

# **POLYELECTROLYTES POTSDAM '95**

## **organized by**

- Max-Planck-Institute for Colloid and Interface Research
- Deutsche Bunsen-Gesellschaft für Physikalische Chemie
- University of Potsdam

## **ADVISORY BOARD OF THE ISP (INTERNATIONAL SYMPOSIA ON POLYELECTROLYTES)**

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J. Koetz (Potsdam), on the behalf of the University of Potsdam

## **ACKNOWLEDGEMENT**

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We thank the Fachhochschule Potsdam for the kind offer to held the conference in their rooms and to use the conference facilities free of charge.

# **Scientific Program**

**September 18th - 22nd**

## **Topics:**

1. Characterization  
(Monday)
2. Polyelectrolyte Behaviour in  
Solution  
(Monday, Tuesday)
3. Macroionic Interactions  
(Wednesday)
4. Interaction at Interfaces  
(Thursday, Friday)
5. Polyelectrolyte Complexes  
and Gels  
(Thursday, Friday)

## **Monday, September 18**

08.30-9.00

### **Opening Addresses**

**H. Dautzenberg**  
(Organizing Committee)

**Minister S. Reiche**  
(Ministry of Science,  
Research and Culture  
of Brandenburg)

**H. Gramlich**  
(Lord Mayor of Potsdam)

**P. Dubin**  
(International Symposia on Poly-  
electrolytes)

**H. Baumgärtel**  
(Deutsche Bunsengesellschaft)

**M. Antonietti**  
(Max-Planck-Gesellschaft)

**J. Koetz**  
(University of Potsdam)

9.00-10.30

## **Invited Lectures**

Chair: **W. Oppermann**  
Stuttgart, Germany

IL 1

**E. J. Amis**, Los Angeles, USA:  
Model Polyelectrolytes in Model Solutions

IL 2

**W. F. Reed**, New Orleans, USA:  
Time-Dependent Static Scattering Studies on  
Kinetic Processes in Polyelectrolyte  
Solutions

10.30-11.00

## **Coffee**

11.00-11.30

## **Poster Introduction**

Chair: **W. Oppermann**  
Stuttgart, Germany

Topic 1

11.30-12.30

## **Contributed Papers**

Topic 1

Chair: **M. Schmidt**, Bayreuth, Germany

CP 1.1

**M. Rinaudo, I. Roure,**  
**M. Milas**, Grenoble, France:  
Solution Properties of Hyaluronan, Role of  
the Ionic  
Strength on Electrostatic Interactions

CP 1.2

**G. Wegner, R. Rulkens, Ch. Kowitz, W.**  
**Meyer, M. Schulze**, Mainz, Germany:

Synthesis and Properties of Poly-p-phenylene-based Polyelectrolytes

CP 1.3

**R. S. Farinato, L. A.**

**Jackson**, Stamford, USA:

Solution Structure of Microgels

Topic 2

Chair: **L. Belloni**, Gif sur Yvette, France

CP 2.1

**Ch. Seidel**, Teltow, Germany:

Polyelectrolyte Simulation

CP 2.2

**M. Borkovec**, Schlieren,

Switzerland, **G. J. M. Koper**, Leiden,  
Netherlands:

Ising Model of Acid-Base Properties of  
Oligomers and Polyelectrolytes: Aliphatic  
Amines, Linear and Branched  
Poly(Ethyleneimine)

CP 2.3

**B. Jamnik, N. Rebolj,**

**V. Vlachy**, Ljubljana,

Slovenia:

