



73rd Prague Meeting on Macromolecules

**New Frontiers in Macromolecular Science:
From Macromolecular Concepts of Living Matter
to Polymers for Better Quality of Life**

Dedicated to the
50th anniversary of
the Institute of Macromolecular Chemistry in Prague

PRAGUE, July 5-9, 2009

PROGRAMME BOOKLET



Published by the Institute of Macromolecular Chemistry AS CR, v.v.i.
ISBN 978-80-85009-59-0

Abstracts, except for their headings, are printed without editing

TABLE OF CONTENTS

ORGANIZATION	4
SPONSORS	6
WELCOME	7
73rd PMM TOPICS.....	8
GENERAL INFORMATION	9
Venue	9
Registration.....	9
Lunches.....	9
Presentations (file upload).....	9
On-site help.....	10
Publication of Papers.....	11
PMM Social Events.....	12
PROGRAM	13
List of posters	18
ABSTRACTS	25
LIST OF PARTICIPANTS	167
AUTHOR INDEX	175

The 73rd Prague Meeting on Macromolecules

organized by

**INSTITUTE OF MACROMOLECULAR CHEMISTRY
ACADEMY OF SCIENCES of the CZECH REPUBLIC, v.v.i.**

F. RYPÁČEK

Director

E. GRISOVÁ, J. JŮZA, M. RODOVÁ

PMM Secretariat

Address:

Institute of Macromolecular Chemistry AS CR, v.v.i.

PMM Secretariat

Heyrovského nám. 2

CZ-162 06 Praha 6

Phone: +420-296 809 331

Fax: +420-296 809 410

E-mail: sympo@imc.cas.cz

WWW: <http://www.imc.cas.cz/sympo/73pmm/>

The 73rd PMM is organized under auspices of the
INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

PMM'09 International Advisory Committee

A.C. ALBERTSSON (Sweden)	H.W. SPIESS (Germany)
K. KATAOKA (Japan)	M. STAMM (Germany)
J. KOPEČEK (USA)	K. ULBRICH (Czech Republic)
L. LEIBLER (France)	G. WEGNER (Germany)
C.K. OBER (USA)	S. ZHANG (USA)
J. RYCHLÝ (Slovakia)	M. ŽIGON (Slovenia)
E. SCHACHT (Belgium)	

Chairman

F. RYPÁČEK

Honorary Chairmen

H. MORAWETZ, J. KOPEČEK, H. RINGSDORF

IMC Prague organizing committee:

M. DUŠKOVÁ (Chairwoman), J. BRUS, V. CIMROVÁ, J. MICHÁLEK,
E. GRISOVÁ, J. KOTEK, Z. PIENKA, K. PROCHÁZKA,
P. ŠTĚPÁNEK, K. ULBRICH

Thanks to all our generous conference sponsors, contributors and supporters



Platinum level

EKOLS PRAHA, spol. s r.o.
Partyzánská 23 , 170 01 Praha 7
<http://www.ekols.cz>



Gold level

ZENTIVA, k.s.
U Kabelovny 130, 102 37 Praha 10, Dolní Měcholupy
<http://www.zentiva.cz>



Silver level

MEGA, a.s.
Pod Vinicí 87, 471 27 Stráž pod Ralskem, Czech Republic
<http://www.mega.cz>



Bausch & Lomb Vision Care
Chauvin Ankerpharm GmbH
V Domově 71, 130 00 Praha 3, ČR
<http://www.bausch.cz>



Sigma-Aldrich, a.s.
Pobřežní 46, Praha 7
<http://www.sigma-aldrich.com/czech>



Bronze level

Wichterle a Vacík, s.r.o.
Hekrova 853/10, 149 00 Praha 4 – Háje
<http://www.wav.cz>



Anamet, s.r.o.
Kováků 26 , 150 00 Praha 5
<http://www.anamet.cz>



American Elements
1093 Broxton Ave. Suite 2000
Los Angeles, CA 90024, USA
<http://www.americanelements.com>

Welcome

Since 1967, the staff of the Institute of Macromolecular Chemistry in Prague has been annually involved in organizing the Prague Meetings on Macromolecules (PMM). Already 72 meetings were held, every year focusing on selected fields and pursuing new trends in macromolecular science. Three times in the past, the Prague macromolecular scientific community hosted the IUPAC World Symposia on Macromolecules (1957, 1965, 1992) from which the first one inspired the foundation of the Institute.

This year, the Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, celebrates 50 years from its foundation. This is the very occasion to discuss the current trends in macromolecular science from the view of challenges of science and technology for the 21st century.

The organizers wish the 73rd PMM to provide a unique opportunity for researchers to meet their colleagues in interdisciplinary fields of macromolecular science and to enjoy the exchange of ideas in the inspiring environment of summer Prague.

73rd PMM TOPICS

Bioanalogous and Biomimetic Principles and Materials

Chairmen: J. Kopeček, K. Ulbrich

bioanalogous and biomimetic concepts in design of polymer biomaterials, biomaterial/cell interfaces, bio-interactions of polymers through molecular recognition, polymer-derived stealth properties, drug targeting and delivery through macromolecular carriers

Molecular and Supramolecular Organization in Macromolecular Systems

Chairmen: C.K. Ober, P. Štěpánek

polymeric materials with hierarchical structure, supramolecular polymer assemblies, targeted synthesis of self-ordering polymers, self-organized polymer materials responsive to external stimuli, polymers at ordered surfaces and interfaces, dynamics in organized polymeric systems, theoretical models of self-organized polymer systems, advanced methods for structure analysis of macromolecules

Polymers for Advancement in Technologies

Chairman, chairwoman: G. Wegner, V. Cimrová

advanced materials, photonics and electronics, polymer nanocomposites, smart gels and polymer networks, (bio)degradable polymer materials, polymers in energy production and conservation

GENERAL INFORMATION

VENUE

Institute of Macromolecular Chemistry, lecture hall A
address: Heyrovského náměstí 2, Praha 6

REGISTRATION

The registration desk operates in the IMC building. The opening hours are:

<i>Sunday</i>	16	–	19
<i>Monday</i>	8	–	16
<i>Tuesday</i>	8	–	16
<i>Wednesday</i>	8	–	15
<i>Thursday</i>	8	–	16

All participants must register. Only persons wearing name badges are entitled to enter the lecture rooms of the Institute.

