

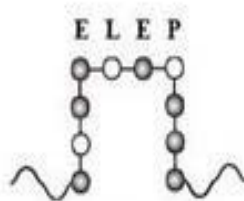
7th Hellenic Polymer Conference

Ioannina, September 28th - October 1st 2008

Program



UNIVERSITY OF IOANNINA



HELLENIC POLYMER SOCIETY

Acknowledgements

The 7th Hellenic Polymer Conference could not be accomplished without the financial support of the following sponsors:

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7th Hellenic Polymer Conference
Ioannina, September 28th - October 1st 2008
Science and Technology Park of Epirus

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7th Hellenic Polymer Conference
Science and Technology Park of Epirus

Program

Sunday, September 28th 2008

17:00 - 20:00 **Registration - Welcome Party**

Monday, September 29th 2008

08:15 - 09:15 **Registration**

09:15 - 09:30 **Opening Remarks**

Session 1: NANOTECHNOLOGY

Presiding: N. Hadjichristidis, G. Floudas

09:30 - 10:10 **IL.1: "Periodic polymers for photonics, phononics and mechanics"**

E. L. Thomas

Materials Science and Engineering, MIT

10:10 - 10:30

O.1: "Synthesis and characterization of amphiphilic block copolymers. Association behavior in aqueous solutions. Potential use of the micellar structure as drug carriers"

N. Karanikolopoulos, M. Pitsikalis, N. Hadjichristidis

Department of Chemistry, University of Athens

10:30 - 10:50

O.2: "Synthesis and characterization of polymeric [Ru²⁺] complexes and their application as dyes in solar cells"

E. K. Pefkianakis¹, N. P. Tzanetos¹, T. Stergiopoulos², P. Falaras² and J. K. Kallitsis¹

¹*Department of Chemistry, University of Patras*

²*Institute of Physical Chemistry, NCSR Demokritos*

10:50 - 11:10

Coffee Break - Conference Photo

Session 2: POLYMER SYNTHESIS

Presiding: J. Kallitsis, C. Tsitsilianis

11:10 - 11:50

IL.2: "Well-defined complex macromolecular architectures by anionic polymerization high vacuum techniques"

N. Hadjichristidis

Department of Chemistry, University of Athens

11:50 - 12:10

O.3: "Vinyl polymerization of norbornene with a novel nickel (II) diphosphinoamine/methylaluminumoxane catalytic system"

G. C. Vougioukalakis¹, N. Petzetakis¹, M. Pitsikalis¹, N. Hadjichristidis¹, I. Stamatopoulos², P. Kyritsis², A. Terzis³, C. Raptopoulou³

¹*Department of Chemistry, University of Athens*

²*National and Kapodistrian University of Athens, Department of Chemistry, Inorganic Chemistry Laboratory*

³*National Centre of Scientific Research "Demokritos", Institute of Materials Science*

- 12:10 - 12:50 **IL.3: “Novel ion-containing polymers via post-polymerization chemistry”**
J. W. Mays
 Department of Chemistry, University of Tennessee and Center for Nanophase Materials Sciences and Chemical Sciences Division, Oak Ridge National Laboratory
- 12:50 - 13:10 **O.4: “Responsive microgel particles”**
M. Vamvakaki
 Institute of Electronic Structure and Laser, FO.R.T.H. and Department of Materials Science and Technology, University of Crete
- 13:10 - 13:30 **O.5: “Smart multifunctional hybrid microgels”**
 J. Rubio-Retama^{1,2}, M. Agrawal¹, M. Stamm¹, N. E. Zafeiropoulos³
¹Dept. of Nanostructured Materials, Leibniz-Institut für Polymerforschung, Dresden
²Dpto. Físico-Química Farmacéutica, Facultad Farmacia, Universidad Complutense, Madrid
³Department of Materials Science & Engineering, University of Ioannina
- 13:30 - 15:00 **Lunch Break**

Session 3: COLLOIDS/GELS

Presiding: D. N. Theodorou, C. Kiparissides

- 15:00 - 15:40 **IL.4: “Tailoring sound propagation by mesoscopic engineering of soft matter”**
G. Fytas^{1,2}
¹Max Planck Institute for Polymer Research
²Department of Materials Science & Technology and FO.R.T.H.
- 15:40 - 16:00 **O.6: “Simulations of temperature induced ageing and crystallization in dense suspensions of ultrasoft colloids”**
I. A. Bitsanis¹, A. N. Rissanou^{1,2}, M. Yannourakou², I. G. Economou², D. Vlassopoulos^{1,3}
¹Institute of Electronic Structure and Laser, FO.R.T.H.
²Molecular Thermodynamics and Modeling of Materials Laboratory, Institute of Physical Chemistry, NSCR “Demokritos”
³Department of Materials Science University of Crete
- 16:00 - 16:20 **O.7 “Yielding mechanisms and particle rearrangements in colloidal glasses and gels”**
G. Petekidis
 Dept. of Materials Science and Technology, University of Crete & IESL-FORTH
- 16:20 - 16:40 **O.8: “Hydrogen-bonded interpolymer complexes soluble at low pH”**
G. Staikos¹, M. Sotiropoulou¹, G. Bokias², F. Bossard³, J. Oberdisse⁴, E. Balnois⁵
¹Department of Chemical Engineering, University of Patras
²Department of Chemistry, University of Patras
³Laboratoire de Rheologie, UMR 5520, Université Joseph Fourier
⁴Laboratoire des Colloïdes, Verres et Nanomatériaux, UMR CNRS/UM2, Université Montpellier
⁵Laboratoire Polymères, Propriétés aux Interfaces et Composites (L2PIC), Université de Bretagne Sud
- 16:40 - 17:00 **Coffee Break**

Session 4: SELF-ASSEMBLY

Presiding: G. Fytas, C. Toprakcioglu

- 17:00 - 17:40 **I.L.5: “Block copolymer-directed nanomaterials synthesis and organization”**
P. Alexandridis
Department of Chemical and Biological Engineering, The State University of New York (SUNY), Buffalo
- 17:40 - 18:00 **O.9: “Self-assembled nanostructures from block copolymers and vesicle-forming surfactant in aqueous solutions”**
S. Pispas
Theoretical & Physical Chemistry Institute, National Hellenic Research Foundation
- 18:00 - 18:20 **O.10: “Effect of Lithium salt concentration on the self-assembly of PEO-based block copolymer electrolytes”**
E. F. Ioannou¹, K. D. Gatsouli¹, S. Pispas¹, E. I. Kamitsos¹ and G. Floudas²
¹*Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation*
²*Department of Physics, University of Ioannina and Foundation for Research and Technology-Hellas, Biomedical Research Institute (FORTH-BRI)*
- 18:20 - 18:40 **O.11: “Fabrication of nanoobjects from star-shaped copolymers”**
C. Tsitsilianis^{1,2}, D. Tasis³, C. Galiotis^{1,3}, V. Bocharova⁴, A. Kiriy⁴, M. Stamm⁴
¹*Foundation of Research and Technology Hellas, Institute of Chemical Engineering and High Temperature Processes*
²*Department of Chemical Engineering, University of Patras*
³*Department of Materials Science, University of Patras*
⁴*Leibniz-Institut für Polymerforschung, Dresden*
- 18:40 - 20:00 **Poster Session I**

