

INTERNATIONAL SYMPOSIUM ON ELECTROKINETIC PHENOMENA

Dedicated to the memory of Marjan Smoluchowski



Cracow, Poland

August 18-22, 2002

Third Circular Programme

Organised by the Institute of Catalysis and Surface Chemistry
Polish Academy of Sciences



Dear Colleagues,

Many thanks for attending the Elkin Conference that has established its well-deserved reputation as the leading event in this fascinating field of research. We are convinced that your presence will significantly add to the value of the conference promoting its further development. More than 130 scientists confirmed their attendance in that number many promising students and young researchers. A special “youngster” session is planned accordingly to create a forum for their scientific initiation.

The scientific programme comprises nine plenary lectures opening each of the sessions with the special “Smoluchowski” lecture held by Prof. J. Lyklema. The plenary lectures will be followed by oral presentation of prominent scientists selected by the Scientific Committee on the basis of their outstanding scientific merit. More than sixty presentations lasting 20 minutes each have been selected. In order to provide the most favourable conditions for their perception the inefficient, parallel session model has been abandoned. A poster session (about 60 presentations) and the IUPAC workshop chaired by Prof. Gonzalez-Caballero will complement the scientific programme.

However, there is a price to be paid for eliminating parallel sessions. Coffee breaks and lunchtime periods have been reduced and the scientific agenda became very tight indeed. We hope that the social programme will compensate these hardships. The welcome reception and the more informal get-together party are scheduled at the beginning of the conference for integration purposes. Concerts of Polish folk music and dances are scheduled as well. There also will be a concert of classical music held in the picturesque Cloth Hall with famous Polish painters’ exposition at hand. Equally attractive seems the conference dinner at a restaurant located at the Royal Castle with magnificent evening panorama over Cracow. The expenses of all these events will be covered by the conference package.

We are sure that with this scientific programme and social attractions you will find your stay in Cracow an exciting and enjoyable event.

We look forward to seeing you in Cracow

The Organising Committee

Local Organising Committee

Chairmen

Zbigniew Adamczyk, Jerzy Haber

Scientific affairs

Marek Kosmulski, Piotr Warszyński

Co-ordination / Technical affairs

Władysław Janusz, Paweł Nowak, Lilianna Szyk-Warszyńska, Elizeusz Musiał

Secretary / Treasurer

Elżbieta Porębska,

Ladies Programme

Maria Zembala

International Advisory Board

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| T. G. M. VAN DE VEN | (Canada) |
| C. WERNER | (Germany) |
| A. E. YAROSHCHUK | (Ukraine) |

Scope of the symposium

The topics of the symposium will be theoretical and experimental aspects of electrokinetic phenomena, adsorption, double-layer dynamics, colloid and biosystem stability, in particular:

- adsorption at solid/liquid interfaces (ions, surfactants, polymers)
- dielectric spectroscopy
- electric double-layer, colloid interactions
- electric response of dispersions
- electroacoustics
- electroosmosis, membranes
- electroviscous effects
- electrophoresis, electrophoretic deposition
- dynamics and stability of dispersions
- protein, bioparticle deposition via streaming potential
- microfluidic systems
- streaming potential
- zeta potential

Plenary lectures

S. S. Dukhin, Newark, USA

Electrophoresis Theory and Electrokinetic Characterization of Colloid Particle Surfaces

J. Lyklema, Wageningen, The Netherlands

Electrokinetics after Smoluchowski (special Smoluchowski lecture)