The EC/MC, EDC/Maestro and VISA cards are accepted at the desk. On-site cash payment of the registration fee is considered as a late payment.

LUNCHES

Catered lunches will be provided during the four meeting days in lobby of the IMC building. Lunches are covered by the registration fee.

PRESENTATIONS

Presenation file upload

It is advised to test the presentation files well before the lecture is scheduled, ideally the day before. The organizers prefer the speakers to have their presentations uploaded in advance on the projection system that has been already set up to its best performance. If the speakers need use their own laptops, the connection and projection test is essential - the day before at the latest! The file upload spot will be located in the rear of the lecture hall A. For file upload assistance turn to the IT administrator, Mr. Jiří Kaprálek or to anyone of the IMC organizing team. Please use your last name as the presentation file name. If other than the digital projection technique should be used consult the organizers.

Language

English is the working language of the meeting.

Recordings

The audio/video recording of the lectures or copying of the lecture files is not allowed without the prior agreement of the speaker or the author. The organizers reserve the right to take photographs during the meeting.

Posters

The poster sessions will be held in the lobbies of the Institute. Material to fix posters will be provided onsite. The posters can be mounted always after lunch, i.e. during the afternoon coffee break and should be removed after the poster sessions.

ON-SITE HELP

Besides the registration desk you can turn any time for help to the members of the “IMC young organizing team” identified by colored badges. The members of the team are: Michal Babič, Sergej Filippov, Jevgenij Karpushkin, Libor Kobera, Libor Kostka, Elena Konyushenko, Hana Krakovičová, Petra Látalová, Vladimír Raus, Jana Svobodová, and Daniela Šponarová.

PUBLICATION OF PAPERS PRESENTED AT THE 73rd PMM

The organizers of PMM 2009 received the invitation from Wiley InterScience Editorial office to publish selected contributions to the meeting in a volume of MACROMOLECULAR SYMPOSIA.

The papers will be collected during the conference days and within the following six weeks. The **deadline is August 20, 2009**.

Accepted articles will be typeset and published as a hardcover edition together with online publication at Wiley InterScience, thereby guaranteeing an immediate international dissemination. Publication of a volume usually can be completed within three months after receiving the final manuscript data.

How to prepare manuscript

Manuscript must be prepared using the MS template on MS homepage <http://www.ms-journal.de>. All papers should be checked carefully, as the authors will NOT receive any proofs. Maximum length of manuscript of the **invited and special lectures** is 12 pages. Maximum length of papers presented as **poster** is 8 pages. Accepted articles will be typeset and published as a hardcover edition together with online publication at Wiley InterScience, thereby guaranteeing an immediate international dissemination. Publication of a volume usually can be completed within three months after receiving the final manuscript data.

PMM SOCIAL EVENTS

Sunday, July 5

16:00 – 19:00

Registration, welcome party, and a summer evening chamber music

location: IMC building

Wednesday, July 8

15:30 – 23:00

Prague tour and the PMM dinner for all participants

location: beginning of the tour at the IMC building, the dinner will take place at the Villa Richter Restaurants at the Staré zámecké schody (from approx. seven o'clock)

the participants will be brought after the tour directly to the dinner

Thursday, July 9

16:00

Farewell party at the IMC building

According to the established tradition, after the last lecture, all participants are offered a farewell toast in the entrance hall of the Institute

Thursday, July 9

16:30

Prague tour “What you did not see in Praha”

Approx. three-hours professionally guided tour, small bus rides the tourists to the less known places of interest in Prague (mostly to areas off the tourist center)

The tour is optional, should be registered for before, the cost is not included in the conference fee

PROGRAM & ABSTRACTS

PROGRAM

MONDAY, July 6

9:00 OPENING

F. Rypáček

Director of IMC and the 73rd PMM chairman

H. Ringsdorf

73rd PMM Honorary chairman

Chairpersons: **J. Kopeček, H. Ringsdorf**

9:30 IL 1 **R. Duncan** (*UK*)

Bioresponsive polymer therapeutics for treatment of cancer and for tissue repair

10:00 IL 2 **D. Cohn** (*Israel*)

Engineering nano and macro-sized “smart“ biomedical structures

10:30 - 11:00 *Coffee break*

11:00 IL 3 **K. Kataoka** (*Japan*)

Supra-macromolecular nanodevices for smart molecular therapy

11:30 IL 4 **E. Wagner** (*Germany*)

Dynamic polymers for therapeutic DNA and RNA delivery

12:00 IL 5 **G. Storm** (*The Netherlands*)

Targeted nanomedicines and EC-sponsoring in FP6

12:30 Discussion

Leaders: **J. Kopeček, H. Ringsdorf**

13:00 – 14:15 *Lunch*

Chairpersons: **R. Borsali, P. Štěpánek**

14:15 IL 6 **C.K. Ober** (*USA*)

Polymer brushes as responsive materials for the biology-materials interface

14:45 IL 7 **V. Percec** (*USA*)

Bioinspired synthesis of complex functional systems

15:15 - 15:40 *Coffee break*

15:40 IL 8 **A.J. Ryan** (*UK*)

Making polymers swim

16:10 SL 1 **M. Silverstein** (*Israel*)

Porous biodegradable polymers and hydrogels through emulsion templating

16:30 SL 2 **M. Özmen** (*Turkey*)

Preparation of macroporous poly(acrylamide) hydrogels in DMSO/water mixture

16:50 Discussion

Leaders: **R. Borsali, P. Štěpánek**

17:30 – 19:00

POSTERS P 1 – P 58

TUESDAY, July 7

Chairpersons: **G. Nelles, V. Cimrová**

- 9:00 IL 9 G. Wegner (Germany)**
Ion-transport in polymers: How to improve the performance of batteries and fuel-cells?
- 9:30 IL 10 O. Azzaroni (Argentina)**
Polymer brushes in confined environments: New challenges and opportunities for designing advanced functional materials
- 10:00 IL 11 H. Böhm (Germany)**
Molecular engineering of cellular environments: Cell adhesion to nanodigital surfaces