Tuesday, September 30th 2008

Session 5: BIOPOLYMERS

Presiding: M. Kosmas, A. Andreopoulos

- 09:00 - 09:40 **I.L.6: “Packaging biological macromolecules and delivery”**
M. Muthukumar
Polymer Science and Engineering Department, University of Massachusetts, Amherst
- 09:40 - 10:00 **O.12: “Self-assembly and dynamics of poly(γ -benzyl-L-glutamate) embedded into nanoporous alumina templates”**
A. Gitsas¹, G. Floudas¹, H. Duran², W. Knoll², M. Mondeshki², M. Steinhart³
¹*University of Ioannina, Department of Physics, and Foundation for Research and Technology-Hellas (FORTH), Biomedical Research Institute (BRI).*
²*Max Planck Institute for Polymer Research, Mainz*
³*Max Planck Institute of Microstructure Physics, Halle*
- 10:00 - 10:20 **O.13: “Vesicles from well-defined block copolypeptides”**
H. Iatrou¹, N. Ferderigos¹, N. Hadjichristidis¹, H. Frielinghaus², D. Richter², S. Nevanpää³, O. Ikkala³
¹*University of Athens, Department of Chemistry*
²*Institut für Festkörperforschung, Forschungszentrum Jülich*
³*Optics and Molecular Materials, Helsinki University of Technology*

- 10:20 - 10:40 **O.14: “Hierarchies in the structural organization of spider silk - a quantitative model”**
P. Papadopoulos, J. Sölter, R. Ene, I. Weidner, F. Kremer
 University of Leipzig, Faculty of Physics and Geosciences, Leipzig
- 10:40 - 11:00 **O.15: “Synthesis of molecularly imprinted polymers via precipitation polymerization from the selective separation of peptides”**
S. Chaitidou, O. Kotrotsiou and C. Kiparissides
 Department of Chemical Engineering, Aristotle University of Thessaloniki and Chemical Process Engineering Research Institute
- 11:00 - 11:20 **Coffee Break**

Session 6: SURFACES AND INTERFACES

Presiding: G. Floudas, C. Panayiotou

- 11:20 - 12:00 **I.L.7: “Single polymer binding: Towards a universal adhesive”**
 J. Wang¹, M. Kappel¹, H.-J. Butt¹, M. N. Tahir², W. Tremel²
¹Max-Planck Institute for Polymer Research, Mainz
²Institut für Anorganische Chemie und Analytische Chemie, Mainz
- 12:00 - 12:20 **O.16: “Viscoelasticity of semifluorinated alkanes at the air-water interface”**
 C. Christopoulou^{1,2}, U. Jonas^{1,3}, C. Clark³, D. Vlassopoulos^{1,2}
¹FORTH, Institute of Electronic Structure & Laser
²University of Crete, Department of Materials Science and Technology
³Max-Planck Institute for Polymer Research, Mainz
- 12:20 - 12:40 **O.17: “Adsorption of oligomers and polymers in nanoporous alumina”**
 S. Karagiovanaki, A. G. Koutsioubas, N. Spiliopoulos, C. Toprakcioglu
 Department of Physics, University of Patras
- 12:40 - 13:00 **O.18: “Dynamic of zwitterion terminated polystyrene at a glass-solution interface studied by evanescent wave dynamic light scattering”**
 A. Tsigkri¹, B. Loppinet¹, S. Pispas²
¹Institute of Electronic Structure and Laser, F.O.R.T.H.
²Theoretical and Physical Chemistry Institute, N.H.R.F.
- 13:00 - 13:20 **O.19: “Theoretical study of adsorption of star-polymers by mean field theory”**
G. Kritikos and A. F. Terzis
 Department of Physics, School of Natural Sciences, University of Patras
- 13:20 - 13:40 **O.20: “A general approach to surface initiation polymerizations from multi-wall carbon nanotubes”**
 D. Priftis¹, G. Sakellariou¹, D. Baskaran², J. W. Mays², N. Hadjichristidis¹
¹Department of Chemistry, University of Athens
²Department of Chemistry, University of Tennessee
- 13:40 - 15:00 **Lunch Break**

Session 7: SURFACES AND NANOCOMPOSITES

Presiding: S.H. Anastasiadis, C. Galiotis

- 15:00 - 15:40 **I.L.8: “Polymer brushes for functional surfaces”**
M. Stamm
 Leibniz-Institut für Polymerforschung, Dresden

- 15:40 - 16:00 **O.21: “Dynamics of poly (propylene oxide) amines intercalated in clay”**
P. Pissis¹, A. Kyritsis¹, S. Kriptou¹, A. Panagopoulou¹, P. I. Xidas², K. S. Triantafyllidis²
¹Department of Physics, National Technical University of Athens
²Department of Chemistry, Aristotle University of Thessaloniki
- 16:00 - 16:20 **O.22: “Crystallization behavior in polymer / layered silicate nanocomposites”**
K. Chrissopoulou¹, E. Pavlopoulou^{1,2}, H. Papananou³, S. Fotiadou³, G. Portale⁴,
 W. Bras⁴, S. H. Anastasiadis^{1,3}
¹Institute of Electronic Structure and Laser, Foundation for Research & Technology-Hellas
²Department of Materials Science and Technology, University of Crete
³Department of Chemical Engineering, Aristotle University of Thessaloniki
⁴DUBBLE CRG, European Synchrotron Radiation Facility, Grenoble
- 16:20 - 16:40 **O.23: “The use of aliphatic di/triamines (Jeffamines) as clay surface modifiers for the preparation of epoxy - clay nanocomposites”**
 P. I. Xidas^{1,2}, D. Gournis², K. S. Triantafyllidis¹
¹Department of Chemistry, Aristotle University of Thessaloniki
²Department of Materials Science & Engineering, University of Ioannina
- 16:40 - 17:00 **Coffee Break**