Ion Binding in Polyelectrolyte Solution

12.30-14.00

**Lunch**

14.00-15.30

**Invited Lectures**

Chair: **G. Wegner**, Mainz,  
Germany

- IL 3                    **J. C. Leyte**, Leiden,  
                              Netherlands:  
                              Diffusion in Polyelectrolyte Systems as  
                              Probed by NMR
- IL 4                    **I. Noda, Y. Takahashi**,  
                              Nagoya, Japan:  
                              Viscoelastic Properties of Polyelectrolyte  
                              Solutions
- 15.30-16.00           **Coffee**
- 16.00-18.00           **Contributed Papers**
- Topic 1
- 16.00-17.00           Chair: **G. Timofeeva**, Moscow, Russia
- CP 1.4                    **A. Briel, S. Förster,**  
                              **M. Antonietti**, Teltow,  
                              Germany:  
                              Viscosity of Model Polyelectrolytes
- CP 1.5                    **D. Porschke**, Göttingen, Germany:  
                              Macrodipoles: Structures and Dynamics of  
                              Biological Polyelectrolytes
- CP 1.6                    **D. Hunkeler, J. Hernandez-Barajas**,  
                              Nashville, USA:  
                              Synthesis of Copolymers of Acrylamide and  
                              Quaternary Ammonium Cationic Monomers  
                              via Inverse-Emulsion Polymerization
- 17.00-17.40           Chair: **T. G. M. Van de Ven**, Montreal, Canada
- CP 1.7                    **D. Klemm<sup>1</sup>, Th. Heinze<sup>1</sup>**,

**W. Wagenknecht**<sup>2,1</sup> Jena,  
Germany, <sup>2</sup> Teltow, Germany:  
Properties of Regioselective  
ly Substituted Anionic Cellulose Derivatives

CP 1.8 **L. Rosengarten, K. Tauer**, Teltow, Ger-  
many:  
A New Route to Water-Soluble  
Polyelectrolytes

Topic 2

16.00-17.00 Chair: **W. Knoche**, Bielefeld, Germany

CP 2.4 **A. R. Khokhlov**, Moscow,  
Russia:  
Mixed Polyelectrolyte/Ionomer Behavior in  
Ion-Containing Polymer Systems

CP 2.5 **M. Keller, A. Heintz, R. N. Lichtenthaler**,  
Heidelberg, Germany:  
Enthalpies of Dilution of Some Polycation  
Solution and Exchange Enthalpies of Poly-  
cation Counterions

CP 2.6 **I. D. Robb, P. A. Williams, S. Clegg, D. G.  
Hall**, Clwyd, England

17.00-18.00 Chair: **K. Schmitz**, Kansas City, USA

CP 2.7 **V. S. Zdanowicz**,  
**U. P. Strauss**, New Jersey, USA:  
Solubilization Peculiarities of Copolymers of  
Maleic Anhydride and Alkyl Vinyl Ethers

CP 2.8 **A. Takahashi, T. Kato**, Tsu, Japan:

Excluded Volume Effects of Sulphobetaine  
Polymers

CP 2.9

**I. Hermeier, W. Knoche,**

Bielefeld, Germany,

**A. Pohlmeier, H.-D. Narres,** Jülich, Ger-  
many:

Kinetics of Complexation of Heavy Metal  
Ions with Polyelectrolytes

18.00

**Poster Presentation**

Topic 1 and 2

## **Tuesday, September 19**

08.30-10.00

**Invited Lectures**

Chair: **J. Barthel,**

Regensburg, Germany

IL 5

**M. Beer, R.**

**Grottenmüller, M. Schmidt,** Bayreuth,

Germany, **M. Muthukumar,**

Amherst, USA:

Polyelectrolytes in Solution: Linear Chains,  
Ionic Micronetworks and Molecular Reco-  
gnition

IL 6

**P. Turq, O. Bernhard, J. P. Simonin,** Paris,  
France:

Charge Transport in Polyelectrolyte  
Solutions

10.00-10.30

**Coffee**



10.30-11.30

## **Poster Introduction**

Topic 2

Chair: **D. Woermann**, Köln, Germany

11.30-12.30

## **Contribution Papers**

Topic 2

Chair: **A. Heintz**, Heidelberg, Germany

CP 2.10

**J. X. Tang, P. A. Janmey**, Boston, USA:  
Counterion Induced Bundle Formation of  
Rodlike Polyelectrolytes

CP 2.11

**W. Burchard, M. Frank, E. Michel**, Freiburg,  
Germany:  
Particularities in Static and Dynamic Light  
Scattering from Branched Polyelectrolytes in  
Comparison with their Linear Analogues

