



Organization:
University of Ioannina



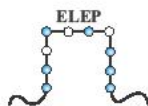
Department of Materials
Science & Engineering



Department of Chemistry



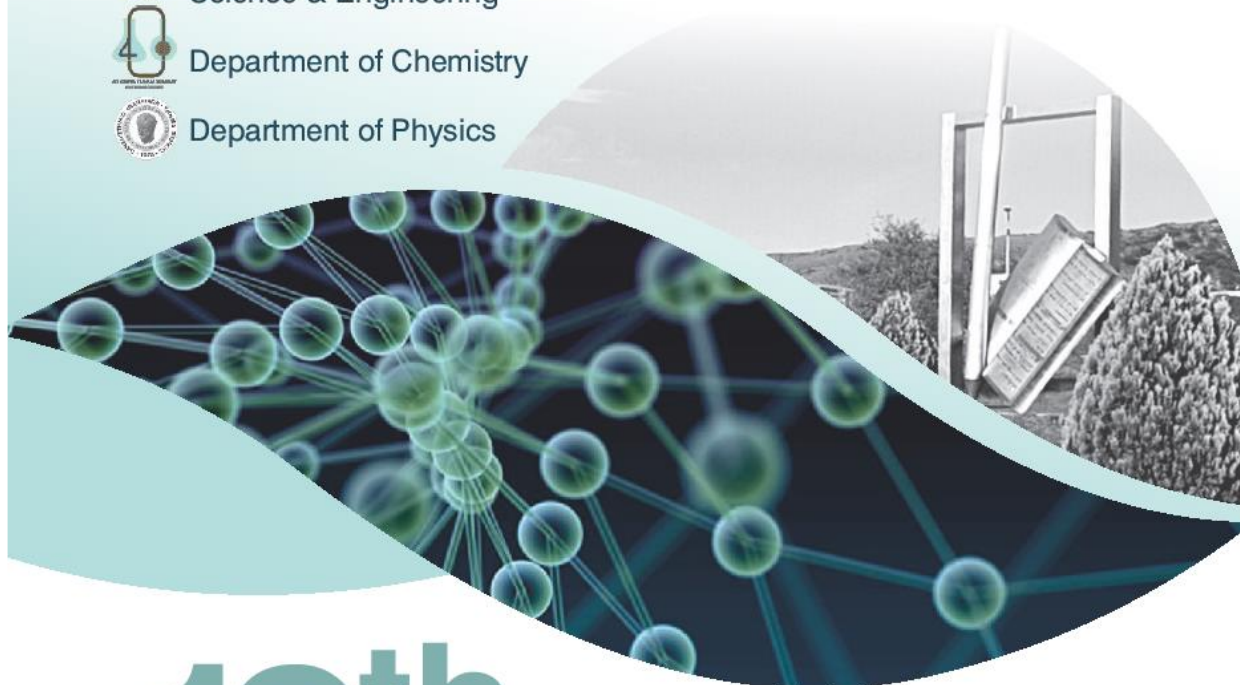
Department of Physics



Under the auspices:
Hellenic Polymer Society



European Polymer Federation



12th

Hellenic Polymer Society
International Conference

2018



30 September - 3 October

Ioannina, Greece

Main Ceremony Hall, University of Ioannina:
"Georgios Mylonas"

SCIENTIFIC PROGRAMME

Welcome

On behalf of the Organizing Committee and the Hellenic Polymer Society, I would like to thank you for your participation in the 12th Hellenic Polymer Society International Conference (POLYCONF12) which is held at the University of Ioannina, Ioannina, Greece, during September 30-October 3, 2018. The conference venue is the main Ceremony Hall “Georgios Mylonas” at the University of Ioannina.

The Hellenic Polymer Society is a scientific society rapidly growing and a significant number of participants from Academia, Research Institutes and Industry are expected. This is the second time this conference is held in Ioannina.

This Conference series, which started in 1987, is a biannual event hosted in different cities in Greece and always features plenary lectures, invited talks as well as oral and poster presentations.