10:30 - 11:00 *Coffee break*

- 11:00 IL 12 G. Nelles (Germany)**
Functional materials for future devices
- 11:30 IL 13 Z. Bo (China)**
Towards stable blue light-emitting materials
- 12:00 Discussion**
Leaders: **G. Wegner, O. Azzaroni, V. Cimrová**

12:30 – 14:00 *Lunch*

Chairpersons: **A. Ryan, K. Dušek**

- 14:00 IL 14 K. Mortensen (Denmark)**
The nano-scale structure of polymer amphiphilic systems: Tailored new phases and applications as smart materials
- 14:30 IL 15 R. Borsali (France)**
Hybrid block glycopolymer self-assemblies
- 15:00 IL 16 K. Procházka (Czech Republic)**
Block copolymer micelles with complexed metallacarboranes in cores

15:30 - 16:00 *Coffee break*

- 16:00 IL 17 T. Etrych (Czech Republic)**
Polymer therapeutic architecture: A major factor in achieving highly efficient polymer medicines
- 16:30 IL 18 A.S. Hoffman (USA)**
How the Institute of Macromolecular Chemistry inspired and influenced my research over the past 40 years
- 17:00 Discussion**
Leaders: **A.S. Hoffman, A.J. Ryan, K. Dušek**
- 17:30 – 19:00** **POSTERS P59 – P 104**

WEDNESDAY, July 8

Chairpersons: **C.K. Ober, P. Kratochvíl**

- 9:00 IL 19 S.P. Brown (UK)**
New solid-state NMR methodology for probing structure-determining hydrogen-bonding interactions
- 9:30 IL 20 J. Brus (Czech Republic)**
Nanostructured polymer systems as seen by solid-state NMR spectroscopy
- 10:00 IL 21 H.W. Spiess (Germany)**
Self-assembly and dynamics of synthetic polymers and polypeptides from NMR spectroscopy

10:30 - 11:00 *Coffee break*

- 11:00 SL 3 M. Žigon (Slovenia)**
Transparent UV-absorbing PMMA/ZnO nanocomposites
- 11:20 SL 4 M. Ton That (Canada)**
Biobased polyurethane nanocomposite foam
- 11:40 SL 5 P. Marcasuzaa (France)**
Irradiated microwave synthesis: A new way to obtain conducting copolymers
- 12:00 Discussion**
Leaders: **C.K. Ober, P. Kratochvíl**

12:30 – 14:00 *Lunch*

Chairpersons: **M. Žigon, M. Dušková**

- 14:00 SL 6 T. Wada (Japan)**
Studies on the effects of arginine residues introduced to peptide ribonucleic acids (PRNA) on the complex stability with RNA and the cell membrane permeability
- 14:20 SL 7 A. Bertin (Germany)**
Thiol-ene chemistry on glass slides: Easy way to carbohydrate microarrays, protein recognition, and tunable surfaces
- 14:40 SL 8 M. Bílek (Australia)**
Properties of polymeric surfaces suitable for linker free covalent binding of functional biomolecules: the role of free radicals

- 15:30 Prague tour & conference dinner for all participants**
Tour buses leave from IMC, after the tour the participants will be brought directly to the Villa Richter Restaurant where the PMM dinner takes place

THURSDAY, July 9

Chairpersons: **Z. Bo, F. Rypáček**

- 9:00 IL 22 R.H. Friend (UK)**
Polymer semiconductor solar cells – design of structures for charge photogeneration, separation and collection
- 9:30 IL 23 S. Slomkowski (Poland)**
Polymer nano- and microparticle based systems for medical diagnostics
- 10:00 IL 24 B. Voit (Germany)**
Thin functional polymer films for micro- and nanopatterning

10:30 - 11:00 *Coffee break*

- 11:00 IL 25 Z. Pientka (Czech Republic)**
Hydrogen economy and polymeric membranes
- 11:30 IL 26 B. Ratner (USA)**
Biostable and biodegradable methacrylate hydrogels for healing and tissue regeneration
- 12:00 SL 9 W. Burchard (Germany)**
Supra-molecular structure formation: What is the physical basis?

12:30 – 14:00 *Lunch*

Chairpersons: **R. Duncan, K. Ulbrich**

- 14:00 IL 27 C. Werner (Germany)**
Biohybrid hydrogels for regenerative therapies
- 14:30 IL 28 L. Seymour (UK)**
Polymers for improved delivery of cancer-killing viruses
- 15:00 IL 29 S. Zhang (USA)**
Self-assembling peptide materials for diverse applications
- 15:30 Discussion**
Leaders: **R. Duncan, K. Ulbrich**

