

CZECH AND GERMAN NATIONAL COMMITTEE FOR COOPERATION
WITH THE INTERNATIONAL INSTITUTE OF REFRIGERATION (IIR)

The 12th
CRYOGENICS 2012
IIR International Conference



Dresden, Germany
September 11 – 14, 2012

INSTITUT INTERNATIONAL DU FROID
INTERNATIONAL INSTITUTE OF REFRIGERATION
Commissions A1, A2 and C1



LAST ANNOUNCEMENT

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GENERAL INFORMATION

Conference venue

Dorint Hotel

Address: Grunaer Strasse 14, 01069 Dresden, www.dorint.com/dresden

On-site registration

The registration & information desk is located on the 1st floor of the hotel, in front of the lecture hall.

Registration hours are as follows:

Monday	16:00 - 19:00
Tuesday	08:00 - 18:00
Wednesday	09:00 - 18:00
Thursday	09:00 - 18:00
Friday	closed

Name badge and tickets

A name badge is issued upon registration. The badge should be worn throughout the conference. The badge serves as an admission pass to all lectures, the exhibition, the welcome party, coffee breaks and lunches, the dinner and technical excursions included in the registration fee.

For accompanying persons, all relevant information, name badges, tickets, etc. are available at the registration & information desk.

How to reach the conference site by car

From West via A 4/A17 (direction Chemnitz):

- at the "three-leg motorway interchange Dresden West" change from A4 to A17 in direction to Prague
- at exit "Dresden Südvorstadt/Zentrum" turn left on "B170 highway"
- following the "B170" to "Pirnaischer Platz" (signposted: Gruna/Gläserne Manufaktur)
- turn right, following the road for 200m
- The Hotel is located at the right side.

From South via A17 (direction Prague):

- at exit "Dresden Südvorstadt/Zentrum" turn left on "B170 highway"
- following the "B170" to "Pirnaischer Platz" (signposted: Gruna/Gläserne Manufaktur)
- turn right, following the road for 200m
- The Hotel is located at the right side.

From North via A13/A4 (direction Berlin):

- at the "three-leg motorway interchange Dresden Nord" change from A13 to A4 in direction to Dresden/Frankfurt/Main
- at exit "Dresden Hellerau" turn right on "B170 highway"
- following the "B170" " to "Pirnaischer Platz" (signposted: Stadtzentrum) via Hansastraße – große Meissner Straße – Köpkestraße
- at the Köpkestraße turn right on "Carolabrücke" to "Pirnaischer Platz" (signposted: Gruna/Gläserne Manufaktur)
- at "Pirnaischer Platz" turn left (signposted: Gruna/Gläserne Manufaktur), following the road for 200m
- The Hotel is located at the right side.

From East via A4 (direction Görlitz/Wroclaw):

- at exit "Dresden Hellerau" turn right on "B170 highway"
- following the "B170" " to "Pirnaischer Platz" (signposted: Stadtzentrum) via Hansastraße – große Meissner Straße – Köpkestraße
- at the Köpkestraße turn right on "Carolabrücke" to "Pirnaischer Platz" (signposted: Gruna/Gläserne Manufaktur)
- at "Pirnaischer Platz" turn left (signposted: Gruna/Gläserne Manufaktur), following the road for 200m
- - The Hotel is located at the right side.

How to reach the conference site from Airport Dresden

by Airport Shuttle (S-Bahn S2)

- The underground station is located in the terminal building. Double-decker trains run every 30 minutes between the airport and the city centre.
- Get out of the train at station "Dresden Bahnhof Mitte" or Main Station "Dresden Hbf." For Further information please look at "By train"

by Taxi:

- The taxi stands are directly in front of the terminal exits.
- The taxi journey between the airport and Dorint Hotel costs around 20 €.

How to reach the conference site by train

from Main Station:

- Take a tram No. 3 or 7 to stop "Pirnaischer Platz"
- change to tram No. 1, 2, 4, or 12 to stop "Deutsches Hygiene-Museum"

from station "Dresden Bahnhof Mitte":

- take a tram No. 1, 2, 4, or 12 to stop "Deutsches Hygiene-Museum"

Public transport in Dresden

Tickets are available

- in the ticket machines at a lot of public transport stops
- in the ticket machines inside the trams
- at the bus driver
- at DVB-Service Locations

More information is available at www.dvb.de.