The scientific program is covering all the polymer science and engineering topics related to specific thematic areas such as: Recent Developments in Polymer Synthesis and Characterization Methods, Polymer Physics, Polymer Engineering, Biopolymers & Applications, Polymers for Emerging Technologies (Energy, Organic Electronics, Environment, Nanotechnology), Advances in Polymer Theory and Simulations and Polymers in Industry.

Furthermore, two special sessions during the conference will be held honouring the memory of the late Professor Marios Kosmas involving plenary lectures and invited talks from esteemed colleagues. Professor Kosmas was a full Professor at the Department of Chemistry, University of Ioannina and his contribution in polymer science and engineering through his emerging research was and is very highly appreciated by the Polymer scientific community.

During the closing ceremony of the conference, three awards will be given to the best three poster presenters. The evaluation will be made by an independent scientific Award Committee on the basis of scientific merit and excellence of authors' research.

Finally, I would like to thank all our sponsors for their support and efforts for a successful and fruitful scientific conference.

Welcome to the 12th Hellenic Polymer Society International Conference (POLYCONF12) and I wish you a pleasant stay in the city of Ioannina.

Apostolos Avgeropoulos
Chair of the Organizing Committee

Organization:



University of Ioannina



Department of Materials Science and Engineering

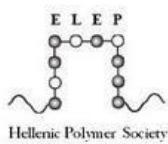


Department of Chemistry



Department of Physics

Under the auspices:



Hellenic Polymer Society



European Polymer Federation

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SCIENTIFIC PROGRAM

Sunday, 30th September 2018

18:00-20:00 Conference Opening - Registration

20:00-22:00 Welcome Cocktail and Buffet

Monday, 1st October 2018

08:00-09:00 Registration

09:00-09:30 Welcome

09:30-11:15 SESSION 1:

Recent Developments in Polymer Synthesis and Characterization Methods

Chairs: A. Avgeropoulos, G. Hadziioannou

09:30-10:00 PLENARY ORAL: Ring-based macromolecular architectures: their importance in polymer physics

Nikos Hadjichristidis

Polymer Synthesis Laboratory, KAUST Catalysis Center, Physical Sciences and Engineering Division, King Abdullah University of Science and Technology (KAUST), Thuwal, Kingdom of Saudi Arabia

10:00-10:30 PLENARY ORAL: Anionic copolymerization of CO₂ with epoxides as a new approach for the synthesis of polycarbonates

Yves Gnanou

Polymer Synthesis Laboratory, KAUST Catalysis Center, Physical Sciences and Engineering Division, King Abdullah University of Science and Technology (KAUST), Thuwal, Kingdom of Saudi Arabia

10:30-10:50 INVITED ORAL: Triblock terpolymers by raft polymerization: synthesis and self-assembly

Stergios Pispas

Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece

10:50-11:10 INVITED ORAL: Metallocene-mediated cationic polymerization of vinyl ethers. A new route for the synthesis of statistical, block and graft copolymers

Marinos Pitsikalis, Stavros Zouganelis, Eleftheria Batagianni, Arkadios Marathianos, Ekaterini Koraki, Andreas-Philippos Maroudas

Industrial Chemistry Laboratory, Department of Chemistry, National & Kapodistrian University of Athens, Athens, Greece

11:15-11:45 Coffee Break

11:45-13:00 SESSION 2:

Recent Developments in Polymer Synthesis and Characterization Methods

Chairs: N. Hadjichristidis, Y. Gnanou

11:45-12:05 INVITED ORAL: Dynamic covalent polymer networks comprising four-armed star polymers cross-linked with acylhydrazone bonds

Costas S. Patrickios, Demetris E. Apostolidis

Department of Chemistry, University of Cyprus, Aglantzia, Nicosia, Cyprus

12:05-12:25 INVITED ORAL: Cooperative response of triple-stimuli sensitive diblock copolymers

Maria Vamvakaki^{1,2}

¹*Institute of Electronic Structure & Laser, Foundation for Research & Technology-Hellas, Heraklion, Crete, Greece*