Session 8: NANOCOMPOSITES

Presiding: A. Avgeropoulos, P. Pissis

- 17:00 - 17:40 **I.L.9: “Tailoring the physical properties of nanocomposite materials - why structure matters”**
M. R. Bockstaller
 Department of Materials Science and Engineering, Carnegie Mellon University, Pittsburgh
- 17:40 - 18:00 **O.24: “Synthesis and selective segregation of Fe₃O₄ nanoparticles inside of the poly-2vinylpyridine domain of poly(styrene-*b*-2vinylpyridine)”**
A. Horechvy¹, N. E. Zafeiropoulos^{1,2}, C. Tsitsilianis³, M. Stamm¹
¹Leibniz-Institut für Polymerforschung Dresden
²Department of Materials Science and Engineering, University of Ioannina
³Department of Chemistry Engineering, University of Patras
- 18:00 - 18:20 **O.25: “Impregnation of pH-responsive polymeric matrices with metal nanoparticles”**
E. Pavlopoulou^{1,2}, V. Katsamanis^{1,3}, K. Christodoulakis^{1,2}, G. Portale⁴, W. Bras⁴,
 M. Vamvakaki^{1,2}, S.H. Anastasiadis^{1,5}
¹Foundation for Research and Technology-Hellas, I.E.S.L
²Department of Materials Science and Technology, University of Crete
³Department of Physics, University of Crete
⁴DUBBLE CRG/European Synchrotron Radiation Facility, Grenoble
⁵Department of Chemical Engineering, Aristotle University of Thessaloniki
- 18:20 - 18:40 **O.26: “Complexation of anionic polyelectrolytes with Cu²⁺ ions and/or cationic surfactants: Design of the polymer architecture to control the behavior in aqueous solution”**
 Z. Iatridi¹, E. K. Oikonomou^{1,2}, Ch. Daktyloudis¹, G. Bokias¹
¹Department of Chemistry, University of Patras
²Foundation of Research and Technology Hellas, Institute of Chemical Engineering and High-Temperature Chemical Processes (ICE/HT)

18:40 - 20:00 **Poster Session II**
21:00 **Conference Dinner**

Wednesday, October 1st 2008

Session 9: POLYMER DYNAMICS
Presiding: D. Vlassopoulos, V. Mavrantzas

- 09:00 - 09:40 **I.L.10: “From chemical structure to physical properties of polymers via hierarchical modeling”**
D. N. Theodorou
School of Chemical Engineering, National Technical University of Athens
- 09:40 - 10:00 **O.27: “A Poly(dimethylsiloxane) quantum mechanical force-field: Molecular dynamics calculations for the prediction of physical properties”**
K. D. Papavasileiou¹, V. E. Raptis^{1,2} and V. S. Melissas¹
¹*Department of Chemistry, University of Ioannina*
²*Department of Materials Science and Engineering, University of Ioannina*
- 10:00 - 10:20 **O.28: “Structure and dynamics of entangled polystyrene melts through hierarchical multi-scale dynamic simulations”**
V. Harmandaris^{1,2} and K. Kremer¹
¹*Max-Planck Institute for Polymer Research, Mainz, Germany*
²*Department of Applied Mathematics, University of Crete, Greece*
- 10:20 - 10:40 **O.29: “Topological and dynamical mapping of atomistic simulation data onto the tube model for entangled polymer melts”**
P. S. Stephanou¹, C. Baig¹, G. Tsolou¹, V. G. Mavrantzas¹, M. Kröger²
¹*Department of Chemical Engineering, University of Patras & FORTH-ICE/HT*
²*Polymer Physics, ETH Zürich, Department of Materials*
- 10:40 - 11:00 **O.30: “Molecular dynamics simulations of diblock-arm star copolymers”**
A. N. Rissanou^{1,3}, D. Vlassopoulos^{1,2}, C. N. Likos³
¹*FO.R.T.H., Institute of Electronic Structure and Laser*
²*University of Crete, Department of Materials Science and Technology*
³*Institut für Theoretische Physik II Weiche Materie, Heinrich-Heine-Universität, Düsseldorf*
- 11:00 - 11:20 **O.31: “Atomistic simulation of poly(dimethylsiloxane) permeability properties to gases and n-alkanes”**
Z. A. Makrodimitri and I. G. Economou
Molecular Thermodynamics and Modeling of Materials Laboratory, Institute of Physical Chemistry, National Center of Scientific Research “Demokritos”
- 11:20 - 11:40 **Coffee Break**

Session 10: POLYMER TECHNOLOGY
Presiding: C. Papaspyrides, I. Simitzis

- 11:40 - 12:00 **O.32: “Steady capillary flow of polytetrafluoroethylene (PTFE) paste: experiments and simulations”**
E. Mitsoulis¹, Th. Zisis¹, S.G. Hatzikiriakos²
¹*School of Mining Engineering and Metallurgy, National Technical University of Athens*
²*Department of Chemical and Biological Engineering, The University of British Columbia*

- 12:00 - 12:20 **O.33: "Thermal degradation kinetics of light-cured dimethacrylate resins used as biomaterials in dental applications"**
D. S. Achilias, M. M. Karabela, I. D. Sideridou
Department of Chemistry, Aristotle University of Thessaloniki
- 12:20 - 12:40 **O.34: "Study of polyblends containing plastics used in electrical and electronic applications"**
P.A. Tarantili, A.N. Mitsakaki, M.A. Petoussi, A.G. Andreopoulos
School of Chemical Engineering, National Technical University of Athens
- 12:40 - 13:00 **O.35: "Porous materials from polysaccharide gels processed by supercritical CO₂"**
C. Tsiptsias, C. Panayiotou
Department of Chemical Engineering, Aristotle University of Thessaloniki
- 13:00 - 13:20 **O.36: Chemical modification of carbon fibers and its evaluation based on their composites with epoxy resin"**
L. Zoumpoulakis, V. Oikonomopoulou, J. Simitzis
School of Chemical Engineering, National Technical University of Athens
- 13:20 - 14:20 **Lunch Break**
- 14:20 - 14:40 **O.37: "Post-polymerisation in the solid state of sulfonated nylon 66 copolymers"**
S. N. Vouyiouka, C. D. Papaspyrides
School of Chemical Engineering, National Technical University of Athens
- 14:40 - 15:00 **O.38: "Evaluation of a polymer based chemocapacitive sensor array for the detection of vapor analytes and their mixtures"**
K. Manolia^{1,2}, E. Karonis¹, D. Goustouridis¹, S. Chatzandroulis¹, I. Raptis¹, M. Sanopoulou²
¹*Institute of Microelectronics, NCSR "Demokritos"*
²*Institute of Physical Chemistry, NCSR "Demokritos"*
- 15:00 - 15:20 **O.39: "Electrical response of polymer matrix - titanium carbide composites"**
C. G. Raptis, G. C. Psarras
Department of Materials Science, University of Patras
- 15:20 - 15:40 **Best Poster Award**
(Award Committee: D. N. Theodorou, N. Hadjichristidis, G. Fytas)
Closing Remarks

