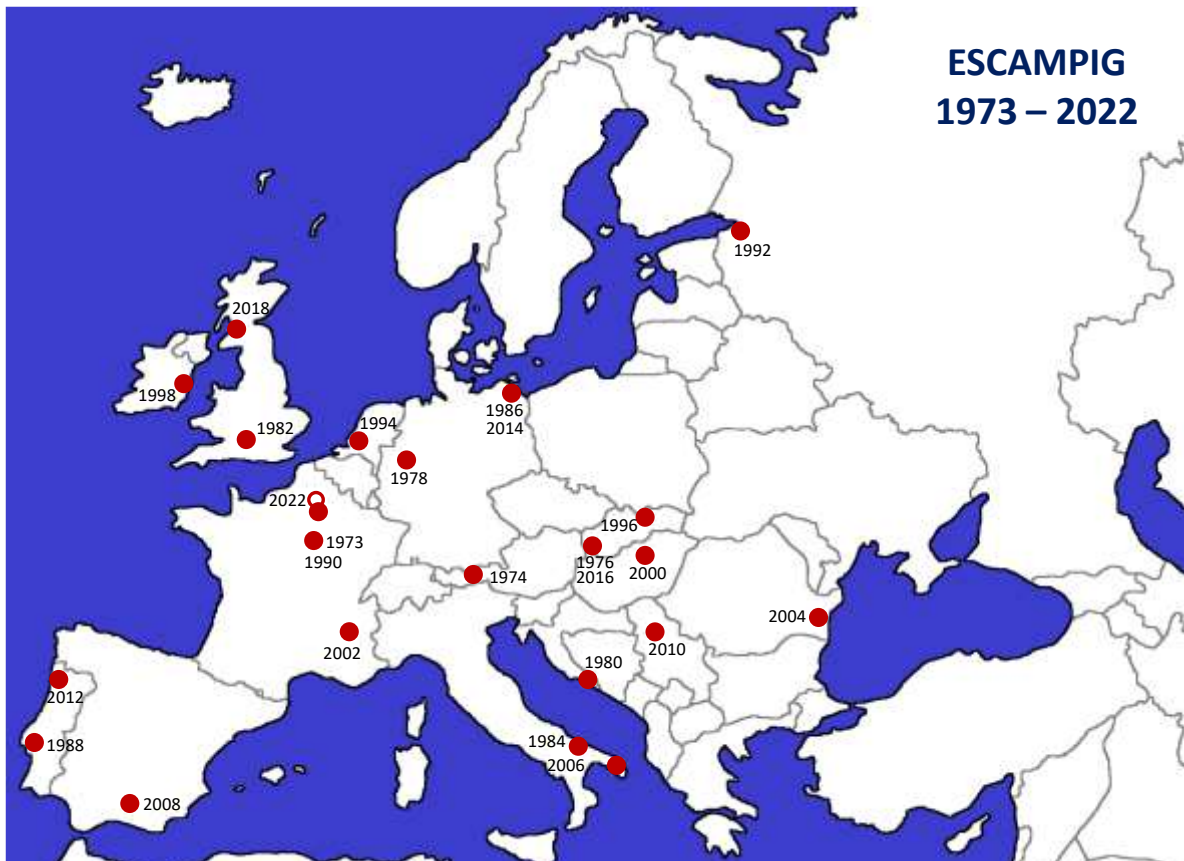


# ESCAMPIG

## Europhysics Sectional Conference on the Atomic and Molecular Physics of Ionized Gases

1973-2022

### HISTORICAL NOTES



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## Introduction

This summary of statistical and historical data of the Europhysics Sectional Conference on the Atomic and Molecular Physics of Ionized Gases, ESCAMPIG covers the time from 1973, when the first ESCAMPIG was held in Versailles, until present. The second ESCAMPIG already took place in Innsbruck 1974. From then on it has been repeated every two years (with the exception of 2020, due to the COVID-19 pandemic situation) and went through a continuous increase of participants and contributed papers. The first two ESCAMPIGs had about 30 contributed papers but presently the "stable" size is about 200 presented papers and a number of participants of also around 200. The ESCAMPIG conferences were approved as Europhysics Conferences by the European Physical Society and are now supported by both its Atomic and Molecular Physics Division and Plasma Physics Division.

H. Günter Lergon

G.M.W. Kroesen

W.G. Graham

J. Meichsner

C. D. Pintassilgo

## 1. ESCAMPIG Conferences (1973 – 2020)

1973	Versailles	France	April 3-5
1974	Innsbruck	Austria	September 3-5
1976	Bratislava	Czechoslovakia	August 24-27
1978	Essen	West-Germany (F.R.G.)	September 18-20
1980	Dubrovnik	Yugoslavia	September 1-3
1982	Oxford	United Kingdom	September 1-3
1984	Bari	Italy	August 28-31
1986	Greifswald	East-Germany (G.D.R.)	August 26-29
1988	Lisbon	Portugal	August 30-September 2
1990	Orléans	France	August 28-31
1992	St. Petersburg	Russia	August 25-28
1994	Noordwijkerhout	The Netherlands	August 23-26
1996	Poprad	Slovak Republic	August 27-30
1998	Malahide	Ireland	September 26-29
2000	Lillafüred	Hungary	August 26-30
2002	Grenoble	France	July 14-18
2004	Constanta	Romania	September 1-5
2006	Lecce	Italy	July 13-16
2008	Granada	Spain	July 15-19
2010	Novi Sad	Serbia	July 13-17
2012	Viana do Castelo	Portugal	July 10-14
2014	Greifswald	Germany	July 15 - 19
2016	Bratislava	Slovakia	July 12 - 16
2018	Glasgow	United Kingdom	July 17 - 21
2022	<i>Paris</i>	<i>France</i>	<i>July 19-23</i>

(Due to the COVID-19 pandemic situation, there was no ESCAMPIG in 2020)

## 2. Topics and workshops

### 1973 Versailles

Topics not given

General discussions on:

- Processes in weakly ionized gases (discussion leader: L. Goldstein)
- Highly ionized gases and statistical models (discussion leader: R.W.P. McWhirter)
- Heavy particle processes (discussion leader: J.B. Hasted)

### 1974 Innsbruck

1. Elementary processes (electron collisions, heavy particle collisions)
2. Discharges and departure from LTE
3. Processes in gas lasers
4. Plasma wall interactions
5. Experimental techniques

*Panel session:*

- Ions Sampling (chairman: J.B. Hasted)

### 1976 Bratislava

1. Elementary processes, low energy electron and heavy particle collisions, diffusion and mobility of ions, recombination, ion-molecule reactions
2. Positive columns of glow discharges
3. Discharges and the departure from LTE
4. Processes in gas lasers
5. Experimental techniques

### 1978 Essen

1. Elementary processes
2. Transport phenomena
3. Non-equilibrium plasmas
4. Processes in gas laser plasmas
5. Plasma sources for the study of elementary processes
6. Plasma-wall interaction
7. Diagnostic methods

### 1980 Dubrovnik

1. Elementary and transport processes in nonequilibrium plasmas, laser plasmas, negative ion plasmas, fusion plasmas
2. Rydberg atom collisions and spectroscopy
3. Radiation induced collisions
4. Spectral line broadening and shift
5. Recombination

*Workshop topic:*

- Rydberg atom collisions (chairman: R.K. Janev)

## **1982 Oxford**

1. Elementary processes involving ions (ion clusters, ion-molecule reactions, excited states of ions)
2. Recombination mechanisms
3. Elementary processes involving Rydberg states
4. Negative ions
5. Laser induced collisions
6. Laser produced plasmas
7. Processes in laser plasmas (lasing media)
8. Spectral line broadening and shift
9. High density plasmas
10. General properties of discharges and plasmas
11. Transport processes in plasmas
12. Fusion plasmas
13. Atomic and molecular processes in interstellar space
14. The sun and atomic processes

## **1984 Bari**

1. Elementary processes in atomic and molecular plasmas
2. Non equilibrium particle energy distribution functions
3. Laser discharge kinetics
4. Physical bases of plasma chemistry
5. Laser interactions with atomic and molecular plasmas
6. Transport properties
7. Gas discharges

### *Workshop topics:*

- Vibrational kinetics and relaxation (organizer: M. Capitelli)
- Electron energy distribution functions (organizer: G.L. Braglia)

