

Sunday 18th October 2015

17:30 **Registration Open**

19:30 **Reception**

20:00 **Dinner**

Monday 19th October 2015

09:00 **Opening**

Session Chair: J. Iñaki Juaristi (Spain)

09:10 **Gunther Andersson (Australia) PI**

High Resolution Concentration Depth Profiles for analysing Soft Matter Surfaces with NICISS

09:55 **Kaoru Nakajima (Japan) I**

Transmission Secondary Ion Mass Spectrometry of Organic Molecules using 5 MeV C_{60}^+ Ions

10:25 **Anders J. Barlow (UK) O**

Argon Gas Cluster Ion Sources in Surface Chemical Analysis: Measurements of Total Sputter Yields and a Semi-Empirical Predictive Model

10:45 **Coffee Break**

Session Chair: Henning Lebius (France)

11:15 **Brigitte Ban-d'Etat (France) I**

Nano-Structuring by Swift Heavy Ions at Grazing Incidence: Different Track Types with Different Targets

11:45 **Clara Grygiel (France) I**

From Surface to Bulk Modifications under Swift Heavy Ion Irradiation of Insulating Materials

12:15 **Kenji Kimura (Japan) O**

Temperature Measurement of Thermal Spike Using Desorption of Nanoparticles

12:35 **William Terry (UK) O**

Cluster Production and Ion-Induced Luminescence in the Matrix Assembly Cluster Source (MACS)

13:00 **Lunch**

Session Chair: Gunther Andersson (Australia)

15:00 Roman Böttger (Germany) I
Extremely High Energy Density Deposition by Heavy Polyatomic Ion Impacts—Surface Nanopatterning and Order Enhancement

15:30 Charlotte Herbig (Germany) I
Ion Irradiation of Graphene/Ir(111): Amorphization, Thermal Recovery, and Noble Gas Trapping

16:00 Stefan Facsko (Germany) O
Transition from Pits to Mounds in Ion Induced Patterning of Germanium

16:20 Hubert Gnaser (Germany) O
Self-Organized Nanocone Formation on Ion-Bombarded InP Surfaces

16:40 Coffee Break

Session Chair: Stefan Facsko (Germany)

17:10 E. Harriet Ahlgren (Finland) I
Creating Nanoporous Graphene with Swift Heavy Ions

17:40 Roland Kozubek (Germany) I
Highly Charged Ion Induced Modifications of Graphene on Different Substrates

18:10 Martin Engler (Germany) O
Reverse Epitaxy on Elemental Semiconductor

18:30 Charles Bourin (France) O
Platform for the Nanoscale Study and Characterization of Ion Implantation

20:00 Dinner

21:00 Committee Meeting

Tuesday 20th October 2015

Session Chair: Philippe Roncin (France)

- 09:00** **Hermann Nienhaus (Germany) PI**
Non-Adiabatic Effects in Low-Energy Gas-Surface Interactions
- 09:45** **Richard A. Wilhelm (Germany) I**
Charge Exchange and Energy Loss of Slow Highly Charged Ions in Graphene
- 10:15** **Dino Novko (Spain) O**
Energy Loss in Gas-Surface Dynamics: Electron-Hole Pair and Phonon Excitations upon Adsorbate Relaxation
- 10:35** **Coffee Break**
- Session Chair: Kenji Kimura (Japan)**
- 11:05** **Peter Bauer (Austria) I**
Inelastic Losses in Low Energy Ion Scattering
- 11:35** **Peter Sigmund (Denmark) I**
Progress in Heavy-ion Stopping
- 12:05** **Pierfrancesco Riccardi (Italy) O**
Electron Promotion Effects in the Interaction of Slow Ions with Al Surface
- 12:25** **Daniel Sanchez Portal (Spain) O**
Electronic Stopping Power of H and He in a Narrow Band Gap Semiconductor
- 13:00** **Lunch**

Session Chair: Takanori Koshikawa (Japan)

- 15:00 Taku Suzuki (Japan) I**
Low-Energy He⁺ Ion Scattering Spectroscopy; Recent Topics in Fundamentals and Applications
- 15:30 R. Carmina Monreal (Spain) I**
Surface Scattering in the Plasmonic Resonances of Ultralow Electron Density Nanospheres
- 16:00 Bo Helsing (Sweden) O**
Plasmaron Footprints in Photoemission
- 16:20 Sachiko T. Nakagawa (Japan) O**
What Promotes the Desired Self Assembly (DSA)?
- 16:40 Coffee Break**

Session Chair: Peter Bauer (Austria)

- 17:10 Poster Introduction Section**
Oral introductions for each poster. A time limit of 2 minutes for each poster is strictly enforced by the session chairperson!