²*Department of Materials Science & Technology, University of Crete, Heraklion, Crete, Greece*

12:25-12:40 Synthesis and characterization of suprapolymeric structures from well-defined linear pentablock quaterpolymers

Panagiota G. Fragouli¹, Nikos Hadjichristidis², Olli Ikkala³, Nikolay Houbenov³, Hermis Iatrou⁴, Johannes S. Haataja³, Vladimir Aseyev⁵, Rachid Sougrat²

¹*University of West Attica, Greece*

²*Physical Sciences and Engineering Division, King Abdullah University of Science and Technology (KAUST), Thuwal, Kingdom of Saudi Arabia*

³*Department of Applied Physics, Aalto University, Alto, Espoo, Finland*

⁴*Department of Chemistry, National and Kapodistrian University of Athens, Athens, Greece*

⁵*Department of Chemistry, University of Helsinki, Helsinki, Finland*

12:40-12:55 Poly(dimethylaminoethyl methacrylate) -b- poly(hydroxypropyl methacrylate) copolymers: synthesis and pH/thermo-responsive behavior in aqueous solutions

Theodoros Sentoukas, Stergios Pispas

Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece

13:00-14:00 Lunch Break ("Figos" Restaurant, please present your coupon)

14:00-16:00 SESSION 3:

Polymer Physics

Chairs: D. Vlassopoulos, D. Ivanov

14:00-14:20 INVITED ORAL: Multi-functional surfaces with controllable wettability and water adhesion

Melani A. Frysalis^{1,2}, George Kenanakis¹, Georgia Kaklamani¹, Lampros Papoutsakis^{1,2} and Spiros H. Anastasiadis^{1,2}

¹*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Crete, Greece,*

²*Department of Chemistry, University of Crete, Heraklion, Crete, Greece*

14:20-14:35 Hydration properties of polymer hydrogels

Apostolos Kyritsis¹, Sotiria Kriptou¹, Evdokia Stefanopoulou¹, Gloria Gallego Ferrer²

¹*Department of Physics, National Technical University of Athens, Athens, Greece*

²*Center for Biomaterials and Tissue Engineering, Polytechnic University of Valencia, Camino de Vera, Valencia, Spain*

14:35-14:50 The glass transition in polyurethanes with hybrid organic inorganic particles. Effects of chain topology and hard segment flexibility

Konstantinos Raftopoulos¹, Jan Ozimek¹, Stefanos Koutsoumpis², Edyta Hebda¹, Patrycja Tworzyd¹, Anna Grzybowska¹, Panagiotis Klonos², Christine Papadakis³, Apostolos Kyritsis², Polycarpos Pissis², Krzysztof Pielichowski¹

¹*Institute of Chemistry and Technology of Polymers, Cracow University of Technology, Cracow, Poland*

²*Department of Physics, National Technical University of Athens, Athens, Greece*

³*Department of Physics, Technical University of Munich, Munich, Germany*

14:50-15:05 Tuning polymer crystallinity

Kiriaki Chrissopoulou,¹ Hellen Papananou,^{1,2} Eleni Perivolari,^{1,2} Spiros H. Anastasiadis^{1,2}

¹*Institute of Electronic Structure and Laser, Foundation for Research and Technology, Heraklion Crete, Greece*

²*Department of Chemistry, University of Crete, Heraklion Crete, Greece*

15:05-15:20 High conductivity, high modulus solid polymer electrolytes via macromolecular engineering

Emmanouil Glynos,¹ Emmanouil Mygiakis,³ Alkmini D. Nega,³ Wenyang Pan,⁴ Lampros Papoutsakis,^{1,2} Emmanuel P. Giannelis,⁴ Georgios Sakellariou³, Spiros H. Anastasiadis^{1,2}

¹*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Crete, Greece*

²*Department of Chemistry, University of Crete, Heraklion, Crete, Greece*

³*Department of Chemistry, National and Kapodistrian University of Athens, Athens, Greece*