## **1986 Greifswald**

1. Elementary processes (particle collisions, transport processes, radiation phenomena)
2. Electrical discharges (glows and afterglows)
3. Plasma kinetics (including plasma wall interaction)
4. Non-ideal plasmas
5. Physical bases of plasma chemistry

### *Workshop topics:*

- Kinetics in weakly ionized gases (organizers: S.Pfau, R. Winkler)
- Non-ideal plasmas (organizer: W.D. Kraeft)

## **1988 Lisbon**

1. Elementary processes in atomic and molecular plasmas
2. Particle energy distribution functions
3. Kinetics of discharges and laser plasmas
4. Laser interaction with plasmas
5. Transport properties
6. Physical bases of plasma chemistry

### *Workshop topic:*

- Plasma etching and deposition - modelling and diagnostics (organizers: F. J. de Hoog, D. Schram and members of LOC)

### **1990 Orléans**

1. Elementary processes in atomic and molecular plasmas
2. Particle energy distribution functions
3. Plasma and laser discharge kinetics
4. Physical bases of plasma chemistry and plasma surface interactions
5. Laser-assisted (plasma) processes
6. Discharge physics: sheaths, transport properties and modeling

*Workshop topic:*

- Laser-surface / plasma-surface interaction (organizers: J. Boulmer, J. Perrin and A. Catherinot)

### **1992 St. Petersburg**

1. Elementary processes in atomic and molecular plasmas
2. Particle energy distribution functions
3. Plasma and laser discharge kinetics
4. Laser-assisted plasma processes
5. Discharge physics: sheaths, transport properties and modelling
6. Physical bases of plasma chemistry and plasma-surface interaction

*Workshop topic:*

- Plasma technology (organizer: L. D. Tsengin)

### **1994 Noordwijkerhout**

1. Atomic and molecular processes in plasmas (including clusters and dust)
2. Particle energy distribution functions
3. Discharge physics: sheaths, transport processes and modelling
4. Plasma diagnostics
5. Laser and particle beam assisted plasma processes
6. Physical bases of plasma chemistry and plasma surface interaction

*Workshop topics:*

- Hydrogen kinetics in pure hydrogen and hydrogen containing plasmas (organizer: D.C. Schram)
- Electronic interaction with particles (organizer: W. Lindinger)
- Physical foundation of gas discharge modelling (informal workshop, organizer: C.M. Ferreira)

### **1996 Poprad**

1. Atomic and molecular processes in plasmas (including clusters and dust)
2. Particle energy distribution functions
3. Discharge physics: sheaths, transport processes and modelling
4. Plasma diagnostics
5. Laser and particle beam assisted plasma processes
6. Physical basis of plasma chemistry and plasma surface interaction

*Workshop topic:*

- Plasma and ecology - basic problems (organizer: P. Lukác)



## **1998 Malahide**

1. Atomic and molecular processes in plasmas (including clusters and dust)
2. Particle energy distribution functions
3. Discharge physics: sheaths, transport processes and modelling
4. Plasma diagnostics
5. Laser and particle beam assisted plasma processes
6. Physical basis of plasma chemistry and plasma surface interaction

### *Workshop topics:*

- Fund Raising (organiser: LOC)

## **2000 Poprad**

1. Atomic and molecular processes in plasmas (including clusters and dust)
2. Particle energy distribution functions
3. Discharge physics: sheaths, transport processes and modelling
4. Plasma diagnostics
5. Laser and particle beam assisted plasma processes
6. Physical basis of plasma chemistry and plasma surface interaction

### *Workshop topics:*

- All about metastables (organiser: S. De Benedictis)
- Controversy on the plasma-sheath transition (organiser: K. Wiesemann)

## **2002 Grenoble (joint conference with the Japanese ICRP)**

*(note: topics 7-9 came from ICRP)*

1. Atomic and molecular processes in plasmas
2. Particle energy distribution functions
3. Discharge physics: sheaths, transport processes and modelling
4. Plasma diagnostics
5. Laser and particle beam assisted plasma processes
6. Physical basis of plasma chemistry and plasma surface interaction
7. Production and control of reactive plasmas
8. Etching, deposition and cleaning
9. Environmental and other applications

### *Workshop topics:*

- Recent developments in plasma monitoring for micro-electronics (organisers: H. Sugai and Didier Louis)
- High-pressure non-equilibrium plasmas and their applications (organisers: H. Fujijama and J.P. Boeuf)

## **2004 Constanta**

1. Atomic and molecular processes in plasmas
2. Particle energy distribution functions
3. Discharge physics: sheaths, transport processes and modelling
4. Plasma diagnostics
5. Laser and particle beam assisted plasma processes
6. Physical basis of plasma chemistry and plasma surface interaction

## **2006 Lecce**

1. Atomic and molecular processes in plasmas
2. Particle energy distribution functions
3. Discharge physics: sheaths, transport processes and modelling
4. Plasma diagnostics
5. Laser and particle beam assisted plasma processes
6. Physical basis of plasma chemistry and plasma surface interaction

### *Workshop topics:*

- Fundamental processes in laboratory and in natural plasmas (organiser: A. Laganà)
- Plasmas and nanomaterials (organisers: G. Bruno and R. d' Agostino)

## **2008 Granada**

1. Atomic and molecular processes in plasmas
2. Transport phenomena, particle velocity distribution function
3. Physical basis of plasma chemistry
4. Plasma surface interaction (boundary layers, sheath, surface processes)
5. Plasma diagnostics
6. Plasma and discharges theory and simulation
7. Self-organization in plasmas, dusty plasmas
8. Upper atmospheric plasmas and space plasmas
9. Low pressure plasma sources
10. High pressure plasma sources
11. Plasmas and gas flows
12. Laser produced plasmas

### *Workshop topics:*

- Sprite chemistry and their impact in the upper atmosphere of the Earth (org. T. Neubert, Danish Space Science Center, F.J. Godillo-Vazquez, CSIC Madrid, Spain)
- Diagnostics of active species in plasma deposition of thin films (org. F.L. Tabares, CIEMAT Madrid, Spain)

## **2010 Novi Sad**

1. Atomic and molecular processes in plasmas
2. Transport phenomena, particle velocity distribution function
3. Physical basis of plasma chemistry
4. Plasma surface interaction (boundary layers, sheath, surface processes)
5. Plasma diagnostics
6. Plasma and discharges theory and simulation
7. Self-organization in plasmas, dusty plasmas
8. Upper atmospheric plasmas and space plasmas
9. Low pressure plasma sources
10. High pressure plasma sources
11. Plasmas and gas flows
12. Laser produced plasmas

### *Workshop topics:*

- Atomic and Molecular Collision data for Plasma Modeling (org: N. Mason and Z.Lj. Petrović)
- Plasmas in Medicine (org: G. Fridman and N. Puač)

## **2012 Viana do Castelo**

1. Atomic and molecular processes in plasmas
2. Transport phenomena, particle velocity distribution function
3. Physical basis of plasma chemistry
4. Plasma surface interaction (boundary layers, sheath, surface processes)
5. Plasma diagnostics
6. Plasma and discharges theory and simulation
7. Self-organization in plasmas, dusty plasmas
8. Upper atmospheric plasmas and space plasmas
9. Low pressure plasma sources
10. High pressure plasma sources
11. Plasmas and gas flows
12. Laser produced plasmas

Workshop topics:

- Plasmas for sustainable environment  
(org. A. Rousseau, LPP, Ecole Polytechnique, Palaiseau)
- Air plasma chemistry  
(org. Fabrizio Esposito (IMIP, Bari) and Mário Lino da Silva (IPFN))

## **2014 Greifswald**

1. Atomic and molecular processes in plasmas
2. Transport phenomena, particle velocity distribution function
3. Physical basis of plasma chemistry
4. Plasma surface interaction (boundary layers, sheath, surface processes)
5. Plasma diagnostics
6. Plasma and discharges theory and simulation
7. Self-organization in plasmas, dusty plasmas
8. Upper atmospheric plasmas and space plasmas
9. Low pressure plasma sources
10. High pressure plasma sources
11. Plasmas and gas flows
12. Laser produced plasmas

Workshop topics:

- Plasma surface interaction at sputtering processes  
(org. H. Kersten, Christian-Albrechts-University Kiel)
- Diagnostics of reactive/electronegative plasmas  
(org. A. v. Keudell, Ruhr-University Bochum)