Basic fares for normal tickets:

Single trip	Fare stage 1 - 1 tariff zone, maximum 1 hour	2.00 €
4-trip card	Short trip - in the city up to a maximum of 4 stops, after getting on the vehicle; changes from one vehicle to another are not allowed	5.00 €
	Fare stage 1	7.20 €
One day ticket for single person - 1 tariff zone		
Until 04:00 a.m. of the day following validation		5.00 €

Further information is available at the flyer "Liniennetz" of DVB (www.dvb.de).

Please note:

The starting point of the sightseeing tours and the conference dinner you can reach by feet.

Internet Access

Free wireless Internet access is available in the entire conference area. The password is: "Tannhaeuser".

Lunches

Lunches are included in the registration fee and will be served at the Dorint hotel restaurant.

Dress Code

Attire during the entire conference is business casual.

Liability

Neither the organizers of the conference nor the Dorint hotel will assume any responsibility for damage or injury to persons or property during the conference. The registration fee does not include any insurance for participants. It is recommended that all participants make their own arrangements with respect to health and travel insurance.

Smoking Policy

Smoking is not permitted in the conference area. If you are unable to refrain from smoking, the Dorint hotel will provide information on areas designated for smoking.

Parking

Parking spaces are available at the Dorint hotel, however, the parking fee is not included in the registration fee. Expenses for the parking space must be covered separately by the participants.

Practical Information

Electricity

The normal household voltage supply in Germany is 230 Volts

Bank Services and Exchange

The legal tender in Germany is the Euro. Besides exchange offices, all large banks have numerous branches in the city. The travel bank in Dresden is also worth recommending. Cash machines are always available outside of bank opening hours.

Tipping

Service is usually included in the bill in bars and restaurants, but tips are welcome. If you consider the service good enough to warrant a tip, we suggest about 5-10%.

Shopping

Shops in central Dresden are usually open Monday to Saturday from 10am to 8pm. The Altmarkt-Galerie in the centre of Dresden is open until 9pm. Large supermarkets and shopping centres are open until 10pm. On Sundays, shops are closed, with some exceptions such as bakeries, train stations and petrol stations.

Tax

All prices in Germany already include VAT 19% or 7%.

First Aid Telephone Numbers

112: General Emergency (Fire, Ambulance)

110: Police

INSTRUCTIONS FOR AUTHORS

Lectures /Oral Presentations

Language

The official language is English. No translation will be provided during the sessions.

Speakers check-in

All speakers should upload their presentations on a computer in the session room 30 minutes before starting the first morning session. All presenters must meet in the lecture room at least 15 minutes prior to the beginning of the session.

Please use a USB memory stick to provide the presentation(s).

CRYOGENICS 2012 accepts only presentation material in MS PowerPoint format. CRYOGENICS 2012 doesn't allow the use of speakers' own laptops for their presentations.

All speakers are requested to register in time to receive their badges and other conference materials.

Oral lectures

Each presenter will have 20 minutes for his/her lecture and 5 minutes for a discussion. There will be discussion immediately after the lectures; a common discussion can take place when all papers scheduled for the session have been presented. All presenters are thus requested to remain for the entire session.

When it is time for your lecture, go to the podium immediately when the previous speaker has finished the presentation and answered questions. The session chair will introduce your lecture and ask you to start your presentation.

Please start your presentation considering the following:

1. Start immediately on the topic and avoid another introduction given by yourself.
2. Pace your talk to end at the scheduled ending time.
3. Obey your chair's instructions.

During the time for discussion, listen carefully to the questions from the audience and answer them briefly. If you cannot answer the questions briefly, ask for a private discussion after the session.

Poster Presentations

Posters should be displayed during the entire conference period. Therefore, we kindly ask you to attach your poster to the display boards as soon as possible and no later than on Tuesday, September 11 noon. You are kindly requested to remove your poster after the last lecture on Thursday afternoon, before you leave the conference area. Posters that are not dismantled will be removed by staff and discarded.

Pins are available at the registration desk or directly in the poster area.

The dimensions of the poster boards are as follows:

Display area of the panel: 1.2 m (width) x 1.5 m (height).

The Programme and Organizing Committees decided to organize a poster competition during the conference. Prizes will be awarded during the closing ceremony to 3 best posters selected by the International Scientific Jury.

