Welcome to ISDEIV 2012 in Russia!

Dear colleagues and participants of ISDEIV-2012!

We are glad to greet You in Tomsk at the 25th International Symposium on Discharge and Electrical Insulation in Vacuum. The Siberian land has already played host to participants of the Symposium the history of which spans almost half a century. This happened in Novosibirsk in 1976. That 36 year old event and the forum held today are significant milestones for the Siberian academic science.

The fact that the Tomsk Institute of High Current Electronics SB RAS was chosen as a host of the 25th ISDEIV points to recognition of the Institute's research in the field of nanosecond vacuum breakdown and pulsed gas discharges. It is this field, along with pulsed power, that was taken fundamental for the scientific profile of the Institute by its founder Professor Gennady Mesyats (a winner of the Dyke award in 1990), and the field continues to be fundamental to the Institute which will celebrate its 35th anniversary in September, 2012. The cause for this is a huge variety, multiscale range, and complexity of fast discharge phenomena that make a crucial impact on the operation of almost all pulsed power devices – from high-current electron accelerators and microwave generators to superhigh-power pulsed gas lasers and soft and hard X-ray sources based on plasma pinches or electron beams. The research in the field unceasingly gives more and more new unexpected physical results and opens up unique possibilities for engineering solutions.

The Symposium will cover five days during which 170 reports of more than 150 participants from 21 countries of the world will be presented and discussed.

On behalf of the Local Organizing Committee, Institute of High Current Electronics, and Tomsk Scientific Center SB RAS we wish all participants of the Symposium fruitful work, rich scientific communication, and pleasant stay in Tomsk.

Nikolai Ratakhin
Correspondent Member of RAS
Director, IHCE SB RAS
Symposium LOC Chairman

Efim Oks
Professor,
Symposium
LOC Co-Chairman

Scope

The International Symposium on Discharge and Electrical Insulation in Vacuum (ISDEV) is a non-profit international forum with the aim to encourage the advances in science and application of electrical insulation and discharges in vacuum, primarily through scientific communication and data exchange.

The Symposium is held every two years (even years) and is interdisciplinary meetings at which scientists exchange research data, present progress reports, and discuss ideas and challenges for the future of the field of electrical discharges and insulation in vacuum, covering both fundamental and applied aspects. The Symposium program consists of invited talks, invited oral contributions, and poster presentations. Minicourses and informal discussions on relevant topics may also be offered in addition to the regular Symposium schedule.

The Symposium has been held constantly every 2 years since 1964. The prior host countries of the Symposium were the following:

1964	Cambridge, Massachusetts, USA
1966	Cambridge, Massachusetts, USA
1968	Paris, France
1970	Waterloo, Canada
1972	Poznan, Poland
1974	Swansea, United Kingdom
1976	Novosibirsk, Russia
1978	Albuquerque, New Mexico, USA
1980	Eindhoven, The Netherlands
1982	Columbia, Missouri, USA
1984	Berlin, Germany
1986	Shoresh, Israel
1988	Paris, France
1990	Santa Fe, New Mexico, USA
1992	Darmstadt, Germany
1994	Moscow-St. Petersburg, Russia
1996	Berkeley, California, USA
1998	Eindhoven, The Netherlands
2000	Xi'an, China
2002	Tours, France
2004	Yalta, Ukraine
2006	Matsue, Japan
2008	Bucharest, Romania
2010	Braunschweig, Germany

The 25th ISDEIV will be hosted in Tomsk, Russia, September 2 – 7, 2012, by the Institute of High Current Electronics, Siberian Branch of the Russian Academy of Sciences.

Contents

1. Organizing Committees

Permanent International Scientific Committee (PISC)

Andre Anders, USA, Chairman
Raymond L. Boxman, Israel
Alexey Chaly, Russia
Edgar Dullni, Germany, Secretary-elect
Lesli T. Falkingham, United Kingdom, Secretary, Chair-elect
Shenli Jia, P.R. China
Zou Jian, P.R. China
Eiji Kaneko, Japan, Vice Chairman
Dieter Koenig, Germany
Michael Kurrat, Germany
H. Craig Miller, USA
Dan Pavelescu, Romania
Dmitry I. Proskurovsky, Russia
Ekkehard Schade, Switzerland
Sergej Shkol'nik, Russia
Rene P.P. Smeets, The Netherlands, Chair Awards Committee
Kenneth W. Struve, USA, Treasurer
Satoru Yanabu, Japan

Local Organizing Committee (LOC)

Nikolay Ratakhin, Institute of High Current Electronics, Chairman
Efim Oks, Institute of High Current Electronics, Co-Chairman
Alexey Markov, Institute of High Current Electronics, Secretary
Alexander Batrakov, Institute of High Current Electronics
Georgy Yushkov, Institute of High Current Electronics
Igor Pegel, Institute of High Current Electronics
Dmitry Proskurovsky, Institute of High Current Electronics
Andrey Kozyrev, Institute of High Current Electronics
Alexander Khuzeev, Institute of High Current Electronics

2. General Information

2.1. Getting to Symposium Location

From Tomsk's Bogashevo Airport to Rubin Hotel

Travel from Tomsk's Bogashevo Airport will be provided by the conference LOC:

on Saturday, September 1, and on Sunday, September 2,
from Bogashevo Airport to Rubin Hotel,
on Friday, September 7, and on Saturday, September 8,
from Rubin Hotel to Bogashevo Airport.

Please, inform the Organizing Committee about your travel schedule to allow us to arrange a meeting and transport you from and to Tomsk's Bogashevo Airport. The time it takes to get from the airport to the hotel is about 40 minutes.

Taxi service is also available at the Bogashevo Airport. The cost varies with taxi companies, and is in the range 600–1000 Russian Rubles (15–25 Euros) per car.

From Novosibirsk to Tomsk

For some foreign guests, it may be convenient to arrive at the Tolmachevo International Airport in Novosibirsk (about 300 km from Tomsk). The Tolmachevo International Airport takes flights from Hanover, Frankfurt, Beijing, Istanbul, and other cities.

Please, inform the Organizing Committee about your travel schedule to allow us to arrange a meeting and transport you from and to the Tolmachevo Airport. The time it takes to get from the Tolmachevo airport to the hotel is about five hours.

2.2. Symposium Location

The ISDEIV will be held at the Rubin Hotel and Congress Center in Tomsk; (http://rubin.tomsk.ru/en/).

The Rubin Congress Center is a hotel complex which is widely used for conferences and seminars held in Tomsk. The complex is located in a picturesque and environmentally clean area within the domain of the Scientific Research Institutes of the Russian Academy of Sciences, which creates a unique atmosphere for intellectual creativity.

The Rubin complex offers single and double rooms, superior quality rooms, and luxury suites. It is located about 7 km from Tomsk downtown. There are several public bus lines from the hotel to the downtown (priced at 12 Rubles), but we highly recommend to use taxi service (priced at about 200–250 Rubles). You can order a taxi at the

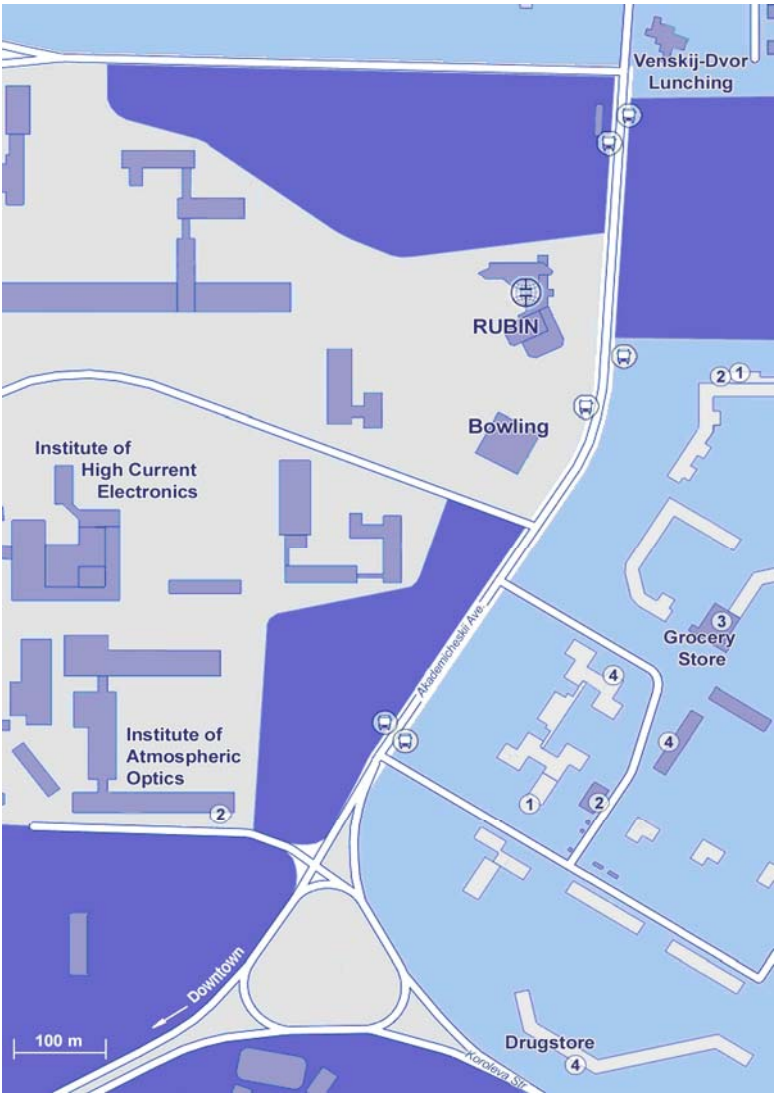
Rubin reception desk or at the Local Organizing Committee's office. To return from the downtown, just show a Rubin business card to a taxi driver.

The Large Conference Auditorium (300 seats) is equipped to the latest technology and routinely serves participants of many major conferences and congresses. The foyer of the Large Conference Auditorium is intended for poster programs and industrial exhibitions. All necessary office equipment and high-speed internet access are provided to guests at the Business Center. Wi-Fi internet access is available throughout the Congress Center.

The Symposium Location address:

Rubin Hotel and Congress Center,
16 Akademichesky Prospekt,
Tomsk, 634021, Russia
Telephone/fax: +7 (3822) 49-26-89 / +7 (3822) 49-25-59,
Email: rubin@mail.tomsknet.ru

2.3. Map of Symposium Location Area



1) Bank, currency exchange **2) ATM**

3) Grocery Store **4) Drugstore**

2.4. Registration

The registration desk will be located on the first floor of the Rubin Hotel, and will be open

Sunday	September 2, 2012	13:00 – 19:00
Monday	September 3, 2012	08:30 – 12:00

On registration, participants will receive a copy of the symposium proceedings and all other printed materials.

For registration after 12:00 pm on Monday, September 3, and for any questions or help, please, visit the Local Organizing Committee office at the Rubin Hotel. The LOC office will be open:

Monday	September 3, 2012	12:00 – 17:30
Tuesday	September 4, 2012	08:30 – 17.30
Wednesday	September 5, 2012	08:30 – 12:00
Thursday	September 6, 2012	08:30 – 17:30
Friday	September 7, 2012	08:30 – 13:00

In the case of emergency, including after hours, please, do not hesitate to contact Efim Oks at +79138206576 (cell phone).

The symposium fee is payable in Euros (€) and includes:

- Oral and poster sessions
- A copy of the conference proceedings
- Welcome reception
- All coffee breaks
- 5 working lunches (Monday 3 to Friday 7)
- Conference banquet,
- Conference excursion.

The full fee is € 450.00 (IEEE members € 400.00).
The discounted fee for students and retirees is € 200.00.
The accompanying person registration fee is € 150.00 and includes lunches, symposium dinner, all social events, and a special program for accompanying persons.

With our apology, credit cards are not accepted for payments. All payments must be made at the registration desk and in cash. No other options are provided.

2.5. Coffee Break and Lunch

Refreshing drinks, coffee and tea, as well as small snacks will be offered on coffee breaks in the foyer of the Large Conference Auditorium.

Working lunches at the “Vienna Court” restaurant (Venskij-Dvor in Russian) are included in the conference registration fee. The restaurant is located 3-5 minutes by

walking from the Rubin Congress Center (please, see the map). Please, take your lunch ticket with you and be careful when crossing the road.

You can also order other meals or drinks of your choice from the Vienna Court restaurant menu for extra cost.

You can have dinner at the Rubin Hotel restaurant or the Vienna Court restaurant, which are nearest to the Symposium location, or enjoy dining at other dining places in the downtown of Tomsk. For assistance, please, resort to the Local Organizing Committee office.

2.6. Internet Access

Wi-Fi internet is available at the Rubin Hotel and Congress Center. Please, ask for assistance at the Hotel reception desk or the Local Organizing Committee office.

2.7. Supporters and Sponsors

The ISDEIV 2012 is supported by the Russian Foundation for Basic Research (RFBR) and by the Siberian Branch of the Russian Academy of Sciences.

We would like to thank the following sponsors of the Tomsk ISDEIV 2012 meeting:

Gold Sponsor

Silver Sponsor

Bronze Sponsors

Technical Sponsors

Russian Academy of Sciences

3. Social Program

3.1. Welcome Reception

Sunday, September 2, 2012
From 15:00 till 19:00
Foyer of the Large Conference Auditorium at the Rubin Congress Center (Symposium location).

Salads, snacks and other meals, with both alcoholic and non-alcoholic drinks, will be served. Everyone attending the conference (including registered accompanying persons) is welcome.

3.2. Governmental Reception and Cultural Evening

Monday, September 3, 2012
From 19:00 till 21:30
International Cultural Center of Tomsk Polytechnic University
Tomsk, 13 Usov St.

Meeting point: Main Entrance of the Rubin Hotel at 18:30.

All Symposium participants and accompanying persons are invited. Wine, soft drinks, salads, and meals will be served at the reception. During the reception the Academic Choir of Tomsk State University will give a short performance.