16:00 *Farewell toast at the IMC entrance hall*

List of posters

MONDAY POSTER SESSION

- P1** M. Pastorczak, M. Kozanecki, S. Kadlubowski, J.M. Rosiak, J. Ulanski
Intermolecular interactions and structure of water in poly(vinyl methyl ether) hydrogels
- P2** T. Riedel, E. Brynda, J. Chlupáč, E. Filová, L. Bačáková, J.E. Dyr
Artificial fibrin gels for blood vessel engineering
- P3** A. Sionkowska, J. Kozłowska, A. Planecka, J. Skopińska-Wisniewska
Comparison of the properties of novel materials based on collagen, chitosan and hydroxyapatite
- P4** Y. Morita, S. Yamamoto, H. Yabu, E. Ito, M. Tanaka, K. Ijiri, O. Honmou, M. Shimomura
Honeycomb-patterned topography regulates cell shape and improves proliferative ability of multipotent adult stem cells
- P5** M. Annaka
Electrostatic self-assembly of charged block copolymers and low molecular-weight molecules
- P6** R. Hobzová, B. Dvořánková, T. Fenclová, J. Michálek, K. Smetana Jr.
New hydrogel support for cell cultures for medical and research purposes
- P7** A. Anžlovar, Z. Crnjak Orel, M. Žigon
Poly(methyl methacrylate)/ZnO nanocomposites based on organophilic ZnO nanorods
- P8** M. Sedlák, Č. Koňák, J. Dybal
Self-assembly of thermosensitive poly(ethacrylic acid) homopolymers into stable nanoparticles via stabilization by hydrogen bonds
- P9** S. Kazim, J. Pflieger
Photoelectrical properties of MEH-PPV and Nile blue dye blends and bilayer structures
- P10** S. Kazim, S. Ahmad, J. Pflieger, Y.M. Joshi
Polyaniline–Na⁺-MMT clay nanocomposites: Synthesis and characterization
- P11** E.N. Konyushenko, J. Stejskal, M. Trchová
Preparation of polyaniline in non-aqueous solvents
- P12** A. Jäger, D. Gromadzki, P. Štěpánek
New pH-tunable block copolymer nanoparticles via controlled radical polymerization and azide-nitrile click chemistry
- P13** J. Holoubek, J. Baldrian, J. Hromádková, M. Steinhart
Self-assembled nanostructures in copolymer blends: SAXS, SANS and TEM Study
- P14** J. Hašek, T. Skálová, J. Dušková, J. Dohnálek, P. Kolenko, T. Koval, A. Štěpánková
Hydrophilic polymers as versatile tool for preparation of supramolecular systems

- P15** S. Filippov, Č. Koňák, J. Kopeček, P. Kopečková, L. Starovoytova, M. Špírková, P. Štěpánek
New polyplexes on the basis of cholesterol modified polycations
- P16** P. Bober, J. Hromádková, M. Trchová, J. Stejskal, J. Prokeš
The oxidation of aniline with silver nitrate in the solutions of acetic acid to polyaniline–silver composites
- P17** N.V. Blinova, S. Reynaud, M. Trchová, J. Stejskal
Synthesis of gradient polyaniline-polystyrene particles
- P18** S. Baytekin, Z. Küçükyavuz
Synthesis and characterization of polypyrrole nanoparticles and their nanocomposites with polypropylene
- P19** L. Cucco Porto, I. Pignot-Paintrand, V. Soldi, R. Borsali
Nanoparticles and thin films made from block copolymers and their decoration with polysaccharides
- P20** J. Toušek, J. Toušková, I. Křivka, P. Pavlačková, D. Výprachtický, V. Cimrová
Exciton diffusion length in fluorene - thiophene based copolymers determined by the surface photovoltage method
- P21** R.K. Donato, H.S. Schrekker
Silica-ionic liquid hybrid for the preparation of polyethylene composites
- P22** R.K. Donato, H.S. Schrekker, J. Pleštil, M. Šlouf, L. Matějka
The influence of ionic liquids on the *in situ* formation of epoxy – silica nanocomposites
- P23** V. Cimrová, I. Kmínek, D. Výprachtický, P. Pavlačková
Novel soluble fluorene – thienothiadiazole and fluorene – carbazole copolymers for optoelectronics
- P24** I. Horská, V. Zajícová, P. Exnar
Layers of inorganic-organic materials prepared by sol-gel method
- P25** W. Chen, B.-L. Hsu, C.-H. Wang, Y.-M. Weng
Structural characterization of edible zein film by FT-Raman spectroscopy
- P26** J. Kalfus, J. Jančář, S.S. Sternstein, J. Kučera
On the effect of randomness of particle spacing on the viscoelasticity of polymer nanocomposites
- P27** L. Lazzeri, M.G. Cascone
Effect of several parameters on dimensional and release properties of alginate microparticles
- P28** M. Bouhadid, J. Desbrières, N. Redon, C. Pillon, S. Reynaud
One single composite for chemical sensor or heating purposes
- P29** D. Pahovnik, E. Žagar, J. Vohlídal, M. Žigon
Morphology of polyaniline nanoparticles synthesized by using an ionic liquid as a soft template

- P30** J. Pánek, Č. Koňák, P. Štěpánek
Physicochemical characterisation of polymeric nanoparticles stabilised by surfactants
- P31** K. Podhájecká, J. Pflieger, V. Slunečková, J. Hromádková, D. Bondarev, J. Vohlídal
Self-assembled alternating multilayers of conjugated polyelectrolytes and gold nanoparticles
- P32** Š. Popelka, O. Pop-Georgievski, F. Rypáček
High-density poly(ethylene oxide) surface coatings: The effect of grafting conditions on the structure of grafted poly(ethylene oxide) layer
- P33** V. Proks, J. Jaroš, O. Pop-Georgievski, Š. Popelka, A. Hampl, P. Dvořák, F. Rypáček
“Click & Seed” approach to the biomimetic modification of polymers
- P34** D. Rais, G. Wang, S. Nešpůrek, J. Hain, Y. Lu, A. Pich, H.-J.P. Adler, A. Hamáček, J. Řeboun
Synthesis of conductive polymeric composites of sub-micrometer sized particles and electrical characterization of thin films prepared therefrom
- P35** S. Pochekailov, J. Nožár, S. Nešpůrek, J. Rakušan, M. Karásková
Soluble phthalocyanines as nitrogen dioxide sensors
- P36** O. Trhlíková, D. Rědrová, V. Hanková, J. Zedník, J. Sedláček, J. Vohlídal
SEC/MALS and ¹H NMR study of poly[(4-n-pentylphenyl)acetylene]: Solution properties and molecular-weight and configurational stability
- P37** L. Starovoytova
Effect of additives on stability of polymer globules
- P38** M. Varga, J. Prokeš, J. Nedbal, P. Bober, J. Stejskal
Electric and dielectric properties of polyaniline/montmorillonite composites
- P39** L. Rajabi, H. Gharibpour, M.R. Panahi, M. Khazaie
Hardness and tensile properties of epoxy-based nano particle-reinforced composites
- P40** L. Rajabi, Z. Mohammadi, M. Panahi
Thermal stability and dynamic mechanical properties of epoxy/nano and micro-TiO₂ composites: Effect of mixing method
- P41** A. Kochalska, J. Nožár, S. Nešpůrek, J. Pospíšil
Photostabilization and photodegradation of poly[methyl(phenyl)silylene]
- P42** R. Hobzová, J. Hradil
Surface properties of polymers
- P43** M. Špírková, P. Duchek, A. Strachota, J. Kotek, J. Baldrian, M. Šlouf
The influence of organically modified layered silicates on properties of organic-inorganic nanocomposite coatings
- P44** J. Svobodová, F. Rypáček, J. Brus
The chemical modification of poly(α-amino acids)s fibres for tissue engineering applications