## **2016 Bratislava**

1. Atomic and molecular processes in plasmas
2. Transport phenomena, particle velocity distribution function
3. Physical basis of plasma chemistry
4. Plasma surface interaction (boundary layers, sheath, surface processes)
5. Plasma diagnostics
6. Plasma and discharges theory and simulation
7. Self-organization in plasmas, dusty plasmas
8. Upper atmospheric plasmas and space plasmas
9. Low pressure plasma sources
10. High pressure plasma sources

11. Plasmas and gas flows
12. Laser produced plasmas

Workshop topics:

- Breakthroughs in Elementary Processes in Plasma and Microdischarges  
(org. Marija Radmilovic-Radjenovic, University of Belgrade)
- Electron Processes Active in Low-Temperature Plasmas  
(org. Nigel J. Mason, The Open University)

## 2018 Glasgow

1. Atomic and molecular processes in plasmas
2. Transport phenomena, particle velocity distribution function
3. Physical basis of plasma chemistry
4. Plasma surface interaction (boundary layers, sheath, surface processes)
5. Plasma diagnostics
6. Plasma and discharges theory and simulation
7. Self-organization in plasmas, dusty plasmas
8. Upper atmospheric plasmas and space plasmas
9. Low pressure plasma sources
10. High pressure plasma sources
11. Plasmas and gas flows
12. Laser produced plasmas

Workshop topics:

- Plasmas and Living Systems (including applications in plasma medicine, biocides, cell treatment, agriculture), introduced by Deborah O'Connell (University of York) and Nevena Puac (University of Belgrade)
- Plasmas in multi-phase media (including plasma dust, droplets, bubbles, liquid interfaces), introduced by Anton Nikiforov (University of Ghent) and Paul Maguire (Ulster University)

## 3. Invited Talks

### 1973 Versailles

M.A. Biondi (USA)	Experimental aspects of electron-ion recombination
J.N. Bardsley (USA)	Theoretical aspects of electron-ion recombination
J.L. Delcroix (France)	Metastables
H.J. Kunze (FRG)	Laser scattering
A.V. Phelps (USA)	Atomic physics and gas lasers
R.W.P. Mc Whirter (UK)	Spectral line intensities of laboratory plasmas and atomic collision processes
J. Richter (FRG)	Departures from LTE in arcs
L. Pekarek (Czechoslovakia)	Ionization waves in discharges
N. Twiddy (UK)	Flowing afterglows
T. Märk (Austria)	Mass spectrometric probing of gaseous plasmas
K. Suchy (FRG)	Transport properties in ionized gases

### 1974 Innsbruck

W.L. Fite (USA)	Ionization processes
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C. Manus (France)	Collisions involving excited species
A.E. Costley (UK)	Plasma spectroscopy at millimetre and submillimetre wavelengths
L. Vriens (Netherlands)	Light scattering from ionized gases
C.R. Vidal (FRG)	Metal vapor spectroscopy with the heat pipe oven
R. Deloche (France)	Processes in early afterglows
J.B. Gerardo (USA)	Survey of electron-beam-initiated gas lasers
D. Albritton (USA)	Ion-molecule reactions studied in a flowing afterglow
P.L. Kapitza (USSR)	Recent work on hot plasmas in the U.S.S.R.
A.Kh. Mnatsakanian (USSR)	Kinetics of processes in discharges in mixtures of alkali vapor and molecular gases
M.W. Thompson (UK)	Theory of atomic collisions at solid surfaces
H. Vernickel (FRG)	Experimental investigations for plasma-wall interaction in fusion experiments

### 1976 Bratislava

L.M. Chanin (USA)	Cataphoretic processes in glow discharges
A. Rutscher (GDR)	The electrical equivalent circuit of gas discharges and its relation to the elementary processes
D. Smith (UK)	Physical and chemical processes in afterglows studied using probes and mass spectrometers
Z. Herman (Czechoslovakia)	Kinematics of ion molecule collisions
B.M. Smirnov (USSR)	The diffusion and mobility of ions in low electric fields
N.N. Sobolev	Properties of gas discharge molecular laser plasma
C.B. Collins (USA)	High pressure helium gas lasers
Yu.M. Kagan (USSR)	Electron energy distribution and the physical phenomena in the positive column of glow discharges
J. Berlande (France)	Elementary processes in Alkali and Alkali-rare gas plasmas
N.P. Penkin (USSR)	Determination of collisional cross sections from low temperatures plasma data
V. Martisovits (Czechoslov.)	Destruction of metastable atoms by electron impact in the argon and neon positive column
L.M. Biberman (USSR)	Criteria of local thermodynamic equilibrium in plasma
J. Labat (Yugoslavia)	Spectroscopy of transient plasmas
E.I. Asinovsky (USSR)	Discharges at cryogenic temperatures

### 1978 Essen

C.F. Barnett (USA)	Atomic and molecular data needs relevant to fusion research
J. Bohdanský (FRG)	Important surface processes for the plasma wall interaction in fusion experiments
J. Lucas (UK)	Electron transport parameters in gases
E.E. Ferguson (USA)	Ion-molecule reactions in the earth's atmosphere
H.P. Helm (Austria)	The motion and reactions of rare gas ions in gases
J-C. Gauthier (France)	Time resolved laser fluorescence techniques for atomic and molecular excited states kinetics studies
E. Hintz (FRG)	Application of fluorescence spectroscopy to the investigation of plasma wall interaction
C.A. Brau (USA)	Elementary processes in excimer lasers

A. Garscadden (USA)	A perspective on atomic and molecular processes in gas laser plasmas
Y.I. Sobelman (USSR)	Elementary processes in laser-produced plasmas
A.R. Trindade (Portugal)	Hollow cathode arcs

### 1980 Dubrovnik

C. de Michelis (France)	Atomic physics in Tokamak plasmas
K. Katsonis (Austria)	Atomic and molecular data needs for controlled thermonuclear fusion research
L.P. Presnyakov (USSR)	Elementary processes in astrophysical plasmas
N.V. Karlov (USSR)	Laser isotope separation
R.A. Haas (USA)	Kinetic and radiative processes in excimer lasers
J. Uhlenbusch (FRG)	Continuous optical discharges
C. Manus (France)	Laser induced collisions
C.B. Collins (USA),	A multiphoton technique for dissociative spectroscopy of simple molecules
F. Gounand (France)	Collisional processes involving highly excited alkali atoms: experiment and theory
V.N. Ochkin (USSR)	Intensities of diatomic molecule electron spectra in nonequilibrium plasmas
V.V. Urosevic (Yugoslavia)	Excitation of molecules in swarm experiments
D. Smith (UK)	The formation and reactions of cluster ions at thermal energies
I.T. Iakubov (USSR)	Ionic complexes in plasmas of alkali metals
F. Howorka (Austria)	Transport of ions in gases under the influence of electrical fields
E. Roueff (France)	Pressure broadening: progress in experiments and theory

### 1982 Oxford

T.D. Märk (Austria)	Production and reactions of cluster ions studied with molecular beam ionisation techniques
R.F. Stebbings (USA)	Recent experimental studies of Rydberg atoms
B. Carré (France)	Ionisation of an alkali vapour in presence of a resonant radiation field
E.A. Yukov (USSR)	Broadening and shift of atomic spectral lines
H-J. Kunze (FRG)	Spectral line profiles in turbulent plasmas
H.G. Lergon (FRG)	Ion transport to the wall in nonthermal plasmas
F.J. de Hoog (Netherlands)	Atomic processes in hollow cathode laser plasma
D.E. Post (USA)	Some recent developments and trends in the application of atomic processes to magnetic fusion research
A. Dalgarno (USA)	Atomic and molecular processes in interstellar space
A.E. Kingston (Ireland)	Atomic physics diagnostics of the solar atmosphere
M.J. Shaw (UK)	Kinetic processes in rare gas Halide Lasers
A.V. Phelps (USA)	Measurement of electron excitation coefficients for molecular and atomic metastables and free-free radiation