PROGRAMME AT A GLANCE

MONDAY, SEPTEMBER 10, 2012

16:00 – 19:00 Registration of participants
19:00 – 21:00 Welcome party

TUESDAY, SEPTEMBER 11, 2012

09:00 – 09:20 Opening ceremony
09:20 – 11:00 I. Cryogenics in particle physics
11:00 – 11:25 Coffee break
11:25 – 13:05 II. Cryogenics in particle physics & fusion
13:05 – 14:00 Lunch break
14:00 – 16:05 III. Superconductivity and its applications
16:05 – 16:30 Coffee break
16:30 – 18:35 IV. Superconductivity & Very Low Temperatures

WEDNESDAY, SEPTEMBER 12, 2012

08:30 – 10:35 V. Cryocoolers, Liquid Helium
10:35 – 11:00 Coffee break
11:00 – 13:05 VI. Cryotherapy, Cryobiology
13:05 – 14:00 Lunch break
14:00 – 16:05 VII. Air separation and product storage, CO₂ sequestration
16:05 – 16:30 Coffee break
16:30 – 17:45 VIII. Miscellaneous
17:45 – 19:00 Poster session

THURSDAY, SEPTEMBER 13, 2012

08:30 – 10:10 IX. Liquefied natural gas (LNG)
10:10 – 10:35 Coffee break
10:35 – 12:40 X. Cryobiology and -technology
12:40 – 14:00 Lunch break
14:00 – 16:05 XI. Liquid hydrogen
16:05 – 16:30 Coffee break
16:30 – 18:10 XII. Rare Gases
18:10 – 18:30 Closing ceremony
19:30 – 23:30 Conference dinner

FRIDAY - SEPTEMBER 14, 2012

09:00 - 16:30 Technical tours

PROGRAMME IN DETAIL

MONDAY, SEPTEMBER 10, 2012

REGISTRATION

16:00 – 19:00

WELCOME PARTY

19:00 – 21:00

TUESDAY, SEPTEMBER 11, 2012

OPENING CEREMONY

Chair: Chrz V., Herzog R., Scurlock R., Coulomb D., Lebrun P.

09:00 **Opening Ceremony**

I. CRYOGENICS IN PARTICLE PHYSICS

Chair: Lebrun P., Herzog R.

09:20 001 **Cryogenics for the Future Accelerator Complex NICA at JINR**

Agapov N.

09:45 009 **Development of a Two-Phase Thermosiphon for Extreme Cooling Requirements in the Tritium Source of KATRIN**

Grohmann S.

10:10 010 **Thermal Design of Cryogenic Permanent Magnet Undulator for SLS**

Anghel A.

10:35 036 **Analysis of the SIS100 Superconducting Magnet Cooling**

Bleile A.

COFFEE BREAK

11:00 – 11:25

II. CRYOGENICS IN PARTICLE PHYSICS & FUSION

Chair: Herzog R., Agapov N.

11:25 030 **Cryogenics for the Future Accelerator Complex NICA at JINR**

Chorowski M.

11:50 020 **Design proposal for MITICA Cryogenic Plant**

Valente M.

12:15 018 **The MITICA Facility: A Possible Optimization of the Cryogenic Plant Cooling capacity**

Fellin F.

12:40 095 **Cryogenics for the European Spallation Source**

Wang X.

LUNCH BREAK

13:05 – 14:00

III. SUPERCONDUCTIVITY AND ITS APPLICATIONS

Chair: Lebrun P., Kade A.

14:00 002 **Experimental Study of Superconducting Magnets for the NICA Accelerator Complex**

Khodzhbagiyani H.

14:25 037 **Measurement of Dynamic Heat Losses in the Fast Ramped Superconducting Magnets for the SIS100 Synchrotron**

Bleile A.

14:50 026 **The cryogenic system of the 43 T Hybrid magnet of LNCMI Grenoble, France**

Ronayette L.

- 15:15 054 Cooling Systems for Superconducting Power Applications – Experiences Gained in HTS Cable and Fault-Current Limiter Projects**
Hobl A.
- 15:40 051 Components and Systems for HTS Applications**
Kade A.

COFFEE BREAK
16:05 – 16:30

IV. SUPERCONDUCTIVITY & VERY LOW TEMPERATURES

Chair: Herzog R., Kralik T.

- 16:30 015 Superconducting Current Feeders System for SST-1**
Gupta N.C.
- 16:55 042 Refrigeration Characteristics of Slush Nitrogen for High Temperature Superconducting Cable**
Nakamura N.
- 17:20 079 Modern Ways of Reaching and Using Millikelvin Temperatures**
Wernicke D.
- 17:45 053 Compact Dilution Refrigerator for Sensor Cooling**
Schneider M.
- 18:10 073 The Low Temperature System of AEGIS**
Eisel T.