R. J. Hunter, Sydney, Australia

Electroacoustic Studies of Emulsion Formation and Properties

M. Kosmulski, Lublin, Poland

The Significance of Isoelectric Point of Common Materials

V. Ribitsch, Graz, Austria

Characterization of Polymer Surfaces Using Streaming Potential Measurements

D. A. Saville, Princeton, USA

The Electrokinetics of Particle Deposition by External Fields

P. J. Scales, Melbourne, Australia

Electrokinetics of Soft and Hard Surfaces

T. G. M. van de Ven, Montreal, Canada

Electroviscous Forces Acting on a Charged Sphere Moving Near a Charged Wall

P. Warszyński, Cracow, Poland

Electrokinetics of Particles Attached to Surfaces

Preliminary programme

Sunday, August 18, 2002

- From 15:00 *Registration*
19:00 *Welcome reception*

Monday, August 19, 2002

- 8:00-9:00 *Registration*
9:00 *Opening*
9:30 **J. LYKLEMA**
Electrokinetics after Smoluchowski (special Smoluchowski lecture)
10:10 **S. S. DUKHIN, C. WERNER**
Electrophoresis Theory and Electrokinetic Characterization of Colloid Particle Surfaces
10:50-11:20 *Coffee break*
11:20 **H. OHSHIMA**
Electrokinetic Phenomena in Salt-Free Media
11:40 **C. GROSSE, S. PEDROSA, V. N. SHILOV**
On the Influence of Size, ζ Potential, and State of Motion of Dispersed Particles on the Conductivity of a Colloidal Suspension.
12:00 **N. MISHCHUK**
Concentration Polarization and Limits of Applicability of Smoluchowski's Formula.
12:20 **J. C. BAYGENTS**
The Dielectrophoresis of a Colloidal Particle in an Ionic Solution
12:40 **J. A. COHEN**
Application of the Smoluchowski Equation to Soft Liposomes
13:00 **A. YAROSHCHUK, V. RIBITSCH**
The Role of Channel Wall Conductance in the Determination of Zeta-Potential from Electrokinetic Measurements
13:20 **K. YAMADA, H. SASAKI, S. USUI**
The Dependence of Zeta-Potential of Gas Bubble on the Degree of Surface Mobility and Relaxation Effect as Determined by the Dorn Effect
13:40 **M. J. GARCIA-SALINAS, F. J. DE LAS NIEVES**
About the Primary Electroviscous Effect.

14:00-15:00 *Lunch*

- 15:00 **P. J. SCALES**
Electrokinetics of Soft and Hard Surfaces
- 15:40 **M. LOZADA-CASSOU, E. GONZALEZ-TOVAR**
The Overcharging Effects on the Electrophoresis of a Spherical Colloid Particle
- 16:00 **H. J. KEH, Y. K. WEI**
Electrokinetic Phenomena in Fibrous Porous Media Caused by Gradients of Electrolyte Concentration
- 16:20 **A. N. ZHUKOV, YU. V. ZVIAGUILSKAYA, C. BENNDORF**
Electrokinetic Properties of Diamond Particles in Solutions of Simple Electrolytes in Ethanol
- 16:40 **U. BÖHME, U. SCHELER**
Effective Charge, Size and Counterion Mobility in Polyelectrolytes Studied by Electrophoresis NMR

17:00-17:10 *Coffee break*

- 17:10 **L. ARCE, F. GÁMEZ, S. CALERO, S. LAGO**
Capillary Electrophoresis of Simple Amines: Results from Experiments and from Molecular Dynamics
- 17:30 **M. QUESADA-PÉREZ, A. MARTÍN-MOLINA, F. GALISTEO-GONZÁLEZ, R. HIDALGO-ÁLVAREZ**
Primitive Models and Electrophoresis: an Experimental Study
- 17:50 **D. MIZUNO, Y. KIMURA, R. HAYAKAWA**
Wide Band Spectroscopy of Dynamic Electrophoretic Mobility
- 18:10 **J. L. VIOTA, M. M. RAMOS-TEJADA, J. DE VICENTE, J. D. G. DURÁN**
Electrophoretic and Rheological Properties of Zirconia Suspensions Stabilized by Polyacrylic Acid Polymers
- 18:30 **I. P. SERGEEVA, N. V. CHURAEV, T. B. ERMAKOVA, V. D. SOBOLEV**
Electrokinetic Properties of Quartz Surface in Contact with Flowing Cationic Polyelectrolyte Solutions