⁴*Department of Materials Science and Engineering, Cornell University, Ithaca, NY, USA*

15:20-15:35 Structure and dynamics in bio-based polymer nanocomposites

Krystalenia Androulaki,^{1,2} Kiriaki Chrissopoulou,¹ Massimiliano Labardi,³ Spiros H. Anastasiadis^{1,2}

¹*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion Crete, Greece*

²*Department of Chemistry, University of Crete, Heraklion, Crete, Greece*

³*Department of Physics, University of Pisa, Pisa, Italy and CNR-IPCF, Messina, Italy*

15:35-15:50 Polymerized ionic liquids with polythiophene backbones. Self-assembly, thermal properties and ion conduction.

Achillefs Pipertzis¹, Markus Mühlinghaus², Markus Mezger³, Ulli Scherf², George Floudas¹

¹*Department of Physics, University of Ioannina, Ioannina, Greece*

²*Bergische Universität Wuppertal, Wuppertal, Germany*

³*Institute of Physics, Johannes Gutenberg University, Mainz, Germany*

16:00-16:30 Coffee Break

16:30-18:15 SESSION 4:

Polymer Physics, Polymer Engineering, Polymers in Industry

Chairs: S. Anastasiadis, C. Patrikios

16:30-16:50 INVITED ORAL: Monitoring Crystallization and Melting with Millisecond Time Resolution: In-situ Combination of Micro-Focus X-ray Scattering and Ultra-Fast Scanning Chip Calorimetry

Dimitri A. Ivanov¹, Martin Rosenthal², Alexey P. Melnikov³

¹*Institut de Sciences des Matériaux de Mulhouse, Mulhouse, France*

²*European Synchrotron Radiation Facility (ESRF), Grenoble, France*

³*Faculty of Fundamental Physical and Chemical Engineering, Lomonosov Moscow State University (MSU), Russia*

- 16:50-17:10 INVITED ORAL: Nonlinear shear rheometry of entangled polymers**
Dimitris Vlassopoulos^{1,2}
¹*Department of Materials Science & Technology, University of Crete, Heraklion, Crete, Greece*
²*Foundation for Research and Technology-Hellas (FORTH), Heraklion, Crete, Greece*
- 17:10-17:25 Conformation of grafted-through high generation dendronized polymers in solutions**
Fabien Dutertre¹, Ki-Taek. Bang², Manos Vereroudakis³, Benoit Loppinet³, George Fytas⁴, Tae-Lim Choi⁵
¹*CNRS, Université de Saint-Etienne, Saint-Etienne, France*
²*Department of Chemistry, Seoul National University, Seoul, Republic of Korea*
³*Institute of Electronic Structure and Laser, Foundation For Research And Technology-Hellas (IESL-FO.R.T.H.), Heraklion, Crete*
⁴*Max Planck Institute For Polymer Research, Mainz, Germany*
- 17:25-17:45 INVITED ORAL: Thermo-chemical recycling of polymers from plastic wastes**
Dimitris Achilias
Laboratory of Polymer Chemistry and Technology, Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece
- 17:45-18:00 Epoxy polymer additives derived from lignocellulosic biomass: the case of organosolv and kraft lignin**
D. Giliopoulos, R. Kokoli, K. Karagiannidis, C. Pappa, A. Fotopoulos, P. Lazaridis, A. Margellou, K.S. Triantafyllidis
Laboratory General and Inorganic Chemical Technology, Department of Chemistry, Aristotle University of Thessaloniki, Greece
- 18:00-18:15 The role of polymers on the development of eco-friendly household products**
Evdokia Oikonomou¹, Nikolay Christov², Galder Cristobal², Claudie Bourgaux³, Laurent Heux⁴, Jean-Francois Berret¹
¹*Laboratoire Matière Et Systèmes Complexes, CNRS Université Denis Diderot Paris-Vii, Ba Timent Condorcet, 10 Rue Alice Domon Et Léonie Duquet, Paris, France*
²*Solvay Singapore, 1 Biopolis Dr, Amnios, Singapore*
³*Institut Galien Paris-Sud - UMR CNRS, Faculté De Pharmacie, Université Paris-Sud Xi, Châtenay-Malabry Cedex, France*
⁴*Centre De Recherches Sur Les Macromolécules Végétales, Bp 53, Grenoble Cedex 9, France*