The Academic Choir of the Tomsk State University was founded in 1959. The Choir performs Sacred Music of the XVII century and compositions of Russian and Western European composers in classical and modern choral styles. The Academic Choir is a distinctive musical insignia of Tomsk State University and Tomsk as a whole; it is a winner of various National and International musical contests.

Transport by bus to the Rubin hotel will start at 21:30.

Please, take your Reception ticket with you.

3.3. Symposium Tour and Symposium Dinner

Wednesday, September 5, 2012
From 15:15 till 21:30
Meeting point: Main Entrance of the Rubin Hotel at 15:15.

This tour will be particularly interesting for those who are in Tomsk for the first time. Introduction to the history of Tomsk begins with a visit to Voskresenskaya Mountain where Tomsk was founded in honor of which Memorial Stone was put up. Nearby, you will see a former police station with a fire-watch tower, which is now the Tomsk Museum. The wooden Spassky Tower and the wooden wall there are reconstructed

as part of the former fortress, with their old style kept carefully. Nearby, there is a Catholic Church, and a little bit far, an Orthodox Church of the Resurrection. You will see a reconstructed belfry with a bell weighting 16 tons. Also, guests will visit the Central Square of the city, still called Lenin Square, where Orthodox churches and Lenin Monument are neighbors. Part of the tour goes along the main avenue of the city with many architectural and historical landmarks. The end point of the tour is the Lagerny Sad (Camp Garden) – a beautiful memorial place with an amazing view of the River Tom.

The Symposium dinner will be held from 19:00 till 21:30 at the Tsar's Hall of Celebrations – a beautiful building representative of typical Soviet monumental classicism. The building impresses by big halls decorated with soft colors and gold, antique moldings, crystal chandeliers, and oak parquet. The Restaurant keeps to traditions of various world cuisines.

Transport by bus to the Rubin Hotel will start at 21:30.

Please, take your Tour/Diner ticket with you.

3.4. Program for Accompanying Persons

The fees for all events and bus transport are included in the registration fee for Accompanying Persons.

All excursions take 2–3 hours, except for the excursion to the "Tomskaya Pisanitsa" Museum on Thursday, September 6; this excursion will take all day long.

The meeting point to all excursions for Accompanying Persons is the main entrance of the Rubin Hotel. Please, be at the meeting point a few minutes before the time indicated below and take your excursion ticket with you.

Monday, September 3, 2012 at 10:00

Siberian Botanical Garden

The Siberian Botanical Garden was founded in 1880 under the leadership of Professor P. N. Krylov. Currently, the Garden occupies 128 hectares, a greenhouse complex (6500 square meters), and an experimental farm (114 hectares). The exposition of live plants consists of more than 6000 species.

The staff of the Siberian Botanical Garden was awarded the R.F. Government Prize in the field of science and technique for establishment of the botanic complex unique to the Northern Latitudes of the planet.

The Siberian Botanical Garden provides a study location for students of the Department of Biology and Soil, and the International Department of Agriculture and Ecology, where they do practical work as well as research for course papers and final projects.

Monday, September 3, 2012 at 15:00

Tomsk State University Museums

The Mineralogical Museum is one of the oldest and largest university museums in Siberia. From the first days of its existence, the Museum has paid much attention to scientific and educational activities.

The Paleontology Museum includes all the paleontological collections received previously by the University. Further accumulation of the collection owed to geological exploration in Siberia. Among the most valuable peaces are fragments of skulls, jaws, and teeth of mammoths, mammoth skulls, skeletons and fragments of woolly rhinoceroses, bison, horses, reindeer, cave bear and lions, and many others.

The Zoological Museum has a large collection of stuffed animals of the North Arctic Ocean. There is also a collection of reptiles, amphibians, and invertebrates provided by both wet and dry species. The museum has an exchange fund and participates in learning processes by providing training sessions for students.

Tuesday, September 4, 2012 at 10:00

Beer Museum

The “Tomskoye Pivo” (“pivo” is beer in Russian) Company is one of the biggest beer and kvass (traditional Russian non-alcoholic soft drink) producers in West Siberia. The whole production process is realized using high-tech equipment from Germany, Sweden, Finland, Great Britain, and the Netherlands. The products of the Company are distributed to more than 50 Russian cities from Moscow to the Far East.

During its 125-year history the brewery has never stopped and is now one of the oldest enterprises in the Tomsk Region. The brewery was founded by the Kruger family from Germany – a promoter of brewing technologies in Tomsk.

Tuesday, September 4, 2012 at 15:00

Old Fashion Wooden Houses in Tomsk

Wooden architecture gives a unique charm to Tomsk. At the beginning of the XX century, wood carving in Tomsk reached extraordinary heights. One can find several different architectural styles, each characterized by its own ornament in decoration of windows, doors, and cornices. Former mansions of merchants and manufacturers were the subject of rivalry in architectural design and patterns of wooden lace. As a result, the city acquired a very specific and beautiful architectural style.

Wednesday, September 5, 2012 at 10:00

Museum of Architecture

The Museum of Architecture is one of very few museums of similar profile in the Siberian region. The museum presents important milestones in the history of the

wooden architecture of Tomsk. The museum has pieces of carved decoration and shows techniques and types of wood carving. The most attractive peaces relate to eclecticism in architecture, the so-called "Siberian" style. Particularly attractive decorative elements are those of Tomsk tenement houses that were richly decorated with carvings. As a rule, the decor has individual character. Considerable attention is paid to the Art Nouveau style, which is widely represented in the wooden architecture of Tomsk. The museum also has a unique collection of cast iron stoves manufactured at various ironworks.

Thursday, September 6, 2012 at 10:00

Museum "Tomskaya Pisanitsa". Full day excursion.

The historical, cultural and natural museum-preserve "Tomskaya Pisanitsa" was founded in 1988. The base of the museum is rock with ancient drawings. In Siberia, rocks and stones with ancient drawings are called "pisanitsa". The drawings of these pisanitsa were made with a piece of stone. They were knocked out with light hits. The museum-preserve is situated on the right bank of the River Tom.

Friday, September 7, 2012 at 10:00

Memorial Museum "NKVD remand prison"

The NKVD – a short for Soviet Police in Stalin's time – was an important part of the GULAG system. The "NKVD remand prison" Memorial Museum was opened in 1989. At that time, Perestroika in the Soviet Union was underway, and the opening of this museum was a symbol of change. The museum is of great interest to Tomsk tourists as well as government officials and journalists. It is the most visited museum in Tomsk.

The museum is located in the basement of the building, where an internal prison of the Tomsk city department of the NKVD was located from 1923 to 1944. The area adjacent to the building served as a prison courtyard where the Square of Memory is now located. The Museum and the Square of Memory is a historical and architectural memorial.

4. Scientific Program

4.1. Symposium Topics

A: BREAKDOWN AND FLASHOVER

A1. Vacuum breakdown and pre-breakdown phenomena
A2. Surface discharges and flashover phenomena
A3. RF breakdown and multipactoring phenomena
A4. High field effects in microelectromechanical systems and nano-structures

B: VACUUM ARCS

B1. Switching in vacuum and related phenomena
B2. Interaction of vacuum arc with magnetic field
B3. Vacuum arc physics
B4. Computer modeling and computer aided design
B5. Pulse power physics and technology

C: APPLICATIONS

C1. Vacuum interrupters and their applications
C2. Deposition of coatings by vacuum arc plasmas and related technologies
C3. Electron, ion, neutron, X-ray and other beam and light sources
C4. Accelerators and fusion reactor related issues
C5. Space related technologies

4.2. Instructions for Speakers and Poster Presenters

Oral Presentation

All oral presentations will take place in the Large Conference Auditorium. Each regular oral presentation will last 15 minutes and be followed by 5 minutes discussion.

The equipment provided for the speakers will include:

- microphone;
- personal computer with an LCD projector;
- laser pointer.

Microsoft® PowerPoint® and Adobe® Acrobat Reader® will be available for oral presentations. Presenting authors are invited to pass their presentations via a CD disk or a USB memory stick into a multimedia computer before the session starts.

If you need additional audio/visual equipment, please, notify the LOC about your needs before August 20.

Speakers are kindly requested to provide demonstration material to session technical supporters, and to introduce themselves to the session chairman before the start of their session.

Poster Presentation

All poster sessions will be held in the foyer of the Large Conference Auditorium. The poster board size is 120 cm (height) by 90 cm (width). Poster presentations should include the following material in addition to the main part.

- Title of the presentation
- Authors' names and their organization(s)
- Introduction
- Conclusion

The poster boards are marked with codes corresponding to the paper numbers (please refer to the scientific program). Please, do not cover the numbers. A poster information desk with fixing materials will be available.

Please, put up your poster prior to the start of the poster session and remove your poster shortly after the session.

Please, make sure that at least one of the authors is present at the poster during the session.

4.3. Information for Authors

Accepted manuscripts will be published in the Symposium Proceedings.

Authors who are interested in having his/her manuscripts reviewed for one of the following Special Issues are requested to submit extended and complete journal manuscripts. The journal manuscripts are requested to be not identical to the Symposium Proceedings manuscripts and must be prepared according to the standards and principles of IEEE Transactions:

IEEE Transactions on Plasma Science
IEEE Transactions on Dielectrics and Electrical Insulation.

4.4. Short Courses

Two special lectures for students and young professionals are expected:

Short Course I: Tuesday, September 4, 2012, 16:00 – 18:00
Prof. Raymond Boxman, Israel: "English Writing"

Short Course II: Thursday, September 6, 14:20 – 16:00
Prof. Rene P. P. Smeets, The Netherlands:
"Application of vacuum circuit breakers above 52 kV"
Both lectures will take place in the Academic Room of the Rubin Hotel and Congress Center.

4.5. Panel Discussions

Two Panel Discussions will take place at the Large Conference Auditorium:

Panel Discussion I Tuesday, September 4, 2012, 18:00 – 19:30
"Overvoltages generated by VCB at switching of inductive loads"
moderated by Prof. Rene P.P.Smeets, The Netherlands

Panel Discussion II Thursday, September 6, 2012, 18:00 – 19:30
"Is there anything fundamentally new in our field?"
moderated by Dr. Andre Anders, USA

4.6. Awards

The Dyke Award, endowed by the Toshiba Corporation, will be given to a person identified by the Awards Committee for an outstanding body of significant contributions in the field of electrical discharges or electrical insulation in vacuum. The Dyke Award Address is given by the awardee during the Symposium.

Previous recipients of the Dyke Awards are

- Walter P. Dyke (1988)
- Gennady A. Mesyats (1990)
- George A. Farrall (1992)
- Burkhard Jüttner (1994)
- H. Craig Miller (1996)
- Satoru Yanabu (1998)
- Raymond Boxman (2000)
- Erhard Hantzsche (2002)
- Ekkehard Schade (2004)
- Ji-Mei Wang (2006)
- Dmitry Proskurovsky (2008)
- Rod Latham (2010)

The Chatterton Young Investigator Award, sponsored by ABB Calor-Emag Schaltanlagen AG, will recognize the outstanding achievement of a young investigator based on the quality of the paper and presentation at the Symposium.

Previous recipients of the Chatterton Awards are

- Jos Wetzer (1992)
- Andre Anders and Simone Anders (awarded in 1994 for a 1992 paper)
- Sergej Shkuratov (1994)
- Thomas Betz (1996)
- Holger Weinert (1998)
- Georgy Yu. Yushkov (2000)
- Stephan Mändl and Sergey Popov (2002)
- Kentaro Usui (2004)
- Mohamed Kamarol and Ezra van Lanen (2006)

- Guan-Jun Zhang and V. Yu. Anan'in (2008)
- Masoumeh Koochack Zadeh (2010)

The ISDEIV Best Paper Award – Japan Prize established during the 2006 ISDEIV in Matsue, Japan. Arranged by the Japanese Local Organizing Committee, funds were pooled from various sponsors to establish this award recognizing the best and most significant contribution presented at the Symposium. Because till the end of the Symposium nobody will know what presentation deserves this honor, the recipient will be selected after the Symposium and the award will be given at the next symposium.

Recipients of the ISDEIV Best Paper Award – Japan Prize – are

- Dietmar Gentsch and Sharyanto (2008)
- Masoumeh Koochack Zadeh, Volker Hinrichsen, René Peter Paul Smeets, and Andreas Lawall (2010)

4.7. Exhibition

Industrial and R&D companies are invited to participate in the Exhibition Program during the XXV International Symposium on Discharges and Electrical Insulation in Vacuum.

The exhibition will be held in the foyer of the Large Conference Auditorium in the poster program and coffee break areas. Each exhibition participant will have a space of about 3 x 2 sq. meters. A desk, chairs, and connection to 220 V, 50 Hz electrical power (European standard) will be available.