12.30-14.00

## **Lunch**

14.00-15.30

## **Invited Lectures**

Chair: **N. Ise**, Osaka, Japan

IL 7

**G. Jannink**, Gif sur Yvette, France:  
The Charge Structure Function in  
Electrolytes and Polyelectrolytes

IL 8

**K. S. Schmitz**, Kansas City, USA:  
Further Developments on Polyelectrolyte  
Coupled Dynamics

15.30-16.00

**Coffee**

16.00-18.00

**Contributed Papers**

Topic 2

2 Parallel Sessions

**Session A**

16.00-17.00

Chair: **G. Jannink**, Gif sur Yvette, France

CP 2.12

**C. Konak**, Prag, Czech Republic, **R. C. Rathi, P. Kopekova, J. Kopecek**, Utah, USA:  
Solution Properties of Polymers Containing Zwitterionic Moieties in Side Chains

CP 2.13

**M. Benmouna**<sup>1,2</sup>, **T. A. Vilgis**<sup>1</sup>, **F.-I. Hakem**<sup>2, 1</sup>  
Mainz,  
Germany, <sup>2</sup> Tlemcen, Algeria:  
Scattering from Weakly Charged Polyelectrolytes

CP 2.14

**D. W. Sohn, P. S. Russo**, Los Angeles, USA, **D. B. Roitman**, California, USA:  
Polarized and Depolarized Dynamic Light Scattering from a Rodlike Polyelectrolyte in a Strong Acid

17.00-18.00

Chair: **P. Turq**, Paris, France

CP 2.15

**M. Sedlák**, Kosice, Slovakia:  
Light Scattering from Salt-Free Solutions of Linear Flexible Polyelectrolytes

- CP 2.16                    **M. Drifford, J. P. Dalbiez, M. Delsanti, L. Belloni**, Gif sur Yvette, France:  
  
                                 Dynamics and Structure of Polyelectrolyte Solutions with Multivalent Added Salt
- CP 2.17                    **R. Borsali**, Grenoble, France:  
                                 Light and Small Angle Neutron Scattering by Charged Polysaccharide in Solution
- Session B**
- 16.00-17.00                Chair: **V. Vlachy**, Ljubljana, Slovenia
- CP 2.18                    **N. Ise**, Osaka, Japan:  
                                 Long-Range Electrostatic Attraction Between Macroions Mediated by Oppositely Charged Counterions: Experimental Supports, Past and Present
- CP 2.19                    **T. Okubo**, Kyoto, Japan:  
                                 Importance of the Electrical Double Layers in the Formation of Giant Colloidal Single Crystals
- CP 2.20                    **H. Ludwig, K.-H. Loebel**, Heidelberg, Germany:  
                                 Interaction of Polyelectrolytes with Mono- and Divalent Cations
- 17.00-18.00                Chair: **U. Strauss**, Piscataway, USA
- CP 2.21                    **N. Imai**, Nagoya, Japan:  
                                 An Exact Theoretical Formula of Electrophoresis of Spherical Macroions in

## Dilute Solution

CP 2.22      **Ch. Wandrey**, Teltow, Germany:  
Molecular Mass and Ionic  
Strength Dependence of Electrochemical  
Properties of Flexible Polyelectrolytes

CP 2.23      **K. Yoshikawa**, Nagoya, Japan:  
Thermodynamics and Kinetics on Coil-  
Globule Transition in a Single DNA  
Molecule

## 18.00      **Poster Presentation**

Topic 1 and 2

## **Wednesday, September 20**

Topic 3

Chair: **G. S. Manning**,  
New Brunswick, USA

08.30-10.10      **G. S. Manning**: Dedication to Paul Ander 1930-  
1994

CP 3.1      **G. N. Patey**, Vancouver,  
Canada:  
Macroscopic Particles in Solution: Solvent  
Structure and Interparticle Forces

CP 3.2      **B. Joansson**, **T. Aakesson**, Lund, Sweden,  
**C. E. Woodward**, Campbell, Australia:  
Electrostatic and Hard Core Correlations in  
an Electric Double Layer