Posters

Monday, September 29th 2008

Poster Session I

Synthesis / Polymer Technology

- 1 **“Contribution to obtain the graft copolymers of alginic acid with pnipam”**
N.-O. Ciocoiu, G. Staikos
Department of Chemical Engineering, University of Patras - FORTH/ICEHT
- 2 **“High-temperature iminisation of crystalline poly(aryl ether ketones) using aromatic/aliphatic amines”**
I. Manolakis, H. M. Colquhoun
Department of Chemistry, University of Reading
- 3 **“Synthesis, characterization and enzymatic hydrolysis of poly(propylene adipate)-copoly(ϵ -caprolactone) block copolymers”**
S. G. Nanaki, D. N. Bikiaris
Department of Chemistry, Aristotle University of Thessaloniki
- 4 **“Synthesis, solid state and enzymatic degradation of novel poly(propylene-co-ethylene succinate)s”**
G. Z. Papageorgiou, I. Palazi, P. Andria, Ch. A. Stergiou, D. N. Bikiaris
Department of Chemistry, Aristotle University of Thessaloniki
- 5 **“ β -Lactam functionalized amphiphilic block copolymers from poly(isoprene-*b*-ethylene oxide) copolymers”**
E. Kaditi, S. Pispas
Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation
- 6 **“Responsive polymer brushes on flat surfaces by surface - initiated polymerization”**
A. Mateescu^{1,2}, M. Vamvakaki^{2,3}
¹*Department of Chemistry, University of Crete*
²*Institute of Electronic Structure and Laser, FO.R.T.H.*
³*Department of Materials Science and Technology, University of Crete*
- 7 **“On the formation of apatite aggregates through precipitation from polymer-containing solutions”**
V. A. Kosma, K. G. Beltsios
Department of Materials Science and Engineering, University of Ioannina
- 8 **“A kinetic investigation of vinyl neo-decanoate bulk free-radical polymerization over the full monomer conversion”**
D. S. Achilias
Department of Chemistry, Aristotle University of Thessaloniki
- 9 **“Synthesis and characterization of 2nd generation dendritic copolymers”**
S. Rangou¹, E.L. Thomas², A. Avgeropoulos¹
¹*Department of Materials Science & Engineering, University of Ioannina*
²*Department of Materials Science & Engineering and Institute of Soldier Nanotechnologies, Massachusetts Institute of Technology*
- 10 **“Synthesis of poly(α -methylstyrene-*b*-4-hydroxystyrene) diblock copolymers via anionic polymerization”**
G. Evangelou, C. Ntaras, S. Rangou, A. Avgeropoulos
Department of Materials Science & Engineering, University of Ioannina

- 11 **“Synthesis of graft copolymers with divinyl - terminated poly(dimethylsiloxane) and polystyrene (“grafting to” approach)”**
C. Ntaras¹, G. Evangelou¹, S. Rangou¹, A. Avgeropoulos¹, R.M. Hill²
¹Department of Materials Science & Engineering, University of Ioannina
²Dow Corning Corporation, Midland, Michigan, USA
- 12 **“Synthesis of block copolymers with poly(methyl methacrylate) and 2-(trimethylsilyloxy) ethyl methacrylate [PMMA-*b*-(TMS-HEMA)]”**
M. Constantinou, P. Georgopoulos, A. Avgeropoulos
 Department of Materials Science & Engineering, University of Ioannina
- 13 **“Synthesis, molecular and morphological characterization of modified diblock copolymers with organic acid chloride derivatives”**
N. Politakos¹, C.J. Weinman², C.K. Ober², A. Avgeropoulos¹
¹Department of Materials Science & Engineering, University of Ioannina,
²Department of Materials Science & Engineering, Cornell University
- 14 **“Synthesis, molecular and morphological characterization of linear triblock terpolymers where one of the blocks is poly(cyclohexadiene)”**
K. Misichronis¹, S. Rangou¹, E. Aschroft², J. W. Mays², A. Avgeropoulos¹
¹Department of Materials Science & Engineering, University of Ioannina
²Department of Chemistry, University of Tennessee at Knoxville
- 15 **“Synthesis and characterization of high molecular weight linear triblock terpolymer consisting of polystyrene, polybutadiene, polyisoprene with different isomerisms”**
G. Zapsas¹, S. Rangou¹, A. Avgeropoulos¹, E. L. Thomas²
¹Department of Materials Science & Engineering, University of Ioannina
²Department of Materials Science & Engineering and Institute of Soldier Nanotechnologies, Massachusetts Institute of Technology
- 16 **“Nanostructures from well defined diblock copolymers of polystyrene (PS) and poly(dimethylsiloxane) (PDMS)”**
P. Georgopoulos¹, C. C. Chao², R. M. Ho^{2,3}, A. Avgeropoulos¹
¹Department of Materials Science & Engineering, University of Ioannina
²Institute of Microelectromechanical System, National Tsing Hua University, Taiwan
³Department of Chemical Engineering, National Tsing Hua University, Taiwan
- 17 **“Thiophene conducting copolymers”**
E. Grana¹, V. Goulas², A. Katsoulidis³, T. Makris⁴, D. Katsigiannopoulos¹, E. Skouras⁴, P. Pomonis³, A. Avgeropoulos¹
¹Polymers' Laboratory, Department of Materials Science & Engineering, University of Ioannina
²Section of Organic Chemistry & Biochemistry, Department of Chemistry, University of Ioannina
³Section of Industrial Chemistry, Department of Chemistry, University of Ioannina
⁴Nanotechnology Laboratory, Department of Materials Science & Engineering, University of Ioannina
- 18 **“Incorporation of magnetic nanoparticles in a PI_{3,4}-*b*-PB_{1,4} polymeric matrix”**
A. Tomou¹, A. Enotiadis¹, S. Rangou¹, M. Kitsas¹, A. P. Douvalis^{1,2}, A. Avgeropoulos¹, I. Panagiotopoulos¹, D. Gournis¹, T. Bakas²
¹Department of Materials Science and Engineering, University of Ioannina
²Department of Physics, University of Ioannina
- 19 **“Intercalation of an amphiphilic diblock copolymer in layered materials”**
Enotiadis A.¹, Sotiriou I.¹, Douli E.², Georgopoulos P.², Avgeropoulos A.², Gournis D.¹
¹Ceramics and Composites Laboratory, Department of Materials Science and Engineering, University of Ioannina
²Polymers' Laboratory, Department of Materials Science & Engineering, University of Ioannina,