18:15-18:35 Hellenic Polymer Society (ELEP)

18:45-20:45 Poster Viewing

Tuesday, 2nd October 2018

09:00-11:15 SESSION 5:

Polymers for Emerging Technologies (*Energy, Organic Electronics, Environment, Nanotechnology*)

Chairs: H.-A. Klok, G. Malliaras

- 09:00-09:30 PLENARY ORAL: Structure - property correlations for thermoelectric polymers: towards efficient material design**
Georges Hadziioannou¹, Geoffrey Prunet¹, Ioannis Petsagkourakis², Eleni Pavlopoulou³, Giuseppe Portale⁴, Mats Fahlman², Eric Cloutet⁵, Guillaume Fleury¹, Xianjie Liu²
¹ *Laboratoire de Chimie des Polymères Organiques, University of Bordeaux, France*
² *Laboratory of Organic Electronics, Department of Science and Technology, University of Linköping, Sweden,* ³ *Bordeaux INP, LCPO, Pessac, France,* ⁴ *Groningen University, Holland,* ⁵ *French National Center for Scientific Research (CNRS), France*
- 09:30-09:50 INVITED ORAL: Multi-functional graphene/polymer nanocomposites**
Costas Galiotis^{1,2}
¹ *Department of Chemical Engineering, University of Patras, Rio, Greece*
² *Institute of Chemical Engineering Sciences, Foundation of Research and Technology-Hellas (ICEHT/ FORTH), Rio, Greece*
- 09:50-10:10 INVITED ORAL: Semiconducting materials and hybrids for organic electronics**
J. K. Kallitsis^{1,2}, S. Aivali¹, C. Anastasopoulos¹, A. K. Andreopoulou^{1,2}
¹ *Department of Chemistry, University of Patras, Rio, Greece,*
² *Chemical of Engineering Sciences, Foundation of Research Technology Hellas FORTH/ICE-HT Rio, Greece*
- 10:10-10:25 Development of polymeric ionic liquid membranes for CO₂ separation**
Aristofanis Vollas¹, Thanasis Chouliaras¹, Valadoula Deimede¹, Theophilos Ioannides², Joannis Kallitsis¹
¹ *Department of Chemistry, University of Patras, Rio, Greece*
² *Institute of Chemical Engineering Science, Foundation of Research Technology Hellas (FORTH/ICE-HT), Rio, Greece*
- 10:25-10:40 Development of photosensitizers for dsscs of improved light absorption and stable binding onto inorganic nanoparticulate photoanodes**
Aikaterini Andreopoulou, Christos Charalampopoulos, Charalampos Anastasopoulos, Panagiotis Giannopoulos, Joannis Kallitsis
Department of Chemistry, University of Patras, Rio, Greece
- 10:40-10:55 Unveiling the Unique Properties of Conjugated Polymers. Horizon Materials for Organic (Bio) Electronic Applications**
Vasilis G. Gregoriou,^{1,2} Apostolos Avgeropoulos³ and Christos L. Chochos^{1,3,4}
¹ *Advent Technologies SA, Patras Science Park, Rio, Patra, Greece*
² *National Hellenic Research Foundation (NHRF), Athens, Greece*
³ *Department of Materials Science and Engineering, University of Ioannina, Ioannina, Greece*
⁴ *National Hellenic Research Foundation (NHRF), Institute of Biology, Medicinal Chemistry & Biotechnology, Athens, Greece*
- 10:55-11:15 INVITED ORAL: What can polymer science learn from the vibration dynamics of polymer colloids?**
Georgios Fytas^{1,2}
¹ *Max Planck Institute for Polymer Research, Mainz, Germany*
² *Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (IESL-FO.R.T.H.), Heraklion, Crete, Greece*