19:30 *Get-together party*

Tuesday, August 20, 2002

- 9:00 **R. J. HUNTER**
Electroacoustic Studies of Emulsion Formation and Properties
- 9:40 **F. CARRIQUE, F. J. ARROYO, A. V. DELGADO**
Low-Frequency Dielectric Dispersion of Concentrated Colloidal Suspensions
- 10:00 **A. S. DUKHIN, V.N. SHILOV, P. J. GOETZ**
New Generalizations of the Theory of Electroacoustics for Concentrated Suspensions
- 10:20 **D. ERICKSON, D. LI**
3D Numerical Simulation of Pressure Driven Flow over Electrokinetically Heterogeneous Surfaces
- 10:40 **R. GREENWOOD**
Studying the Interparticle Forces in Aqueous Suspension of Inorganic Materials Using Electroacoustics
- 11:00 **R. HERBIG, R. E. BRÄUNING, G. TOMANDL**
Electroacoustic Measurement of Surface Potentials
- 11:20-11:40 *Coffee break*
- 11:40 **J. GUSTAFSSON, E. NORDENSWAN, M. KOSMULSKI, J. B. ROSENHOLM**
Sedimentation Behaviour of TiO₂ Suspensions at Different ζ Potentials in the Presence of Electrolytes
- 12:00 **M. MANCONI, A. O. VILA, C. RODRIGUEZ-FLORES, J. FIGUERELO, F. MOLINA**
Viscoelastic Properties of Concentrated Dispersions in Water of Soya Lecithin.
- 12:20 **E. K. ZHOLKOVSKIJ, J. H. MASLIYAH, J. CZARNECKI**
Diffuse Electric Double-Layer and Drop Deformation in Electric Field
- 12:40 **M. A. RODRÍGUEZ-VALVERDE, M. A. CABRERIZO-VÍLCHEZ, A. PÁEZ-DUEÑAS, R. HIDALGO-ÁLVAREZ**
Electrokinetic Potential of Highly Charged Particles: Bitumen-in-Water Dispersions
- 13:00 **A. MONCHO-JORDÁ, A. SCHMITT, M. TIRADO-MIRANDA, G. ODRIÓZOLA, R. HIDALGO-ÁLVAREZ**
A New Theoretical Kernel for Describing the Aggregation of Particles Partially Covered by Proteins
- 13:20 **D. MIROSHNYCHENKO**
The Effect of an Electric Field on the Viscosity and Normal Stress Differences in a Dilute Suspension of Dielectric Ellipsoids

- 13:40 **YU. B. BORKOVSKAYA, V. N. SHILOV, A. S. DUKHIN**
The Theory of Electroacoustics in Concentrated Weakly-Conducting Suspensions
- 14:00-15:00 *Lunch*
- 15:00 **P. WARSZYŃSKI**
Electrokinetics of Particles Attached to Surfaces
- 15:40 **V. V. RODRIGUEZ, H. J. BUSSCHER, H. C. VAN DER MEI, W. NORDE**
Softness of Bacterial Cell Walls as Probed by Electrophoresis
- 16:00 **A. TANIOKA, I. UEMATSU, K. MOROTA, H. MATSUMOTO, Y. YAMAGATA, K. INOUE**
Surface Properties of Protein Chips Prepared by Electrospray Deposition Method
- 16:20 **YU. FELDMAN**
Dielectric Properties of Biological Systems, from Amino Acids to Cells.
- 16:40 **S. R. DZIENNIK, E. B. BELCHER, M. J. PANZER, G. A. BARKER, A. M. LENHOFF**
Coupled Transport and Adsorption of Proteins in Porous Ion Exchange Particles
- 17:00-18:30 **POSTER SESSION**
- 19:30 *Concert*

Wednesday, August 21, 2002

- 9:00 **D. A. SAVILLE**
The Electrokinetics of Particle Deposition by External Fields
- 9:40 **Z. ADAMCZYK, B. SIWEK, E. MUSIAŁ, L. SZYK-WARSZYŃSKA**
Particle Deposition at Surfaces – Role of Electrostatic Interactions
- 10:00 **M. ZEMBALA, Z. ADAMCZYK, P. WARSZYŃSKI**
Streaming Potential for Particle Covered Surfaces
- 10:20 **J. FARAUDO, J. BAFALUY**
Low-Coverage Effects on Bulk Concentration in the Irreversible Adsorption of Charged Colloids.
- 10:40 **P. WEROŃSKI, J. Y. WALZ, M. ELIMELECH**
Effect of Depletion Interaction on Colloid Particle Transport in Porous Media