- 20 **“Synthesis and characterization of proton exchange membrane nanocomposites for high temperature fuel cells”**
I. Kalamaras¹, J. K. Kallitsis^{2,3}, V. G. Gregoriou^{1,2}
¹Foundation for Research and Technology-Hellas, Institute of Chemical Engineering and High Temperature Chemical Processes (FORTH/ICEHT)
²Advent Technologies S. A., Scientific Park of Patras
³Department of Chemistry, University of Patras
- 21 **“Crosslinked 2-carboxybenzylchitosan: synthesis, characterization and potential use for transdermal delivery of fluconazole”**
K. P. Koutroumanis, D. N. Bikiaris
Department of Chemistry, Aristotle University of Thessaloniki
- 22 **“Synthesis of copolyesters based on adipic acid, glycolic acid and 1,4-butanediol and their hydrolytic degradation”**
S. Papadaki, D. Triantou, J. Simitzis
School of Chemical Engineering, National Technical University of Athens
- 23 **“Low temperature process for the production of long chain aliphatic polyamides”**
A. C. Boussia, S. N. Vouyiouka, C. D. Papaspyrides
School of Chemical Engineering, National Technical University of Athens
- 24 **“Titanium catalyzed ring opening polymerization of lactides. A route to novel macromolecular architectures”**
N. Petzetakis, D. Let, V. Kotzabasakis, M. Pitsikalis, N. Hadjichristidis
Industrial Chemistry Laboratory, Department of Chemistry, University of Athens
- 25 **“Synthesis of symmetric and asymmetric miktoarm star copolymers (PI)₂(PEO)₂”**
Th. Vasilakopoulos, H. Iatrou, N. Hadjichristidis
Industrial Chemistry Laboratory, Department of Chemistry, University of Athens
- 26 **“Synthesis of well defined graft polymers”**
A. Nikopoulou, N. Hadjichristidis
Industrial Chemistry Laboratory, Department of Chemistry, University of Athens
- 27 **“New approach to ‘click chemistry’ - combination of ‘click chemistry’ and anionic polymerization”**
A. Touris, N. Hadjichristidis
Industrial Chemistry Laboratory, Department of Chemistry, University of Athens
- 28 **“Controlled functional nanoparticles”**
E. Driva², G. Sakellariou², D. Baskaran², J. W. Mays^{1,2}
¹Chemical Sciences Division and Center for Nanophase Materials Science, Oak Ridge National Laboratory, Oakridge, TN, USA
²Industrial Chemistry Laboratory, Department of Chemistry, University of Tennessee
- 29 **“Synthesis of water soluble polypeptides containing (L)-proline”**
Gkikas M., Iatrou H., Hadjichristidis N.
Industrial Chemistry Laboratory, Department of Chemistry, University of Athens
- 30 **“Synthesis and characterization of triblock copolymers by combination of anionic and atom transfer radical polymerization”**
L.-F. Arakelian, M. Pitsikalis, N. Hadjichristidis
Industrial Chemistry Laboratory, Department of Chemistry, University of Athens

- 31 **“Terpyridine-ruthenium complexes for the decoration of CNTs, semiconducting oligomers and polymers”**
A. K. Andreopoulou^{1,2}, A. A. Stefopoulos^{1,2}, E. K. Pefkianakis^{1,2}, N. P. Tzanetos^{1,2}, C. Papagellis³, M. Hammond⁴, R. Mezzenga⁴, J. K. Kallitsis^{1,2}
¹Department of Chemistry, University of Patras
²Foundation of Research and Technology Hellas, Institute of Chemical Engineering and High Temperature Processes
³Department of Materials Science, University of Patras
⁴Department of Physics and Fribourg Center for Nanomaterials, University of Fribourg
- 32 **“Synthesis of copolymers based on benzene and biphenyl and their characterization by XRD and DSC”**
D. Triantou, S. Soulis, J. Simitzis
 School of Chemical Engineering, National Technical University of Athens
- 33 **“Electrochemical surface treatment of laboratorily produced carbon fibers by cyclic voltammetry”**
P. Georgiou, A. Photiou, S. Soulis, J. Simitzis
 School of Chemical Engineering, National Technical University of Athens
- 34 **“Nanofiller effect on the thermal response of poly(3-hydroxybutyrate) nanocomposites and isoconversional kinetic analysis of the thermal degradation”**
 E. Panayotidou^{1,2}, S. I. Marras¹, I. Zuburtikudis¹, D. S. Achilias²
¹Department of Industrial Design Engineering, TEI of Western Macedonia
²Department of Chemistry, Aristotle University of Thessaloniki
- 35 **“Periodic nanodot formation on polymers with plasmas: Towards plasma-directed polymer self-assembly?”**
D. Kontziampasis, N. Vourdas, G. Boulousis, V. Constantoudis, A. Tserepi, E. Gogolides
 Institute of Microelectronics, NCSR Demokritos
- 36 **“Stochastic prediction of the exact topological characteristics of LDPE produced in tubular reactors”**
 D. Meimaroglou^{1,2}, P. Pladis², A. Baltas², C. Kiparissides^{1,2}
¹Department of Chemical Engineering, Aristotle University of Thessaloniki
²Chemical Process Engineering Research Institute, Centre for Research and Technology
- 37 **“Effect of reaction conditions and catalyst design on the rheological properties of polyolefins produced in gas-phase olefin polymerization reactors”**
 P. Pladis², V. Kanellopoulos², C. Chatzidoukas², C. Kiparissides^{1,2}
¹Department of Chemical Engineering, Aristotle University of Thessaloniki
²Chemical Process Engineering Research Institute, Centre for Research and Technology Hellas
- 38 **“Modeling of industrial catalytic olefin polymerization slurry reactors”**
 V. Touloupides^{1,2}, V. Kanellopoulos², P. Pladis², A. Krallis², C. Kiparissides^{1,2}
¹Department of Chemical Engineering, Aristotle University of Thessaloniki
²Chemical Process Engineering Research Institute, Centre for Research and Technology Hellas
- 39 **“Viscoelastic tube inflation under constant rate of growth”**
E. Voyiatzis, C. Tsenoglou
 School of Chemical Engineering and School of Applied, National Technical University of Athens
- 40 **“On-line monitoring of the industrial formaldehyde resin production”**
D. Papapetros^{1,2}, I. Katsampas¹, C. Panayiotou²
¹Chimar Hellas S.A., Thessaloniki
²Department of Chemical Engineering, Aristotle University of Thessaloniki