### 1984 Bari

V.V. Balashov (USSR)	Perspectives and basic theoretical concepts in the collisional spectroscopy of autoionisation states in atoms
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A. Catherinot (France)	Laser interaction with a low pressure glow discharge
R.W. Crompton (Australia)	Electron collision cross sections from transport data
R. d'Agostino (Italy)	Elementary processes in plasma etching systems
A. Garscadden (USA)	Electron energy distribution functions in silicon deposition plasmas
J. Hackmann (FRG)	Particle velocity distributions in front of a wall
W. Lindinger (Austria)	The influence of vibrational excitation on ion molecule reactions
L.A. Lompre (France)	Multiphoton ionisation processes in atoms and molecules
S. Savinov (USSR)	Molecular distribution functions in non equilibrium plasmas
F. Torello (Italy)	Experimental determination of the interaction potential energy surface for simple systems
J.J.A.M. v.d. Mullen (Neth.)	Collisional-radiative models: general features
R. Winkler (GDR)	On the electron energy distribution functions in radiofrequency discharges

### 1986 Greifswald

L.G. Christophorou (USA)	Electron attachment and detachment processes in electronegative gases
T.D. Märk (Austria)	Electron attachment to Van der Waals clusters
M. Sicha (CSSR)	The use of Langmuir probes for studying elementary processes in plasmas
L.C. Pitchford (USA)	Recent progress in the kinetic theory of weakly ionized gases
C. Gorse (Italy)	Self-consistent determination of the electron velocity distribution function in molecular plasmas
H. Wolff (GDR)	Properties of the Tokamak edge plasma
W.D. Kraeft (GDR)	Theory of dense plasmas - elementary processes and macroscopic properties
I.T. Yakubov (USSR)	New results in the field of non-ideal plasmas: experiments and interpretation
H.C.W. Beijerinck (Neth.)	Electronically excited atoms in the eV energy range: beam sources and collision experiments
A. Lunk (GDR)	Fundamentals of plasma stimulated thin film production
H. Halbritter (FRG)	Processes on contaminated surfaces

### 1988 Lisbon

M.A. Cacciatore (Italy)	Dynamics of vibrational energy transfers in gas-phase and gas-surface collisions involving excited diatomic molecules
R.A. Gottscho (USA)	Diagnostics and theories for RF and DC glow discharges
K. Wiesemann (FRG)	Measurements of particle distribution functions in low-pressure gas discharges
V.N. Tsytovich (USSR)	Collective polarizational bremsstrahlung and its role in weakly ionized plasma
H. Störi (Austria)	Mass spectrometry and modelling of nitride deposition plasmas
D.I. Slovetsky (USSR)	Heterogeneous chemical reactions under nonequilibrium plasma conditions
J.N. Bardsley (USA)	Energy deposition in ionized gases by photons, electrons and ions
A.E. de Vries (Netherlands)	Physics of etching by noble gas ions in the presence of halogens
H.-E. Wagner (GDR)	Kinetic models of reactive plasma-wall interactions in molecular non-isothermal plasmas

- J.M. Pouvesle (France)      Reactivity of ion and metastable species in atmospheric pressure afterglows  
 R.K. Janev (Austria)      Atomic and molecular processes in Tokamak edge plasmas

### 1990 Orléans

- H.A. Baldis (France)      Parametric processes and light scattering in laser plasmas  
 D. Bäuerle (Austria)      Surface chemical processing with laser  
 W. Böttcher (Germany)      Modelling of discharge pumped XeCl\* lasers. Open questions.  
 J. Derouard (France)      Optical diagnostics and modelisation of sheath dynamics in RF and transient glow discharge  
 G. Ferrante (Italy)      Laser-assisted elementary process in ionized gases  
 M.R. Flannery (USA)      Recombination processes  
 B.M. Jelenkovic (Yugoslavia)      Electron and heavy particle collision processes in gas discharges at high E/n  
 A.W. Kleyn (Netherlands)      Surface conversion in sources of negative hydrogen ions  
 J. Loureiro (Portugal)      Electron and molecular kinetics in molecular gas discharges  
 K. Masek (CSFR)      The discharge kinetics in molecular gases  
 A.P. Napartovich (USSR)      Electron kinetics of electric field free plasmas  
 N.G. Preobrazhensky (USSR)      Computerized tomography in low temperature plasma research  
 R. Rudolph (Germany)      Degradation mechanism in pulsed TE-CO<sub>2</sub> laserdischarges  
 M. Touzeau (France)      Active species in O<sub>2</sub> and N<sub>2</sub> DC discharges

### 1992 St. Petersburg

- N.L. Aleksandrov (Russia)      Negative ion processes and modern technologies  
 M. Bacal (France)      The plasma diagnostics in negative ion sources  
 F.G. Baksht (Russia)      Generation of negative hydrogen ions in cesium-hydrogen discharge  
 V. Helbig (Germany)      Stark broadening of Balmer lines at low electron density  
 W. Lindinger (Austria)      Energy dependences of ion-neutral interactions  
 T.J. Sommerer (USA)      Modeling of electron kinetics in non-uniform fields  
 J. Hermann (France)      Laser-plasma interaction with metal target  
 A. Rutscher (Germany)      Chemical quasi-equilibria - A new concept in the description of reactive plasmas  
 N. Sadeghi (France)      Non-intrusive diagnostics of sheaths  
 A.P. Shergin (Russia)      Charge states of sputtered particles in keV-ion-surface bombardment  
 M.C.M. van de Sanden (Neth.)      Thomson-Rayleigh scattering in expanding plasmas

#### *Workshop speakers:*

- A. Bouchoule (France)      Production of dust in argon-silane discharge  
 J. Janca (CSFR)      Deposition of diamond-like carbon layers  
 A.T. Rakhimov (Russia)      Self-consistent models of low-pressure HF discharge in electropositive and electronegative gases

### 1994 Noordwijkerhout

- L.D. Tsendin (Russia)      Electron kinetics in non-uniform glow discharge plasmas  
 P. Ségur (France)      Kinetic description of electrons in inhomogeneous electric fields



V.S. Vorob'ev (Russia)	Kinetics of ionization and recombination in a low temperature plasma
U. Kortshagen (Germany)	Electron and ion distribution functions in RF and microwave sustained plasmas
J.E. Allen (UK)	Probe theories and applications: modern aspects
J. Perrin (France)	Mass spectrometry detection of radicals in SiH <sub>4</sub> -CH <sub>4</sub> -H <sub>2</sub> glow discharge plasmas
M. Haverlag (Netherlands)	High resolution infrared spectroscopy of etching plasmas
I.B. Földes (Hungary)	Spectroscopy of high temperature matter heated by laser plasma X rays
S. De Benedictis (Italy)	Relaxation of excited species in He/N <sub>2</sub> pulsed RF discharges: kinetics of metastable species
H.F. Döbele (Germany)	Generation of coherent vacuum ultraviolet radiation and application to plasma diagnostics

*Workshop speakers:*

A. Garscadden (USA)	Non-equilibrium kinetics in hydrogen-nitrogen discharges
W.G. Graham (UK)	The kinetics of negative hydrogen ions
D.K. Otorbaev (Kirgisia)	Hydrogen kinetics in plasma chemistry
D. Smith (Austria)	Electron attachment and electron-ion recombination
K.H. Becker (USA)	Electron-impact ionization of atoms, molecules, ions and transient species

**1996 Poprad**

N.St.J. Braithwaite (UK)	External and internal electrical diagnostics of RF plasmas
A. Giardini-Guidoni (Italy)	Cluster formation and interaction of laser with solid targets
V.A. Godyak (USA)	EEDF in dense RF plasmas
R. Winkler (Germany)	Strict calculation of electron energy distribution functions in inhomogeneous plasmas
W.J. Goedheer (Netherlands)	Two-dimensional modelling of RF discharges
A. Granier (France)	Diagnostics in O <sub>2</sub> Helicon plasmas for SiO <sub>2</sub> deposition
A. Lagana (Italy)	Rate coefficients for reactive elementary processes involving atoms and vibrationally excited molecules
T. Makabe (Japan)	Nonlinear phenomena in RF discharges: models and experiments
V. Martisovits (Slovakia)	Transport of chemically active species in plasma reactors for etching
D.C. Schram (Netherlands)	Plasma jet deposition of amorphous carbon and silicon layers
B.M. Smirnov (Russia)	Kinetic and radiation processes in cluster plasmas
H. Tammet (Estonia)	Applications of air ion measurements in environmental diagnostics
<i>Workshop speakers:</i>	
A. Huczko (Poland)	Atomic and molecular physics of plasma-based environmental technologies for abatement of volatile organic compounds
W. Lindinger (Austria)	Analysis of trace gases at ppb levels by proton-transfer-reaction-mass spectrometry (PTR-MS)
M. Cernák (Slovakia)	Application of underwater corona discharges for water remediation