WEDNESDAY, SEPTEMBER 12, 2012

V. CRYOCOOLERS, LIQUID HELIUM

Chair: Thummes G., Kaiser G.

- 08:30 039 A 3-Dimensional Numerical Study a Co-Axial type Acoustic Stirling Cryocooler**
Farouk B.
- 08:55 038 Effects of the Inertance Tube on Pulse Tube Refrigerator Performance**
Farouk B.
- 09:20 052 3-Cycle Pulse Tube Cooler for Cryogenic High-Power Applications**
Kuhn M.
- 09:45 008 Low Temperature Phase Equilibria of Refrigerant Mixtures**
Winkelmann D.
- 10:10 088 Studies of Adsorption Characteristics of Activated Carbons down to 4.5K for Development of Cryosorption Pumps**
Kasthurirengan S.

COFFEE BREAK
10:35 – 11:00



Coffee Breaks on Wednesday are sponsored by

VI. CRYOTHERAPY, CRYOBIOLOGY

Chair: Mericka P., Schumacher H.M.

- 11:00 006 Cryotherapy State-of-art and Challenges in Poland**
Piotrowska A.
- 11:25 077 Study of Contact Methods to Cool Biological Tissue in Local Cryosurgery**
Butorina A.
- 11:50 004 Application of the Very Low Temperatures for the Preservation of Rare Plants' Seeds of Ukraine**
Arapetyan E.
- 12:15 094 A Preliminary Method for Ultra-Rapid Freezing of the Nicotiana Tabacum BY-2 Cell Line by Encapsulation/Vitrification**
Schumacher H.M.

- 12:40 074 Standardization of the Cryopreservation Process for Parathyroid Glands**
Von Walcke-Wulffen

LUNCH BREAK

13:05 – 14:00

VII. AIR SEPARATION AND PRODUCT STORAGE, CO₂ SEQUESTRATION

Chair: Chrz V., Kalbassi M.

- 14:00 058 Air Separation Unit Installation and Qualification at the French Guyana Space Centre**
Burdaszewski P.
- 14:25 032 Advanced Cryogenic Process for Low Purity Oxygen Production**
Kirchner L.
- 14:50 085 Oxygen Supply for CO₂ Capture by Oxyfuel Coal Combustion**
Kalbassi M.
- 15:15 007 Thermodynamic Analysis of Liquid Oxygen Production System Based on Coupling Joule-Thomson Cooler with PSA**
Piotrowska A.
- 15:40 078 Feasibility Study of "CO₂ Free Hydrogen Chain" Utilizing Australian Brown Coal Linked with CCS**
Inoue K.

COFFEE BREAK

16:05 – 16:30



Coffee Breaks on Wednesday are sponsored by

VIII. MISCELLANEOUS

Chair: Klier J., Vins M.

- 16:30 076 Thermosiphon Tanks for Reliable Pump Operation**
Hnizdil T.
- 16:55 045 Numerical Simulation of Mixed Convection Heat Transfer to Forced Flow Supercritical Helium**
Ghosh P.
- 17:20 055 Presentation of the German DIN Working Group – Safety Devices for Helium Cryostats**
Süsser M.

POSTER SESSION - INTRODUCTION

17:45 – 17:55

POSTER SESSION

17:55 – 19:00

- A1 013 Design of a superconducting inductor for axial concentration flux motor**
Ailam E.H.
- A1 016 Stability of YBCO coated conductor according to Cu stabilizer thickness for cryogenic applications**
Bae J.H.
- A1 017 The cryogenic insulation characteristics of GFRP in Liquid Nitrogen**
Kim H.J.
- A1 019 Cool-down processes of NICA accelerator complex**
Mitrofanova Y.A.
- A1 021 Liquid cryogen targets for experiments in nuclear relativistic and particle physics**
Konstantinov A.V.