María José Aliaga (Spain)

Molecular Dynamics simulations of ion implantation in Fe thin films

Barbara Bruckner (Austria)

Influence of Oxygen in the charge exchange process of He backscattered from Ta in LEIS

Sophie Cervera (France)

Towards the Understanding of Mechanisms Responsible of the Thermal Hysteresis Suppression by Highly Charged Ions Collisions in Thin Films

Ayman Sherif El-Said (Saudi Arabia)

Modifications of Gallium Phosphide Single Crystals using Swift Heavy Ions and Slow Highly Charged Ions

Alexander Fuchs-Fuchs (Austria)

Electron Emission Induced by Highly Charged Ion Impact on Single Layer Graphene

Elisabeth Gruber (Austria)

Interaction of Multiply Charged Ions with Single Layer Graphene: Charge Exchange and Energy Loss Studies

Rene Heller (Germany)

Time of Flight Backscattering and Secondary Ion Mass Spectrometry in a Helium Ion Microscope

Karima Khalal-Kouache (Algeria)

Monte Carlo Simulation of Charge Exchange Processes in He^+/Cu Scattering

Karima Khalal-Kouache (Algeria)

Multiple Scattering of Low Energy H^+ Ions in Matter: Mean Energy Approximation with the Sigmund and Winterbon Model

Takanori Koshikawa (Japan)

Magnetic Property of Ferromagnetic Material multi-layer with High Brightness and Highly Spin-polarized LEEM

Henning Lebius (France)

Nanostripes and nanoripples: surface modifications by swift heavy ions

Tomoya Marumo (Japan)

Transmission Secondary Ion Mass Spectroscopy of a Peptide using $5\text{MeV } \text{C}_{60}^+$ Ions

Jiro Matsuo (Japan)

Secondary Molecular Ion Emission from Liquids under Ambient Pressure

Philippe Roncin (France)

Qualitative and Quantitative Description of SiC grown Graphene Corrugation by Grazing Incidence Fast Atom Diffraction

Philippe Roncin (France)

A Compact, Large Area, Time and Position Sensitive Detector for Time of Flight Measurements

Philippe Roncin (France)

Active Correction of the Tilt Angle of the Surface Plane with respect to the Rotation Axis during Azimuthal Scan

Rafael Saavedra (Spain)

Ionoluminescence and Microstructural Changes of Fused Silica under Swift Ion Irradiation

Chad E. Sosolik (USA)

Recent Results from the Ion Beam Laboratories at Clemson University

John A. Tanis (USA)

Transmission of Electrons through Insulating PET Foils: Charge Deposition, Angular and Energy Dependence

John A. Tanis (USA)

Incident Energy and Charge Deposition Dependences of Electron Transmission through a Microsized Tapered Glass Capillary

YuYu Wang (China)

Nanostructure Formation on CaF₂, Al₂O₃, c-SiO₂ and MgO Single Crystal Surfaces by Highly Charged Ions and Swift Heavy Ions Impact

YuYu Wang (China)

Effects of Swift Heavy Ion Irradiation in a FeSiNbZrB Amorphous Alloy

Boris Weidtmann (Germany)

A Ballistic Transport Model for Electron Excitation Energy Induced by Particle Impact

Asier Zugarramurdi (Finland)

Helium Atom Scattering from Graphene: Testing the Pairwise Potential Ansatz

18:10 **Poster Session**

20:00 **Dinner**

Wednesday 21st October 2015

Special Session in Honor of Professor Helmut Winter

Session Chair: Ricardo Díez Muiño (Spain)

09:00 Pedro Miguel Echenique (Spain)

LAUDATIO FOR PROFESSOR HELMUT WINTER

09:30 Andrei Borisov (France) I

Tunneling at Surfaces: Atomic Projectiles and Localized Plasmons

10:00 Helmut Winter (Germany) PI

IISC, Ions, and Surfaces – The First Four Decades

10:45 Coffee Break

Session Chair: Ronnie Hoekstra (The Netherlands)