- 11:00 **E. A. M. BROUWER, E. S. KOOIJ, H. WORMEESTER, E. VAN VROONHOVEN, A. VAN SILFHOUT, B. POELSEMA**
Electrically Controlled Deposition of Nano-Colloidal Metal Particles
- 11:20-11:40 *Coffee break*
- 11:40 **T. G. M. VAN DE VEN**
Electroviscous Forces Acting on a Charged Sphere Moving Near a Charged Wall
- 12:20 **M. SAKAMOTO, M. MIYAHARA, K. HIGASHITANI**
Long-Range Attractive Force Between Hydrophilic Surfaces in Surfactant Solutions
- 12:40 **K. FURUSAWA**
Flocculation of Latex Dispersion in Ionic Micellar Solutions.
- 13:00 **Y. I. CHANG, M. H. KU**
The Effect of Electrostatic Repulsion on the Gravity-Induced Flocculation of Non-Brownian Particles
- 13:20 **C. YANG, H. Q. GONG, L. Q. CHEN, L. Q. DENG**
Measurement of the Zeta Potential of the Glass Capillary - Solution Interface by the Electroosmosis Method
- 13:40 **D. SINTON, D. LI**
Visualization of Electroosmotic Flow in Microchannels
- 14:00-15:00 *Lunch*
- 15:00 **C. WERNER, R. ZIMMERMANN, R. SCHWEISS, S. S. DUKHIN**
Evaluation of Electrokinetic Measurements at Thin Organic Layers Complemented by Surface Conductivity Data – a Survey.
- 15:20 **R. ZIMMERMANN, T. KRATZMÜLLER, C. WERNER**
Zeta Potential Surface Conductivity and Optical Thickness Reveal Structural Variations of Grafted Polypeptide Layers
- 15:40 **K. RICHAU, V. KUDELA, J. SCHAUER, R. MOHR**
Electrokinetic and Impedance Spectroscopic Characterization of Polymer Membranes Developed for Fuel Cell Applications
- 16:00 **J. ADDAI-MENSAH, J. RALSTON**
Influence of Pulp Chemistry and Particle Interactions on Sedimentation and Electroosmotic Dewatering of Kaolinite Dispersions
- 17:20 *Sightseeing tour (Royal Castle)*
- 19:30 *Conference dinner*

Thursday, August 22, 2002

9:00 **V. RIBITSCH**
Characterization of Polymer Surfaces Using Streaming Potential Measurements

9:40 **N. KALLAY, A. CHITTOFRATI, V. TOMIŠIĆ, V. HRUST**
Electric Mobility of Micelles and Counterion Association

10:00 **W. PIASECKI, W. RUDZIŃSKI**
On the Temperature Dependence of the Surface Potential Determined by Assuming of 1pK and 2pK Charging Models of Ion Adsorption at the Metal Oxide/Electrolyte Solution Interface

10:20 **P. TURQ, M. JARDAT, O. BERNARD, J. F. DUFRECHE, V. MARRY**
Dynamics and Transport in Charged Colloidal and Porous Media

10:40 **J. VIRKUTYTE, M. SILLANPAA**
Practical Implementation of Electrokinetics in Removing Copper from Sand

11:00-11:20 *Coffee break*

11:20 **M. KOSMULSKI**
The Significance of Isoelectric Point of Common Materials

12:00 **K. SANJAY, R. SHEKHAR, R. P. DAS**
Electroremediation of Cr(VI) Contaminated Soils: Kinetics and Energy Efficiency

12:20 **M. M. RAMOS-TEJADA, A. ONTIVEROS, M. ESPINOSA-JIMÉNEZ,
J. D. G. DURÁN**
Relationship Between Interfacial Properties and Yield Stress in Humic Acid/Hematite Suspensions

12:40 **E. CHIBOWSKI, L. HOLYSZ**
Time Dependent Changes in Zeta Potential of Freshly Precipitated Calcium Carbonate

13:00 **S. P. FRIEDMAN, C. B. LI**
Wien Effect Mechanism in Dilute Suspensions of Charged Particles.