- CP 3.3                      **R. Kjellander**, Göteborg,  
Sweden:  
Ion Correlations and Effective Charges in  
Electrolyte and Macroion Systems
- 10.10-10.30              **Coffee**
- 10.30-12.00
- CP 3.4                      **L. Belloni, O. Spalla**, Gif sur Yvette,  
France:  
Long Range Attraction of  
Electrostatic Origin Between Neutral Sur-  
faces
- CP 3.5                      **G. S. Manning**, New Brunswick, USA:  
Extended Debye-Huckel Theory of  
Polyelectrolyte Interactions
- CP 3.6                      **U. Mohanty, E. F. Merkert**, Chestnut Hill,  
USA:  
Polarization Effects, Counterion  
Condensation, Electrostatic Excluded  
Volume and Attractive Forces in Polye-  
lectrolytes
- 12.00-13.00              **Poster Introduction**
- Topic 5, Part I
- Chair: **P. Dubin**,  
Indianapolis, USA
- 13.00                        **Lunch**

## Thursday, September 21

08.30-10.00

### Invited Lectures

Chair: **D. Horn**, Ludwigshafen, Germany

IL 9

**T. M. Birshtein, B. B.**

**Zhulina**, St. Petersburg,

Russia, **O. V. Borisov**, Mainz, Germany:

Theory of Polyelectrolyte Brushes

IL 10

**G. J. Fler**, Wageningen,

Netherlands:

Polyelectrolyte Brushes and Polyelectrolyte

Adsorption Layers

10.00-10.30

### Coffee

10.30-11.30

### Poster Introduction

Topic 4

Chair: **D. Horn**, Ludwigshafen, Germany

11.30-12.30

### Contributed Papers

Topic 4

Chair: **B. Vincent**, Bristol, England

CP 4.1

**J. B. Schlenoff, M. Li, H. Ly, T. Graul,**

Tallahassee, Fürstentum Liechtenstein:

Polyelectrolyte Adsorption at Charged  
Surfaces

CP 4.2                    **M. A. Cohen Stuart**, **N. G. Hoogeveen**,  
Wageningen,  
Netherlands:  
Kinetics of Polyelectrolyte Adsorption

CP 4.3                    **G. Decher**, Strasbourg,  
France:  
Layered Polymeric Nanocomposites

Topic 5

Chair: **Kabanov**, Moscow,  
Russia

CP 5.1                    **V. A. Izumrudov**, Moscow,  
Russia:  
Competitive Interchains Reactions

CP 5.2                    **C. Tribet**, **F. Petit**,  
**R. Audebert**, **J. L. Popot**, Paris, France:  
Hydrophobic Association Between a  
Polyelectrolyte and a Protein in Aqueous  
Media

CP 5.3                    **H. Dautzenberg**, **J. Hartmann**, **S.**  
**Grunewald**, **F. Brand**,  
Teltow, Germany:  
Stoichiometry and Structure of PEC Particles  
in Diluted Solutions

12.30-14.00            **Lunch**

14.00-15.30            **Invited Lectures**

Chair:

- IL 11                    **B. Alinec, A. Vanerek, T. G. M. van de Ven,**  
Montreal,  
Canada:  
Effects of Surface Topography, pH and Salt  
on the Adsorption of Polydisperse Polyethyleneimine Onto Pulp Fibers
- IL 12                    **A. Hill, A. Murphy,**  
**B. Vincent**, Bristol, England:  
The Effect of Cationic Polyelectrolytes,  
Containing Terminal Hydrophobic Anchors,  
on the Stability of Vesicles of  
Dioctadecyldimethylammonium Chloride in  
Calcium Chloride Solutions
- 15.30-16.00            **Coffee**
- 16.00-18.00            **Contributed Papers**
- Topic 4
- 16.00-17.00            Chair: **N. Ise**, Osaka, Japan
- CP 4.4                    **E. Killmann**, **O. Rustemeier, O.**  
**Portenlänger, R. Rehmet, A. Fuchs,**  
Garching, Germany:  
Stability of Suspensions Regulated by PE-  
Adsorption
- CP 4.5                    **L. E. Dewalt, M. Valentine, H. D. Ou-**  
**Yang**, Bethlehem, USA:  
Polyelectrolyte Adsorption on Colloidal  
Surfaces
- CP 4.6                    **I. B. Petkanchin**, Sofia,