## 1998 Malahide

- T. Märk (Austria) Surface induced reactions of polyatomic ions and cluster ions: insight into plasma – surface interactions
- N. L. Alexandrov (Russia) Ionisation processes in spark discharge plasmas  
G. Vinogradov (Russia) Development and application of spectroscopic determination of the electron energy distribution functions in plasmas
- G. Dilecce (Italy) Experimental studies on elementary kinetics in N<sub>2</sub>/O<sub>2</sub> pulsed discharges
- M. Turner (Ireland) Hysteresis and the inductive to capacitive transition in radio-frequency discharges
- A. Bogaerts (Belgium) Comprehensive modelling network of DC glow discharges in argon
- M. Bowden (Japan) Thomson scattering diagnostic systems for electron measurements in glow discharge plasmas
- U. Czarnetsky (Germany) Temporally and spatially resolved electric field measurements in helium and hydrogen RF discharges
- J.P. Booth (France) Optical and electrical diagnostics of fluorocarbon plasma etching processes
- P. Sunka (Slovak Republic) Generation of chemically active species by electrical discharges in water

## 2000 Lillafüred

- A. Melzer (Germany) Laser manipulation of particles in dusty plasmas
- E. Stoffels (Netherlands) Plasma chemistry and surface processes of negative ions
- G. Ferrante (Italy) Velocity distribution functions of plasma electrons in strong laser fields
- A. V. Phelps (USA) Abnormal glow discharges in Ar: comparison of models and experiments
- S. M. Starikovskaya (Russia) Pulsed breakdown at high overvoltage: development, propagation and energy branching
- R. A. H. Engeln (Netherlands) Applications of cavity ring down absorption spectroscopy in the study of plasmas
- N. Konjević (Yugoslavia) On the use of non hydrogenic spectral line profiles for plasma electron density diagnostics
- A. Bouchoule (France) Optical and electrical diagnostics of the ion plume and of the active channel of closed electron drift plasma thrusters: new insights on stationary and transient behavior: an overview of results of a national cooperative research
- H. Sugai (Japan) High-density etching plasma diagnostics and fluorocarbon plasma chemistry
- J. Mizeraczyk Radicals in electrical discharges used for environmental protection

Workshop speakers: chosen from contributed papers

## 2002 Grenoble

*General invited talks:*

- D. Vender (Ireland) EPIC simulations

J. Bretagne (France)	Fundamental aspects in non-reactive and reactive magnetron discharges
M. Esashi (Japan)	Bulk micromachining for MEMS
E. Illenberger (Germany)	Fundamental processes in reactive plasmas
J. Hopwood (USA)	A microfabricated inductively coupled plasma source and its applications
M. Kondo (Japan)	Recent developments in high-rate growth technique of device grade microcrystalline silicon thin films
J. Lawler (USA)	Advanced X-ray and optical diagnostics of high pressure plasmas
J. Roepcke (Germany)	Recent progress in diagnostics of molecular plasmas using infrared tunable diode spectroscopy
H. Satake (Japan)	Formation of gate dielectrics of SiON by plasma
L. Tsendin (Russia)	Electron kinetics in glows

*Topical invited talks:*

S. Hamaguchi (Japan)	Molecular dynamics simulation of Si and SiO <sub>2</sub> etching
S. Longo (Italy)	Particle kinetic modelling of rarefied gases and plasmas
S. Iizuka (Japan)	High-quality diamond formation by electron temperature control
T. Ichiki (Japan)	Challenges in plasma technologies for micro chemical/biochemical analysis systems
J. Glosik (Czech Republic)	The recombination of H <sup>3+</sup> ions with electrons: dependence on partial pressure of H <sub>2</sub>
V. Guerra (Portugal)	Electron and metastable kinetics in the nitrogen afterglow
J. Kawahara (Japan)	High thermal stability, low-k organic polymer film, tailored by plasma enhanced polymerisation method for ULSI application
G. Malovic (Serbia)	Measurements and analysis of excitation coefficients and secondary electron yields in Townsend dark discharges
S. Matejcik (Slovakia)	Gas temperature effects in dissociative electron attachment to the molecules studied in a crossed beam experiment
J.-M. Pouvesle (France)	Discharge based sources of XUV-X radiation
S. Takagi (Japan)	Predictable topography simulation of RIE combined with a plasma simulation, sheath model and chemical reaction model
M. Tuda (Japan)	Profile evolution and nanometer scale linewidth control during etching of polysilicon gates in high density plasmas

**2004 Constanta**

*General invited talks:*

V.A. Godyak (USA)	Probe diagnostics of dense rf plasmas
H.F. Döbele (Germany)	Laser-induced fluorescence measurements of absolute atomic densities: Concept and limitations
Kazuo Terashima (Japan)	Microplasma under high-pressure environment up to supercritical Fluid
J.P. Boeuf (France)	Understanding atmospheric pressure dielectric barrier discharge and glow discharges at small geometry
S. Matt-Leuber (Austria)	Energetics, kinetics and dynamics of decaying metastable ions studied with a high resolution three sector field mass spectrometer
J. Berndt (Germany)	Dust particles in laboratory plasmas and in astrophysics
M. Moisan (Canada)	Plasma sterilization at reduced gas pressure: the main mechanisms involved in relation with sterilization efficiency and damages to

Yu. Akishev (Russia) material  
Corona, glow and spark discharges in ambient air and transitions between them

*Topical invited talks:*

C.M.O. Mahony Electrical characterization of radio frequency discharges  
N.A. Dyatko Peculiarities in electron kinetics absolute and differential negative mobility and bi-stability  
M. Simek (Czech Republic) Spectroscopic methods for N<sub>2</sub>(A) metastable detection in atmospheric pressure discharge  
K. Kutasi Molecular ions in helium glow discharges  
I. Armenise State to state kinetics in boundary layer of entering body in earth atmosphere. Particle distribution and kinetics.  
G. Cunge Plasma-walls interaction during gate etching processes  
A. Salabas Numerical investigations in capacitively coupled plasmas

*Hot Topic talks:*

E. Stamate Investigation of energetic electrons in a 915 MHz surface wave Plasma  
P. Diomede Particle modelling of capacitively coupled radio frequency discharge plasmas in hydrogen: negative ion kinetics  
M. Osiac (Romania) Investigations of plasma boundary sheath dynamics in the afterglow of a pulsed inductively coupled rf plasma in hydrogen  
N. Sadeghi (France) Absolute density of N<sub>2</sub><sup>+</sup>(X) ground state ions measured by cavity-enhanced broad band absorption spectroscopy with a femtosecond laser in the short-lived afterglow of a flowing nitrogen microwave plasma.  
D. Korzec (Germany) Determination of He(23S) concentration in a surface barrier discharge: time resolved analysis  
Z.Lj. Petrovic (Serbia) Gas-phase model of the afterglow kinetics in neon  
H. Testrich (Germany) Influence of the resonance kinetic effects on the stratification of the positive column of a discharge  
E. Aldea Generation mechanism of atmospheric glow in a DBD configuration

**2006 Lecce**

*General invited talks:*

M. Benilov (Portugal) Theory and modelling of current constriction of cathode DC discharges  
M. Capitelli (Italy) Non-equilibrium plasma kinetics: a state-to-state approach  
V. E. Fortov (Russia) Pressure – temperature ionization in strongly nonideal plasmas at megabars  
G. M.W. Kroesen (Netherlands) Physics and diagnostics of EUV emitted pinched discharge plasmas  
V. P. Pasko (USA) Red sprites: discharges in the atmosphere at high altitude. The molecular physics and the similarity with laboratory discharges  
Z. Petrovic (Serbia) Kinetic phenomena in charged particle transport in gases, swarm parameters and cross section data

T. Sakurai (Japan ) Laser-based plasma particle analysis on the surface in a discharge  
A. von Keudell (Germany) The search for growth precursor in reactive plasmas

*Topical invited talks:*

J. I. Fernandez Palop (Spain ) Sheath structure in electronegative plasmas  
G. Hagelaar (France) Challenges in plasmas modelling: low pressure plasmas with magnetized electrons  
E. Kessels (Netherlands) Advanced in-situ diagnostics for probing plasma – surface interaction  
V.A. Maiorov (Russia) Modeling of atmospheric pressure dielectric barrier discharges with emphasis on stability issues  
C. D. Pintassilgo ( Portugal) N<sub>2</sub>-O<sub>2</sub> afterglow for plasma sterilization  
A. Rousseau (France) Infrared diagnostics for understanding of VOCS removal by plasma-catalyst coupling  
G.D. Stancu (Germany) Infrared absorption spectroscopic studies of methyl and boron monoxide radicals  
L. Zajickova (Czechia) Deposition of protective coatings in RF organosilicon discharges