- 41 **“Effect of the concentration of silane-coupling agent on physical properties of dental resin-nanocomposites”**
M.M. Karabela, I.D. Sideridou
Department of Chemistry, Aristotle University of Thessaloniki
- 42 **“Plain and modified phase inversion membranes for gas separation”**
G. Karadimos, V. Kosma, K. G. Beltsios
Department of Materials Science and Engineering, University of Ioannina
- 43 **“Effect of the environmental degradation on the viscoelastic response of nano modified epoxies and CFRPs”**
N. M. Barkoula¹, E. Fiamegou², A. Paipetis¹
¹*Dept. of Materials Science & Engineering, University of Ioannina*
²*Department of Mechanical Engineering and Aeronautics, University of Patras*
- 44 **“Synthesis and characterization of acrylic bone cements reinforced with bioceramics”**
D.-E. Baci, D. Giannakopoulos, S. Soulis, J. Simitzis
School of Chemical Engineering, National Technical University of Athens
- 45 **“Processing effects on the dissolution properties of thin polymer based chemically amplified photoresist films”**
D. Drygiannakis^{1,2}, G. P. Patsis¹, K. van Werden³, A. Boudouvis², I. Raptis¹
¹*Institute of Microelectronics, NCSR “Demokritos”*
²*School of Chemical Eng., National Technical University of Athens*
³*AZ Electronic Materials GmbH, Wiesbaden, Germany*
- 46 **“Electrical properties of polymeric carbons produced from the precursor system of novolac resin - naphthalene/catalyst - olive stones biomass”**
A. Pikasi, P. Georgiou, J. Simitzis
School of Chemical Engineering, National Technical University of Athens
- 47 **“Novolac resin and lignocellulosic materials as precursors for carbonaceous adsorbents”**
Z. Ioannou, J. Simitzis
School of Chemical Engineering, National Technical University of Athens
- 48 **“New high temperature polymer electrolyte membranes influence of the chemical structure on their properties”**
N. Gourdoupi^{1,3}, K. Papadimitriou¹, S. Neophytides^{2,3}, J.K. Kallitsis^{1,2,3}
¹*Department of Chemistry, University of Patras, Patras 26500, Greece*
²*Foundation of Research and FORTH-ICE/HT*
³*Advent Technologies S.A., Patras Science Park*
- 49 **“The effect of nanoclay content on the electrospun fibrous structure of biodegradable polymer nanocomposites”**
A. Tsimliaraki, S. Svinterikos, C. Panayiotou
Department of Chemical Engineering, Aristotle University of Thessaloniki
- 50 **“Type II photoinitiator systems based on novel fluorenone and fluorene chromophores. A mechanistic study by laser flash photolysis”**
X. Asvos¹, M. G. Siskos¹, A. K. Zarkadis¹, O. Brede², R. Hermann²
¹*Department of Chemistry, University of Ioannina*
²*Interdisciplinary Group Time-Resolved Spectroscopy, University of Leipzig*

Tuesday, 30th September 2008

Poster Session II

Nanotechnology / Self-Assembly / Colloids / Biopolymers / Surfaces and interfaces /
Nanocomposites / Polymer Dynamics

- 1 **“Measurements of free volume in polymer nanocomposite coatings using positron annihilation lifetime spectroscopy”**
G. Choudalakis, A. D. Gotsis
Department of Sciences, Technical University of Crete
- 2 **“Light induced micro-fiber formation in transparent polymer solutions”**
E. Anyfantakis^{1,2}, B. Loppinet², C. Mantzaridis^{3,4}, S. Pispas⁴, G. Fytas^{2,3}
¹*Chemistry Department, University of Crete*
²*Institute of Electronic Structure and Laser, F.O.R.T.H.*
³*Materials Science and Technology Department, University of Crete*
⁴*Theoretical and Physical Chemistry Institute, N.H.R.F*
- 3 **“Does Brillouin light scattering probe the primary glass transition process?”**
P. Voudouris^{1,2}, G. Fytas^{1,3,4}
¹*FORTH/ Institute of Electronic Structure and Laser*
²*Department of Chemistry, University of Crete*
³*Department of Materials Science and Technology, University of Crete*
⁴*Max Planck Institute for Polymer Research*
- 4 **“A thermal and dielectric study of molecular dynamics in polyurethane-poss hybrids”**
K. Raftopoulos¹, C. Pandis¹, L. Apekis¹, B. Janowski², K. Pielichowski², P. Pissis¹
¹*National Technical University of Athens, Department of Physics*
²*Department of Chemistry and Technology of Polymers, Cracow University of Technology*
- 5 **“Dielectric - mechanical and thermal studies of molecular mobility and phase morphology in epoxy-amine / carbon black nanocomposites”**
E. Logakis¹, Th. V. Kosmidou³, A. Kanapitsas², C. Tsonos², C. G. Delides³, P. Pissis¹
¹*National Technical University of Athens, Department of Physics*
²*Technological Educational Institute of Lamia, Department of Electronics*
³*Technological Educational Institute of Western Macedonia*
- 6 **“Dynamics and rheology in suspensions and glasses of soft colloids”**
A. Pamvouxoglou^{1,2} and G. Petekidis^{1,2}
¹*FORTH/ Institute of Electronic Structure and Laser*
²*Department of Materials Science and Technology, University of Crete*
- 7 **“Thermal and electrical properties of multi-walled carbon nanotube nanocomposites prepared by diluting a masterbatch with various types of modified and non-modified polypropylenes”**
E. Logakis¹, C. Pandis¹, V. Peoglos¹, P. Pissis¹, M. Mičušik², M. Omastová², J. Pionteck³, P. Pötschke³
¹*National Technical University of Athens*
²*Polymer Institute, Slovak Academy of Sciences*
³*Leibniz Institute of Polymer Research, Dresden*
- 8 **“Dielectric studies of molecular dynamics in swollen poly(ethyl acrylate) networks with non-polar solvents”**
A. Stathopoulos¹, A. Kyritsis¹, P. Pissis¹, J.L. Gomez Ribelles², M. Monleon Pradas²
¹*Department of Physics, National Technical University of Athens, Greece*
²*Department of Applied Thermodynamics, Universidad Politecnica de Valencia, Spain*

- 9 **“Dynamic mechanical and tensile properties of thermally oxidized homopolymer PAN fibers”**
S. Soulis, M. Pisania, P. Stergiou, J. Simitzis
School of Chemical Engineering, National Technical University of Athens
- 10 **“Synthesis and mechanical properties of A_nB_n star copolymers and $A_n(B-b-C)_n$ star terpolymers”**
G. Tsoukleri^{1,2}, G. Linardatos^{1,3}, J. Parthenios¹, C. Galiotis^{1,2}, C. Tsitsilianis^{1,3}
¹*Foundation of Research and Technology Hellas, Institute of Chemical Engineering and High Temperature Processes*
²*Department of Materials Science, University of Patras*
³*Department of Chemical Engineering, University of Patras*
- 11 **“Influence of maleic anhydride component of cured polyesters on their relaxations determined by dielectric spectroscopy (DS) and dynamic mechanical thermal analysis (DMTA)”**
G. Mitsis, D. Triantou, S. Soulis, J. Simitzis
School of Chemical Engineering, National Technical University of Athens
- 12 **“Self-assembly and dynamics of discotic liquid crystals”**
M. M. Elmahdy^{1,2}, X. Dou³, M. Mondeshki³, G. Floudas^{1,2}, H. -J. Butt³, H. W. Spiess³, K. Müllen³
¹*Department of Physics, University of Ioannina*
²*Foundation for Research and Technology-Hellas (FORTH), Biomedical Research Institute (BRI)*
³*Max-Planck Institut für Polymerforschung, Mainz*
- 13 **“Effect of architecture on the self-assembly and dynamics of model diblock and star copolypeptides”**
A. Gitsas¹, G. Floudas¹, M. Mondeshki², H. -J. Butt², H. W. Spiess², H. Iatrou³, N. Hadjichristidis³
¹*University of Ioannina, Department of Physics and Foundation for Research and Technology-Hellas (FORTH), Biomedical Research Institute (BRI)*
²*Max Planck Institute for Polymer Research*
³*University of Athens, Department of Chemistry, Industrial Chemistry Laboratory*
- 14 **“Modeling the lateral aggregation of membrane proteins”**
M. Yiannourakou¹, L. Marsella², F. De Meyer^{2,3}, B. Smit³
¹*NCSR “Demokritos”*
²*CECAM - Centre Europeen de Calcul Atomique et Moleculaire, Lyon, France*
³*Department of Chemical Engineering, University of California*
- 15 **“Complexation of hen egg white lysozyme with sodium (sulfamate-carboxylate) isoprene polyelectrolytes”**
M. Karayianni, G. Mountrichas, S. Pispas, G. D. Chryssikos, V. Gionis
Theoretical & Physical Chemistry Institute, National Hellenic Research Foundation
- 16 **“Study of the release kinetics of a drug and an MRI contrast agent from poly (vinyl alcohol) matrices”**
A. Hasimi, K. G. Papadokostaki, M. Sanopoulou
Institute of Physical Chemistry, NCSR “Demokritos”
- 17 **“Wetting, optical property and protein adsorption control of polymer surfaces by plasma nanotexturing”**
K. Tsougeni¹, M. E. Vlachopoulou¹, K. Kontakis¹, D. Papageorgiou¹, P. S. Petrou², S. E. Kakabakos², A. Tserepi¹, E. Gogolides¹
¹*Institute of Microelectronics, NCSR “Demokritos”*
²*Institute of Radioisotopes and Radiodiagnostic Products NCSR “Demokritos”*