11:15-11:45 Coffee Break

11:45-14:00 SESSION 6:

Polymers for Emerging Technologies (*Energy, Organic Electronics, Environment, Nanotechnology*)

Chairs: C. Galiotis, G. Fytas

11:45-12:15 PLENARY ORAL: Polymers at synthetic and biological surfaces

Harm-Anton Klok

Institute of Materials, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne,

Switzerland

12:15-12:45 PLENARY ORAL: Conjugated polymers in brain interfacing

George Malliaras

Department of Engineering, University of Cambridge, Cambridge, United Kingdom

12:45-13:05 INVITED ORAL: Development of Near Infrared (NIR) Conjugated Polymers and Advanced Characterization Spectroscopic Tools for Bioimaging and Healthcare Applications

Vasilis G. Gregoriou^{1,2}

¹*National Hellenic Research Foundation (NHRF), Athens, Greece*

²*Advent Technologies SA, Patras Science Park, Platani-Rio, Patra, Greece*

13:05-13:20 Fluorinated polymers for hydrophilicity surface modification via lithography

Fotini Machairioti¹, Panagiotis Bilalis², Anastasia Nika¹, Michalis Milidis¹, Panagiota Petrou³, Sotiris Kakambakos³, Panagiotis Argitis³, Nikos Hadjichristidis², Margarita Chatzichristidi¹

¹ *Department of Chemistry, National and Kapodistrian University of Athens, Athens, Greece*

² *KAUST Catalysis Center, Physical Sciences and Engineering Division, King Abdullah University of Science and Technology (KAUST), Kingdom of Saudi Arabia*

³ *Institute of Microelectronics, National Center for Scientific Research NCSR "Demokritos", Athens, Greece*

13:20-13:35 Synthesis and crystallization kinetics of graphene/poly(butylene succinate) composites

Panagiotis Karagkounis, Dimitrios Tasis, George Z. Papageorgiou

Department of Chemistry, University Of Ioannina, Ioannina, Greece

13:35-13:50 Effect of biaxial stretching on the structure and dynamics of isotactic polypropylene films

Christos Politidis¹, George Floudas¹, Antonis Gitsas²

¹*Department of Physics, University of Ioannina, Ioannina, Greece,*

²*Borealis Polyolefine GMBH, Austria*

14:00-15:00 Lunch Break ("Figos" Restaurant, please present your coupon)

15:00-17:00 SESSION 7: *Special Session I, in memory of M. Kosmas*

Advances in Polymer Theory and Simulations

Chairs: S. Anastasiadis, J. Kallitsis, A. Avgeropoulos, G. Floudas

15:00-15:30 PLENARY ORAL: Polymer flow and polymer topology: linear chains, rings and knots flow differently

Christos N. Likos, Maximilian Liebetreu, Lisa Weiß

Faculty of Physics, University of Vienna, Vienna, Austria

15:30-15:50 INVITED ORAL: A novel simple method for the integral thermodynamic characterization of polymers and composite materials

Costas Panayiotou

Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece

15:50-16:10 INVITED ORAL: Molecular simulations of complex polymeric nanostructured materials

Vassilios Harmandaris^{1,2}

¹*Department of Mathematics and Applied Mathematics, University Of Crete, Heraklion, Greece*

²*Institute of Applied and Computational Mathematics, IACM/FORTH, Heraklion, Greece*

16:10-16:25 Flow behavior of pp-polymer nanocomposites in injection molding hyperbolic dies

Evan Mitsoulis

School of Mining Engineering and Metallurgy, National Technical University of Athens (N.T.U.A.), Athens, Greece

16:25-16:40 Conformation and dynamics of ring polymers in dilute solutions of linear matrices: results from a systematic molecular dynamics simulation study and comparison with experimental data

Dimitrios Tsalikis, Vlas Mavrantzas

Department of Chemical Engineering, University of Patras, Rio, Greece

Institute of Chemical Engineering Science, Foundation of Research Technology Hellas (FORTH/ICE-HT) Rio, Greece