Exhibition open hours:

Monday,	September 3, 2012	10:00 – 17:00
Tuesday,	September 4, 2012	09:00 – 17:00
Wednesday,	September 5, 2012	09:00 – 12:00
Thursday,	September 6, 2012	09:00 – 17:00
Friday,	September 7, 2012	09:00 – 12:00

Monday Sessions September 3, 2012

09:00 – 09:10 Opening

09:10 – 10:00
Dyke Award Session
Chairman: Andre Anders, LBNL, Berkeley, USA

DA

09:10 Dieter König,
Darmstadt University of Technology, High Voltage Labs, *Darmstadt, Germany*
THE ROLE OF VACUUM IN CIRCUIT BREAKER TECHNOLOGY

10:00 - 10:40
Oral Session A1 Vacuum breakdown and pre-breakdown phenomena
Chairman: Dmitry Proskurovsky, HCEI, Tomsk, Russia

A1-O-01

10:00 Leslie Falkingham, R. Reeves, S. Mistry, C.H. Gill
Vacuum Interrupters Limited, Rugby, United Kingdom
STUDIES IN INVERSE MAGNETRON DISCHARGES OF VACUUM INTERRUPTERS – PART 3 - ANOMALIES

A1-O-02

10:20 Kai Hencken
ABB Switzerland Ltd., Corporate Research, Baden-Dttwil, Switzerland
INVESTIGATION OF THE ROLE OF X-RAY PHOTONS IN THE PRE-BREAKDOWN CURRENT IN VACUUM INTERRUPTER GAPS

10:40 - 11:00 Symposium group photography

11:00 - 11:20 Coffee Break

11:20 - 13:00
Oral Session A1 Vacuum breakdown and pre-breakdown phenomena
Chairman: Ray Boxman, Tel Aviv University, Israel

A1-O-03

11:20 Antonio De Lorenzi, N. Pilan, E. Spada
Consorzio RFX, Padova, Italy
VALIDATION PROGRESSES OF THE VOLTAGE HOLDING PREDICTION MODEL AT THE HIGH VOLTAGE PADOVA TEST FACILITY HVPTF

		A1-O-04
11:40	T. Furukawa, M. Ueda, K. Hidaka, H. Ikeda, A. Kumada, S. Sato, S. Nishimura, H. Shimizu, T. Shioiri, M. Homma *University of Tokyo, Tokyo, Japan* INVESTIGATION ON INFLUENCE OF CURRENT INTERRUPTION ON V-T CHARACTERISTICS OF VACUUM INTERRUPTER	
		A1-O-05
12:00	Hiroki Kojima, Yasutomo Otake, Ryoki Nishimura, Naoki Hayakawa, Kosuke Hasegawa, Hitoshi Saito, Yasushi Noda, Hitoshi Okubo *Nagoya University, Nagoya, Japan* CONDITIONING CHARACTERISTICS OF MULTI-GAP ELECTRODE SYSTEM IN VACUUM	
		A1-O-06
12:20	Flyura Djurabekova, A. Pohjonen, S.Parviainen, H.Timko, A.Ruzibaev, and K. Nordlund *Helsinki Institute of Physics and Physics Department, University of Helsinki, Helsinki, Finland* ATOMISTIC APPROACH TO STUDY THE INITIATION OF VACUUM ARCS NEAR METAL SURFACES	
		A1-O-07
12:40	Minfu Liao, Xiongying Duan, Xian Cheng, Zhihui Huang and Jiyan Zou *Dalian University of Technology, Dalian, China* PROPERTY OF 126KV VACUUM CIRCUIT BREAKER BASED ON THREE 40.5KV FIBER-CONTROLLED VACUUM INTERRUPTER MODULES IN SERIES	

13:00 – 14:20 Lunch

14:20 – 16:00

Oral Session A2 Surface discharges and flashover phenomena

B1 Switching in vacuum and related phenomena

Chairman: Satoru Yanabu, Electrical engineering, Tokyo, Japan

		A2-O-01
14:20	Ingo Gramberg, M. Kurrat, D. Gentsch *University Braunschweig ELENIA, Braunschweig, Germany* ELECTRON PROBE MICRO ANALYSIS AND SURFACE RESISTANCE MEASUREMENT INVESTIGATION OF COPPER CHROME COATINGS ON VACUUM CIRCUIT BREAKER CERAMIC SURFACES FOLLOWING SWITCHING OPERATIONS	
		A2-O-02
14:40	Le Xu, Meng Wang, JianJun Deng, Feng Li, Zun Yang *Department of Engineering Physics, Tsinghua University, Beijing, China* DIFFERENT PERFORMANCE OF UV LASER INDUCED SURFACE FLASHOVER	

		A2-O-03
15:00	Feng Li, Wang Meng, Dai Yingmin, Chen Lin, Ren Jing *Institute of Fluid Physics, CAEP, Mianyang, China* SURFACE CHARGE CHARACTERISTICS ON INSULATORS IN VACUUM UNDER DC VOLTAGE	
		B1-O-01
15:20	Rene Smeets, S. Kuivenhoven, S. Chakraborty, G. Sandolache *KEMA Testing, Inspections and Certification, Arnhem, Netherlands* FIELD ELECTRON EMISSION CURRENT IN VACUUM INTERRUPTERS AFTER LARGE INRUSH CURRENT	
		B1-O-02
15:40	Donen Taiki, Tsukima Mitsuru, Sato Shinji, Yoshida Tomokazu *Mitsubishi Electric, Advanced Technology RD center,* *Tuskaguchi honmachi, Amagasaki, Hyogo, Japan* INVESTIGATION OF CORRELATION BETWEEN VACUUM BREAKDOWN PHENOMENA AND FIELD EMISSION CURRENT DURING SHUNT CAPACITOR SWITCHING	

16:00 – 16:20 Coffee Break

16:00 – 18:00
Chatterton Award Poster Session
Chairman: R. P. P. Smeets, KEMA Testing, Inspections and Certification, Arnhem, Netherlands

		A1-O-04
1	Takaaki Furukawa, M. Ueda, K. Hidaka, H. Ikeda, A. Kumada, S. Sato, S. Nishimura, H. Shimizu *University of Tokyo, Tokyo, Japan* INVESTIGATION ON INFLUENCE OF CURRENT INTERRUPTION ON V-T CHARACTERISTICS OF VACUUM INTERRUPTER	
		A1-O-05
2	Hiroki Kojima, Yasutomo Otake, Ryoki Nishimura, Naoki Hayakawa *Nagoya University, Nagoya, Japan* CONDITIONING CHARACTERISTICS OF MULTI-GAP ELECTRODE SYSTEM IN VACUUM	
		A1-P-07
3	Yury Zemskov *Insitute of Electrophysics, Ekaterinburg, Russia* DEPENDENCE OF THE ION ENERGY IN VACUUM SPARK PLASMA FLOW ON CURRENT PULSE SHAPE FEATURES	
		A1-P-08
4	Zhenxing Wang, Yingsan Geng, Zhiyuan Liu *Xi'an Jiaotong University, Xi'an, China* SIMULATION OF METAL VAPOR BREAKDOWN AFTER INTERRUPTING A VACUUM ARC	

5	*A1-P-11* He Yang, Yingsan Geng, Zhiyuan Liu, Xiaoshe Zhai, Chaoran Wang *Xi'an Jiaotong University, Xi'an, China* A HIGH EFFICIENCY CONDITIONING METHOD OF VACUUM INTERRUPTERS BY HIGH FREQUENCY VOLTAGE IMPULSES
6	*A1-P-17* Dmitry Sinelnikov, V.A. Kurnaev, N.V. Mamedov, A.P. Popov *Moscow, Russia* COLD EMISSION OF NEGATIVE IONS FROM THE GRAPHITE WITH THE ROUGH SURFACE
7	*A1-P-18* Tomohiro Kanai, Yasushi Yamano, Shinichi Kobayashi, Yoshio Saito *Saitama University, Saitama, Japan* MICROSCOPIC OBSERVATION AND ANALYSIS ON FIELD ELECTRON EMISSION SITES BY USING AN ELECTRON EMISSION MICROSCOPE AND AUGER ELECTRON SPECTROMETER
8	*A2-O-01* Ingo Gramberg, M. Kurrat, D. Gentsch *University Braunschweig ELENIA, Braunschweig, Germany* ELECTRON PROBE MICRO ANALYSIS AND SURFACE RESISTANCE MEASUREMENT INVESTIGATION OF COPPER CHROME COATINGS ON VACUUM CIRCUIT BREAKER CERAMIC SURFACES FOLLOWING SWITCHING OPERATIONS
9	*A2-O-02* Le Xu, Meng Wang, JianJun Deng, Feng Li, Zun Yang *Department of Engineering Physics, Tsinghua University, Beijing, China* DIFFERENT PERFORMANCE OF UV LASER INDUCED SURFACE FLASHOVER
10	*A2-P-02* Arkady Gilev, R.F.Emlin, P.A.Morozov, S.O.Cholach *IEP UrB RAS, Ekaterinburg, Russia* POLAR PATTERN OF THE ION-PLASMA BEAMS FORMED IN VACUUM FLASHOVER OF THE INCLINED SURFACE OF THE POLYMERS IN THE FIELD OF A PLANE CAPACITOR
11	*A2-P-06* Yusuke Nakano, Hiroki Kojima, Naoki Hayakawa, Kenji Tsuchiya, Hitoshi Okubo *Nagoya University, Nagoya, Japan* DEVELOPMENT PROCESS OF IMPULSE SURFACE DISCHARGE IN VACUUM
12	*A2-P-08* Hideaki Fukuda, Yasushi Yamono, Shinichi Kobayashi, Shinichiro Michizono, Yoshio Saito, Takeshi Maeda *Saitama University, Saitama, Japan* RELATIONSHIP BETWEEN VACUUM SURFACE FLASHOVER AND CHARGING CHARACTERISTICS FOR VARIOUS KINDS OF ALUMINA CERAMICS

		B1-O-03
13	Yusuke Kuroki, Seibou Miyamoto, Eiji Kaneko *University of The Ryukyus, Okinawa, Japan* INVESTIGATIONS ON QUENCHING BY TRANSIENT OR INSTABILITY PHENOMENA IN A SMALL DC CURRENT VACUUM ARC	
		B1-O-06
14	Anton Schneider *Institute of High Current Electronics SB RAS, Tomsk, Russia* MEASUREMENTS OF ANODE TEMPERATURE AROUND CURRENT ZERO FOLLOWING INTERRUPTION OF HIGH CURRENTS	
		B1-P-06
15	Thomas Rettenmaier, V. Hinrichsen, A. Lawall, E. D. Taylor, J. Teichmann *Tu-Darmstadt High Voltage Laboratories, Darmstadt, Germany* INVESTIGATIONS ON CONTACT EROSION IN VACUUM CIRCUIT BREAKERS BY ARC ROTATION MEASUREMENTS WITH EXTERNAL MAGNETIC FIELD SENSORS	
		B1-P-07
16	Patrick Halbach, V. Hinrichsen, K. Ermeler, E. D. Taylor, J. Teichmann *Tu Darmstadt High Voltage Laboratories, Darmstadt, Germany* INFLUENCE OF SUPPLY AND LOAD CIRCUIT PARAMETERS ON THE CHOPPING PHENOMENA OF VACUUM INTERRUPTERS	
		B2-P-06
17	Mikhail Tsventoukh, Gennady A. Mesyats, Sergey A. Barengolts *Lebedev Physical Institute Ras, Moscow, Russia* MAGNETIC FIELD INFLUENCE ON THE ECTON PROCESSES IGNITION AND SUSTAINMENT	
		B3-P-05
18	Guowei Kong, Zhiyuan Liu, Yingsan Geng, Hui Ma, Xiaohui Xue *Xi'an Jiaotong University, Xi'an, China* INFLUENCE OF CONTACT SOLID ANGLE ON ANODE SPOT FORMATION THRESHOLD CURRENT IN VACUUM CIRCUIT BREAKERS	
		B3-P-06
19	Xiaofei Yao, Jianhua Wang, Yingsan Geng, Zhiyuan Liu, Guowei Kong *Xi'an Jiaotong University,State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an, China* AN INFLUENCE OF AN AMBIENT MAGNETIC FIELD INDUCED BY A NEARBY PARALLEL CONDUCTOR ON HIGH-CURRENT VACUUM ARCS	
		B4-O-01
20	Lijun Wang, Zhonghao Qian, Shenli Jia, Zongqian Shi *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiaotong University, Xian, China* 3D TIME-DEPENDENT MODEL AND SIMULATION OF HIGH-CURRENT VACUUM ARC IN COMMERCIAL AXIAL MAGNETIC FIELDS VACUUM INTERRUPTERS	

	B4-O-04
21	Lyudmila Vshivkova *Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia* NUMERICAL MODELING OF PLASMA PHENOMENA USING THE PIC-METHOD
	C2-O-01
22	Marina Kauffeldt, M. Pflaum, J. Schein, B. Wiegmann, A. Haverich *University of Federal Armed Forces, Munich, Neubiberg, Germany* TRIGGERLESS PULSED VACUUM CATHODIC ARC PLASMA DEPOSITION OF THIN TITANIUM OXIDE COATINGS ON PMP-FOILS AS A FUNCTIONAL COATING FOR MEDICAL APPLICATIONS
	C2-P-03
23	Ruslan Vafin, K. Ramazanov, V. Budilov *Ufa State Aircraft Engineering University , Ufa, Russia* EFFECT OF APPLYING A MAGNETIC FIELD ON THE ION NITRIDING IN A GLOW DISCHARGE
	C2-P-12
24	Evgeny Yakovlev, Markov A.B., Petrov V.I. *Institute of High Current Electronics, SB RAS, Tomsk, Russia* ELECTRICAL AND TRIBOLOGICAL PROPERTIES OF COPPER-BASED SURFACE ALLOYS FORMED WITH A LOW-ENERGY HIGH-CURRENT ELECTRON BEAM
	C3-P-03
25	Ivan Turmyshev, Murzakaev A.M., Timoshenkova O.R. *Institute of Electrophysics of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia* FIELD EMISSION FROM METALL TIPS COVERED BY ULTRATHIN FILMS OF ZIRCONIA ENERGY SPECTRA FEATURES AND CURRENT-VOLTAGE CURVES
	C4-O-01
26	Shin Kajita, Noriyas Ohno, Shuichi Takamura *Nagoya University, Nagoya, Japan* OBSERVATION OF ARC SPOTS INITIATED ON NANOSTRUCTURED TUNGSTEN
	C4-O-02
27	Aleksey Adonin, R. Hollinger *GSI Helmholtzzentrum Fr Schwerionenforschung Gmbh, Darmstadt, Germany* CHALLENGES OF PRODUCTION OF HIGH CURRENT FOUR-FOLD Bi AND Au BEAMS FROM VACUUM ARC ION SOURCES AT GSI ACCELERATOR FACILITY
	C4-P-01
28	Natalia Labetskaya, V.I. Oreshkin, S.A. Chaikovsky, I.M. Datsko, Y.A. Sukovatitsyn, E.N. Volkov *Institute of High Current Electronics SB RAS, Tomsk, Russia* EXPERIMENTAL RESEARCH OF ELECTRICAL CONDUCTOR EXPLOSION IN THE CURRENT SKINNING MODE

		C2-O-02
29	Olga Krysina, N.N. Koval, Yu.F. Ivanov, V.V. Shugurov *Institute of high current electronics SB RAS, Tomsk, Russia* ARC PLASMA-ASSISTED DEPOSITION OF NANOCRYSTALLINE COATINGS	

18:30 – 21:30 Governmental reception

Meeting Point: Main entrance of Rubin Hotel at 18:30.