- P45** E. Třesohlavá, L. Machová, V. Proks, P. Knotek, Y. Yang, F. Rypáček
Biomimetic modification of polylactide surfaces through deposition of functional amphiphilic block copolymers
- P46** D. Ishii, Y. Hirai, H. Yabu, M. Shimomura
Biomimetic surface based on metal–polymer hybrids prepared from self-organized honeycomb films
- P47** A.V. Sybachin, E. Kesselman, J. Schmidt, Y. Talmon, A.A. Yaroslavov
Complexes of cationic polymers with anionic liposomes: Stability, structure and properties
- P48** K. Dušek, M. Dušková-Smrčková
Strategies in predicting polymer network formation and structure of complex systems
- P49** C. Rodríguez Emmenegger, E. Hasan, E. Brynda, M. Houska, Z. Sedláková, A. Bologna Alles, W.T.S. Huck
Novel architecture design of block copolymers of ethylene glycol methyl ether methacrylate and carboxybetaine acrylamide
- P50** C. Rodríguez Emmenegger, E. Hasan, E. Brynda, M. Houska, A. Bologna Alles
Atom transfer radical polymerization of mono-methoxy capped oligo(ethylene glycol methacrylate) in phosphate buffered saline
- P51** T. Sedlačik, F. Rypáček
Cryogels based on synthetic poly(a-amino acid)s
- P52** P. Weda, B. Trzebicka, A. Utrata-Wesolek, Ch.B. Tsvetanov, A. Dworak
Nanocontainers made of polymeric mesoglobules
- P53** J. Pilař, J. Kříž, A. Strachota, P. Kadlec, J. Michálek
Effect of structure of HEMA-DEGMA hydrogel matrix on diffusion coefficients of PEG tracers
- P54** Q. Yang, C. Kaul, M. Ulbricht
Protein resistance of glycocalyx-mimetic glycopolymer layer: Study by SPR
- P55** N. Vranješ, V. Rek, I. Fiamengo
Effect of EPDM as compatibilizer on mechanical properties and morphology of PP/LDPE blends
- P56** Y. Hirai, H. Yabu, Y. Matsuo, K. Ijiri, M. Shimomura
Superhydrophobic and anti-reflective nano-structures prepared by self-organization and dry etching process
- P57** M. Janata, P. Vlček, J. Spěváček, A. Sikora, P. Látalová
New polyisobutylene based hydrogels prepared by two-step polymer procedure
- P58** B.S. Gyarmati, Á. Némethy, T. Gyenes, B. Pukánszky, A. Szilágyi
Cross-linked poly(aspartic acid) based hydrogels

TUESDAY POSTER SESSION

- P59** H. Studenovská, M. Dušková-Smrčková
Biodegradable hydrogels for soft tissue engineering: microstructure control through microsyreresis
- P60** F. Topuz, O. Okay
Formation and properties of responsive DNA hydrogels
- P61** F. Topuz, O. Okay
Tough hydrogel beads with superfast responsivity
- P62** B.S. Gyarmati, Á. Némethy, T. Gyenes, B. Pukánszky, A. Szilágyi
Modeling of equilibrium swelling behaviour of polyelectrolyte gels
- P63** T. Gotoh, K. Tanaka, T. Arase, S. Sakohara
A novel gel adsorbent for phosphoric acid by temperature swing adsorption/desorption
- P64** K. Dworecki
Experimental investigation of the anomalous diffusion in gel-membrane system
- P65** A.I. Popadyuk, N.Yu. Solomko, O.G. Budishevska, S.A. Voronov
Hydrogels based on chitosan-polyvinylpyrrolidone copolymers for drug delivery
- P66** A. Purkrt, A. Poruba, M. Vančček, V. Cimrová
Comparative annealing study of photoelectric properties of bulk heterojunction organic solar cells based on P3HT:ThCBM[60] and P3HT:ThCBM[70] blends
- P67** A. Utrata-Wesołek, I. Žymelka, B. Trzebicka, A. Dworak
Polyether hydrogels from photo- and chemically crosslinkable derivatives of polyglycidol
- P68** K. Depa, A. Strachota
Fast thermoresponsive poly(*N*-isopropylacrylamide) hydrogels with improved mechanical properties
- P69** E. Minko, M. Hauf, P. Sysel, J. Brus, L. Kobera
Synthesis and properties of hyperbranched polyimides combined with silica
- P70** M. Netopilík, M. Janata, P. Kratochvíl
Problems with tailoring graft polymers
- P71** L. Poláková, Z. Sedláková, P. Látalová, H. Valentová
Synthesis and liquid-crystalline behavior of telechelic poly(butadiene)diols with azobenzene-based side chains
- P72** Z. Sedláková, J. Pleštil, J. Baldrian, M. Šlouf, P. Holub
Nanostructured hybrid materials prepared via in-situ emulsion polymerization
- P73** A. Šturcová, P. Schmidt, J. Dybal
Coordination properties of water and polymer-water interactions
- P74** I. Šeděnková, M. Trchová, J. Stejskal, J. Prokeš
Solid-state oxidation of polyaniline base with silver nitrate