13:20 **S. F. ALKAFAEF**
Why do Wells Produce Only Half of the Oil in Place?

13:40-14:20 *Lunch*

- 14:20 **I. VOIGT, M. ESCHNER, D. PLEUL, S. SPANGE, F. SIMON**
Electrokinetic Investigations to Study Surface Reactions – Hybrid Function-
alization
- 14:40 **C. LABBEZ, P. FIEVET, F. THOMAS, A. SZYMCZYK, A. VIDONNE,
C. SIMON, A. FOISSY, J. PAGETTI**
Tangential Streaming Potential Measurements and Structural Characteriza-
tion of a Nanofiltration Membrane: Evaluation of the DSPM Model for Sol-
ute Retention
- 15:00 **H. MATSUMOTO, A. TANIOKA, Y. KOYAMA**
Pore-Surface Characterization of Amphoteric Charged Membranes by
Means of Zeta Potential Measurements
- 15:20 **Y. HAYASHI, A. PUZENKO, YU. FELDMAN**
Electrode Polarisation Corrections in Dielectric Spectroscopy for Biological
Materials
- 15:40 **R. SCHWEISS, P. B. WELZEL, C. WERNER, W. KNOLL**
Streaming Potential and Streaming Current Investigations of Self-
Assembled Monomolecular Films on Gold and Glass
- 16:00 **C. CHASSAGNE, D. BEDEAUX, G. J. M. KOPER**
Dielectric Enhancement of Charged Nanospheres Dispersed in an Electro-
lyte
- 16:20 **M. PIECH, J. Y. WALZ**
Direct measurement of Depletion and Structural Forces in Polydisperse,
Charged Systems
- 17:00-17:20 *Closing remarks*

Oral Presentations

Twenty minutes are envisaged for each oral presentation, including discussion. A slide projector, an overhead projector and a multimedia player will be available.

Poster Presentations

The list of accepted poster presentations is available on our website <http://kinga.cyf-kr.edu.pl/~ncmusial/Poster.html>. The space available for each poster is 120 (height) per 90 (width). They can be fixed by adhesive tapes only.

| Time | Sunday, August 18 | Monday, August 19 | Tuesday, August 20 | |
|-------|-------------------------------|--|-------------------------------|---------------------------------|
| 08:00 | | Registration | | |
| 09:00 | | Opening | Plenary Lecture R.J.Hunter | |
| 09:30 | | Plenary Lecture J.Lyklema | A.V.Delgado | |
| 09:40 | | | V.N.Shilov | |
| 10:00 | | Plenary Lecture S.S.Dukhin | D.Li | |
| 10:10 | | | R.Greenwood | |
| 10:20 | | Coffee Break | R.Herbig | |
| 10:40 | | | | |
| 10:50 | | | | |
| 11:00 | | | | |
| 11:20 | | H.Ohshima | Coffee Break | |
| 11:40 | | C.Grosse | J.Gustafsson | |
| 12:00 | | N.Mishchuk | A.O.Vila | |
| 12:20 | | J.C.Baygents | E.K.Zholkovskij | |
| 12:40 | | J.A.Cohen | M.A.Rodríguez-Valverde | |
| 13:00 | | A.Yaroshchuk | A.Moncho-Jordá | |
| 13:20 | | H.Sasaki | D.Miroshnychenko | |
| 13:40 | | M.J.Garcia-Salinas | Yu.B.Borkovskaya | |
| 14:00 | | | | |
| | | | Lunch | Lunch |
| 15:00 | | R E G I S T R A T I O N | Plenary Lecture P.J.Scales | Plenary Lecture P.Warszyński |
| 15:40 | | | M.Lozada-Cassou | W.Norde |
| 16:00 | | | H.J.Keh | A.Tanioka |
| 16:20 | | | A.N.Zhukov | Yu.Feldman |
| 16:40 | U.Scheler | | A.M.Lenhoff | |
| 17:00 | Coffee Break | | Poster Session | |
| 17:10 | L.Arce | | | |
| 17:30 | M.Quesada-Pérez | | | |
| 17:50 | D.Mizuno | | | |
| 18:10 | J.L.Viota | | | |
| 18:30 | I.P.Sergeeva | | | |
| 18:50 | | | | |
| 19:00 | Welcome Reception (Campus) | | | |
| 19:30 | | Get-together Party | Concert | |