**2008 Granada**

*General invited talks:*

I.A. Adamovich (USA) Experimental studies of high-speed flow control by nonequilibrium plasmas  
A. Eletsii (Russia) Emission properties of carbon nanotubes and cathodes on their basis  
D. Loffhagen (Germany) Advances in Boltzmann equation based modelling of discharge plasmas  
N. Mason (United Kingdom) The data needs for plasma processing  
N. Sadeghi (France) Laser diagnostic techniques for the study of elementary processes in plasmas: an overview  
P. Tosi (Italy) Ion chemistry in gas discharges  
J. Winter (Germany) Experimental study of dust formation in Ar/CH<sub>4</sub> and Ar/C<sub>2</sub>H<sub>2</sub> plasmas  
R. Van De Sanden (Netherlands) Experimental characterization of plasma-surface interactions (Crookes prize lecture)

*Topical invited talks:*

M.D. Calzada (Spain) Spectroscopic methods in high pressure discharges  
M.A. Gonzalez (Spain) Analysis of Stark line profiles for non-equilibrium plasma diagnosis  
M. Lino Da Silva (Portugal) Non-equilibrium dissociation rates for atmospheric entry studies  
D. Maric (Serbia) Space time development of low pressure gas breakdown  
S. Mazouffre (France) Diagnostics of a discharge in crossed electric and magnetic propulsion  
D O'Connell (Germany) Spatio-temporally resolved plasma diagnosis for investigation of RF excited discharges  
A. Orr-Ewing (United Kingdom) Laser probing of diamond deposition plasmas  
A. Salabas (Germany) Fluid modelling of dual frequency capacitively coupled discharges: advantages and limitations

## 2010 Novi Sad

### *General invited talks:*

- Mark J. Kushner (USA) Plasma in bubbles in liquids and streamers intersecting with liquids  
J. Loureiro (Portugal) Non-equilibrium kinetics in N<sub>2</sub> discharges and post-discharges: a full picture by modelling and impact on the applications
- Toshiaki Makabe (Japan) Low Pressure Nonequilibrium Plasma for Topdown Nanoprocess  
T. Belmonte (France) Chemical vapour deposition enhanced by atmospheric microwave plasmas: A large-scale industrial process or the next nano-manufacturing tool?
- H. Kersten (Germany) Particles as micro-probes in plasmas  
U. Czarnetzki (Germany) The Electrical Asymmetry Effect in Capacitive RF Discharges  
S. de Benedictis (Italy) Energy transfer in N<sub>2</sub>-O<sub>2</sub> plasmas: Recognizing and measuring active species
- Z. Donko (Hungary) Particle simulation methods for studies of low-pressure plasma sources (Crookes Prize lecture)

### *Topical invited talks:*

- A. Aanesland (France) Inductively coupled electronegative plasmas applied to space propulsion  
Peter Bruggeman (The Netherlands) Diagnostics of plasmas in and in contact with liquids  
S Dujko (Serbia) A multi-term Boltzmann Equation analysis of charged particle transport properties in electric and magnetic fields in gases  
K Niemi (UK) Absolute concentrations of atomic radicals in cold atmospheric pressure plasmas  
Nvena Puac (Serbia) Diagnostics and applications of high frequency discharges in biomedical treatments and treatment of textiles  
J. van Dijk (The Netherlands) Modelling of Transport in Non-Equilibrium Atmospheric Plasmas  
F. Taccogna (Italy) Modeling of negative ion sources  
I. Tanarro (Spain) Large effects of small pressure changes in the kinetics of low pressure glow discharges

## 2012 Viana do Castelo

### *General invited talks:*

- C. M. Ferreira (Portugal) Microwave driven air-water plasmas  
N. Trushkin (Russia) Steady-state and pulsed-periodical regimes for generation of non-thermal plasma jets at atmospheric pressure  
R. Celiberto (Italy) Electron-molecule collision processes in non-equilibrium molecular plasmas  
M. Bonitz (Germany) Complex plasmas - a laboratory for self-organization  
U. Ebert (The Netherlands) Thunderstorms as electron accelerators and the discharge zoo above the clouds  
A. Rousseau (France) Streamers and discharges at liquid and solid interfaces (Crookes Prize Lecture)  
K. Ostrikov (Australia) Small energy for small things: plasma nanoscience for a sustainable future  
W. G. Graham (UK) Plasmas in Liquids and their Applications

*Topical invited talks:*

- J. Benedikt (Germany) Plasma chemistry in the effluent of a He/O<sub>2</sub> microplasma jet: the role of VUV photons
- E. Marotta (Italy) Decomposition of mixtures of organic compounds in atmospheric plasma
- F. Tabares (Spain) Application of nitrogen-containing plasmas to Fusion Plasma Research
- O. Guaitella (France) N and O atoms adsorbed under plasma exposure: a model system to investigate surface reactivity
- J. S. Sousa (UK) Cold atmospheric pressure plasma jets as sources of reactive oxygen species for biomedical applications
- T. Callegari (France) Generation, annihilation and motion of self-organized filaments in dielectric barrier discharges
- B. Mitu (Romania) Plasma deposition of carbon-based materials: diagnostic studies
- F. Krcma (Czech Republic) Generation of pin hole discharges in liquids

**2014 Greifswald**

*General invited talks:*

- L. Boufendi (France) Dusty plasma for nanotechnology
- P. Chabert (France) Living on the edge: fifteen years in RF sheaths (Crookes Prize Lecture)
- F. Gordillo-Vázquez (Spain) Electrical discharges above the clouds: kinetics and optical spectra
- Y. Lebedev (Russia) Microwave discharges at low pressures and peculiarities of the processes in strongly non-uniform plasma
- M. Mozetic (Slovenia) Application of extremely non-equilibrium plasmas in processing of nano and biomedical materials
- L. Pitchford (France) Modeling micro-discharges / dielectric barrier discharges
- Yi-Kang Pu (China) Determination of electron properties from optical emission spectroscopy – Possibilities and Limitations
- J. Röpcke (Germany) On recent progress applying quantum cascade lasers in plasma diagnostics

*Topical invited talks:*

- A. Laricchiuta (Italy) Elementary processes in nitrogen and air plasmas
- S. Marjanović (Serbia) Modeling of positron and electron transport in gases and liquids
- M. Magureanu (Romania) Degradation of pharmaceutical compounds in water by non-thermal plasma treatment
- S. Nijdam (The Netherlands) Multi-dimensional experimental studies on streamers
- M. Sabo (Slovakia) Selective formation of positive and negative ions in corona discharge and its application in atmospheric pressure chemical ionisation for IMS and MS
- J. Schulze (Germany) Heating dynamics and process control in capacitively coupled plasmas driven by customized voltage waveforms
- Xin Tu (UK) Plasma-catalysis for CO<sub>2</sub> conversion: understanding plasma-catalyst interactions from a physical and chemical perspective
- P. Vašina (Czech Republic) Non-monotonous evolution of hybrid PVD–PECVD process

## 2016 Bratislava

### *General invited talks:*

- J. de Urquijo (Mexico) Progress in the validation/derivation of cross sections for ions and electrons in pure gases and gas mixtures of atmospheric and bioplasmas
- N. Balucani (Italy) The reactions of atomic oxygen with alkenes and alkynes: primary products, branching ratios and role of intersystem crossing
- A. Bogaerts (Belgium) Modeling of CO<sub>2</sub> plasmas
- C. Laux (France) Transitions between the corona, glow, and spark regimes of Nanosecond Repetitively Pulsed discharges in air at atmospheric pressure
- A. Piel (Germany) Dynamics of Dusty Plasmas
- J.-M. Pouvesle (France) Atmospheric Plasma Jets for Therapeutic Applications from the discharge to the treatments: issues and challenges
- V. Guerra (Portugal) Modeling of N<sub>2</sub> -O<sub>2</sub> -Ar-plasmas - volume and surface kinetics (Crookes Prize lecture)