11:15 Maarten van Kampen (The Netherlands) I

Ions in Extreme UltraViolet lithography tools

11:45 Catia Costa (UK) I

Imaging Mass Spectrometry in Forensic Science – New Tools, New Applications

12:15 Norman H. Tolk (USA) O

Dynamical Studies of Optoelectronic Modification arising from Heavy Ion Induced Point Defects using Coherent Acoustic Phonons

12:35 Marco Trassinelli (France) O

Highly Charged Ions Impact, a Promising Route to Exploit the Refrigeration Power of Giant Magnetocaloric Thin Films

13:00 Lunch

14:00 EXCURSION

20:00 Dinner

Thursday 22nd October 2015

Session Chair: Christian Linsmeier (Germany)

09:00 Thomas Schwarz-Selinger (Germany) PI
Tungsten as Plasma Facing Material: Hydrogen Transport Studies and Defect Creation

09:45 Mark E. Bannister (USA) I
Surface Morphologies of He-Implanted Tungsten

10:15 Evgeny Marenkov (Russia) O
The Role of the Adatoms Diffusion in the Tungsten Fuzz Growth

10:35 Coffee Break

Session Chair: Fritz Aumayr (Austria)

11:05 Bernhard Berger (Austria) I
Erosion of Fusion-Relevant Wall Materials under Ion Bombardment studied with a Quartz Crystal Microbalance Technique

11:35 Frederic Allegrini (USA) I
Carbon Foils for Space Plasma Instrumentation

12:05 Alvaro García Carrasco (Sweden) O
The Impact of Helium Irradiation on Reflectivity of Self-Damaged Molybdenum Mirrors at High DPA Values

12:25 Sergey Ryabtsev (Russia) O
Deuterium Thermal Desorption from Vacancies in Tungsten

13:00 Lunch

Session Chair: Andrei Borisov (France)

15:00 **Philippe Roncin (France) I**
High Resolution Surface Topography with Grazing Incidence Fast Atom Diffraction.

15:30 **Paola Atkinson (France) I**
Dynamic Grazing Incidence Fast Atom Diffraction: in-situ monitoring of layer-by-layer growth oscillations and surface reconstructions during molecular beam epitaxys

16:00 **María Silvia Gravielle (Argentina) O**
Influence of the lighting on Fast Atom Diffraction studied via a Semi-Quantum Approach

16:20 **Cristina Díaz (Spain) O**
The Role of the Internal Degrees of Freedom in Molecular Diffractive Scattering under Fast Grazing Incidence

16:40 **Coffee Break**

Session Chair: Evgeny Marenkov (Russia)

17:10 **Hussein Hijazi (USA) I**
Solar Wind Sputtering of Lunar Soil Analogs: Charge State and Mass Effects

17:40 **Rafael Martinez (Brazil) I**
Astrophysical Material Analogs Irradiated by Swift Heavy Ions

18:10 **Eli Kolodney (Israel) O**
Velocity Correlated Cluster Emission in Surface Sputtering by a Large Polyatomic Projectile

18:30 **Carsten Bundesmann (Germany) O**
Secondary Particle Properties of the Ion Beam Sputter Process of Ag, Ge and Ti

20:00 **Refreshments**

20:30 **Conference Dinner**

Friday 23rd October 2015

Session Chair: María Silvia Gravielle (Argentina)

09:00 Torgny Gustafsson (USA) PI

Studying Solids using the Helium Ion Microscope

09:45 Yasushi Yamauchi (Japan) I

Surface Microscopy using Spin-Polarized Metastable Helium Atom Beams

10:15 Andrew Pratt (UK) O

Laser Manipulation of Metastable Helium Atoms: Applications to Surface Analysis

10:35 Coffee Break

Session Chair: Maite Alducin (Spain)

11:05 Ivor Loncaric (Spain) O

Femtosecond Laser Pulse Induced Desorption: a Molecular Dynamics Simulation

11:25 Dietmar Roth (Austria) O

Electronic Stopping of Slow Light Ions in Vanadium Dioxide

11:45 Natalia Koval (Spain) O

TDDFT Calculations of the Vicinage Effect in the Energy Loss of a Hydrogen Dimer

12:05 Karima Khalal-Kouache (Algeria) O

Influence of the Interaction Potential on the Scattering Cross Section and the Energy Spectra in LEIS

12:25 CLOSING REMARKS

13:00 Lunch