Bulgaria:  
Adsorption of Polyelectrolytes and Polymers  
on Model Colloidal Particles

17.00-18.00

Chair: **M. Cohen Stuart**,  
Wageningen, Netherlands

CP 4.7

**A. Lundqvist**, **L. Ödberg**, **G. Glad-Nordmark**, Stockholm, Sweden:  
Transfer of Polyelectrolytes from Cellulosic  
Fibers to Calcium Carbonate Particles

CP 4.8

**L. Wagberg**, **K. Kolar**, Sundsvall, Sweden:  
Adsorption of Cationic Starch on Cellulosic  
Fibres

CP 4.9

**S. Barany**, **J. Gregory**,  
London, England:  
Flocculation of Clay Suspensions by  
Cationic Polyelectrolytes

Topic 5

16.00-17.00

Chair: **Ch. Tribet**, Paris, France

CP 5.4

**E. A. Bekturov**, **L. A. Bimendina**, Almaty,  
Kazakhstan:  
Polyelectrolyte Complexes Synthesized at  
Interfaces

CP 5.5

**A. Laschewsky**, **B. Mayer**, **E. Wischerhoff**,  
Louvain,  
Belgium:  
Polyelectrolyte Complexes at Interfaces

- CP 5.6                            **H.-M. Buchhammer, K. Lunkwitz**, Dresden, Germany:  
Surface Modification by Polyelectrolyte Complexes
- 17.00-18.00                      Chair: **E. Kokufuta**, Tsukuba, Japan
- CP 5.7                            **H. Dautzenberg, B. Lukanoff, U. Eckert, B. Tiersch, U. Schuldt**, Teltow, Germany:  
Immobilisation of Biological Matter by Polyelectrolyte Complex Formation
- CP 5.8                            **M. Bezan, M. Malavasic, G. Vesnaver**, Ljubljana, Slovenia:  
Surfactant Binding to Oppositely Charged Polyions
- CP 5.9                            **S. Kosmella, J. Koetz**, Potsdam, Germany, **S. E. Friberg, R. A. Mackay**, Clarkson, USA:  
Interactions of Polyelectrolytes with the Lyotropic Liquid Crystalline System Nado-decylsulfate/Decanol/Water
- 18.00                              **Poster Presentation**
- Topic 4 and 5
- 08.30-10.00                      **Invited Lectures**
- Chair: **K. Yoshikawa**, Nagoya, Japan
- IL 13                                **S. Paoletti**, Sassari, Italy

IL 14                    **V. A. Bloomfield**, St. Paul, USA:  
Mechanism of DNA Condensation by  
Multivalent Cations

10.00-10.30           **Coffee**

10.30-11.30           **Poster Introduction**

Topic 5, Part II

Chair: **A. Khokhlov**, Moscow, Russia

11.30-12.30           **Contributed Papers**

Topic 4

Chair: **G. Decher**, Strasbourg, France

CP 4.10                **P. J. Atkinson**, Leeds, England, **D. S. Horne**, Scotland, England, **F. A. M. Leermakers**, Wageningen, Netherlands,  
**R. M. Richardson**, Bristol, England:  
Theoretical and Experimental Investigations  
of Adsorbed Protein Structure at Interfaces

CP 4.11                **G. Schwarz**, Basel, Switzerland:  
Peptides at Lipid Bilayers and at the Air-Water Interface

CP 4.12                **A. A. Yaroslavov**, Moscow, Russia:  
Polyelectrolyte-Liposome Complexes