| Wednesday, August 21 | Thursday, August 22 | | Time |
|-------------------------------------|--------------------------------|--|-------|
| | | | 08:00 |
| Plenary Lecture D.A.Saville | Plenary Lecture V.Ribitsch | | 09:00 |
| Z.Adamczyk | N.Kallay | | 09:40 |
| M.Zembala | W.Rudziński | | 10:00 |
| J.Farauto | P.Turq | | 10:20 |
| P.Weroński | M.Sillanpaa | | 10:40 |
| E.A.M.Brouwer | Coffee Break | | 11:00 |
| Coffee Break | Plenary Lecture M.Kosmulski | | 11:20 |
| Plenary Lecture T.G.M.van de Ven | R.Shekhar | | 11:40 |
| K.Higashitani | M.M.Ramos-Tejada | | 12:00 |
| K.Furusawa | E.Chibowski | | 12:20 |
| Y.I.Chang | S.P.Friedman | | 12:40 |
| C.Yang | S.F.Alkafeef | | 13:00 |
| D.Sinton | Lunch | | 13:20 |
| Lunch | F.Simon | | 13:40 |
| | C.Labbez | | 14:00 |
| C.Werner | H.Matsumoto | | 14:20 |
| R.Zimmermann | Y.Hayashi | | 14:40 |
| K.Richau | R.Schweiss | | 15:00 |
| J.Addai-Mensah | C.Chassagne | | 15:20 |
| | M.Piech | | 15:40 |
| | | | 16:00 |
| | | | 16:20 |
| | | | 16:40 |
| | Closing Remarks | | 17:00 |
| Sightseeing Tour (Royal Castle) | | | 17:20 |
| Conference Dinner | | | 19:30 |

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Conference venue

Cracow, situated on the Vistula River at the intersection of important European trade routes, almost from the very dawn of Polish history through the seventeenth century was the political and administrative capital of the country, and remains its intellectual and cultural centre to this day. Today, Cracow, with its population of about 1 000 000, is the third largest city in Poland. With the Jagiellonian University founded in 1364, Technical University and University of Mining and Metallurgy, numerous other institutions of higher education, museums, symphonic orchestras, theatres and other cultural institutions, present-day Cracow is one of the main scientific, cultural and educational centres of the country. In 1978, Cracow was listed by UNESCO as one of the treasures of the world's cultural heritage. Of the many valuable monuments of Cracow, the Wawel castle complex (see front page) and the picturesque, 325-foot-long Cloth Hall (see photograph) rank among the most impressive architectural beauties of the city.

The conference will be held at the Polonia Institute campus picturesquely situated on a cliff by the Vistula (see the photograph). The venue located just midway between downtown Cracow and the international airport (5 km from each site) can be reached easily by public transportation or by car. Its exceptionally scenic location inside a park, its specific microclimate and isolation from the city create a unique environment for a successful scientific event. The campus is managed by the Polonia Institute of the Jagiellonian University.



*The Cloth Hall
(concert venue)*



*The Polonia Institute campus
Venue address: ul.Jodłowa 13
30-252 Kraków*

Social Programme

Sunday, August 18 – *Welcome Reception*
Monday, August 19 – *Get-together Party*
Tuesday, August 20 – *Concert*
Wednesday, August 21 – *Conference Dinner at Royal Castle Wawel with Cultural Highlights and Sightseeing*

Additional ladies programme (optional):

Guided tour to the medieval salt mine, Wieliczka

Guided tour – Old Cracow

The conference fee covers expenses of all these events for participants and accompanying persons.