- A1 033 Properties of impregnated superconducting coils made from YBCO coated conductor using different technology of impregnation**
Frolek L.
- A1 049 Study of Heat Electrodynamic Processes in High Temperature Superconductors (HTSC) Taking into Account Defects of Their Internal Structure**
Dontsova E.
- A1 056 Superconducting Unclosed Shields for Improving Homogeneity of the Magnetic Field in Magnetic Systems**
Kulikov E.
- A1 062 Studies of Performance Characteristics of Twin Thermoacoustic Prime Mover with Gas Mixtures as Working Fluids**
Behera U.
- A1 065 Cryogenic System of Superconducting Separator for Kaon Channel of IHEP Accelerator**
Kozub S.
- A1 068 High-Power Stirling-Type Pulse Tube Cryocooler for Operation near 80 K**
Thummes G.
- A1 071 Cryogenic He experiment on natural turbulent convection**
Kralik T.
- A1 072 Radiative heat transfer at low temperatures over microscopic distances in vacuo**
Kralik T.
- A1 086 Critical Current Degradation Analysis in Irradiated Superconducting Materials**
Sosnowski J.
- A1 090 Status of the Cryogenic System for the Ariel E-Linac at Triumf**
Sitnikov A.
- A1 093 Opportunities for Improving the Electrochemical Characteristics of Ni-Zn Batteries Using High Temperature Superconducting Ceramic**
Dimitrov D.
- A2 023 Mixtures on basis of rare gases. Application and methods of production**
Bondarenko V.L.
- A2 027 Design of a cryogenic helium plate-fin heat exchanger**
Hu Z.J.
- A2 028 Development of an Equation of State for the Representation of Solid-Liquid, Solid-Vapour, and Liquid-Vapour Equilibria of Substances of Interest for the Air Distillation Process**
Campestrini M.
- A2 029 Study Concerning the Possibility for Increasing Argon Recovery from a Cryogenic Air Separation Process**
Popa V.
- A2 034 Test procedures for cryogenic components and considerations for leakage measurement**
Boersch M.
- A2 083 Study on the Miniature Turbo-Expander of Reverse Brayton Cryocooler at 100K**
Hou Y.
- A2 084 Experimental investigation on the thermodynamic performance of turbo-expander in two phases**
Hou Y.
- A2 091 Computer program for simulating the rollover phenomenon during the storage of the stratified layers of liquefied natural gas**
Belgacem A.

- A1/2 025 Cryogenic hydrogen storage in highly porous materials - A modelling approach**
Schlemminger Ch.
- A1/2 069 The development of methods and means of gasification of liquid hydrogen under supercritical parameters**
Cheremnykh O. Ya.
- A1/2 082 The development of methods and means of evacuation of hydrogen from tanks of a space flying apparatus under supercritical parameters**
Cheremnykh O. Ya.
- C1 048 Dreams and Reality of Superhigh Frequency Cryogenic Technology in Surgery**
Butorina A.

THURSDAY, SEPTEMBER 13, 2012

IX. LIQUEFIED NATURAL GAS (LNG)

Chair: Scurlock R., Schustr P.

- 08:30 031 Conceptual Design of an Efficient Small LNG Production Facility**
Quack H.
- 08:55 041 A multiobjective optimization for micro-scale liquefaction plants**
Arteconi A.
- 09:20 040 LNG as vehicle fuel in Italy**
Arteconi A.
- 09:45 047 Exergy Analysis to Determine Appropriate Design and Operating Parameters for Collins Refrigerator-Liquefier under Mixed Mode Operation**
Chowdhury K.

COFFEE BREAK

10:10 – 10:35

X. CRYOBIOLOGY AND -TECHNOLOGY

Chair: Todorovich M., Spörl G.

- 10:35 046 Analysis on protein stability in Tris buffered purified bulk solutions during the freezing process**
Heidingsfelder J.
- 11:00 003 Coupled Transport of Water and Cryoprotectant across Cell Membranes and Applications to Cryopreservation**
Weng L.
- 11:25 064 Biological and technological challenges establishing a future-proof cryogenic biomaterialbank**
Ciba P.
- 11:50 087 Cryopreservation of mesenchymal stromal cells by vitrification in multicomponent solutions**
Petrenko A.
- 12:15 070 Safety and Quality Assurance in Donation, Harvest and Preservation of Cells and Tissues of Human Origin – A Review of Own Experience**
Mericka P.

LUNCH BREAK

12:40 – 14:00

Business lunch meeting (Commissions A1, A2, C1)

XI. LIQUID HYDROGEN

Chair: Haberstroh C., Bondarenko A.

- 14:00 067 Thermophysical Properties of Hydrogen and Deuterium at all Ortho-Para Compositions**
Leachman J.
- 14:25 080 Principles for the liquefaction of hydrogen with emphasis on pre-cooling processes**
Walnum H.T.
- 14:50 081 Search for the Best Processes to Liquefy Hydrogen in Very Large Plants**
Quack H.
- 15:15 061 The development of methods and means for long-term storage of liquid hydrogen of high purity**
Cheremnykh O.
- 15:40 050 A new cryogenic high-pressure H₂ test area: First results**
Klier J.