Tuesday Sessions September 4, 2012

09:00 – 11:00
Oral Session B1 Switching in vacuum and related phenomena
B2 Interaction of vacuum arc with magnetic field

Alexey Chaly, Tavrida Electric, Moscow, Russia

09:00	Yusuke Kuroki, Seibou Miyamoto, Eiji Kaneko *University of The Ryukyus, Okinawa, Japan* INVESTIGATIONS ON QUENCHING BY TRANSIENT OR INSTABILITY PHENOMENA IN A SMALL DC CURRENT VACUUM ARC	*B1-O-03*
09:20	Liu Bin, Wu Jianwen, Xin Chao, Zhu Liying *BeiHang university, BeiJing, China* RESEARCH ON THE REIGNITION CONDITION FOR DC ARC FORCING INTERRUPTION	*B1-O-04*
09:40	Tarek Lamara, D. Gentsch *ABB Corporate Research, Dttwil, Switzerland* HIGH CURRENT VACUUM ARC INVESTIGATION WITH NEW INNOVATIVE TMF-AMF CONTACTS	*B1-O-05*
10:00	Anton Schneider *Institute of High Current Electronics SB RAS, Tomsk, Russia* MEASUREMENTS OF ANODE TEMPERATURE AROUND CURRENT ZERO FOLLOWING INTERRUPTION OF HIGH CURRENTS	*B1-O-06*
10:20	Sergey Shkol'nik, K.K. Zabello, S.U. Myatovich, A.A. Logatchev *A.F. Ioffe Phys.-Techn. Institute RAS, St.-Petersburg, Russia* INFLUENCE OF MAGNETIC FIELD ON DIRECTION OF CATHODE SPOT PLASMA JET PROPAGATION	*B2-O-01*
10:40	Wu Jianwen, Zhu Liying, Liu Bin, Feng Ying *School of Automation Science and Electrical Engineering, BeiHang University, Beijing, China* ARCING BEHAVIOR ON TMF CONTACTS AT INTERMEDIATE-FREQUENCY	*B2-O-02*

11:00 – 11:20 Coffee Break

11:00 – 13:00

Poster Session A1 Vacuum breakdown and pre-breakdown phenomena
A2 Surface discharges and flashover phenomena
A4 High field effects in microelectro-mechanical systems and nano-structures

		A1-P-01
1	Nina Tatarinova *National Research Nuclear University MEPhI, Moscow, Russia* EMISSION AND POSTEMISSION OF CHARGED PARTICLES IN VACUUM AT LOW VALUES OF AN EXTERNAL ELECTRIC FIELD	
		A1-P-02
2	Evgeny Nefyodtsev *High Current Electronics Institute SB RAS, Tomsk, Russia* DETACHMENT OF A MACROPARTICLE FROM THE ELECTRODE SURFACE UNDER RAPIDLY-RISING VOLTAGE CONDITIONS	
		A1-P-03
3	Sergey Onischenko, Nefyodtsev Evgeny *Institute of High Current Electronics, Tomsk, Russia* CHANGE OF ELECTRIC STRENGTH OF VACUUM INSULATION AFTER THE ACTION OF ATOMIC HYDROGEN ON THE ELECTRODES	
		A1-P-04
4	Sho Fujita, Toru Iwao, Motoshige Yumoto *Tokyo City University, Tokyo, Japan* DEPENDENCE OF ASPERITY DEPTH ON SECONDARY ELECTRON EMISSION COEFFICIENT	
		A1-P-05
5	Erik Taylor *Siemens AG, Berlin, Germany* APPLICATION OF RESEARCH IN FIELD EMITTER ARRAYS TO THE BREAKDOWN OF CONTACTS IN VACUUM	
		A1-P-06
6	Paul Stoving *Cooper Power Systems, South Milwaukee, United States* WITHSTAND STRENGTH OF METALLIC SURFACES IN VACUUM	
		A1-P-07
7	Yury Zemskov *Insitute of Electrophysics, Ekaterinburg, Russia* DEPENDENCE OF THE ION ENERGY IN VACUUM SPARK PLASMA FLOW ON CURRENT PULSE SHAPE FEATURES	
		A1-P-08
8	Zhenxing Wang, Yingsan Geng, Zhiyuan Liu *Xi'an Jiaotong University, Xi'an, China* SIMULATION OF METAL VAPOR BREAKDOWN AFTER INTERRUPTING A VACUUM ARC	

	A1-P-09
9	Sandeep Kulkarni, M Hemachander, Arun Kumar, S Saravanan, Viren Acharya, Srinivas Rayudu *Global Rd Centre, Crompton Greavres Ltd, Mumbai, India* SIGNIFICANCE OF SHIELD IN HIGH VOLTAGE PERFORMANCE OF VACUUM INTERRUPTERS
	A1-P-10
10	Yingyao Zhang, Zhiyuan Liu, Yingsan Geng *Xi'an Jiaotong University, Xi'an, China* INFLUENCE OF NO-LOAD OPERATION AND CURRENT SWITCHING ON BREAKDOWN CHARACTERISTICS OF HIGH VOLTAGE VACUUM INTERRUPTERS AT CONTACT GAP 30MM
	A1-P-11
11	He Yang, Yingsan Geng, Zhiyuan Liu, Xiaoshe Zhai, Chaoran Wang *Xi'an Jiaotong University, Xi'an, China* A HIGH EFFICIENCY CONDITIONING METHOD OF VACUUM INTERRUPTERS BY HIGH FREQUENCY VOLTAGE IMPULSES
	A1-P-12
12	Masayuki Ishida, Hiroki Kojima, Naoki Hayakawa, Masahiro Hanai, Mitsutaka Homma, Tetsu Shioiri, Hitoshi Okubo *Nagoya University, Nagoya, Japan* CHARGE BEHAVIOR AND PARTIAL DISCHARGE CHARACTERISTICS ON ALUMINA DIELECTRICS UNDER AC VOLTAGE APPLICATION IN VACUUM
	A1-P-13
13	Dmitry Alferov, L. Rylskaya *All-Russian Electrotechnical Institute, Moscow, Russia* BREAKDOWNS OF VACUUM INTERRUPTERS BEHIND FRONT OF A LIGHTNING IMPULSE
	A1-P-14
14	Yury Barengolts, S.I. Beril *T.G. Shevchenko Trans-Dniesterian State University, Tiraspol, Republic of Moldova* ON THE PARTICIPATION OF MOLECULES ADSORBED TO THE CATHODE SURFACE IN THE INITIAL STAGE OF A HIGH-VOLTAGE VACUUM DISCHARGE
	A1-P-15
15	Maxim Bochkarev *Insitute of Electrophysics, Ekaterinburg, Russia* BREAKDOWN OF THE POINT-PLANE GAP IMAGED WITH LASER SHADOWGRAPHY BY STREAK AND FRAMING TECHNIQUE
	A1-P-16
16	Igor Uimanov *Institute of Electrophysics, Ekaterinburg, Russia* SIMULATION OF PRE-BREAKDOWN PHENOMENA IN PULSED VACUUM DISCHARGES OF NANOSECOND AND PICOSECOND DURATION IN VIEW OF THE SCREENING OF THE EXTERNAL ELECTRIC FIELD BY THE EMITTED ELECTRON BEAM

	A1-P-17
17	Dmitry Sinelnikov, V.A. Kurnaev, N.V. Mamedov, A.P. Popov *Moscow, Russia* COLD EMISSION OF NEGATIVE IONS FROM THE GRAPHITE WITH THE ROUGH SURFACE
	A1-P-18
18	Tomohiro Kanai, Yasushi Yamano, Shinichi Kobayashi, Yoshio Saito *Saitama University, Saitama, Japan* MICROSCOPIC OBSERVATION AND ANALYSIS ON FIELD ELECTRON EMISSION SITES BY USING AN ELECTRON EMISSION MICROSCOPE AND AUGER ELECTRON SPECTROMETER
	A1-P-19
19	Myung Ki Baek, Young Ki Chung, Se Hee Lee, Il Han Park *Sungkyunkwan University, School of Information and Communication Engineering, Suwon, Korea* EXPERIMENT AND ANALYSIS FOR CHARACTERIZATION OF ELECTRIC DISCHARGE SYSTEM WITH FLOATING CONDUCTOR
	A1-P-20
20	Jiyan Zou, Cheng Xian, Duan Xiongying, Chen Jianhua, Liao Minfu, Zou Jiyan *School of Electrical Engineering Dalian University of Technology, Dalian, China* STATIC ELECTRIC FIELD DISTRIBUTION OF HYBRID CIRCUIT BREAKER BASED ON ANSOFT
	A1-P-21
21	Nikolay Landl, Yu. D. Korolev, O. B. Frants, V. S. Kasyanov, V. A. Bolotov, I. A. Shemyakin *Insitute of High Current Electronics SB RAS, Tomsk, Russia* INVESTIGATION OF THE HIGH CURRENT STAGES IN PSEUDOSPARK DISCHARGE
	A2-P-01
22	Suharyanto, T. Hayakawa, S. Michizono, Y. Saito, Y. Yamano and S. Kobayashi *Gadjah Mada University, Yogyakarta, Indonesia* SURFACE PROFILE EFFECTS ON SECONDARY ELECTRON EMISSION CHARACTERISTICS OF COMMERCIAL ALUMINA CERAMICS
	A2-P-02
23	Arkady Gilev, R.F.Emlin, P.A.Morozov, S.O.Cholach *IEP UrB RAS, Ekaterinburg, Russia* POLAR PATTERN OF THE ION-PLASMA BEAMS FORMED IN VACUUM FLASHOVER OF THE INCLINED SURFACE OF THE POLYMERS IN THE FIELD OF A PLANE CAPACITOR
	A2-P-03
24	Luis Del Rio Etayo *Ormazabal Corporate Technology, Amorebieta, Spain* ANALYSIS OF A 36KV VACUUM INTERRUPTER BASED ON A TRIPLE JUNCTION SHIELDING RESEARCH

	A2-P-04
25	Zhan Jiang-Yang, Guan-Jun Zhang, Xue-Zeng Huang, Xian-Jun Shao *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiaotong University, Xi'an, China* CATHODE-LIKE LUMINESCENCE ON VACUUM-DIELECTRIC INTERFACE UNDER DC VOLTAGE BASED ON SELF-STABILIZING SECONDARY ELECTRON EMISSION
	A2-P-05
26	Huang Xue-Zeng, Jiang-Yang Zhan, Hai-Bao Mu, Guan-Jun Zhang, Xin-Pei Ma *State Key Lab of Electrical Insulation and Power Equipment, Xian Jiaotong University, Xian, China* EXPERIMENTAL TEST AND SIMULATION ANALYSIS ON SURFACE FLASHOVER CHARACTERISTICS OF EMBEDDED ELECTRODE INTO MACHINABLE CERAMIC IN VACUUM
	A2-P-06
27	Yusuke Nakano, Hiroki Kojima, Naoki Hayakawa, Kenji Tsuchiya, Hitoshi Okubo *Nagoya University, Nagoya, Japan* DEVELOPMENT PROCESS OF IMPULSE SURFACE DISCHARGE IN VACUUM
	A2-P-07
28	Bai-Peng Song, Xi-Wei Hao, Guan-Jun Zhang *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiao Tong University, Xi'an, China* SECONDARY ELECTRON EMISSION MEASUREMENTS OF DIELECTRIC WINDOW MATERIALS
	A2-P-08
29	Hideaki Fukuda, Yasushi Yamono, Shinichi Kobayashi, Shinichiro Michizono, Yoshio Saito, Takeshi Maeda *Saitama University, Saitama, Japan* RELATIONSHIP BETWEEN VACUUM SURFACE FLASHOVER AND CHARGING CHARACTERISTICS FOR VARIOUS KINDS OF ALUMINA CERAMICS
	A2-P-09
30	Huang Zhi-Chao, Yan Hong-yan, Fan Xing-ming, Yang Sheng-zhen, Li Zhen,Liang Cong *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* THE METHOD OF POWER CAPACITOR PARTIAL DISCHARGE SIGNAL EXTRACTION BASED ON SEVERAL ALGORITHMS FUSION
	A2-P-10
31	Osamu Yamamoto, Yusuke Shimizu, Morii Hiroshi *Dept. of Electrical Engineering, Kyoto University, Kyoto, Japan* CONTROL OF SURFACE CHARGE ON INSULATING HOLLOW CYLINDER BY USING SHIELD RING IN VACUUM