Post Conference Tours (optional, paid):

Auschwitz Museum of Holocaust

Tatra Mountains – Zakopane

The Dunajec River Gorge raft trip

Please let us know in advance about your intention to take part in these events.

Conference Office:

The Conference Office will be opened permanently starting from 15:00, August 18 (Sunday)
Participants will have free access to fax, photocopier and Internet during the time of the conference.

Contact address

*Institute of Catalysis and Surface Chemistry
ul. Niezapominajek 8
30-239 Kraków, Poland*

Phone (+4812) 6395-104

Fax (+4812) 6395-145

E-mail: ncadamcz@cyf-kr.edu.pl
ekp2002@elektron.pol.lublin.pl

Internet: <http://www.ik-pan.krakow.pl/electrokinetic/index.html>
<http://akropolis.pol.lublin.pl/users/ekp2002/index.htm>

During the conference there will be a special hot-line phone for arranging transportation and helping in all practical matters (number will be given in the final programme).

Registration

The registration fees (conference package) are:

Standard registration (until May 30, 2002):

USD 670 (per person in double rooms)

USD 730 (single rooms)

USD 500 (students upon official confirmation, per person in double rooms)

USD 400 (accompanying persons)

Late registration (after May 30):

USD 740 (per person in double rooms)

USD 440 (accompanying persons)

The fee includes four-nights' accommodation (within the campus in fully equipped rooms, each with bathroom), welcome party, conference dinner, all social events, breakfasts, lunches, coffee breaks, snacks during poster sessions, conference kit including materials and souvenirs.

Please transfer the due amount to the bank account:

Account holder: Institute of Catalysis and Surface Chemistry

BPH S.A. IV/O Krakow

ul. Pijarska 1

30-015 Kraków, POLAND

10601389-330000199551

SWIFT BPH KPLPK

Please note that bank fees have to be charged to your account.

Other practical matters

Arrival

Poland is presently an EU-associated country, and no visa is required for citizens of most European countries. However, visas are required for non-European countries, especially Australia, Japan, Canada etc. The Conference Office will provide you with an official invitation when needed to obtain visas or raise travel found.

The official Polish currency is złoty, 1 zł = 100 grosz. The official exchange rate (May 8th, 2002) is 1 \$(US) = 4 zł and 1 EUR = 3.6 zł. Foreign currency can be brought without limitation and can be taken away up to 200 EUR, without permission. Major credit cards (VISA, AmEx, Dinners Club, MasterCard/EuroCard, JCB) are accepted in restaurants, most shops and in the hotels. Cash can easily be exchanged in banks and in many exchange offices (called 'kantór').

Transport

Cracow has direct flights to Frankfurt, London, Paris, Rome, Vienna, Zurich, Tel Aviv, New York and Chicago. There also exist air connections (about 5 per day) with Warsaw International Airport.

Similarly, Cracow has convenient train connections with Berlin, Hamburg, Prague, Vienna, Kiev, Bratislava, Budapest, Frankfurt and other cities.

Coming by car is equally simple since the major Cracow-Katowice-Berlin highway (A4) approaches the conference site as close as 3 km (see the map attached).

Accommodation

This conference package covers four-nights' accommodation within the campus in fully equipped rooms, each with bathroom. For those who would like to stay in luxury hotels (downtown area, 15 minutes by taxi) the costs will be significantly higher. Early booking of these hotel rooms is strongly recommended because of the expected pope visit to Cracow at this time. On Sunday, August 18, Cracow will host over 1 000 000 pilgrims who come there to attend the mass celebrated by the pope. This event will impair the traffic in the city between 8 AM and 2 PM. Please let us know in advance about your intention of taking part in the celebration. We arrange your hotels and transportation accordingly. Similarly it is advised to notify us about the post-conference stays in Poland. We will assist you in booking the hotels.