### *Topical invited talks:*

- P. Diomede (The Netherlands) Modeling of tailored ion energy distributions for plasma processing applications
- A. Luque (Spain) Beads and glows: the dynamics of streamer channels
- D. Marinov (France) Plasma-surface interaction: Heterogeneous processes of atmospheric gases
- R. Plasil (Czech Republic) Experimental study of recombination of H<sub>3</sub><sup>+</sup>, H<sub>2</sub>D<sup>+</sup>, HD<sub>2</sub><sup>+</sup> and D<sub>3</sub><sup>+</sup> ions in low temperature afterglow plasma in He/Ar/H<sub>2</sub>/D<sub>2</sub> gas mixture
- A. Shishpanov (Russia) Long tube ignition processes at low gas pressure
- N. Škoro (Serbia) Heavy-particle collisions in water vapour discharges at low pressures
- I. Topala (Romania) Atmospheric pressure plasma jets for life science
- J. Winter (Germany) Characterisation of microplasma jets by infrared absorption spectroscopy

## 2018 Glasgow

### *General invited talks:*

- Nickolay Aleksandrov (Russia) Kinetics of high-voltage nanosecond discharge plasmas in hydrocarbons and combustible mixtures
- Anne Bourdon (France) Modelling and simulation of non-equilibrium plasma discharges
- Ralf-Peter Brinkmann (Germany) Plasma modelling for the understanding and active control of technological plasmas
- Giorgio Dilecce (Italy) Laser diagnostics of nanosecond repetitively pulsed discharges
- Gheorghe Dinescu (Romania) Plasma processing of nanomaterials at low and atmospheric pressure
- Zoran Petrovic (Serbia) Overview of the procedure to obtain cross section data from the transport coefficients
- Ryo Ono (Japan) Optical diagnostics in atmospheric-pressure non-thermal plasma
- Deborah O'Connell The interplay of physics, chemistry and biology for plasma cancer treatment (Crookes Prize Lecture)



*Topical invited talks:*

Aranka Derzsi (Hungary)	The effect of secondary electrons on the discharge characteristics in low pressure capacitively coupled plasmas
Thomas Gries (France)	Ultrathin metallic oxide nanostructures synthesized by plasma afterglow-assisted oxidation for photocatalysis applications
Mario Merino (Spain)	Kinetic electron response in a rarified plasma jet expanding into vacuum
Zdenek Navratil (Czech Republic)	Optical diagnostics of helium coplanar barrier discharge: pre-breakdown light and electric field measurement
Anton Nikiforov (Belgium)	Atmospheric pressure plasma sources diagnostics as a key to control their utilization in surface or liquid processing
Tiago Silva (Portugal)	Understanding the electron and vibration kinetics in CO <sub>2</sub> plasmas
Ana Sobota (The Netherlands)	Electric fields and electron properties in atmospheric pressure plasma jets
James Walsh (United Kingdom)	Cold atmospheric-pressure plasmas for improved food safety

#### 4. Members of the International Scientific Committee (ISC)

(Number of terms in brackets, chairmen underlined)

<b>Country</b>	<b>1973 Versailles</b>	<b>1974 Innsbruck</b>	<b>1976 Bratislava</b>
Austria	-	T.D.Märk (1)	T.D. Märk (2)
Czechoslovakia	P. Lukac (1)	P. Lukac (2)	P. Lukac (3)
Ireland	M.C. Sexton (1)	M.C. Sexton (2)	M.C. Sexton (3)
France	C. Manus (1)	J. Berlande (1)	J. Berlande (2)
Germany West	J. Uhlenbusch (1)	J.Uhlenbusch (2)	J. Uhlenbusch (3)
The Netherlands	R. Bleekrode (1)	R. Bleekrode (2)	R. Bleekrode (3)
UK	J.B. Hasted (1)	J.B. Hasted (2)	J.B. Hasted (3)

<b>Country</b>	<b>1978 Essen</b>	<b>1980 Dubrovnik</b>	<b>1982 Oxford</b>
Austria	T.D. Märk (3)	T.D. Märk (4)	W. Lindinger (1)
Czechoslovakia	P. Lukac (4)	P. Lukac (5)	K. Masek (1)
Ireland	M.C. Sexton (4)	M.C. Sexton (5)	-
France	R. Deloche (1)	<u>R. Deloche (1)</u>	<u>R.Deloche (2)</u>
Germany West	J. Uhlenbusch (4)	K.G. Müller (1)	K.G.Müller (2)
Italy	-	-	M.Capitelli (1)
The Netherlands	R. Bleekrode (4)	L. Vriens (1)	D.C. Schram (1)
UK	J.B. Hasted (4)	R.W.P.McWhirter (1)	R.W.P. McWhirter (2)
U.S.S.R.	N.N. Sobolev (1)	N.N. Sobolev (2)	N.N. Sobolev (3)
Yugoslavia	R.K. Janev (1)	R.K. Janev (2)	R.K. Janev (3)

<b>Country</b>	<b>1984 Bari</b>	<b>1986 Greifswald</b>	<b>1988 Lisbon</b>
Austria	F. Howorka (1)	F. Howorka (2)	F. Howorka (1)
Czechoslovakia	K. Masek (2)	K. Masek (3)	K. Masek (4)
France	<u>R. Deloche (3)</u>	<u>R. Deloche (4)</u>	B. Dubreuil (1)
Germany East	-	-	J. Wilhelm (1)
Germany West	K.G. Müller (3)	K.G. Müller (4)	H.G. Lergon (1)
Hungary	-	J.S. Bakos (1)	J.S. Bakos (2)
Italy	M. Capitelli (2)	M. Capitelli (3)	M. Capitelli (4)
The Netherlands	D.C. Schram (2)	D.C. Schram (3)	H.C.W. Beijerinck (1)
UK	N.D. Twiddy (1)	N.D. Twiddy (2)	N.D. Twiddy (3)
U.S.S.R.	V. Kolesnikov (1)	V. Kolesnikov (2)	V. Kolesnikov (3)
Yugoslavia	R.K. Janev (4)	R.K. Janev (5)	N. Konjevic (1)
<b>Country</b>	<b>1990 Orléans</b>	<b>1992 St. Petersburg</b>	<b>1994 Noordwijkerhout</b>
Austria	<u>F. Howorka (2)</u>	W. Lindinger (1)	W. Lindinger (2)
Czecho/Slovakia	I. Kosinar (1)	I. Kosinar (2)	I. Kosinar (3)
France	B. Dubreuil (2)	B. Dubreuil (3)	B. Dubreuil (4)
Germany East	J. Wilhelm (2)	J. Wilhelm (3)	J. Wilhelm (4)
Germany West	H.G. Lergon (2)	<u>H.G. Lergon (1)</u>	<u>H.G. Lergon (2)</u>
Hungary	J.S. Bakos (3)	J.S. Bakos (4)	J. Szigeti (1)
Italy	M. Capitelli (5)	M. Cacciatore (1)	M. Cacciatore (2)
The Netherlands	H.C.W. Beijerinck (2)	G.M.W. Kroesen (1)	G.M.W. Kroesen (2)
Portugal	C.M. Ferreira (1)	C.M. Ferreira (2)	C.M. Ferreira (3)
United Kingdom	N.D. Twiddy (4)	R.N. Franklin (1)	R.N. Franklin (2)
Russia	V. Kolesnikov (4)	I.T. Iakubov (1)	I.T. Iakubov (2)
Yugoslavia	N. Konjevic (2)	N.Konjevic (3)	N. Konjevic (4)
<b>Country</b>	<b>1996 Poprad</b>	<b>1998 Malahide</b>	<b>2000 Lillafüred</b>
Austria	W. Lindinger (2)	W. Lindinger (3)	W. Lindinger (4)
France	J. Perrin (1)	N. Sadeghi (1)	N. Sadeghi (2)
Germany	<u>H.G. Lergon (3)</u>	K. Wiesemann (1)	K. Wiesemann (2)
Hungary	J. Szigeti (2)	J. Szigeti (3)	J. Szigeti (4)
Italy	M. Cacciatore (3)	M. Cacciatore (4)	S. Debenedictis (1)
The Netherlands	G.M.W. Kroesen (3)	<u>G.M.W. Kroesen (1)</u>	<u>G.M.W. Kroesen (2)</u>
Portugal	C.M. Ferreira (4)	J. Loureiro (1)	J. Loureiro (2)
Rumania	G. Musa (1)	G. Musa (2)	G. Musa (3)
Russia	I.T. Iakubov (3)	I.T. Iakubov (4)	A. Napartovic (1)
Slovakia	I. Kosinar (4)	J.D. Skalný (1)	J.D. Skalný (2)
United Kingdom	R.N. Franklin (2)	W.G. Graham (1)	W.G. Graham (2)
Yugoslavia	Z. Petrovic (1)	Z. Petrovic (2)	Z. Petrovic (3)
<b>Country</b>	<b>2002 Grenoble</b>	<b>2004 Constanta</b>	<b>2006 Lecce</b>
Austria	H. Störi (1)	H. Störi (2)	H. Störi (3)
France	N. Sadeghi (3)	N. Sadeghi (4)	J.P. Boeuf (1)
Germany	K. Wiesemann (3)	K. Wiesemann (4)	J. Meichsner (1)
Hungary	Z. Donko (1)	Z. Donko (2)	Z. Donko (3)
Italy	S. Debenedictis (2)	S. Debenedictis (3)	S. Debenedictis (4)
The Netherlands	<u>G.M.W. Kroesen (3)</u>	<u>G.M.W. Kroesen (4)</u>	W. Goedheer (1)
Portugal	J. Loureiro (3)	J. Loureiro (4)	V. Guerra (1)
Rumania	G. Musa (4)	G. Popa (1)	G. Popa (2)