32	*A2-P-11* Song Bai-Peng, Xi-Wei Hao, Jun-Bo Deng and Guan-Jun Zhang *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiao Tong University, Xi'an, China* MULTIPACTOR SIMULATION OF GROOVED DIELECTRIC WINDOW SURFACE
33	*A2-P-12* Ingo Gramberg, M. Kurrat, D. Gentsch *University Braunschweig Elenia, Braunschweig, Germany* INVESTIGATIONS ON EVAPORATION PROCESS OF VACUUM CIRCUIT BREAKER CERAMICS DURING SWITCHING OPERATIONS BY PIC MC SIMULATION
34	*A2-P-13* Toshifumi Yuji, Yuichi Kiyota, Narong Mungkung, Xiaoxuan Che, Shinichi Tashiro, Manabu Tanaka *University of Miyazaki, Miyazaki, Japan* IMAGING OPTICAL SPECTROSCOPY METHOD OF OXYGEN RADICALS IN ATMOSPHERIC-PRESSURE NON-EQUILIBRIUM DC PULSE DISCHARGE PLASMA JET
35	*A4-P-01* Nikolay B. Volkov, S.V. Barakhvostov, M.B. Bochkarev, K.A. Nagayev, O.R. Timoshenkova *Institute of Electrophysics, Russian Academy of Sciences, Ural Branch, Yekaterinburg, Russia* FEATURES OF THE CHANNEL FORMATION DURING THE VOLTAGE GENERATOR WITH dU/dt 1MV/ns DISCHARGE TO THE COAXIAL LINE CONTAINING EITHER CLOSED VIA MICROCONDUCTOR OR OPEN-ENDED GAP
36	*A4-P-02* Il Han Park, Myung Ki Baek, Se Hee Lee *Sungkyunkwan University, School of Information and Communication Engineering, Suwon, Republic of Korea* INFLUENCE ON MICRO ELECTRIC DISCHARGE BY CONDUCTIVE MICRO-BEAD IN DIELECTRIC BARRIER
37	*A4-P-03* Sergy Korolev *VEI, Moscow, Russia* DETERMINATION OF DISTRIBUTION THE FIELD ENDHANSEMENT FACTOR OF MATRIX OF FIELD EMITTER

13:00 – 14:20 Lunch

14:20 – 16:00
Oral Session B3 Vacuum arc physics
Chairman: Edgar Dullni, ABB AG, Ratingen, Germany

14:20	André Anders, Jonathan Slack *Lawrence Berkeley National Laboratory, Berkeley,CA, United States* PHASE TRANSITIONS IN VACUUM ARCS IN THE CONTEXT OF LIQUID METAL ARC SOURCES	*B3-O-01*
14:40	Ralf Methling, Sergey Popov, Alexander Batrakov, Dirk Uhrlandt, and Klaus-Dieter Weltmann *INP, Greifswald, Germany* SPECTROSCOPY OF SINGLE VACUUM ARC CATHODE SPOTS WITH IMPROVED SENSITIVITY	*B3-O-02*
15:00	Shenli Jia, Dingge Yang, Lijun Wang, Zongqian Shi *Xi'an Jiaotong University, Xi'an, China* SIMULATION AND EXPERIMENTAL STUDIES OF ANODE ACTIVITIES IN HIGH-CURRENT VACUUM ARCS	*B3-O-03*
15:20	Mikhail Benilov, L.G. Benilova, M.D. Cunha, W. Hartmann, A. Lawall, N. Wenzel *Universidade da Madeira, Funchal, Portugal* MODELLING CATHODE SPOTS IN VACUUM ARCS BURNING ON MULTI-COMPONENT CONTACTS	*B3-O-04*
15:40	Norbert Wenzel, S. Kosse, A. Lawall, R. Renz, W. Hartmann *Siemens AG, Corporate Technology, D-91058 Erlangen, Germany* NUMERICAL SIMULATION OF MULTI-COMPONENT ARCS IN HIGH-CURRENT VACUUM INTERRUPTERS	*B3-O-05*

16:00 – 16:20 Coffee Break

16:00 – 18:00
Poster Session B1 Switching in vacuum and related phenomena
B2 Interaction of vacuum arc with magnetic field

1	*B1-P-01* Leslie Falkingham, R. Reeves, S. Mistry, C.H. Gill *Vacuum Interrupters Limited, Rugby, United Kingdom* A STUDY OF VACUUM LEVELS IN A SAMPLE OF LONG SERVICE VACUUM INTERRUPTERS
2	*B1-P-02* Zhengyang Zhou, Ling Dai, Yanzhao Wang, Fuchang Lin *College of Electrical and Electronics Engineering, Huazhong University of Science and Technology, Wuhan, China* THE LIFETIME OF A HIGH-CURRENT TRIGGERED VACUUM SWITCH WITH MULTI-GAP
3	*B1-P-03* Baihe Miao, Jinglin Xie, Jianping He, Guoxun Liu, Wenbin Wang, Xiaojun Wang *Beijing, China* EFFECTS OF TRACE TE ON THE ANTI-WELDING PROPERTY OF CU-30CRTE ALLOY CONTACT MATERIAL
4	*B1-P-04* Dmitry Alferov, M. Ahmetgareev, R. Bunin, D. Evsin, V. Sidorov *All-Russian Electrotechnical Institute, Moscow, Russia* TRIGGERED VACUUM SWITCH WITH AN AXIAL MAGNETIC FIELD
5	*B1-P-05* Li Yu, Shun Yuan, Feng Li *Shenyang Institute of Engineering, Shenyang, China* ANALYSIS OF CURRENT TRANSFER PROCESS DURING THE OPEN OPERATING IN LARGE CURRENT VACUUM INTERRUPTERS WITH DUAL-CONTACT
6	*B1-P-06* Thomas Rettenmaier, V. Hinrichsen, A. Lawall, E. D. Taylor, J. Teichmann *Tu-Darmstadt High Voltage Laboratories, Darmstadt, Germany* INVESTIGATIONS ON CONTACT EROSION IN VACUUM CIRCUIT BREAKERS BY ARC ROTATION MEASUREMENTS WITH EXTERNAL MAGNETIC FIELD SENSORS
7	*B1-P-07* Patrick Halbach, V. Hinrichsen, K. Ermeler, E. D. Taylor, J. Teichmann *Tu Darmstadt High Voltage Laboratories, Darmstadt, Germany* INFLUENCE OF SUPPLY AND LOAD CIRCUIT PARAMETERS ON THE CHOPPING PHENOMENA OF VACUUM INTERRUPTERS
8	*B1-P-08* Thierry Delachaux, F. Rager, R. A. Simon, D. Gentsch *ABB Corporate Research, Dttwil, Switzerland* TESTING PROCEDURE FOR THE CURRENT INTERRUPTION CAPABILITY OF VACUUM INTERRUPTER CONTACT MATERIALS

9	*B1-P-09* Dietmar Gentsch, K. Gorlt *ABB Calor Emag Mittelspannungsprodukte, Ratingen, Germany* WELDING BEHAVIOR OF VACUUM INTERRUPTER EQUIPPED WITH CUCR CONTACT MATERIAL CAUSED BY MAKING AND BREAKING OPERATIONS UNDER SHORT CIRCUIT CURRENT INTERRUPTION
10	*B1-P-10* Stefan Giere, Roman Renz, Frank Richter, Norbert Trapp *Siemens AG, Berlin, Germany* CAPACITIVE CURRENT SWITCHING CAPABILITY OF 72.5 KV HIGH-VOLTAGE VACUUM INTERRUPTERS
11	*B1-P-11* Byoung-Chul Kim, Sung-tae Kim, Gil-young Ahn, Jong-ho Lee *LS Industrial Systems, Cheong-Ju, Korea* DEVELOPMENT OF A VACUUM CIRCUIT BREAKER WITH BREAKING AND SWITCHING CAPABILITY
12	*B1-P-12* Srinivasrao Rayudu, Srinivas Rayudu, Sandeep Kulkarni, Lalichan Andrews, Janemejay Nemade *Vacuum Interrupters and Instrument Transformer Division, Crompton Greaves Ltd, Aurangabad, India* FUNCTIONALLY GRADED COPPER CHROMIUM BASED VACUUM INTERRUPTER CONTACT TIP AND ITS INTERRUPTION ABILITY
13	*B1-P-13* He Yang, Yingsan Geng, Zhiyuan Liu *Xi'an Jiaotong University, Xi'an, China* CAPACITIVE CURRENT SWITCHING OF VACUUM INTERRUPTERS AND INRUSH CURRENTS
14	*B1-P-14* Minfu Liao, Xiongying Duan, Xian Cheng, Jiyan Zou *Dalian University of Technology, Dalian, China* CHARACTERISTICS OF TRIGGERED VACUUM SWITCH WITH SINGLE AXIAL MAGNETIC ELECTRODE FOR HIGH FREQUENCY CURRENT INTERRUPTION
15	*B1-P-15* Jiyan Zou, Cheng Xian, Liao Min Fu, Duan Xiong Ying *School of Electrical Engineering, Dalian University of Technology, Dalian, China* DISTRIBUTION PROPERTY OF TRANSIENT RECOVERY VOLTAGE FOR VACUUM SWITCH WITH MULTI-BREAK DURING SHORT-CIRCUIT CURRENT INTERRUPTION
16	*B1-P-16* Vladimir S. Minaev, Alexey M. Chaly *IG Tavrida Electric, Moscow, Russia* NUMERICAL SIMULATION OF OVERVOLTAGE GENERATED AT SWITCHING ON MEDIUM-VOLTAGE MOTORS WITH THE AID OF DIFFERENT CIRCUIT BREAKERS

	B1-P-17
17	Vladimir Bugayov, I.N. Poluyanova *IG Tavrida Electric, Sevastopol, Ukraine* INTERRUPTING CAPABILITY OF THE AMF ELECTRODES IN THE EXTERNAL TRANSVERSE FIELD
	B1-P-18
18	Antoni Klajn *Wroclaw Uniwersity of Technology, Institute of Electrical Power Engineering, Wroclaw, Poland* EVALUATION OF RESIDUAL CHARGE AFTER A FORCED EXTINGUISHING OF THE VACUUM ARC
	B1-P-19
19	Tarek Lamara, D. Gentsch, K. Hencken *ABB Corporate Research, Dttwil, Switzerland* HIGH CURRENT INTERRUPTION PERFORMANCE OF VACUUM INTERRUPTER WITH DOUBLE-TMF CONTACTS
	B1-P-20
20	Anton Schneider, S. Popov, H. Schellekens, G. Sandolache, A. Batrakov *Institute of High Current Electronics SB RAS, Tomsk, Russia* EXPERIMENTAL STUDY OF SHEATH DYNAMICS AFTER CURRENT ZERO OF AMF-STABILIZED VACUUM ARC
	B1-P-21
21	Konstantin Ulyanov, D. F. Alferov, Ya. I. Londer *All-Russian Electrotechnical Institute, Moscow, Russia* LIMIT RATE OF CURRENT RISE IN TRIGGERED VACUUM SWITCH
	B1-P-22
22	Fan Xing-Ming, Zhang Xin, Huang Zhi-chao, Zou Qi-Tao, Liang Cong, Shi Wei-Jian *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* TRIGGERING CHARACTERISTIC OF TVS AND ITS APPLICATION RESEARCH IN SYNTHETIC MAKING TEST FOR HIGH VOLTAGE CIRCUIT-BREAKERS
	B1-P-23
23	Liu Xiaoming, Leng Xue, Cao Yundong *Economic & Technological Development Zone, Shenyang University of Technology, Shenyang, China* RESEARCH OF THE CHAOS CHARACTERISTIC OF THE VACUUM CIRCUIT BREAKER. PART I: THE CHAOS BEHAVIOR OF THE COUPLED ELECTRO-MAGNETIC FIELD
	B1-P-24
24	Liu Xiaoming, Leng Xue, Cao Yundong *Economic & Technological Development Zone, Shenyang University of Technology, Shenyang, China* RESEARCH OF THE CHAOS CHARACTERISTIC OF THE VACUUM CIRCUIT BREAKER. PART II: THE CONTACT STRUCTURE INFLUENCE ON THE CHAOS CHARACTERISTIC

25	*B1-P-25* Liu Xiaoming, Wang Lijun, Cao Yundong, Leng Xue, Hou Chunguang *Economic & Technological Development Zone, Shenyang University of Technology, Shenyang, China* FAULT DIAGNOSIS STUDY BASED ON NEURAL NETWORK FOR VACUUM CIRCUIT BREAKER
26	*B1-P-26* Victor Paperny, I. V. Romanov, Yu.V. Korobkin, N.G. Kiselev *Irkutsk State University, Irkutsk, Russia* FAST SWITCH WITH LASER INITIATION
27	*B1-P-27* Anton Schneider, S.A. Popov, V.G. Durakov, B.V. Dampilon, S.Z. Dekhonova, A.V. Batrakov *Institute of High Current Electronics SB RAS, Tomsk, Russia* ON BREAKING CAPACITY OF THE CUCR_25 COMPOSITE MATERIAL PRODUCED WITH ELECTRON-BEAM CLADDING
28	*B1-P-28* A.A. Bazavluk, L.I. Sarin, A.I. Shirkovets, A.V. Telegin *Bolid, Novosibirsk, Russia* INVESTIGATIONS OF TRANSIENT PROCESSES AT VACUUM CIRCUIT BREAKER SWITCHING AND DEVELOPMENT OF TECHNICAL REQUIREMENTS FOR 6-35 KV VACUUM CIRCUIT BREAKERS
29	*B2-P-01* Victor Paperny, V.I. Krasov, N.V. Lebedev *Irkutsk State University, Irkutsk, Russia* INFLUENCE OF CENTRIFUGAL DRIFT ON MASS-SEPARATION OF IONS OF PLASMA FLOW IN A CURVED MAGNETIC FIELD
30	*B2-P-02* Ehsan Hashemi, Kaveh Niayesh *School of Electrical and Computer Engineering, University of Tehran, Tehran, Islamic Republic of Iran* DYNAMICS OF NON-PLASMA REGION IN VACUUM ARC IMPOSED BY HIGH-TRANVERSE MAGNETIC FIELD
31	*B2-P-03* Xiaochuan Song, Zongqian Shi, Shenli Jia, Lijun Wang, Chang Liu *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiaotong University, Xi'an, China* THE INFLUENCE OF LAGGED AXIAL MAGNETIC FIELD ON THE DISTRIBUTION OF CATHODES SPOTS IN CURRENT-ZERO STAGE OF VACUUM ARC
32	*B2-P-04* Zongqian Shi, Wenhui Li, Na Yan, Yingkui Zhang, Xiaochuan Song, Shenli Jia, and Lijun Wang *Xi'an Jiaotong University, Xi'an, China* EXPERIMENTAL INVESTIGATION ON THE EFFECT OF VACUUM ARC ON REMOVING OXIDE LAYER ON METAL-TUBE SURFACE IN A TRANSVERSE MAGNETIC FIELD