COFFEE BREAK

16:05 – 16:30

XII. RARE GASES

Chair: Arkharov A., Lansky M.

- 16:30 059 Assessment of the Storage of Crude Helium in Reserves in Europe and elsewhere**
Clarke R.H.
- 16:55 024 Cascade units for neon isotope production by rectification method**
Bondarenko A.
- 17:20 022 Enrichment of rare gases concentrates with application of diaphragm technologies**
Bondarenko A.
- 17:45 060 The Future of Helium? A Global Agency to Oversee Production, Storage, Supply and Use of Helium Gas and Liquid**
Scurlock R.

CLOSING CEREMONY

Chair: Chrz V., Herzog R., Scurlock R., Coulomb D., Lebrun P.

18:10 – 18:30

CONFERENCE DINNER

19:30 – 23:30

The conference dinner is sponsored by



ILK Dresden



CULTURAL EVENTS

Welcome Party on Monday, September 10, 2012

Time: 19:00 - 21:00

Place: **at the Dorint hotel** (= conference site)

Participation is complimentary for registered participants and accompanying persons.

Conference Dinner on Thursday, September 13, 2012

Time: 19:30 – 23:30

Place: **Dresden City Museum** (walking distance from the conference site)

The conference dinner is included in registration fees.

Conference badges and invitation cards are necessary.

Tickets for other guests are available at the registration desk, the price is 45 €.

SIGHTSEEING TOURS

Sightseeing Tours must be reserved in advance, at the registration & information desk during your registration at the latest. Each participant will receive a voucher/ticket at the registration desk.

Dresden – Historic Centre Tour on Tuesday - September 11, 2012 22 €

A walking evening tour with the most famous sights such as Zwinger Palace, Theatre Square, Church of Our Lady, Royal Palace, Procession of Princes and Newmarkt Square. You can check during this tour if Dresden is really the German Florence at the Elbe River.

Meeting point: 19:00 in front of the Dorint hotel

End point: 20:30 downtown

The Transparent Factory on Wednesday - September 12, 2012 10 €

Volkswagen combined the construction of the factory and its idea of a new luxury class car, manufactured with the aim of linking innovative automobile construction to the traditional values of manufactories, while making a communicative event of the building's open transparent architecture.

Meeting point: 18:50 in front of the Dorint hotel

End point: 20:30 Transparent Factory

Dresden – City of Music on Thursday - September 13, 2012 25 €

You will visit the Catholic Cathedral with the greatest organ by Silbermann, the Church of our Lady inside, the domain of Johann Sebastian Bach and also the Holy Cross Church. You will take a look at the Semperopera House as well, one of the most beautiful opera houses in Europe.

Meeting point: 14:00 in front of the Dorint hotel

End point: 15:30 downtown

Concert on Tuesday, September 11, at 19:30 14 €

- The Italian folklore between life and death - Beautiful Monster
- More information on the conference web page (only in German)
- In the Palais in "Grossen Garten in Dresden" - in a walking distance from the Dorint hotel (15-20 min) or 2 stops by tram.
- Payment: cash at the registration desk
- Booking: Romana@icaris.cz, deadline on September 6, 2012

Theatre Performance - on Wednesday, September 12, at 19:30 15 €

- "Figaro's Wedding", a performance in German
- More information on the conference web page (only in German)
- In the St.pauls Church Ruin - not open air, with glassy roof
- Payment: cash at the registration desk

- Booking: Romana@icaris.cz, deadline on September 6, 2012

Recommended sightseeing points

Meissen with the porcelain manufactory,
Moritzburg castle,
Pillnitz castle,
Saxon Switzerland

Please contact directly:

IDEE-Reisen (idee-reisen@dresdenerleben.de)

or Dresden Tourismus (www.dresden.de/tourismus, info@dresden.travel)

or Erlebnistouren Dresden (www.erlebnistouren-dresden-renger.de,
info@erlebnistouren-dresden-renger.de)

TECHNICAL VISITS

Friday, September 14, 2012

Technical visits must be reserved in advance using the conference registration form or by e-mail to the conference secretariat (Romana@icaris.cz).