Russia	A. Napartovic (2)	A. Napartovic (3)	A. Napartovic (4)
Chechia & Slovakia	J. Skalný (3)	J. Skalný (4)	J. Glosik (1)
United Kingdom	W.G. Graham (3)	W.G. Graham (4)	<u>W.G. Graham (1)</u>
Yugosalvia	Z. Petrovic (4)	G. Malovic (1)	G. Malovic (2)
Spain (co-opted)			F. Gordillo-Vasquez

<b>Country</b>	<b>2008 Granada</b>	<b>2010 Novi Sad</b>	<b>2012 Viana do Castelo</b>
Austria	H. Störi (4)		
France	J.P. Boeuf (2)	J. P. Boeuf (3)	S. Pasquiers (1)
Germany	J. Meichsner (2)	J. Meichsner (3)	<u>J. Meichsner (1)</u>
Hungary	Z. Donko (4)	P. Hartmann (1)	P. Hartmann (2)
Italy	G. Dilecce (1)	G. Dilecce (2)	G. Dilecce (3)
Belgium	A. Bogaerts (1)	A. Bogaerts (2)	A. Bogaerts (3)
Portugal	V. Guerra (2)	V. Guerra (3)	V. Guerra (4)
Romania	G. Popa (3)	G. Dinescu (1)	G. Dinescu (2)
Russia	S. M. Starikovskaia (1)	Y. Akishev (1)	Y. Akishev (2)
Czechia/Slovakia	J. Glosik (1)	J. Glosik (2)	Stefan Matejcik (1)
United Kingdom	<u>W.G. Graham (2)</u>	<u>W.G. Graham (3)</u>	M. Bowden (1)
Serbia	G. Malovic (3)	D. Maric (1)	D. Maric (2)
Spain	F. Gordillo-Vasquez (1)	F. Gordillo-Vasquez (2)	F. Gordillo-Vasquez (3)

<b>Country</b>	<b>2014 Greifswald</b>	<b>2016 Bratislava</b>	<b>2018 Glasgow</b>
France	S. Pasquiers (2)	S. Pasquiers (3)	T. Minea (1)
Germany	<u>J. Meichsner (2)</u>	<u>J. Meichsner (3)</u>	R. Brandenburg (1)
Hungary	P. Hartmann (3)	K. Kutasi (1)	K. Kutasi (2)
Italy	S. Longo (1)	S. Longo (2)	S. Longo (3)
The Netherlands	R. Engeln (1)	R. Engeln (2)	R. Engeln (3)
Portugal	C. Pintassilgo (1)	C. Pintassilgo (2)	<u>C. Pintassilgo (1)</u>
Romania	G. Dinescu (3)	B. Mitu (1)	B. Mitu (2)
Russia	Y. Akishev (3)	N. Dyatko (1)	N. Dyatko (2)
Slovakia	Stefan Matejcik (2)	Stefan Matejcik (3)	F. Krcma (1) Czech R.
United Kingdom	M. Bowden (2)	M. Bowden (3)	E. Wagenaars (1)
Serbia	D. Maric (3)	N. Puac (1)	N. Puac (2)
Spain	I. Tanarro (1)	I. Tanarro (2)	I. Tanarro (3)

<b>Country</b>	<b>2022 Paris</b>
France	T. Minea (2)
Germany	R. Brandenburg (2)
Hungary	K. Kutasi (3)
Italy	F. Taccogna (1)
Denmark	E. Stamate (1)
Portugal	<u>C. Pintassilgo (2)</u>
Romania	B. Mitu (3)
Russia	N. Dyatko (3)
Czech R.	F. Krcma (2)
United Kingdom	E. Wagenaars (2)
Serbia	N. Puac (3)
Spain	V. Herrero (1)

## 5. Number and distribution of scientific participants (since 2006)

### 2006 Lecce

<u>Total</u>	202
1.Italy	35
2.France	25
3.Japan	20
4.Germany	17
4.Romania	17
6.Czech Rep.	15
7.Russia	13
8.Portugal	10
9.Spain	8
10.The Neth.	7
11.U.K.	6
12.Serbia	5

### 2008 Granada

<u>Total</u>	299
1.France	47
2.Spain	43
3.Japan	26
4.Germany	25
5.Portugal	16
5.The Neth.	16
7.Romania	15
8.Italy	11
9.Czech Rep.	11
10.Russia	9
10.Serbia	9
10.U.K.	9

### 2010 Novi Sad

<u>Total</u>	177
1.Serbia	28
2.France	23
3.Germany	21
4.U.K.	13
5.Russia	11
6.Japan	9
6.The Neth.	9
8.Czech Rep.	8
8.Portugal	8
8.Spain	8
11.Hungary	6

### 2012 Viana do Castelo

<u>Total</u>	265
1.France	59
2.Germany	30
3.Portugal	19
4.Japan	18
5.Russia	12
6.U.K.	11
7.Czech Rep.	10
7.Spain	10
9.The Neth.	9
10.Serbia	9
11.Italy	8
12.Belgium	7
12. Poland	6
12. Romania	6
12. US	6
16.Switzer.	5
17.Brazil	4
17.Bulgaria	4
19.Canada	3
19.China	3
19.Slovakia	3
19.Slovenia	3
23. Others	1,2

### 2014 Greifswald

<u>Total</u>	235
1.Germany	63
2.France	31
3.Czech Rep	20
4.Russia	13
5.Kazakhstan	10
5. Japan	10
6.U.K	8
7. The Neth.	7
8. Portugal	6
9. Slovakia	5
9. Romania	5
9.US	5
10.Italy	4
10. Serbia	4
10.Belgium	4
11. Spain	3
12.Sweden	3
13.Others	1,2

### 2016 Bratislava

<u>Total</u>	165
1.France	22
2. Slovakia	21
3. Czech Rep.	14
4. Germany	12
5. Russia	11
6. Serbia	10
7. UK	10
8. Japan	9
8. Spain	9
9. Hungary	5
9. Kazakhstan	5
10. Austria	4
10. Belgium	4
10. Italy	4
10. The Neth.	4
10. Portugal	4
17. Romania	3
18.Others	1,2

## 2018 Glasgow

<u>Total</u>	188
1. France	41
2. UK	39
3. Japan	15
4. Germany	13
5. Portugal	10
6. Russia	9
6. US	9
7. Slovakia	6
8. Czech Rep.	5
8. Spain	5
8. The Neth.	5
8. Hungary	4
9. Romania	4
9. Serbia	4
10. Italy	3
10. Russ. Fed.	3
11. Others	1,2

## 6. Previous official websites (2008 - 2018)

2008, Granada, Spain <http://www.escampig2008.csic.es/>

2010, Novi Sad, Serbia <http://www.escampig2010.ipb.ac.rs/>

2012, Viana do Castelo, Portugal <http://escampig2012.ist.utl.pt/>

2014, Greifswald, Germany <http://www.escampig2014.org/>

2016, Bratislava, Slovakia <https://www.escampig2016.org/>

2018, Glasgow, UK <https://www.gla.ac.uk/schools/physics/research/groups/astro2/escampig/>