		B2-P-05
33	Dingge Yang, Shenli Jia, Lijun Wang and Zongqian Shi *Xi'an Jiaotong University, Xi'an, China* INFLUENCE OF AXIAL MAGNETIC FIELD ON ANODE MELTING PATTERN IN HIGH-CURRENT VACUUM ARC	
		B2-P-06
34	Mikhail Tsventoukh, Gennady A. Mesyats, Sergey A. Barengolts *Lebedev Physical Institute Ras, Moscow, Russia* MAGNETIC FIELD INFLUENCE ON THE ECTON PROCESSES IGNITION AND SUSTAINMENT	
		B2-P-07
35	Xiaochuan Song, Zongqian Shi, Chang Liu, Shenli Jia, Lijun Wang *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiaotong University, Xi'an, China* EXPERIMENTAL INVESTIGATION ON THE EXPANSION SPEED OF CATHODE SPOTS IN HIGH-CURRENT TRIGGERED VACUUM ARC	

16:00 – 18:00 Short Course I
Prof. Raymond Boxman, Israel: "English Writing"

18:00 – 19:30 Panel Discussion I
"Overvoltages generated by VCB at switching of inductive loads"
moderated by Prof. Rene P.P.Smeets, The Netherlands

Wednesday Sessions September 5, 2012

09:00 – 11:00

Oral Session B3 Vacuum arc physics

B4 Computer modeling and computer aided design

B5 Pulse power physics and technology

Chairman: Sergey Shkol'nik, A.F. Ioffe Phys.-Techn. Institute RAS, St.-Petersburg, Russia

09:00	*B3-O-06* Isak Beilis, Y. Koulik, R.L. Boxman *Electrical Discharge and Plasma Laboratory, School of Electrical Engineering, Faculty of Engineering, Tel Aviv, Israel* EFFECTIVE CATHODE VOLTAGE AND ION CURRENT MEASUREMENTS IN A VACUUM ARC WITH A BLACK BODY ELECTRODE CONFIGURATION
09:20	*B4-O-01* Lijun Wang, Zhonghao Qian, Shenli Jia, Zongqian Shi *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiaotong University, Xian, China* 3D TIME-DEPENDENT MODEL AND SIMULATION OF HIGH-CURRENT VACUUM ARC IN COMMERCIAL AXIAL MAGNETIC FIELDS VACUUM INTERRUPTERS
09:40	*B4-O-02* Mike Böning, Katharina V. Klinski-Wetzel, C. Kowanda, M. Heilmaier, F.E.H. Müller *Karlsruher Institut Fr Technologie KIT, Karlsruhe, Germany* PARAMETERS INFLUENCING THE ELECTRICAL CONDUCTIVITY OF CuCr ALLOYS
10:00	*B4-O-03* A. Aoufi, G. Damamme *Ecole Des Mines Saint-Etienne, UMR CNRS 5146 LCG, Saint-Etienne, France* 2D REACTION-DIFFUSION COMPUTATION OF CHARGE TRAPPING EVOLUTION IN DIELECTRIC MATERIALS SUBMITTED TO AN ELECTRON BEAM IRRADIATION
10:20	*B4-O-04* Lyudmila Vshivkova *Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia* NUMERICAL MODELING OF PLASMA PHENOMENA USING THE PIC-METHOD
10:40	*B5-O-01* Anatoliy Kharlov, B.M. Kovalchuk, E.V. Kumpyak, A.A. Zherlitsyn *Institute of High Current Electronics, Tomsk, Russia* PULSED GENERATORS ON BASE OF LTD STAGES WITH VACUUM INSULATION IN A SECONDARY TURN

11:00 – 11:20 Coffee Break

11:20 – 12:00
Oral Session C2 Deposition of coatings by vacuum arc plasma and related technologies
Chairman: Dieter König, Darmstadt University of Technology, Darmstadt, Germany

		C2-O-01
11:20	Marina Kauffeldt, M. Pflaum, J. Schein, B. Wiegmann, A. Haverich *University of Federal Armed Forces, Munich, Neubiberg, Germany* TRIGGERLESS PULSED VACUUM CATHODIC ARC PLASMA DEPOSITION OF THIN TITANIUM OXIDE COATINGS ON PMP-FOILS AS A FUNCTIONAL COATING FOR MEDICAL APPLICATIONS	
		C2-O-02
11:40	Olga Krysina, N.N. Koval, Yu.F. Ivanov, V.V. Shugurov *Institute of high current electronics SB RAS, Tomsk, Russia* ARC PLASMA-ASSISTED DEPOSITION OF NANOCRYSTALLINE COATINGS	

13:00 – 14:20 Lunch

15:15 – 21:30 Symposium Tour and Symposium Dinner
Meeting Point: Main Entrance of Rubin Hotel at 15:15.

Thursday Sessions September 6, 2012

09:00 – 11:00

Oral Session C1 Vacuum interrupters and their applications

C5 Space related technologies

Chairman: Shenli Jia, Xi'an Jiaotong University, Xi'an, China

09:00	Gabriela Sandolache, L. Gaches, S. Chakraborty, R. Smeets, S. Kuivenhoven, P. Novak, P. Beer *Schneider Electric, Montpellier, France* AN INVESTIGATION INTO LATE BREAKDOWN PHENOMENA DURING CAPACITOR SWITCHING PERFORMANCES IN RELATION WITH VACUUM INTERRUPTER DESIGN AND FIELD EMISSION CURRENT	*C1-O-01*
09:20	Satoru Yanabu, H. Anji *Minamitsukushino, Macidashi, Tokyo, Japan* VOLTAGE BEHAVIOR OF VACUUM CIRCUIT BREAKER IN CASE OF SERIES CONNECTED	*C1-O-02*
09:40	Ram Shanker Parashar *Alstom Grid Research and Technology, Stafford, United Kingdom* IMPROVED GLASS-CERAMIC ENVELOPE FOR VACUUM INTERRUPTERS	*C1-O-03*
10:00	Martin Leusenkamp *EATON Corporation, Suzhou, China* IMPULSE VOLTAGE GENERATOR DESIGN AND THE POTENTIAL IMPACT ON VACUUM INTERRUPTER DE-CONDITIONING	*C1-O-04*
10:20	Cyril Nicolle, Hans Schellekens, Albin Hénon, Christian Mombard *Schneider Electric, Grenoble, France* DEVELOPMENT OF A NEW VACUUM INTERRUPTER FOR DISCONNECTING AND BREAKING IN A SCREENED AND SOLID INSULATED SWITCHGEAR	*C1-O-05*
10:40	Victor Paperny, S.P. Gorbunov, K.N. Pukhilas *Irkutsk State University, Irkutsk, Russia* PROSPECTIVE MICROTHRUSTER BASED ON A LOW VOLTAGE VACUUM SPARK	*C5-O-01*

11:00 – 11:20 Coffee Break

11:00 – 13:00

Poster Session B3 Vacuum arc physics
B4 Computer modeling and computer aided design
B5 Pulse power physics and technology

		B3-P-01
1	Lijun Wang, Ling Zhang, Lijun Wang, Shenli Jia, Zhonghao Qian, Xin Zhou, Zongqian Shi *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiaotong University, Xian, China* TRANSIENT MODELING AND SIMULATION OF HIGH CURRENT VACUUM ARC UNDER DIFFERENT CONDITIONS	
		B3-P-02
2	Daniele Finarelli, Tang Xinlong Danshuheng *University of Pavia In Italy, Pavia, Italy* THE MODEL OF VACUUM ARC IN THE THREE PHASE HIGH CURRENT TRANSFER SWITCHING EQUIPMENT	
		B3-P-03
3	Narong Mungkung, Somchai Arunrungrusmi and Toshifumi Yuji *King Mongkut's University of Technology Thonburi,Department of Electrical Technology Education, Bangkok, Thailand* AN ANALYSIS OF AFFECTING EFFECTIVE CATHODE HEATING VOLTAGE ON PLASMA PARAMETERS PHENOMENA IN LOW CURRENT VACUUM ARC	
		B3-P-04
4	Narong Mungkung, Somchai Arunrungrusmi and Toshifumi Yuji *King Mongkut's University of Technology Thonburi,Department of Electrical Technology Education, Bangkok, Thailand* INVESTIGATION OF AFFECTING CATHODE SPOT CURRENT DENSITY ON PLASMA PARAMETERS PHENOMENA IN LOW-CURRENT METAL VACUUM ARC	
		B3-P-05
5	Guowei Kong, Zhiyuan Liu, Yingsan Geng, Hui Ma, Xiaohui Xue *Xi'an Jiaotong University, Xi'an, China* INFLUENCE OF CONTACT SOLID ANGLE ON ANODE SPOT FORMATION THRESHOLD CURRENT IN VACUUM CIRCUIT BREAKERS	
		B3-P-06
6	Xiaofei Yao, Jianhua Wang, Yingsan Geng, Zhiyuan Liu, Guowei Kong *Xi'an Jiaotong University,State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an, China* AN INFLUENCE OF AN AMBIENT MAGNETIC FIELD INDUCED BY A NEARBY PARALLEL CONDUCTOR ON HIGH-CURRENT VACUUM ARCS	
		B3-P-07
7	Konstantin Ulyanov, Ya. I. Londer *All-Russian Electrotechnical Institute, Moscow, Russia* MODEL OF THE SHORT VACUUM ARC AT COLLISION FREE MOTION OF IONS	

8	*B3-P-08* Alexander Logachev, M.V. Lisnyak *Ioffe Physical-Technical Institute Ran, Saint-Petersburg, Russia* METHOD OF DETERMINATION OF THE ELECTRON DENSITY IN THE GAP OF HIGH-CURRENT VACUUM ARC ON THE BASE OF CONTINUAL RADIATION ANALYSIS
9	*B3-P-09* Konstantin Zabello, A.M. Chaly, Ya. Barinov, S.M. Shkolnik *Ioffe Physical-Technical Institute Ras, Saint-petersburg, Russia* COMPARISON OF THE CHARACTERISTICS OF VACUUM ARC CATHODE SPOTS ON THE TUNGSTEN AND THE MOLYBDENUM ELECTRODES
10	*B3-P-10* Dmitry Shmelev *Institute of Electrophysics of the Ural Division of the Russian Academy of Sciences, Ekaterinburg, Russia* KINETIC MODEL OF SHORT VACUUM ARC WITH ACTIVE ANODE
11	*B3-P-11* Dmitry Shmelev, I.V. Uimanov *Institute of Electrophysics of the Ural Division of the Russian Academy of Sciences, Ekaterinburg, Russia* KINETIC MODEL OF HEATING OF METAL MICRODROPLET BY SURROUNDING PLASMA
12	*B3-P-12* Dmitry Shmelev *Institute of Electrophysics of the Ural Division of the Russian Academy of Sciences, Ekaterinburg, Russia* KINETIC MODEL OF INITIATION OF EXPLOSION CENTER ON CATHODE UNDER DENSE PLASMA
13	*B3-P-13* Isak Beilis *Depart of Electrical Engineering - Physical Electronics Fleischman Faculty of Engineering, TAU, Tel Aviv, Israel* CATHODE SPOT DEVELOPMENT AT A BULK CATHODE IN A VACUUM ARC
14	*B3-P-14* Sergey Popov, A.V. Schneider, A.V. Batrakov, V.A. Lavrinovich *Institute of High Current Electronics SB RAS, Tomsk, Russia* STUDY OF VOLTAGE DROP DYNAMICS FOR VACUUM ARC AND THYRISTOR CONNECTED IN PARALLEL
15	*B3-P-15* Alexey Nikolaev, G.Yu. Yushkov, K.P. Savkin, and E.M. Oks *HCEI, Tomsk, Russia* ION ANGULAR DISTRIBUTION IN VACUUM ARC PLASMA
16	*B3-P-16* Mikhail Tsventoukh, Sergey A. Barengolts, Gennady A. Mesyats *Lebedev Physical Institute Ras, Moscow, Russia* IGNITION AND SUSTAINMENT OF THE EXPLOSIVE ELECTRON EMISSION CYCLIC PULSES – ECTONS BY PLASMA– SURFACE INTERACTION

	B3-P-17
17	Sergey Barengolts, Gennady A. Mesyats, Mikhail M. Tsventoukh *Prokhorov General Physics Institute Ras, Moscow, Russia* ON PARAMETERS OF THE ECTON PROCESSES AT A THIN-FILM METALLIC CATHODES
	B3-P-18
18	B. Sagi, I. Beilis, V. Zhitomirsky, O. Margulis, and R.L. Boxman *Tel Aviv University, Tel Aviv, Israel* EXPERIMENTAL STUDY OF CATHODE SPOT MOTION IN A VACUUM ARC WITH A LONG RECTANGULAR ROOF-SHAPED CATHODE
	B3-P-19
19	Konstantin Ulyanov, Ya. I. Londer *All-Russian Electrotechnical Institute, Moscow, Russia* THEORY OF ANODE REGION OF HIGH-CURRENT VACUUM ARC
	B3-P-20
20	Sergey Popov, A.V. Batrakov *Institute of High Current Electronics SB RAS, Tomsk, Russia* MASS-ENERGY ANALYSIS OF IONS IN THE ANODE PLASMA CREATED BY HIGH-CURRENT VACUUM SPARK
	B3-P-21
21	Maxim Bochkarev *Insitute of Electrophysics, Ekaterinburg, Russia* STUDY OF THE ECTON PROCESSES AT THE CATHODE SPOT OF LOW CURRENT VACUUM ARC BY TUNABLE LASER SHADOWGRAPHY
	B3-P-22
22	Maxim Bochkarev, Yuri Zemskov *Insitute of Electrophysics, Ekaterinburg, Russia* INVESTIGATION OF PLASMA DENSITY AND COMPOSITION OF HIGH CURRENT METAL PLASMA SOURCE
	B3-P-23
23	Igor Uimanov, A. N. Karmatskii *Institute of Electrophysics, Ekaterinburg, Russia* SIMULATION OF THE HYDRODYNAMIC INSTABILITY OCCURRING IN THE MOLTEN POOL ON A CATHODE IN ITS INTERACTION WITH THE DENSE PLASMA OF THE VACUUM-ARC CATHODE SPOT
	B3-P-24
24	Cao Yundong, Yu Qiuting, and Li Jing *Economic & Technological Development Zone and Shenyang University of Technology, Shenyang, China* A MICROSCOPIC STUDY OF VACUUM METAL VAPOR ARC BEFORE PROCESS IN PROXIMAL REGION
	B3-P-25
25	Igor Zhirkov, Anders Eriksson, Johanna Rosen *Department of Physics, Chemistry and Biology at Linkping University In Sweden, Linkoping, Sweden* INFLUENCE OF CATHODE COMPOSITION ON PLASMA CHEMISTRY AND ION ENERGY IN DC ARC PLASMA FROM INDUSTRIAL COMPOUND CATHODES