- P75** G. Tishchenko, J. Peter, E. Pavlová, J. Brus, M. Netopilík, M. Pekárek, Z. Sedláková, E.Yu. Rosova, M. Smirnov, G.K. Elyashevich
Effect of applied electric field on structure and permeability of chitin nanofiber-reinforced chitosan membranes
- P76** Z. Rozlívková, M. Trchová, I. Šeděnková, M. Špírková, J. Stejskal
Polyaniline films prepared *in-situ* during the standard and dispersion polymerizations of aniline
- P77** D. Výprachtický, V. Cimrová, I. Kmínek, P. Pavlačková
Syntheses of conjugated polymers for photonics
- P78** H. Valentová, J. Nedbal, J. Prokeš, J. Stejskal
Mechanical, dielectric and electrical properties of polyaniline
- P79** J. Jůza
Liquid polybutadienes - influence of modifications on some physical properties.
- P80** J. Prokop, J. Mikešová, Z. Kruliš, H. Beneš
Glycolysis of polyurethane foams under microwave heating conditions
- P81** S. Rungrodnimitchai, U. Supjaroenkul
Biosorbents from rice straw prepared by microwave heating
- P82** R. Sivkova, J. Zedník, J. Sedláček, J. Vohlídal
Application of “click” chemistry for post-polymerization modification of disubstituted polyacetylenes
- P83** M. Liang, Y.-J. Jhuang, C.-F. Zhang, W.-J. Tsai, H.-C. Feng
Synthesis and characterization of poly(phenylene oxide) graft copolymers by atom transfer radical polymerizations
- P84** M. Květoň, V. Lédl, A. Havránek, P. Fiala
Photopolymer for optical holography and holographic interferometry
- P85** S.A. Udra, D.V. Petkiewa, I.V. Ereemeev, V.I. Gerasimov
Gels and xerogels of p(VDF-TFE) copolymer with propylene carbonate
- P86** E. Karpushkin, M. Dušková-Smrčková, M. Lapčíková, K. Dušek
Rheological behaviour of swollen hydrogels
- P87** A.K. Berkovich, E.V. Yaroshenko, V.S. Dudko, E.A. Litmanovich
Overlap in poly(acrylic acid) aqueous solutions in acidic medium
- P88** Ts. Filipova, D.A. Boyles, T. Ranganathan, E.B. Coughlin, T. Emrick
Fire-resistant aromatic poly(aryloxysiloxane)s
- P89** D.C. Tuncaboylu, O. Okay
Single-hole macroporous organogel particles of high toughness and superfast responsivity
- P90** N. Domnina, S. Filippov, R. Khrustaleva, O. Sergeeva, E. Komarova, A. Lezov
Hybrid macromolecular antioxidants: synthesis, properties and application in medicine.

- P91** H. Kaczmarek, J. Kowalonek, D. Bajer
Surface properties of poly(vinyl alcohol) with iron chloride (III) before and after UV irradiation
- P92** H. Kaczmarek, P. Gałka, A. Dąbrowska, I. Dąbrowska
Nanohardness studies of poly(methyl methacrylate) doped with photoinitiator
- P93** Á. Némethy, B.S. Gyarmati, T. Gyenes, B. Pukánszky, A. Szilágyi
Preparation and characterization of poly(aspartic acid)-gelatin co-networks
- P94** L. Michlovská, L. Vojtová, L. Mravcová, S. Hermanová, J. Jančář
Optimizing conditions for functionalization of PLGA-PEG-PLGA copolymer with itaconic anhydride
- P95** N. Permyakova, T. Zheltonozhskaya, L. Kunitskaya
Synthesis and characterization of double-hydrophilic block copolymers based on monomethyl ether of poly(ethylene oxide) and poly(acrylic acid) with the different block lengths
- P96** J. Czernek
Modeling the molecular recognition of nucleic acid bases by polymeric receptors
- P97** I. Fortelný
Origin and adequate model of coalescence in quiescent polymer blends
- P98** A. Havránek
Differential law for energy transfer in muscles
- P99** J. Nožár, S. Nešpůrek
Polarons in polymers, determining its dynamical properties
- P100** P. Toman, S. Nešpůrek, M. Weiter, M. Vala, W. Bartkowiak
Modeling of charge carrier transport in conjugated polymers doped by polar additives
- P101** A. Sikorski, J. Rybicka, P. Adamczyk
Properties of copolymers adsorbed on homogenous and patterned surfaces
- P102** P. Romiszowski, A. Sikorski
Structure of the multi-chain polymer system confined in an adsorbing slit - Monte Carlo simulation
- P103** Z. Kroneková, E. Papajová, I. Krupa, I. Lacík
Comparison of physical properties and mechanical stability of alginate hydrogels prepared by internal gelling depending on the alginate type and gelling conditions
- P104** P. Cifra, Z. Benkova, T. Bleha
Shape transition on confinement of flexible and stiff macromolecules

AUTHOR INDEX

Adamczyk P.	P101	Chytil P.	IL17
Adler H.-J.P.	P34	Cifra P.	P104
Ahmad S.	P10	Cigler P.	IL16
Annaka M.	P05	Cimrová V.	P20, P23, P66, P77
Anžlovar A.	SL03, P07	Cohn D.	IL02
Araki Y.	SL06	Coughlin E.B.	P88
Arase T.	P63	Crnjak Orel Z.	SL03, P07
Atzet S.	IL26	Cucco Porto L.	P19
Azzaroni O.	IL10	Czernek J.	P96
Bačáková L.	P02	Dąbrowska A.	P92
Baird B.	IL06	Dąbrowska I.	P92
Bajer D.	P91	Depa K.	P68
Baldrian J.	P13, P43, P72	Desbrières J.	SL05, P28
Bartkowiak W.	P100	Dohnálek J.	P14
Basinska T.	IL23	Domnina N.	P90
Bax D.	SL08	Donard O.	SL05
Baytekin S.	P18	Donato R.K.	P21, P22
Beneš H.	P80	Dong R.	IL06
Benkova Z.	P104	Duchek P.	P43
Berkovich A.K.	P87	Dudko V.S.	P87
Bertin A.	SL07	Duncan R.	IL01
Bilek M.M.M.	SL08	Dung Ngo T.	SL04
Bleha T.	P104	Dušek K.	P48, P86
Blinova N.V.	P17	Duškova J.	P14
Bo Z.	IL13	Duškova-Smrčková M.	P48, P59, P86
Bober P.	P16, P38	Dvořák P.	P33
Bologna Alles A.	P49, P50	Dvořánková B.	P06
Bondarev D.	P31	Dworak A.	P52, P67
Borsali R.	IL15, P19	Dworecki K.	P64
Bouhadid M.	P28	Dybal J.	P08, P73
Boyles D.A.	P88	Dyr J.E.	P02
Braun F.	IL24	Elyashevich G.K.	P75
Brown S.P.	IL19	Emrick T.	P88
Brus J.	IL20, P44, P69, P75	Eremeev I.V.	P85
Brynda E.	P02, P49, P50	Etrych T.	IL17
Budishevska O.G.	P65	Exnar P.	P24
Burchard W.	SL09	Fenclová T.	P06
Burgert I.	SL07	Feng H.-C.	P83
Cascone M.G.	P27	Fiala P.	P84
Chen W.	P25	Fiamengo I.	P55
Chlupáč J.	P02	Filipova Ts.	P88