A) Institute for Air Handling and Refrigeration

The ILK Dresden - Institut für Luft- und Kältetechnik (Institute of Air Handling and Refrigeration) - is your competent partner for research and development tasks in the fields of air handling and refrigeration technologies and their applications. The institute is an independent and free research enterprise with the legal status of a non-profit limited liability company. The ILK Dresden works as a commercial research & development company for all interested businesses and institutions of the related and applied branches as well as for the supplying industries. The ILK main departments comprise different fields of technology which are subdivided into departments and working groups. Research, development and services are provided in the following ILK fields of technology and working areas: Cryogenics and Low Temperature Physics, Refrigeration and Heat Pumps, Air Handling Technology, Applied Materials Engineering and Applied Energy Engineering.

Detailed information can be found at: <http://www.ilkdresden.de/>

Commission: A1, A2, C1

Address: Bertolt-Brecht-Allee 20, 01309 Dresden, Germany

Transport: mini-bus taxi

Meeting point: entrance hall of the Dorint hotel at 8:30

Duration: approx 2 hours

Return: 11:00 – Dorint hotel

B) Linde AG - Geschäftsbereich Linde Gas - Distribution Center Leuna

The Leuna facilities (located close to Leipzig, two hours to drive from Dresden) are one of the major sites of the Linde Group. It comprises several Air Separation Units, with the most modern put into operation in 2007, adding a capacity of about 64000 Nm³/h and including a rare gas separation (Kr/Xe, He/Ne). LN₂, LOX and LAr for trailer distribution are produced. A pipeline net comprising several 100 km lines for O₂, N₂ and H₂ is available, and a cylinder filling station is located at site.

Presently a remote operation control (ROC) system is installed to make Leuna a central control place for air separation plants all over Germany.

In 1994 a first and in 2003 a second steam reformer for large scale hydrogen production were put into operation. Since 2007 a hydrogen liquefaction facility with a capacity of 5 tons per day is operated there as well.

Detailed information can be found at: <http://www.linde-gas.de>

Commission: A2

Address: Spergauer Straße 1a, 06237 Leuna, Germany

Transport: by bus

Meeting point: entrance hall of the Dorint hotel at 8:15

Duration: approx 6 hours (lunch included)

Return: 16:30 - Dorint hotel (via Leipzig Main Station and/or Leipzig-Halle Airport)

C) Helmholtz-Zentrum Dresden-Rossendorf e. V.

The Helmholtz-Zentrum Dresden-Rossendorf is a member of the Helmholtz Association of German Research Centres pursuing new insights that will allow us to maintain and improve all of our lives. That's why the HZDR conducts research in the sectors Health, Energy und Matter. Scientific research equipment of national and international importance is operated in the HZDR and as such the HZDR is coordinating member and partner of numerous cooperations and projects. The Helmholtz Centre Dresden-Rossendorf has seven institutes and the Department of Research Technology.

The Dresden High Magnetic Field Laboratory (Hochfeld-Magnetlabor Dresden, HLD) focuses on modern materials research in high magnetic fields. The HLD is engaged to open the access to magnetic fields up 100 T. In particular, electronic properties of metallic, semiconducting, superconducting, and magnetic materials are investigated.

Detailed information can be found at: <http://www.hzdr.de>

Commission: A1, A2

Address: Bautzner Landstraße 400, 01328 Dresden, Germany

Transport: by bus

Meeting point: entrance hall of the Dorint hotel at 8:15

Duration: approx 3 hours, lunch 1 hour (self-paid)

Return: 13:00 – Dorint hotel

D) Leibniz Institute for Solid State and Materials Research Dresden

The Leibniz Institute for Solid State and Materials Research Dresden (Leibniz-Institut fuer Festkoerper- und Werkstoffforschung Dresden e.V., in short: IFW Dresden) is a non-university research institute and a member of the Leibniz Association. It is focused on modern materials science and combines explorative research in physics, chemistry and materials science with technological development of new materials and products. The staff comprises about 400 permanent employees and about 100 guest scientists in addition. One of the focus points in research work are superconducting materials and other low temperature research applications. The tour will comprise the central helium plant and distribution system recently put into operation as well as a number of other cryogenic activities.