	B4-P-01
26	Zou Jiyan, Liu Xiaoming, Zhao Enchen, Cao Yundong, Leng Xue, Yang HongxiaoDalian Polytechnic University, Dalian, China ANALYSIS ON DYNAMIC INSULATION OF VACUUM CIRCUIT BREAKER WITH MULTIPLE-BREAKS IN SERIES OPERATION
	B4-P-03
27	Sergy Korolev *VEI, Moscow, Russia* ILL-POSED PROBLEMS OF PHYSICAL ELECTRONICS
	B4-P-04
28	Dmitrij Korolev, Korolev S.V. *VEI, Moscow, Russia* ABOUT CORRECT PROCESSING OF ENERGY ANALIZER MEASUREMENT RESULTS IN THE PLASMA PHYSICS
	B4-P-05
29	Dmitrij Korolev, Korolev S.V. *VEI, Moscow, Russia* ILL-POSED PROBLEMS OF EMISSION ELECTRONICS
	B4-P-06
30	Chaohai Zhang, J.D. Zhu, Z.B. Yang, B.H. Jiang *Harbin Institute of Technology, Harbin, China* A PREDICTION FOR BREAKDOWN VOLTAGES IN SUPERCRITICAL CO2 USING ARTIFICIAL NEURAL NETWORK
	B4-P-07
31	Victor Sveshnikov, Zaleski V. G., Petrovich O.N. *Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia* CALCULATION OF ELECTRON-OPTICAL SYSTEMS WITH A MOVING PLASMA EMITTER
	B4-P-08
32	Toshifumi Yuji, Narong Mungkung, Yuichi Kiyota, Kenichi Nakabayashi, Toshihide Takasaki *University of Miyazaki, Miyazaki, Japan* DESIGN AND MODELING OF LOW-PRESSURE HIGH-FREQUENCY PLASMA CHEMICAL VAPOR DEPOSITION SYSTEM IN THE SIMULATION SOFTWARE PEGASUS
	B4-P-09
33	Liu Xu-dong, Fan Xing-ming, Zhang Xin, Zou Qi-tao, Fan Jian-rong, Liang Cong, Shi Wei-jian *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* THE RELATIONSHIP RESEARCH BETWEEN THE INTERNAL PRESSURE AND SHIELD POTENTIAL IN VACUUM INTERRUPTERS
	B4-P-10
34	Fan Xing-ming, He Jia-min, Zhang Xin, Fan Jian-rong, Huang Zhi-chao, Liang Cong, Shi Wei-jian *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* THE K VALUE DETERMINATION RESEARCH OF ADVANCED BREAKING CURRENT WEIGHED CUMULATIVE METHOD FOR VCB ELECTRICAL ENDURANCE DETECTION

		B4-P-11
35	Shengwen Shu, Jiangjun Ruan, Daochun Huang, Gaobo Wu, Chang Liu *School of Electrical Engineering, Wuhan University, Wuhan, Hubei Province, China* STUDY ON RE-IGNITION CHARACTERISTICS OF 126 KV VACUUM CIRCUIT BREAKER WITH TRIPLE BREAKS	
		B5-P-01
36	Yao Li, Zongqian Shi, Shenli Jia, Lijun Wang, and Xingwen Li *Xi'an Jiaotong University, Xi'an, China* NUMERICAL SIMULATION ON THE INFLUENCE OF SOME PARAMETERS ON WIRE ELECTRICAL EXPLOSION BASED ON A 0D MODEL	
		B5-P-02
37	Vladimir Kokshenev *Institute of High Current Electronics, Tomsk, Russia* VACUUM INSULATION OF A FERROMAGNETIC CORE IN A MEGAAMPERE LOAD CURRENT MULTIPLIER	
		B5-P-03
38	Vladimir Kokshenev *Institute of High Current Electronics, Tomsk, Russia* MICROSECOND PLASMA OPENING SWITCH: PRO ET CONTRA	

13:00 – 14:20 Lunch

14:20 – 16:00

Oral Session C3 Electron, ion, neutron, X-ray and other beam and light sources

Chairman: Leslie Falkingham, Vacuum Interrupters Limited, Rugby, UK

		C3-O-01
14:20	Ian Brown *Lawrence Berkeley National Laboratory, Berkeley, United States* VACUUM ARC ION SOURCES A REVIEW	
		C3-O-02
14:40	Efim M. Oks, A.S. Bugaev, V.I. Gushenets, A.G. Nikolaev, K.P. Savkin, M.V. Shandrikov, A.V. Tyunkov, A.V. Visir, and G.Yu. Yushkov *Institute of High Current Electronics, SB RAS, Tomsk, Russia* SOME RESEARCHES AND APPLICATIONS OF VACUUM ARC BASED ION AND ELECTRON SOURCES	
		C3-O-03
15:00	Grigory Ozur *Institute of High Current Electronics, SB RAS, Tomsk, Russia* LOW-ENERGY, HIGH-CURRENT ELECTRON BEAMS FOR MATERIAL SURFACE TREATMENT	

	C3-O-04
15:20	Gennady Remnev, Vitaliy Ezhov, E. Krastelev *Institute of High Technology Physics, TPU, Tomsk, Russia* THE MECHANISM OF APPEARANCE OF THE VACUUM ARC IN THE PULSE ELECTRON ACCELERATOR DIODE AND ITS IMPACT ON THE LIFE OF THE ANODE FOIL
	C3-O-05
15:40	Nikolay Landl, Yu.D. Korolev, O.B. Frants, V.G. Geyman, I.A. Shemyakin, A.V. Bolotov *Insitute of High Current Electronics SB RAS, Tomsk, Russia* FEATURES OF MAGNETIC COMPRESSION MODEL AS APPLIED TO EUV SOURCE BASED ON A PSEUDOSPARK DISCHARGE

14:20 – 16:00 Short Course II
Prof. Rene P. P. Smeets, The Netherlands:
"Application of vacuum circuit breakers above 52 kV"

16:00 – 16:20 Coffee Break

16:00 – 18:00
Poster Session C1 Vacuum interrupters and their applications
C3 Electron, ion, neutron, X-ray and other beam and light sources

	C1-P-01
1	Jing Yan, Zhiyuan Liu, Sheng Zhang, Yingsan Geng, Yingyao Zhang, Guangli He *State Key Laboratory of Electrical Insulation and Power Equipment, Xian Jiaotong University, Xi'an, China* X-RAY RADIATION OF 126KV VACUUM INTERRAPTERS
	C1-P-02
2	Xavier Godechot, C. Nicolle, M. Hairour, S. Olive, Ph. Picot *Schneider Electric, Montpellier, France* INVESTIGATION AND OPTIMIZATION OF MAGNETRON DISCHARGE IN A VACUUM SWITCH
	C1-P-03
3	Alexey Pertsev, A.N. Panibratets, L.A. Rylskaya *All-Russian Electrotechnical Institute, Moscow, Russia* ABOUT THE PREVENTION OF RESTRIKE OF VACUUM CIRCUIT-BREAKERS
	C1-P-04
4	Li Yu, Zhiyuan Liu, Jianhua Wang, Yingsan Geng, Liqiong Sun, Ranran Yu, Xiaohui Xue *State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an, China* CONTACTS IMPACT PHENOMENON IN A 126 KV VACUUM CIRCUIT BREAKER

	C1-P-05
5	Zhang Xin, Fan Xing-ming, He Jia-min, Zhang Xin, Huang Zhi-chao, Liang Cong, Shi Wei-jian *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* A HIGH ACCURATE SENSOR AND ITS APPLICATION RESEARCH FOR VCBS INTERNAL PRESSURE ON-LINE CONDITION MONITOR
	C1-P-06
6	He Jia-Min, Fan Xing-ming, Zhang Xin, Zou Qi-tao, Huang Zhi-chao, Liang Cong, Fan Jian-rong, Shi Wei-jian *Dept. of Electrical Engineering and Automation, Guilin University of Electronic and Technology, Guilin, China* THE ASSESSMENT AND PREDICTION METHOD FOR VCB CONTACT ENDURANCE RESEARCH BASED ON LM-BP NEURAL NETWORK
	C1-P-07
7	Liu Xu-Dong, Liu Xu-dong, Fan Xing-ming, Zhang Xin, Fan Jian-rong, Liang Cong, Shi Wei-jian *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* A VACUUM INTERRUPTERS INTERNAL PRESSURE ON-LINE CONDITION MONITORING SYSTEM
	C1-P-08
8	Olga Pavleino, A. Chaly, V. Dmitriev, M. Pavleino *St. Petersburg State University, St. Petersburg, Russia* SPECIAL FEATURES OF THE PROCESS OF CONTACT SOFTENING, MELTING, AND WELDING BY SHORT-CIRCUIT CURRENT
	C1-P-09
9	Hyeong Goo Lee, J. S. Kang, I. C. Ahn, J. S. Kim *Hyundai Heavy Industries Co., Ltd, Yongin, Republic of Korea* STUDY ON DESIGN OF AXIAL MAGNETIC FIELD ELECTRODES DEPENDING ON ELECTRODE DIAMETER AND CURRENT
	C1-P-10
10	Jaeseop Ryu, Sungjun Tak, Young-Geun Kim, Jongwoong Choi, Seokweon Park *LS Industrial Systems, Choengju, Republic of Korea* THE EXPERIMENTAL RESEARCH OF 170KV VCB USING SINGLE-BREAKE VACUUM INTERRUPTER
	C1-P-11
11	Hans Schellekens *Schneider-Electric, Medium Voltage Products, Grenoble, France* VACUUM INTERRUPTER CONTACT DESIGN
	C1-P-12
12	Fan Xing-Ming, Zhang Xin, Huang Zhi-chao,Zou Qi-tao, Fan Jian-rong, Liang Cong, Shi Wei-jian *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* A VCB AND IGBT BASED COMBINATION SWITCH AND ITS APPLICATION IN POWER QUALITY IMPROVEMENT

	C1-P-13
13	Shengwen Shu, Jiangjun Ruan, Daochun Huang, Gaobo Wu, Chang Liu *School of Electrical Engineering, Wuhan University, Wuhan, Hubei Province, China* STUDY ON TRANSIENT RECOVERY VOLTAGE DISTRIBUTION MECHANISM AND GRADING CAPACITOR OF DOUBLE-BREAK VACUUM CIRCUIT BREAKER
	C1-P-14
14	Yoshimitsu Niwa, Palad Robert, Kosuke Sasage, Wataru Sakaguchi *Toshiba Corporation, Tokyo, Japan* VACUUM ARC BEHAVIOR IN TRANSVERSAL MAGNETIC FIELD ELECTRODE OF VACUUM INTERRUPTER
	C1-P-15
15	Zhang Xin, Fan Xing-ming, He Jia-min, Fan Jian-rong, Huang Zhi-chao, Liang Cong, Shi Wei-jian *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* THE LEAST SQUARES METHOD FOR VCB ELECTRICAL ENDURANCE PARAMETERS PREDICTING RESEARCH BASED ON BREAKING CURRENT WEIGHTED CUMULATIVE METHOD
	C1-P-16
16	He Jia-Min, Fan Xing-ming, Zhang Xin, Huang Zhi-chao, Zou Qi-tao, Liang Cong, Fan Jian-rong, Shi Wei-jian *Dept. of Electrical Engineering and Automation, Guilin University of Electronic and Technology, Guilin, China* VCB CONTACT SYSTEM ELECTRICAL ENDURANCE ON-LINE CONDITION MONITORING TECHNOLOGY AND ITS APPALICATION
	C1-P-17
17	Sandeep Kulkarni, M. Hemachander, Arun Kumar, Lalichan Andrews, Viren Acharya, Maheswaran C, Srinivas Rayudu *Global Rd Centre, Crompton Greavres Ltd, Mumbai, India* CONCEPT OF SERIES CONNECTED VACUUM INTERRUPTERS
	C1-P-18
18	Zhang Xin, Fan Xing-ming, Liu Xu-dong, Zou Qi-tao, Fan Jian-rong, Liang Cong, Shi Wei-jian *Dept. of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, Guilin, China* THE RELATIONSHIP RESEARCH BETWEEN THE PERMITTIVITY AND INTERNAL PRESSURE IN VACUUM INTERRUPTERS
	C1-P-19
19	Vasily Durakov, S.F. Gnyusov, B.V. Dampilon, S.Z. Dehonova, B.I. Ubiennykh *Institute of Strength Physics and Materials Science, SB RAS, Tomsk, Russia* MICROSTRUCTURE AND PROPERTIES OF VACUUM ELECTRON BEAM FACING CuC525 CONTACT MATERIAL
	C1-P-20
20	Evgeniy Baksht, A.N.Panchenko, V.F. Tarasenko *Institute of High Current Electronics, Tomsk, Russia* ELECTRIC CURRENT PROPAGATION AND INTERRUPTION IN THE PLASMA FORMED BY UV LASER RADIATION