16:40-17:00 INVITED ORAL: The scientific achievements of Professor Marios Kosmas

Costas Vlahos

Department of Chemistry, University of Ioannina, Ioannina, Greece

17:00-17:30 Coffee Break

17:30-19:00 SESSION 8: *Special Session II, in memory of M. Kosmas*

Advances in Polymer Theory and Simulations

Chairs: C. N. Likos, C. Panayiotou

17:30-17:55 PLENARY ORAL: *By skype*

M. Muthukumar

Department of Polymer Science and Engineering, University of Massachusetts at Amherst, Amherst, Massachusetts, USA

17:55-18:15 INVITED ORAL: Polyelectrolyte/graphene-based nanocomposite hydrogels: a detailed view by molecular dynamics simulations

K. Karatasos^{1,2}, G. Kritikos,

¹*Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece*

²*Institute of Electronic Structure & Laser, Foundation for Research and Technology-Hellas (IESL-FO.R.T.H.), Heraklion, Crete, Greece*

18:15-18:30 Hierarchical modelling and simulation of the viscoelasticity of polymer melt nanocomposites: non-equilibrium thermodynamics modeling coupled with molecular simulations

Pavlos S. Stephanou,^{1,2} **Dimitrios G. Tsalikis**,² **Emmanuel N. Skountzos**,² **Vlasis G. Mavrantzas**^{2,3}

¹ *Department of Mathematics and Statistics, University of Cyprus, Nicosia, Cyprus*

² *Department of Chemical Engineering, University of Patras & Institute of Chemical Engineering Science, Foundation of Research Technology Hellas (FORTH/ICE-HT), Rio, Greece*

³ *Particle Technology Laboratory, Department of Mechanical and Process Engineering, ETH Zürich, Switzerland*

18:30-18:45 Structure and dynamics of hybrid polymer/gold and core-shell nanoparticle systems through molecular dynamics simulations

Albert John Power, **Vagelis Harmandaris**

Department of Mathematics and Applied Mathematics, University of Crete, Heraklion, Crete, Greece

18:45-19:00 Atomistic simulations of perfect polyethylene networks: characteristic relaxation times, crosslink fluctuations, uniaxial, equibiaxial and multiaxial deformations, finite extensibility, and strain energy density function

Vasilis D. Georgilas, **Doros N. Theodorou**, **Christos Tzoumanekas**

School of Chemical Engineering, National Technical University of Athens, Athens, Greece

19:00-20:45 Poster Viewing

21:00 - Gala Dinner ("Figos" Restaurant, please present your coupon)

Wednesday, 3rd October 2018

09:00-10:00 **SESSION 9:**
Biopolymers & Applications
Chairs: Ch. Papadakis, C. Tsitsilianis