- 18 **“Bulk and interfacial dynamics of PDMS/Titania nanocomposites”**
A. Panagopoulou¹, A. Spanoudaki¹, P. Pissis¹, L. Bokobza²
¹National Technical University of Athens, Department of Physics
²Laboratoire de Physico-Chimie Structurale et Macromoléculaire ESRCI, France
- 19 **“Synthesis and properties of unmodified LDPE/Organosilicates nanocomposites”**
A. Giannakas¹, C. G. Spanos¹, P. Xidas², K. S. Triantafyllidis², A. Katsoulidis³, A. Ladavos¹
¹School of Natural Resources and Enterprise Management, University of Ioannina
²Department of Chemistry, Aristotle University of Thessaloniki
³Department of Chemistry, University of Ioannina
- 20 **“Organic - Inorganic Nanocomposites: A study of the structure and dynamics in confined geometry”**
S. Fotiadou¹, K. Chrissopoulou², B. Frick³, S. H. Anastasiadis^{1,2}
¹Chemical Engineering Department, Aristotle University of Thessaloniki
²Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas
³Institut Laue Langevin, Grenoble, France
- 21 **“Glass transition, structural characterization and segmental dynamics in epoxy/carbon fillers nanocomposites”**
Th. V. Kosmidou¹, C. G. Delides¹, C. A. Stergiou², A. S. Vatalis¹, P. Pissis³
¹Technological Education Institute (TEI) of Western Macedonia, Laboratories of Physics and Materials Technology
²Department of Electrical Engineering and Computers, Aristotle University of Thessaloniki
³National Technical University of Athens, Department of Physics
- 22 **“Dynamics of epoxy nanocomposites: The effect of filler’s content and the size structure and geometry of the nanoparticles”**
C. G. Delides
Technological Education Institute (TEI) of Western Macedonia, Laboratories of Physics and Materials Technology
- 23 **“Study of silicone rubber nanocomposites reinforced with organophilic montmorillonite”**
A. Voulomenou, P.A. Tarantili
School of Chemical Engineering, National Technical Univ. of Athens
- 24 **“Molecular mobility studies in hybrid PCN clay nanocomposites”**
P. Maroulas¹, S. Kripotou¹, P. Pissis¹, A. Fainleib², K. Gusakova²
¹Department of Physics, National Technical University
²Institute of Macromolecular Chemistry of National Academy of Sciences
- 25 **“A theoretical study on the size and the shape of linear dendronized polymers in good and selective solvents”**
P. Efthymiopoulos, M. Kosmas, C. Vlahos
Department of Chemistry, University of Ioannina
- 26 **“On the conformational properties of a DNA chain with loops”**
M. Kosmas, C. Vlahos
Chemistry Department, University of Ioannina
- 27 **“Collapse transitions in thermosensitive alternating copolymers: a monte carlo study”**
A. N. Rissanou^{1,2}, E. Manias³ and I. A. Bitsanis¹
¹Institute of Electronic Structure and Laser, FO.R.T.H.
²Molecular Thermodynamics and Modeling of Materials Laboratory, Institute of Physical Chemistry, National Center for Scientific Research “Demokritos
³Department of Materials Science & Eng., Pennsylvania State University

- 28 **“Molecular dynamics of PAMAM dendrimers and their complexes with linear polymers in aqueous solutions”**
I. Tanis, K. Karatasos
Department of Chemical Engineering, Aristotle University of Thessaloniki
- 29 **“Off lattice monte carlo simulations of AB and ABA Hybrid star dendritic copolymers”**
L. Gergidis¹, O. Moulτος², C. Georgiadis², M. Kosmas² and C. Vlahos²
¹*Department of Materials Science & Engineering, University of Ioannina,*
²*Department of Chemistry, University of Ioannina*
- 30 **“Neutron reflectivity and computer simulation studies of centrally adsorbed star polymer brushes”**
I. Hiotelis¹, A. G. Koutsioubas¹, N. Spiliopoulos¹, D. Anastassopoulos¹, A. A. Vradis¹, C. Toprakcioglu¹, A. Menelle², G. Sakellariou³, Nikos Hadjichristidis³
¹*Physics Department, University of Patras*
²*Laboratoire Leon Brillouin, CEA SACLAY, France*
³*Chemistry Department, University of Athens*
- 31 **“Detection of diffusive jumps of small penetrants dispersed in polymer systems”**
Th. E. Raptis¹, V. E. Raptis^{2,3}, J. Samios⁴
¹*Division of Applied Technology, NCSR “Demokritos”*
²*Department of Chemistry, University of Ioannina.*
³*Department of Materials Science and Engineering, University of Ioannina.*
⁴*Department of Chemistry, University of Athens*
- 32 **“Investigation of thermodynamic properties of polyethylene glycol by inverse Gas chromatography and computer simulations”**
G. S. Dritsas, I. Tanis, M. Stournara, K. Karatasos, C. Panayiotou
Department of Chemical Engineering, Aristotle University of Thessaloniki
- 33 **“Atomistic simulation of the sorption of small gas molecules in polyisobutylene”**
G. Tsolou¹, V. G. Mavrantzas¹, Z. A. Makrodimitri², I. G. Economou², R. Gani³
¹*Department of Chemical Engineering, University of Patras & FORTH-ICE/HT*
²*Molecular Thermodynamics and Modeling of Materials Laboratory, Institute of Physical Chemistry, National Center for Scientific Research “Demokritos”*
³*CAPEC, Department of Chemical Engineering, Technical University of Denmark*
- 34 **“Studying the elasticity of biological membranes through theory and simulations”**
V. Harmandaris, M. Deserno
Max Planck Institute for Polymer Research, Mainz, Germany
- 35 **“Structural and electronic properties of Nb nanowires by tight binding molecular dynamics calculations”**
M. Iakovidis and Ch.E. Lekka
Department of Materials Science and Engineering, University of Ioannina
- 36 **“Structural and electronic properties of Ti and TiO₂ on C nanotubes by ab-initio calculations”**
M. Gialambouki and Ch.E. Lekka
Department of Materials Science and Engineering, University of Ioannina
- 37 **“Lithium ion induced nanophase ordering and ion mobility in ionic block copolymers”**
E. F. Ioannou¹, G. Mountrichas¹, S. Pispas¹, E. I. Kamitsos¹ and G. Floudas²
¹*Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation* ²*Department of Physics and Foundation for Research and Technology-Hellas, Biomedical Research Institute (FORTH-BRI)*
- 38 **“Reversible self-assembled nanostructures from block polyampholytes”**
C. Mantzaridis, S. Pispas
Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation

