SCHEDULE

Names in **bold**: 40 minutes
Names in *italic*: 20 minutes

**SUNDAY**

Arrival, registration from 16.00. Welcome reception at 19.00.

**MONDAY**

Plenary speaker:
Jan-Erik Sundgren  Advanced Materials and Industrial competitiveness through University-Business Cooperation

Session:
Weitao Zheng  Exploring the novel B-containing superhard materials in extreme condition

Coffee break

Peter Polcik  Boride sputtering targets and arc cathodes – Challenges for manufacturing technologies and target/cathode design

Paul Mayrhofer  Interface and interphase controlled properties of transition metal borides: The beauty of imperfections

Lunch and networking

John Abelson  CVD of Transition Metal Diborides Below 300°C: Routes to Conformal, Superconformal, Hard, Low-friction and Oxidation-resistant Coatings

Georges Chollon  Structure and thermal stability of (Si)-B-C ceramics synthesized by chemical vapor deposition

Michael Tkadletz  Investigation of microstructure and mechanical properties of CVD-Ti(N,B) coatings with varying B content

Jyh-Wei Lee  Microstructure and mechanical property evaluation of boron-contained TiZrBN hard coatings

Coffee break

Petr Vasina  Influence of chemical composition on structure and mechanical properties of W-B-C coating deposited in industrial sputtering system

Johanna Rosen  TiB2 synthesis from optimized arc and sputtering methods

Marton Benke  Application of TiB2 for soldering applications

Feng Huang  Enhancing deformability of TiB2-based hard coatings via proper metal addition

Guided tour “A historical odyssey”.

Dinner

**TUESDAY**

Jochen Schneider  Quantum mechanically guided design of borides or experimentally guided quantum mechanical calculations?

Helmut Riedl  Synthesis of W1-xMxB2 based ternary diborides: Challenges and Possibilities

José Martinez Trinidad  In-vitro cytotoxicity of iron boride layers

Coffee break

Mojmir Jilek Junior  Wear-resistant, nanostructured boron containing PVD coatings for industrial use

Grzegorz Greczynski  (Preliminary title:) Plasma characterization and thin film synthesis - HfB2

Vjaceslav Sochora  Me-BN coatings simultaneously deposited by cathodic arc and magnetron sputtering
Lunch and networking

Ai-Ying Wang  Superhard yet tough CrB\textsubscript{2} coating with superior corrosion resistance deposited by DC magnetron sputtering

Vladimir Vishnyakov  Boron quantification, a comparison between different analysis techniques

Igor Zhirkov  Characterization of plasma generated in magnetron sputtering from metal boride targets

Pavel Soucek  Novel coatings with high hardness and fracture resistance based on metal-carbon-boron design

Vincent Moraes  Ab-initio driven design of ternary diboride thin films

Coffee break

Discussion

Poster session

Dinner

WEDNESDAY

Ulf Jansson  Ternary nanolaminated borides – aspects of growth and properties

Jinn Chu  Boron-containing metallic-glass coating for the first-ever metallic nanotube array

Per Persson  Advanced electron microscopy of borides

Coffee break

Michael Widom  Mixed and partial site occupancy in boron and its carbides and nitrides

Carina Höglund  \textsuperscript{10\textsubscript{B}}C thin films for neutron detection

Lunch and networking

Naureen Ghafoor  Impact of B\textsubscript{4}C co-sputtering on structure and optical performance of multilayer X-ray mirrors

Christina Wüstefeld  Microstructure of Ti-B-C-N nanocomposites deposited from Ti and B\textsubscript{4}C targets

Björn Alling  Theoretical investigations of mixing thermodynamics, age-hardening potential, and electronic structure of boride alloys

Ivan Campos-Silva  The boriding process to improve the tribocorrosion resistance of metallic biomaterials

Coffee break

Hans Högberg  Thin film synthesis and characterization of ZrB\textsubscript{2}

Special Lecture

Joe Greene  The 14-billion Year History of the Universe Leading to Modern Materials Science

Aperitif

Dinner

Guided night tour “Night patrol at Vadstena Castle”

THURSDAY

Marian Mikula  Structure evolution and mechanical properties of yttrium based ternary diborides

Jiri Houska  Role of boron in amorphous SiBCN and nanocomposite MSiBCN

Martin Magnusson  Structure Properties of Transition Metal Borides Investigated by Xray Spectroscopy

Coffee break

Summary and Outlook