Detailed information can be found at: <http://www.ifw-dresden.de>

Commission: A1, A2

Address: Helmholtzstraße 20, 01069 Dresden, Germany

Transport: mini-buses

Meeting point: entrance hall of the Dorint hotel at 8:45

Duration: approx 3 hours + lunch (paid by IFW)

Return: 13:30 - Dorint hotel (with intermediate bus stop at Dresden main station on demand)

EXHIBITION

Venue

Dorint hotel Dresden - Lohengrin Hall + Freischütz Hall (1st floor)

Exhibition installation

Monday, September 10, 2012 from 14:00 till 19:00

Tuesday, September 11, 2012 from 8:00 till 9:00

Exhibition dismantling

Thursday, September 13, 2012

immediately after the scientific programme
before the conference dinner

Leaflets

= information for the exhibitors who have ordered the distribution of advertising leaflets to all participants

We expect about 150 registered participants at this moment.

Leaflets should be sent to ICARIS before the beginning of the conference till September 5 at the latest

The address is:

ICARIS - Cryogenics 2012

Malé náměstí 144/1

110 00 Praha 1

Czech Republic

Shipments

All shipments can be delivered to the hotel one week before the beginning of the conference at the earliest, it means from Sept. 3 till 9, 2012.

Use this address:

Dorint hotel Dresden

Veranstaltung ICARIS

Grunaer Strasse 14

D-01069 Dresden

Germany

The conference has not any official forwarding agent in Dresden.

All exhibitors are asked to use their own forwarder and to coordinate the arrival and departure of all their shipments.

Please note that neither ICARIS nor the Dorint hotel are responsible for customs formalities. Take care of all necessary documents!

Access to the exhibition area

Both exhibition rooms are located on the 1st floor.

If you arrive by your own car you can use a "short" parking in the inner courtyard, and later a hotel garage.

Freight elevator: 2 m length / 1.8 m width / 2.2 m height / 1 000 kg

The smallest door on the way to the exhibition area: 1.2 m width / 1.8 m height

Silent hours: 9 p.m. - 8:30 a.m.

Registered exhibitors in alphabetical order:

Air Products Plc.

Crokford Lane, Chineham, Basingstoke
Hampshire, RG 24 8FE,
United Kingdom
Phone: +44 1256 728 377
baldwip@airproducts.com
www.airproducts.com

Cryophysics GmbH

Dolivostrasse 9
64293 Darmstadt
Germany
Phone: +49 6151 81570
info@cryophysics.de
www.cryophysics.de

Cryotherm GmbH & Co.KG

Euteneuen 4
57548 Kirchen
Germany
Phone: +49 2741 9585-0
info@cryotherm.de
www.cryotherm.de

HEROSE GmbH

Elly-Heuss-Knapp-Strasse 12
23843 Bad Oldesloe
Germany
Phone: +49 4531 5090
info@herose.com
www.herose.com

ISISAN ISI SANAYI VE TICARET A.S.

O.S.B. 21.CAD NO.6
38070 Kayseri
Turkey
Phone: +90 352 321 13 43
info@isisan.com.tr
www.isisan.com.tr

KRIOSYSTEM

Muchoborska 18
54424 Wroclaw
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biuro@kriosystem.com.pl
www.kriosystem.com.pl

Nexans Deutschland GmbH

Kabelkamp 20
30179 Hannover
Germany
Phone: +49 511 676 3769
Holger.Lehmann@nexans.com
www.nexans.com

Chart Qdrive

220 Airport Industrial Drive, Ste.500
Ball Ground, GA 30107
USA
Phone: +01 770 721 7698
Taylor.Erwin@chart-ind.com
www.qdrive.com

CryoShop.de

Claudius-Keller-Strasse 3B/6.OG
81545 München
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Phone: +49 89 638 99012
einfachcool@cryoshop.de
www.cryoshop.de

CryoVac GmbH & Co. KG

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info@cryovac.de
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Institut für Luft- und Kältetechnik gGmbH Dresden

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www.ilkdresden.de

Dr. Jürgen Christian Müller

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Linde Kryotechnik AG

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Phone: +41 52 304 0555
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Peco Controls – Europe Ltd.

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United Kingdom
Phone: +44 1386 556622
office@peco-europe.com
www.peco-europe.com

RUAG Space GmbH

Stachegasse 16
1120 Vienna
Austria
Phone: +43 1 80199 3070
johannes.stipsitz@ruag.com
www.ruag.com/thermal

VRV S.p.A.

Via Burago 24
Ornago (MB) 20876
Italy
Phone: +39 0396025511
cryo@vrv.com
www.vrv.com

Stöhr Armaturen GmbH & Co.KG

Dornier Strasse 4
86343 Königsbrunn
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Phone: +49 8231 3490 31
luede@stoehr-valves.de
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