Topic 5

Chair: **R. Farinato**, Stamford, USA

CP 5.10      **T.-P. Engelhardt,**  
**D. Woermann**, Köln, Germany:  
Light Scattering Experiments Near the  
Sol/Gel Transition Temperature of Thermo-  
Reversible Gels Formed by Aqueous  
Solutions of a Dendrimer

CP 5.11      **M. Silberberg-Bouhnik, O. Ramon, I.**  
**Ladyzhinski, S. Mizrahi, Y. Cohen**, Haifa,  
Israel:  
Osmotic Deswelling of Weakly Charged  
Poly(Acrylic Acid) Solutions and Gels

CP 5.12      **F. Schosseler, R. Skouri, J. P. Munch, S. J.**  
**Candau**,  
Strasbourg, France:  
Concentration Fluctuations in  
Polyelectrolyte Gels and Solutions

12.30-14.00      **Lunch**

14.00-15.30      **Invited Lectures**

Chair: **H. Dautzenberg**,  
Teltow, Germany

IL 15      **V. A. Kabanov**, Moscow,  
Russia:  
Interpolyelectrolyte Complexes of Linear  
and Cross Linked Polyions

IL 16      **R. K. Prud'homme, Y. L. Yin**, Princeton, USA:  
Swelling Properties and Network Structure  
of Polyelectrolyte Gels

15.30-16.00

**Coffee**

16.00-17.00

**Contributed Papers**

Topic 4

Chair: **E. Killmann**, München, Germany

CP 4.13

**M. A. G. Dahlgren, H. C. M. Hollenberg<sup>1</sup>, P. M. Claesson**, Stockholm, Sweden,  
<sup>1</sup> Eindhoven, Netherlands:  
Polyelectrolytes Interacting with Interfaces:  
Surface Forces and Theoretical Results

CP 4.14

**P. M. Claesson, A. Dedinaite, E. Blomberg**, Stockholm, Sweden, **V. G. Sergeyev**, Moscow, Russia:  
Surface Force Measurements in  
Polyelectrolyte Systems

CP 4.15

**S. Akari, W. Schrepp, D. Horn**, Ludwigshafen, Germany:  
Imaging of Single Polyethylenimine  
Polymers Adsorbed on Negatively Charged  
Latex  
Spheres by Chemical Force  
Microscopy

Topic 5

Chair: **E. Bekturov**, Almaty, Kazakhstan

CP 5.13

**E. Kokufuta, S. Matsukawa**, Ibaraki, Japan:  
Construction of a Biochemo-Mechanical  
System Using In-Homogeneous

Polyelectrolyte Gels with Immobilized Urease

CP 5.14 **S. E. Kudaibergenov**, Almaty, Kazakhstan:  
Synthesis and Characterization of  
Polyampholyte Gels

CP 5.15 **Nagy**

CP 5.16 **S. E. Friberg**, Clarkson, USA:  
Polymerization in a Non-Aqueous Lamellar  
Liquid Crystal

17.00 **Poster Presentation**

Topic 4 and 5

18.00 **Farewell**

**Poster**

**Topic 1**

P 1.1 **U. Adolphi, W.-M. Kulicke,**  
**H. Thielking**, Hamburg, Germany

Absolute Determination of the Distribution of Molar Mass and Radius of Gyration for Polyelectrolytes

P 1.2 **G. Pavlov<sup>1</sup>, E. Korneeva<sup>2</sup>,  
N. Yevlampieva<sup>1</sup>, Yu. Fedotov<sup>3</sup>,**  
<sup>1</sup> St. Petersburg, Russia,  
<sup>2</sup> St. Petersburg, Russia,  
<sup>3</sup> Vladimir, Russia

Molecular and Conformational Properties of a New Ion-Containing Aromatic Polyamide

P 1.3 **P. Fritzsche**, Potsdam, Germany

GPC-Characterisation in Systems Containing Ionic Groups

P 1.4 **E. Korneeva<sup>1</sup>, N. Tarasova<sup>1</sup>,  
O. Gorbunova<sup>1</sup>, Yu. Arpidov<sup>2</sup>,  
E. Panarin<sup>1</sup>, G. Pavlov<sup>2</sup>,**  
<sup>1</sup> St. Petersburg, Russia,  
<sup>2</sup> St. Petersburg, Russia