Others

Cracow is known for its moderate climate, especially in late summer when the conference is to be held. The temperature varies from 18 to 25 degrees Celsius at that time, and there is usually little rain.

IUPAC Workshop

The conference will be supplemented by the IUPAC Workshop:

Measurements and interpretation of electrokinetic phenomena

Organised by F. Gonzalez-Caballero, Granada, Spain

Exhibition

During the symposium a permanent exhibition of scientific instruments and other products will take place.

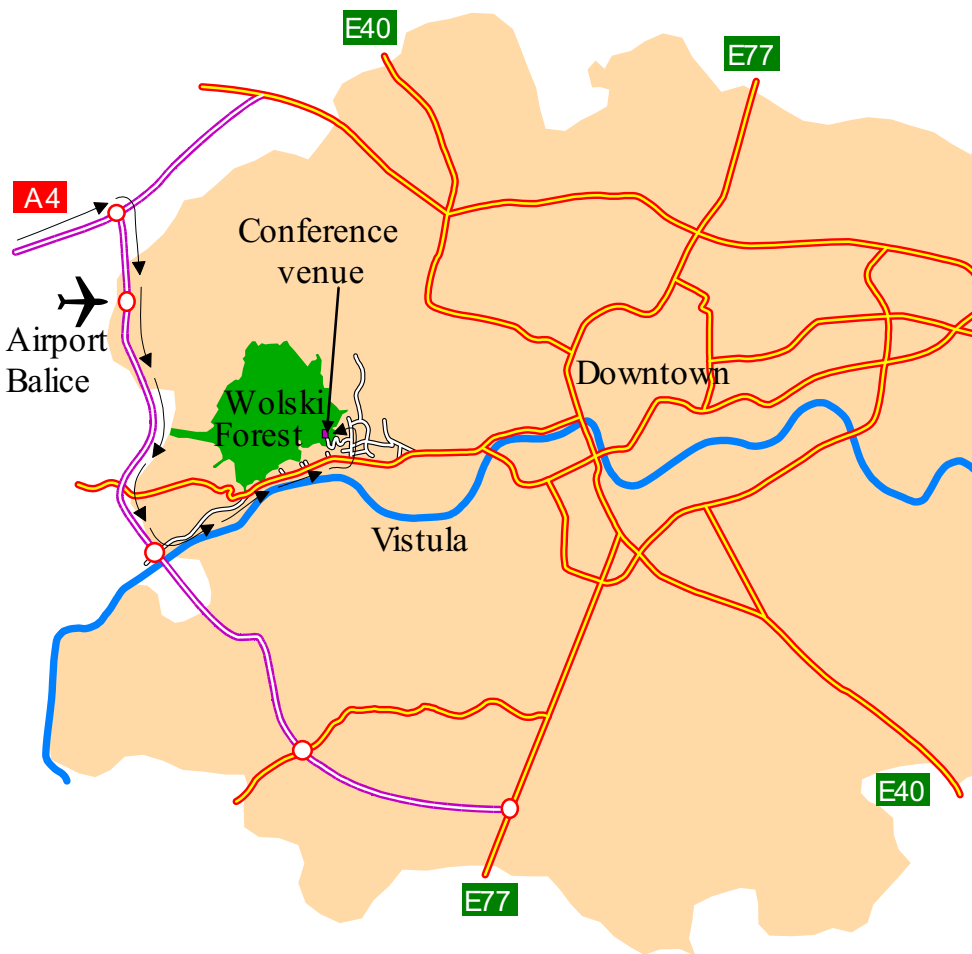
Publication

As previously, the papers will be published in a special issue of "Colloids and Surfaces A: Physicochemical and Engineering Aspects" (subject to acceptance upon positive referees' response). The Guest Editors of the issue will be Z. Adamczyk and M. Kosmulski. Participants giving oral presentation are asked to submit their manuscripts until the end of the symposium.

Maps



Poland



Venue address: ul.Jodłowa 13,
30-252 Kraków-Przegorzały

Cracow

More details on web page: <http://www.krakow.pl/miasto/mapa/mapa.php>