	C1-P-21
21	Cao Yundong, Liu Xiaoming, Yu Deen, and Leng Xue *Economic & Technological Development Zone and Shenyang University of Technology, Shenyang, China* ANALYSIS ON ROTARY MAGNETIC FIELD CHARACTERISTICS OF HIGH VOLTAGE VACUUM INTERRUPTER
	C1-P-22
22	Cao Yundong, Zhang Shiyu, Hou Chunguang *Economic & Technological Development Zone and Shenyang University of Technology, Shenyang, China* RESEARCH ON THE RELATIONSHIP OF INTERNAL PRESSURE AND MAGNETIC CHARACTERISTICS OF VACUUM INTERRUPTER
	C1-P-23
23	Samuel Griot, M. Serge Olive, M. Albin Henon and M. Cyril Nicolle Schneider-Electric, Grenoble, France VACUUM INTERRUPTER LIFETIME TAKE ADVANTAGE OF THE PRESSURE MEASUREMENT
	C3-P-01
24	Evgeniy Baksht, V.F. Tarasenko, A.G. Burachenko, M.I. Lomaev, D.V. Rybka, D.A. Sorokin *Institute of High Current Electronics, Tomsk, Russia* CHANGE OF THE E-BEAM GENERATION MODE AT TRANSITION FROM THE VACUUM TO THE GAS-FILLED DIODE
	C3-P-02
25	Ivan Turmyshev, A.M. Murzakaev, O.R. Timoshenkova *Institute of Electrophysics of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia* FIELD EMISSION PROPERTIES OF SILICON NANOWIRES
	C3-P-03
26	Ivan Turmyshev, A.M. Murzakaev, O.R. Timoshenkova *Institute of Electrophysics of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia* FIELD EMISSION FROM METALL TIPS COVERED BY ULTRATHIN FILMS OF ZIRCONIA ENERGY SPECTRA FEATURES AND CURRENT-VOLTAGE CURVES
	C3-P-04
27	Nikolay Koval, Grigoriev Sergey, Teresov Anton, Moskvin Pavel *High Current Electronics Institute, Tomsk, Russia* PLASMA ELECTRON SOURCE WITH HIGH EFFICIENCY OF BEAM GENERATION
	C3-P-05
28	Alexey Goncharov, A.M. Dobrovolskiy, S.P. Dunets, I.V. Litovko, V.I. Gushenets, E.M. Oks, and A.S. Bugaev *Institute of Physics NAS of Ukraine, Kiev, Ukraine* CURRENT STATUS OF THE DEVELOPMENT THE POSITIVE SPACE CHARGE PLASMA LENSES FOR FOCUSING INTENSE NEGATIVE CHARGED PARTICLE BEAMS

29	*C3-P-06* Vasily Gushenets, A.A. Goncharov, A.M. Dobrovolskiy, S.P. Dunets, I.V. Litovko, E.M. Oks, A.S. Bugaev *Institute of High Current Electronics, Tomsk, Russia* PLASMA LENS FOCUSING OF AN INTENSE ELECTRON BEAM FORMED BY A VACUUM ARC PLASMA ELECTRON SOURCE
30	*C3-P-07* G.Yu. Yushkov, A.V. Vodopyanov, A.G. Nikolaev, I.V. Izotov, K.P. Savkin, S.V. Golubev, E.M. Oks *High Current Electronics Institute, Tomsk, Russia* GYROTRON HEATING OF VACUUM ARC PLASMA FOR HIGH CHARGE STATE METAL ION BEAM GENERATION
31	*C3-P-08* Kiziridi Pavel, G.E. Ozur *Institute of High Current Electronics, SB RAS, Tomsk, Russia* HIGH-CURRENT ELECTRON GUN WITH PLASMA ANODE BASED ON COMBINED DISCHARGE
32	*C3-P-09* Balezin Mikhail, S.Y.Sokovnin, S.V.Scherbinin, A.A.Shverikas *Institute of Electrophysics Ural Division Russian Academy of Sciences, Ekaterinburg, Russia* X-RAY NANOSECOND IRRADIATOR OF BLOOD
33	*C3-P-10* Balezin Mikhail, S.Yu.Sokovnin, V.V.Lisenkov, A.O. Bogum *Institute of Electrophysics Ural Division Russian Academy of Sciences, Ekaterinburg, Russia* RESEARCH OF ULTRA-VIOLET RADIATION THE NANOSECOND GAS DISCHARGE INFLUENCE ON PATHOGENIC MICROORGANISMS
34	*C3-P-11* Andriy General, V. Kelman, S. Ulusova *Institute of Electron Physics, National Academy of Sciences of Ukraine, Uzhgorod, Ukraine* EMISSION CHARACTERISTICS OF BARRIER DISCHARGE PLASMA IN ARH_2_O MIXTURES
35	*C3-P-12* Nikolay Koval, Vladimirov A.M., Vorobyov M.S., Denisov V.V., Devyatkov V.N., Gamermaister S.A., Shugurov V.V., Sulakshin S., *Institute of High Current Electronics SB RAS, Tomsk, Russia* THE MULTIARC PLASMA CATHODE ELECTRON SOURCE
36	*C3-P-13* Artur Ermilov, Alekhina V.I., Kovalenko Yu.A., Korolev D.S., Korolev S.V., Shapiro A.L. *VEI, Moscow, Russia* GIANT CATHODE-HIATING UNITS FOR POVERFUL VACUUM AND PLASMA DEVISES.
37	*C3-P-14* Andrey Kozyrev, E.Kh. Baksht, V.F. Tarasenko, N.N. Koval *Institute of High Current Electronics, Tomsk, Russia* SPECTRUM RECONSTRUCTION OF NANOSECOND AND MICROSECOND ELECTRON BEAM BY FOIL EXTINCTION METHODE

38	*C3-P-15* Ilya Muzyukin *Institute of Electrophysics of the Ural Division of the Russian Academy of Sciences, Ekaterinburg, Russia* INVESTIGATION OF A VACUUM SPARK DISCHARGE WITH PRELIMINARY FORMED ANODE PLASMA CLOUD
39	*C3-P-16* Ilya Muzyukin *Institute of Electrophysics of the Ural Division of the Russian Academy of Sciences, Ekaterinburg, Russia* MEASUREMENTS OF ION FLOW EMANATING FROM PLASMA FORMED BY SHORT ELECTRON PULSE ON A DIELECTRIC SURFACE
40	*C3-P-18* Victor Bochkov, D.V. Bochkov, V.N.Nikolaev, V.I. Teryoshin, P.V. Panov, A.V.Batrakov, K.V. Karlik, G.E. Ozur, and D.I. Proskurovsky *Pulsed Technologies Ltd., Ryazan, Russia* DEVELOPMENT OF SMALL DIMENSION HIGH-VOLTAGE ELECTRONIC VACUUM DEVICES

18:00 – 19:30 Panel Discussion II
"Is there anything fundamentally new in our field?"
moderated by Dr. Andre Anders, USA

Friday Sessions September 7, 2012

09:00 – 11:00
Poster Session C2 Deposition of coatings by vacuum arc plasmas and related technologies
C4 Accelerators and fusion reactor related issues
C5 Space related technologies

1	Andre Anders, Robert Franz, Joseph Wallig, Peter Polcik *Lawrence Berkeley National Laboratory, Berkeley, CA, United States* CHARGE STATE DISTRIBUTIONS OF AL AND CR CATHODIC ARC PLASMAS	*C2-P-01*
2	Victor Bochkov, Yury Chivel, Yury Gryshin, Valery Suslov, Vladimir Vermel *Pulsed Technologies Ltd., Ryazan, Russia* ATMOSPHERIC ELECTROMAGNETIC PLASMADYNAMIC SYSTEM FOR INDUSTRIAL APPLICATIONS	*C2-P-02*
3	Ruslan Vafin, K. Ramazanov, V. Budilov *Ufa State Aircraft Engineering University , Ufa, Russia* EFFECT OF APPLYING A MAGNETIC FIELD ON THE ION NITRIDING IN A GLOW DISCHARGE	*C2-P-03*
4	Eduard Vardanyan, Radik Kireev, Vladimir Budilov *Ufa State Aviation Technical University, Ufa, Russia* SYNTHESIS OF COATINGS BASED ON INTERMETALLIC TITANIUM-ALUMINUM BY VACUUM ARC DEPOSITION	*C2-P-04*
5	Ilgiz Yagafarov, R.Kireev, V.Muchin *Ufa State Aircraft Engineering University, Ufa, Russia* ASSURANCE OF PARTS ACCURACY IN THE PROCESS OF COATING DEPOSITION BY THE VACUUM ARC PLASMA	*C2-P-05*
6	Kamil Ramazanov, F. Sigeneger, D. Loffhagen, V. Budilov *Ufa State Aviation Technical University, Ufa, Russia* MODELING OF A HOLLOW CATHODE DISCHARGE USED FOR ION NITRIDING OF METALLIC SURFACES	*C2-P-06*
7	Konstantin Savkin, A.S.Bugaev, A.G.Nikolaev, E.M.Oks, I.A.Kurzina, M.V.Shandrikov, G.Yu.Yushkov, and I.G.Brown *Institute of High Current Electronics SB RAS, Tomsk, Russia* DECREASE OF CERAMICS SURFACE RESISTANCE BY IMPLANTATION WITH VACUUM ARC METAL ION SOURCE	*C2-P-07*

8	*C2-P-08* Semen Shehtman, Muhin V.S., Kireev R.M. *Ufa State Aviation Technical University, Ufa, Russia* CREATE MULTI-LAYER VACUUM ION-PLASMA COATINGS BASED ON Ti-C-Si IN AN ADDITIONAL ION BOMBARDMENT
9	*C2-P-09* Vasily Durakov, S.F. Gnyusov, A.D. Budnisky *Institute of Strength Physics and Materials Science, SB RAS, Tomsk, Russia* ELECTRON BEAM IN TECHNOLOGY SURFACING OF THE POWDER RAPID STEEL
10	*C2-P-10* Vasily Durakov, Dampilon B.V. *Institute of Strength Physics and Materials Science, SB RAS, Tomsk, Russia* IMPULSIVE ELECTRON-BEAM TREATMENT OF CHROME-VANADIUM CAST IRON COATINGS
11	*C2-P-11* Myung Ki Baek, Gwang Jun Yu, Il Han Park *Sungkyunkwan University, Suwon, Republic of Korea* IMPROVEMENT OF PLASMA ETCHING PROFILE ON SEMICONDUCTOR WAFER BY FINITE ELEMENT DISCHARGE ANALYSIS AND DESIGN MODIFICATION
12	*C2-P-12* Evgeny Yakovlev, Markov A.B., Petrov V.I. *Institute of High Current Electronics, SB RAS, Tomsk, Russia* ELECTRICAL AND TRIBOLOGICAL PROPERTIES OF COPPER-BASED SURFACE ALLOYS FORMED WITH A LOW-ENERGY HIGH-CURRENT ELECTRON BEAM
13	*C2-P-13* D.P. Borisov, N.N. Koval, A.D. Korotaev, V.M. Kuznetsov, V.Ya. Romanov, P.A. Terekhov, and E.V. Chulkov *Tomsk State University, Tomsk, Russia* EFFECTIVE VACUUM-PLASMA-ARC TECHNIQUES OF PRODUCTION SURFACE MODIFICATION
14	*C4-P-01* Natalia Labetskaya, V.I. Oreshkin, S.A. Chaikovsky, I.M. Datsko, Y.A. Sukovatitsyn, E.N. Volkov *Institute of High Current Electronics SB RAS, Tomsk, Russia* EXPERIMENTAL RESEARCH OF ELECTRICAL CONDUCTOR EXPLOSION IN THE CURRENT SKINNING MODE
15	*C5-P-01* Timofey Chernyshev, A.N. Ermilov, V.F. Eroshenko, Yu.A. Kovalenko, S.V. Korolev, A.P. Shumilin *All-Russian Electrotechnical Institute FSUE VEI, Moscow, Russia* FEATURES OF IGNITION OF THE INTENSE DISCHARGE IN CROSSED FIELDS WITH A THERMIONIC CATHODE
16	*C5-P-02* Sergy Korolev *VEI, Moscow, Russia* PROBLEM DIAGNOSTICS OF ELECTRONICS AND PLASMA UNITS

		C5-P-03
17	Sergey Popov, A.V. Batrakov, A.N. Panchenko, A.E. Telminov, V.V. Mataibaev, F.N. Ljubchenko *Institute of High Current Electronics, Tomsk, Russia* INVESTIGATION OF LASER ABLATION OF GA-IN LIQUID-METAL TARGET	

11:00 – 11:20 Coffee Break

11:20 – 12:00
Oral Session C4 Accelerators and fusion reactor related issues

Chairman: H. Craig Miller, Bellevue, USA

		C4-O-01
11:20	Shin Kajita, Noriyas Ohno, Shuichi Takamura *Nagoya University, Nagoya, Japan* OBSERVATION OF ARC SPOTS INITIATED ON NANOSTRUCTURED TUNGSTEN	
		C4-O-02
11:40	Aleksey Adonin, R. Hollinger *GSI Helmholtzzentrum Fr Schwerionenforschung Gmbh, Darmstadt, Germany* CHALLENGES OF PRODUCTION OF HIGH CURRENT FOUR-FOLD Bi AND Au BEAMS FROM VACUUM ARC ION SOURCES AT GSI ACCELERATOR FACILITY	

12:00 – 13:00 Closing Session

13:00 – 14:20 Lunch

15:00 – 17:00 Visit to the Institute of High Current Electronics, SB of RAS

Meeting Point: Main Entrance of Rubin Hotel at 15:00