Study of Dilute Solution Properties of Polyallylamine

P 1.5 **G. Rother**, Teltow, Germany

Characterization of Supramolecular Structures by Static Light Scattering-Methodical Investigations

P 1.6 **E. Giebeler, R. Stadler**,  
Mainz, Germany

ABC Triblock Copolymers Containing Ionomeric Functionalities

**P 1.7 V. Hildebrandt, K. Zeitz,**  
**K.-H. Reichert,** Berlin, Germany

Precipitation Polymerization of a Cationic Monomer in Aqueous Solution  
- Solution Properties of the Polymer

**P 1.8 M. Muth, R. Stadler,** Mainz, Germany

Polysiloxanes with Glucuronic Acid Side Chains

**P 1.9 R. Rulkens, M. Schulze, G. Wegner,**  
Mainz, Germany

Synthesis and Characterization of Rigid Rod Polyelectrolytes

**P 1.10 G. C. Chitanu<sup>1</sup>, I. Lingvay<sup>2</sup>, C. Pacala<sup>2</sup>, I. L. Zaharia<sup>1</sup>, A.**  
**G. Anghelescu<sup>1</sup>,**  
**A. Carpov<sup>1</sup>,** <sup>1</sup> Iasi, Romania, <sup>2</sup> Bukarest, Romania

Some Data Concerning the Anticorrosion Activity of Maleic  
Polyelectrolytes

**P 1.11 V. B. Fainerman<sup>1</sup>, R. Miller<sup>1</sup>,**  
**J. Krägel<sup>2</sup>, R. Wüstneck<sup>2</sup>,**  
**A. Stortini<sup>3</sup>,** <sup>1</sup> Berlin-Adlershof,  
Germany, <sup>2</sup> Potsdam, Germany, <sup>3</sup> Florence, Italy

Studies of Dynamic Surface Tension of Polyelectrolyte Solutions for  
Short Life Time

## **Topic 2**

**P 2.1 P. B. Warren,** Wirral, England



The Electroneutrality Constraint in Polyelectrolyte Phase Stability

P 2.2 **N. Imai, S. Yoshino**, Nagoya, Japan

Interaction between Polyions Due to Charge Fluctuation in Relation to Ion Condensation

P 2.3 **K. Kogej, J. Skerjanc**,  
Ljubljana, Slovenia

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**P. G. Khalatur,** Tver, Russia

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P 4.2 **R. Wüstneck<sup>1</sup>, T. Ebisch<sup>1</sup>, P. Enders<sup>2</sup>,**

<sup>1</sup> Berlin, Germany, <sup>2</sup> Berlin, Germany

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P 4.7 **S. A. Sukhishvili<sup>1</sup>, St. Granick<sup>2</sup>,**  
<sup>1</sup> Moscow, Russia, <sup>2</sup> Urbana-Champaign, USA

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**P 4.8 I. Borukhov<sup>1</sup>, D. Andelman<sup>1</sup>, H. Orland<sup>2</sup>,**  
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**P 4.9 T. Cassier<sup>1</sup>, G. Decher<sup>1</sup>, K. Lowack<sup>2</sup>,**  
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<sup>2,1</sup> Valladolid, Spain, <sup>3</sup> Teltow, Germany

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<sup>1</sup> Chiba, Japan, <sup>2</sup> Indianapolis, USA,  
<sup>3</sup> Ibaraki, Japan

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P 5.6 **J. Huguet**<sup>1</sup>, **I. Bataille**<sup>1</sup>, **G. Muller**<sup>1</sup>,  
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P 5.12 **M. L. T. Liveri<sup>1</sup>, H. Hoffmann<sup>2</sup>**, <sup>1</sup> Palermo, Italy, <sup>2</sup> Bayreuth, Germany

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P 5.18 **K. Matsuda<sup>1</sup>, M. Hirata<sup>1</sup>, E. Kokufuta<sup>2</sup>**,  
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L. Brehmer**, Potsdam, Germany

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