Bern & PSI Villigen
Advances in Chemical Investigations of Heaviest Elements (35+10 min)

V. Pershina, GSI Darmstadt
Theoretical Chemistry of Superheavy Elements: Support for Experiment (35+10 min)

10.30-11.00 COFFEE

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11.00-12.30 CHEMISTRY
Discussion Leader: M.A. Stoyer

A. Yakushev, GSI Darmstadt
Gas-phase Chemistry of Element 114, Flerovium (25+5 min)

P. Schwerdtfeger, Massey University
Toward an Accurate Description of Chemical and Physical Properties of the Superheavy Elements (25+5 min)

R. Eichler, PSI Villigen
Complex Chemistry with Metal Complexes (25+5 min)

12.30 LUNCH

15.00-16:25 CHEMISTRY
Discussion Leader: J.P. Omtvedt

H. Haba, RIKEN Tokyo
Superheavy Element Chemistry Behind GARIS at RIKEN (25+5 min)

Y. Nagame, JAEA Tokai
Chemical Properties of Rf and Db in the Aqueous Phase (25+5 min)

J. Even, University of Groningen
Chemistry Aided Nuclear Physics Experiments (20+5 min)

16:25-17.00 COFFEE

17.00-18:20 PREREQUISITES
Discussion Leader: I. Ragnarsson

S. Dmitriev, FLNR Dubna
Status and Perspectives of the Dubna Superheavy Element Factory (25+5 min)

B.G. Carlsson, Lund University
How to Calculate Alpha-Decay Rates in the Future? (20+5 min)

J.M. Gates, LBNL Berkeley
Prospects of A and Z Identification Experiments at LBNL (20+5 min)

19.00 NOBEL SYMPOSIUM DINNER

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FRIDAY JUNE 3rd

9.00-10.30 STATUS AND PERSPECTIVES
Discussion Leader: M. Leino

K. Morita, RIKEN Tokyo
Discovery of Element 113 and Future Research Direction at RIKEN (35+10 min)

Ch.E. Düllmann, University of Mainz
Search for Elements Beyond Z=118 and Future SHE Research Opportunities at GSI (35+10 min)

10.30-11.00 COFFEE

11.00-12.30 FUTURE OF HEAVY ELEMENT RESEARCH
Discussion Leader: P. Pyykkö

W. Nazarewicz, Michigan State University
Key Questions to Understand and Reach the Island of Stability (35+10 min)

Discussion

12.30 LUNCH

End of Symposium

14:00 Bus transfer to Copenhagen airport (arrival approx. 16:00) and Lund

Knut och Alice Wallenbergs Stiftelse

LUNDS UNIVERSITET