- 39 **“Self-assembly in mixed amphiphilic diblock copolymers-zwitterionic surfactants aqueous solutions”**
K. Dimitroulopoulos, S. Pispas
Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation
- 40 **“Self assembly core-shell PCL-co-PSu nanoparticles based on crystalline amorphous moieties for efficient controlled drug release”**
S. Papadimitriou¹, D. Bikiaris¹, K. Avgoustakis²
¹*Department of Chemistry, Aristotle University of Thessaloniki*
²*Department of Pharmacy, University of Patras*
- 41 **“Formation of gold nanoparticles in the corona of di- and triblock copolymers”**
A. Meristoudi^{1,2}, S. Pispas¹, N. Vainos^{1,2}
¹*Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation*
²*Materials Science Department, University of Patras*
- 42 **“Charge transport of conjugated polymer coated core-shell nanoparticles”**
K. Mpoukouvalas¹, J. Wang¹, L. Sun¹, C. Wei¹, T. Beierlein², A. Muehlebach³, E. Bonaccorso¹, H. -J. Butt¹, G. Wegner¹
¹*Max Planck Institute for Polymer Research*
²*CSEM - Centre Suisse d'Electronique et de Microtechnique SA*
³*Ciba Specialty Chemicals Inc. Group Research, K-420.3.15, Switzerland*
- 43 **“Microcellular nanocomposite polymers prepared with supercritical CO₂: The role of nanoclays on porous structure”**
I. Tsvintzelis¹, S. I. Marras^{1,2}, I. Zuburtikudis², C. Panayiotou¹
¹*Department of Chemical Engineering, Aristotle University of Thessaloniki*
²*Department of Industrial Design Engineering, TEI of Western Macedonia*
- 44 **“Poly(ethylene succinate) nanocomposites with a multifunctional nanofiller: Mechanical properties and biodegradability”**
A. A. Vassiliou, D. N. Bikiaris
Department of Chemistry, Aristotle University of Thessaloniki
- 45 **“A new approach of segmental orientation in amorphous epoxy resin/carbon black nanocomposites”**
C. A. Stergiou¹, Th. V. Kosmidou², C. G. Delides²
¹*Department of Electrical and Computer Engineering, Aristotle University*
²*Technological Education Institute (TEI) of Western Macedonia, Laboratories of Physics and Materials*
- 46 **“End-grafted polymer chains onto inorganic nanoparticles”**
D. S. Achilleos, D. Moatsou, M. Vamvakaki
Institute of Electronic Structure and Laser, FO.R.T.H. and Department of Materials Science and Technology, University of Crete
- 47 **“Adsorption of oligomers and polymers in nanoporous alumina”**
S. Karagiovanaki, A. G. Koutsioubas, N. Spiliopoulos, C. Toprakcioglu
Department of Physics, University of Patras
- 48 **“Fluorinated methacrylic homopolymers: Polymerization, characterization, surface properties and effectiveness for the protection of stone”**
S. K. Papadopoulou¹, C. Michailof¹, I. Karapanagiotis², A. Tsakalof³, I. Zuburtikudis⁴, C. Panayiotou¹
¹*Department of Chemical Engineering, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece*
²*“Ormylia” Art Diagnosis Centre, Ormylia, Chalkidiki*
³*Department of Medicine, University of Thessaly*
⁴*Department of Industrial Design Engineering, TEI of Western Macedonia*

- 49 **“Fabrication and thermal characterization of a thin poly(L-lactic acid) film with the layer-by-layer spin coating process and the use of thickness shear mode resonators”**
A. Kakalis, C. Panayiotou
Department of Chemical Engineering, University of Thessaloniki
- 50 **“Colloidal microgel particles carrying acidic or basic moieties”**
K. E. Christodoulakis, M. Vamvakaki
*Institute of Electronic Structure and Laser, Foundation for Research and Technology
Department of Materials Science and Technology, University of Crete*
- 51 **“Cu²⁺-induced gelation in aqueous solutions of maleic acid-containing polyelectrolytes”**
E. K. Oikonomou^{1,2}, G. Bokias¹, J. K. Kallitsis^{1,2}
¹*Department of Chemistry, University of Patras*
²*Foundation of Research and Technology Hellas, Institute of Chemical Engineering and High-Temperature Chemical Processes (ICE/HT FORTH)*
- 52 **“Hydration properties of nanostructured hydrogels based on poly(2-hydroxyethyl acrylate) and poly(2-hydroxyethyl-co-ethyl acrylate)”**
Ch. Pandis¹, A. Stathopoulos¹, P. Klonos¹, A. Spanoudaki¹, A. Kyritsis¹, P. Pissis¹, M. M. Pradas², J. C. Rodriguez Hernandez², J. L. Gomez Ribelles²
¹*Department of Physics, National Technical University of Athens*
²*Center for Biomaterials, Polytechnic University of Valencia*
- 53 **“Molecularly imprinted polymers (MIPs) as selective sorbents in trichromatic dye mixtures”**
G. Z. Kyzas, D. N. Bikiaris, N. K. Lazaridis
School of Chemistry, Aristotle University of Thessaloniki
- 54 **“pH-controlled quenching of the fluorescence of hydrophobic probes solubilized in ternary poly(acrylic acid)-surfactant-Cu²⁺ complexes in aqueous solution”**
Z. Iatridi, G. Bokias
Department of Chemistry, University of Patras
- 55 **“Development of new semiconducting polymer functionalized carbon nanotubes”**
A. A. Stefanopoulos^{1,2}, C. L. Chochos¹, K. Papagelis³, J. K. Kallitsis¹
¹*Department of Chemistry, University of Patras*
²*FO.R.T.H., Institute of Chemical Engineering and High Temperature Processes*
³*Department of Materials Science, University of Patras*

Route to Conference Location