Filippov S.	P15, P90	Jančář J.	P26, P94
Filová E.	P02	Jaroš J.	P33
Fleischmann S.	IL24	Jhuang Y.-J.	P83
Fortelný I.	P97	Joshi Y.M.	P10
Freudenberg U.	IL27	Jůza J.	P79
Friend R.H.	IL22	Kaczmarek H.	P91, P92
Futaki S.	SL06	Kadlec P.	P53
Galka P.	P92	Kadlubowski S.	P01
Gerasimov V.I.	P85	Kalfus J.	P26
Gharibpour H.	P39	Karásková M.	P35
Gotoh T.	P63	Karpushkin E.	P86
Grimmer M.	IL27	Kataoka K.	IL03
Gromadzki D.	P12	Kaul C.	P54
Gyarmati B.S.	P58, P62, P93	Kazim S.	P09, P10
Gyenes T.	P58, P62, P93	Kesselman E.	P47
Hain J.	P34	Khazaie M.	P39
Hamáček A.	P34	Khrustaleva R.	P90
Hampl A.	P33	Kmínek I.	P23, P77
Hanková V.	P36	Knotek P.	P45
Hasan E.	P49, P50	Kobera L.	P69
Hašek J.	P14	Kochalska A.	P41
Hauf M.	P69	Kolenko P.	P14
Havránek A.	P84, P98	Komarova E.	P90
Hermanová S.	P94	Koňák Č.	P08, P15, P30
Hirai Y.	P46, P56	Kondyurin A.	SL08
Hobzová R.	P06, P42	Konyushenko E.N.	P11
Hoffman A.S.	IL18	Kopeček J.	P15
Holoubek J.	P13	Kopečková P.	P15
Holub P.	P72	Kotek J.	P43
Honmou O.	P04	Koval T.	P14
Horská I.	P24	Kowalonek J.	P91
Houska M.	P49, P50	Kozanecki M.	P01
Hradil J.	P42	Kozłowska J.	P03
Hromádková J.	P13, P16, P31	Kramer E.J.	IL06
Hsu B.-L.	P25	Kratochvíl P.	P70
Hu W.	SL04	Krishnan S.	IL06
Huck W.T.S.	P49	Křivka I.	P20
Ijiro K.	P04, P56	Kříž J.	P53
Inoue Y.	SL06	Kroneková Z.	P103
Ishii D.	P46	Kruliš Z.	P80
Ito E.	P04	Krupa I.	P103
Jäger A.	P12	Kučera J.	P26
Janata M.	P57, P70	Küçükyavuz Z.	P18

Kunitskaya L.	P95	Okay O.	SL02, P60, P61, P89
Květoň M.	P84	Ozmen M.M.	SL02
Lacík I.	P103	Pahovnik D.	P29
Lapčíková M.	P86	Panahi M.	P40
Látalová P.	P57, P71	Panahi M.R.	P39
Lazzeri L.	P27	Pánek J.	P30
Lédl V.	P84	Panyanuwat W.	IL27
Levental K.	IL27	Papajová E.	P103
Lezov A.	P90	Pastorczak M.	P01
Li J.	IL13	Pavlačková P.	P20, P23, P77
Liang M.	P83	Pavlová E.	P75
Lindau M.	IL06	Pekárek M.	P75
Litmanovich E.A.	P87	Percec V.	IL07
Lu Y.	P34	Permyakova N.	P95
Machová L.	P45	Peter J.	P75
Maddan L.R.	IL26	Petkiewa D.V.	P85
Marcasuzaa P.	SL05	Pflegler J.	P09, P10, P31
Matějček P.	IL16	Pich A.	P34
Matějka L.	P22	Pientka Z.	IL25
Matsuo Y.	P56	Pignot-Paintrand I.	P19
McKenzie D.R.	SL08	Pilař J.	P53
Mertig M.	IL24	Pillon C.	P28
Messerschmidt M.	IL24	Planecka A.	P03
Michálek J.	P06, P53	Pleštil J.	P22, P72
Michlovská L.	P94	Pochekailov S.	P35
Mikešová J.	P80	Podhájecká K.	P31
Millaruelo Boira M.	IL24	Poláková L.	P71
Minko E.	P69	Pop-Georgievski O.	P32, P33
Mohammadi Z.	P40	Popadyuk A.I.	P65
Morita Y.	P04	Popelka Š.	P32, P33
Mortensen K.	IL14	Poruba A.	P66
Mravcová L.	P94	Pospíšil J.	P41
Nakase I.	SL06	Procházka K.	IL16
Nedbal J.	P38, P78	Prokeš J.	P16, P38, P74, P78
Nelles G.	IL12	Prokop J.	P80
Némethy Á.	P58, P62, P93	Proks V.	P33, P45
Nešpůrek S.	P100, P34, P35, P41, P99	Pukánszky B.	P58, P62, P93
Netopilík M.	P70, P75	Purkrt A.	P66
Nishio A.	SL06	Rais D.	P34
Nosworthy N.J.	SL08	Rajabi L.	P39, P40
Nožár J.	P35, P41, P99	Rakušan J.	P35
Ober C.K.	IL06	Ranganathan T.	P88
		Ratner B.D.	IL26

Řeboun J.	P34	Slunečková V.	P31
Redon N.	P28	Smetana K. Jr.	P06
Rédrová D.	P36	Smirnov M.	P75
Rek V.	P55	Soldi V.	P19
Reynaud S.	SL05, P17, P28	Solomko N.Yu.	P65
Riedel T.	P02	Spatz J.P.	IL11
Říhová B.	IL17	Spěváček J.	P57
Rodríguez	P49, P50	Spiess H.W.	IL21
Emmenegger C.		Špírková M.	P15, P43, P76
Romiszowski P.	P102	Stadermann J.	IL24
Rosiak J.M.	P01	Starovoytova L.	P15, P37
Rosova E.Yu.	P75	Steinhart M.	P13
Rozlívková Z.	P76	Stejskal J.	P11, P16, P17, P38, P74, P76, P78
Rungrodnimitchai S.	P81	Štěpánek P.	P12, P15, P30
Ryan A.J.	IL08	Štěpánková A.	P14
Rybicka J.	P101	Sternstein S.S.	P26
Rypáček F.	P32, P33, P44, P45, P51	Storm G.	IL05
Sakamoto S.	SL06	Strachota A.	P43, P53, P68
Sakahara S.	P63	Studenovská H.	P59
Sawa N.	SL06	Šturcová A.	P73
Schauer J.	IL25	Supjaroenkul U.	P81
Schlaad H.	SL07	Svobodová J.	P44
Schmidt J.	P47	Sybachin A.V.	P47
Schmidt P.	P73	Sysel P.	P69
Schrekker H.S.	P21, P22	Szilágyi A.	P58, P62, P93
Šeděnková I.	P74, P76	Talmon Y.	P47
Sedláček J.	P36, P82	Tanaka K.	P63
Sedlačík T.	P51	Tanaka M.	P04
Sedlák M.	P08	Tishchenko G.	P75
Sedláková Z.	P49, P71, P72, P75	Toman P.	P100
Sergeeva O.	P90	Ton-That M.T.	SL04
Seymour L.W.	IL28	Topuz F.	P60, P61
Shimomura M.	P04, P46, P56	Toušek J.	P20
Sikora A.	P57	Toušková J.	P20
Sikorski A.	P101, P102	Trchová M.	P11, P16, P17, P74, P76
Silverstein M.S.	SL01	Tršohlavá E.	P45
Sionkowska A.	P03	Trhlíková O.	P36
Sivkova R.	P82	Trzebicka B.	P52, P67
Skálová T.	P14	Tsai W.-J.	P83
Skopińska-Wiśniewska	P03	Tsvetanov C.	P52
J.		Tuncaboylu D.C.	P89
Slomkowski S.	IL23	Udra S.A.	P85
Šlouf M.	P22, P43, P72		

Ulanski J.	P01	Weiter M.	P100
Ulbrich K.	IL17	Welzel P.B.	IL27
Ulbricht M.	P54	Weng Y.-M.	P25
Utrata-Wesołek A.	P52, P67	Werner C.	IL27
Vala M.	P100	Wu Y.	IL13
Valentová H.	P71, P78	Yabu H.	P04, P46, P56
Vaněček M.	P66	Yamamoto S.	P04
Varga M.	P38	Yang Q.	P54
Vlček P.	P57	Yang Y.	P45
Vohlídal J.	P29, P31, P36, P82	Yaroshenko E.V.	P87
Voit B.	IL24	Yaroslavov A.A.	P47
Vojtová L.	P94	Yi Y.	IL06
Voronov S.A.	P65	Yin Y.	SL08
Vranješ N.	P55	Žagar E.	P29
Výprachtický D.	P20, P23, P77	Zajícová V.	P24
Wada T.	SL06	Zedník J.	P36, P82
Wagner E.	IL04	Zhang C.-F.	P83
Wang C.-H.	P25	Zhang S.	IL29
Wang G.	P34	Zheltonozhskaya T.	P95
Weda P.	P52	Zieris A.	IL27
Wegner G.	IL09	Žigon M.	SL03, P07, P29
Weiss A.S.	SL08	Žymelka I.	P67

73rd Prague Meeting on Macromolecules
organized by the Institute of Macromolecular Chemistry
of the Academy of Sciences of the Czech Republic
**New Frontiers in Macromolecular Science:
From Macromolecular Concepts of Living Matter
to Polymers for Better Quality of Life**
Prague, Czech Republic, July 5-9, 2009

PROGRAMME BOOKLET SUPPLEMENT

LIST OF ACTIVE PARTICIPANTS

CZECH REPUBLIC

Sharf Ahmed, Institute of Macromolecular Chemistry Academy of Sciences of the Czech Republic, v. v. i., Heyrovského nám. 2, 162 06 Praha

GERMANY

Helmut Ringsdorf, University of Mainz, Institute of Organic Chemistry,
Duesbergweg 10-14, D-55099 Mainz

JAPAN

Matsuda Naoki, Measurement Solution research Center, National Institute of Advanced Industrial Science and Technology (AIST), Tosu 841-0052, Japan

TURKEY

Diñçer Sevil, Yildiz Technical University, Chemistry and Metallurgy Faculty, Davutpasa
Istanbul

İsođlu İsmail Alper, Hacettepe University Department of Chem. Engineering,
Bioengineering Division, Hacettepe University Beytepe, 06800 Ankara

USA

Jiří Kopeček, Department of Pharmaceutics, University of Utah, 84112 Salt Lake City

POSTERS

poster session II, Tuesday, June 9

P 105 A. Sharf, K. Podhájecká, J. Pflieger

The influence of gold nanoparticles on electrical conductivity of polyalkythiophenes

P 106 N. Matsuda, Y. Ayato, A. Takatsu, K. Kato

In situ observation of activity of hemoglobin and cytochrome c on solid/liquid interfaces by slab optical waveguide spectroscopy

P 107 A. Karagöz, S. Diñçer

Synthesis of PLA-MPEG and PCL-MPEG diblock copolymers by microwave heating