- 09:00-09:30** **PLENARY ORAL: Dissolving the insoluble**
Paschalis Alexandridis, Mohammad Ghasemi, Marina Tsianou
Department of Chemical and Biological Engineering, University at Buffalo, Buffalo, The State University of New York (SUNY), New York, USA
- 09:30-09:50** **INVITED ORAL: Biochemical production of biopolymers: control of the bacterial metabolic pathway and the macromolecular polymer chains**
Costas Kiparissides, Giannis Penloglou
Centre Research and Technology Hellas, Chemical Process & Energy Resources Institute, Thessaloniki Greece (CERTH/CPERI)
- 09:50-10:10** **INVITED ORAL: Responsive Polymeric Nanoconstructs for Drug Delivery to Treat Cancer**
Hermis Iatrou, Panagiota Fragouli, Panagiotis Christakopoulos, Dimitra Stavroulaki, Varvara Athanasiou, Maria Kasimati, Katerina Mathianaki, Diana Kazaryan, Fotini Arfara, Niki Roumelioti
Department of Chemistry, National & Kapodistrian University of Athens, Athens, Greece
- 10:10-10:25** **Polymeric materials with special functionalities based on water-soluble polymers**
Melpo Karamitrou, George Bokias, Dionysia Drouvari, Nikolaos Koromimas, Theoni Dimitra, Ioannis Kallitsis
Department of Chemistry, University of Patras, Rio, Greece
- 10:25-10:40** **Poly(lactic acid) materials for durable applications: focus on hydrolytic stabilization**
Stamatina Vouyiouka², A Porfyris¹, S Vasilakos¹, Christos Zotiadis², Constantine Papaspyrides², S Pavlidou¹
¹*Materials Industrial Research & Technology Center S.A. (MIRTEC), Chalkida, Greece*
²*School of Chemical Engineering, National Technical University of Athens, Athens, Greece*
- 10:40-10:55** **Prediction of tablet strength of hot-melt-extruded powders**
Ioannis Partheniadis, Miltiadis Toskas, Ioannis Nikolakakis
Department of Pharmaceutical Technology, School of Pharmacy, Aristotle University of Thessaloniki, Thessaloniki, Greece
- 10:55-11:10** **Composite thin films of poly(ϵ -caprolactone) with biphosphonate-loaded nanobioglasses for tissue engineering applications**
Zoi Terzopoulou¹, Eleni Gounari², Diana Baciu³, Georgia Charalambopoulou³, Theodore Steriotis³, Dimitrios Bikiaris¹
¹*Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece*
²*Biohellenika Biotechnology Company, Thessaloniki, Greece*
³*National Center for Scientific Research "Demokritos" N.C.S.R., Athens, Greece*

11:15-11:45 **Coffee Break**

11:45-13:15 SESSION 10:
Biopolymers & Applications
Chairs: Paschalis Alexandridis, Costas Kiparissides

11:45-12:05 INVITED ORAL: Self-assembled polymeric nanoparticles for drug delivery: do they interact with blood proteins?

Xiaohan Zhang¹, Petr Chytil², Sergey K. Filippov², Dmitri I. Svergun³, Christine M. Papadakis¹

¹ *Technical University of Munich, Physics Department, Soft Matter Physics Group, Garching, Germany*

² *Institute of Macromolecular Chemistry, The Czech Academy Of Sciences, Prague, Czech Republic,*

³ *European Molecular Biology Laboratory, Hamburg Outstation, C/O Deutsches Elektronen-Synchrotron, Hamburg, Germany*

12:05-12:25 INVITED ORAL: Design of a thermo and shear-induced injectable hydrogel
Constantinos Tsitsilianis

Department of Chemical Engineering, University of Patras, Rio, Greece

12:25-12:45 INVITED ORAL: Polymer nanocomposites as effective drug carriers
Dimitris N. Bikiaris

Laboratory of Polymer Chemistry and Technology, Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece

12:45-13:00 Simulation Studies of Bio-Inspired Polymeric Materials

Anastassia N. Rissanou¹, Maria Arnittali² And Vagelis Harmandaris^{1,2}

¹ *Institute of Applied and Computational Mathematics (IACM), Foundation for Research And Technology Hellas (FORTH), Heraklion, Crete, Greece*

² *Department of Mathematics and Applied Mathematics, University of Crete, Heraklion, Crete, Greece*

13:00-13:15 Development of nanocarriers for nutraceutical substances by polysaccharide/protein complexation and temperature-induced protein denaturation

Aristeidis Papagiannopoulos, Eleni Vlassi

Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece National Hellenic Research Foundation, Athens, Greece

13:30-14:30 Closing Conference - Prize Awards

Chairs: Apostolos Avgeropoulos, Georgios Floudas, Costas Vlachos

14:30 - Lunch ("Figos" Restaurant, please present your coupon)

GENERAL INFORMATION

Official Language

The official language of the Congress is **English**.

Simultaneous translation (interpretation) will not be provided.

e- Abstract Book

Abstracts of all Oral and Poster Presentations of the Congress will be included in the e-Abstract Book of the Congress. All registered participants are entitled to receive the e-Abstract Book in electronic format (included in the USB-Pen along with the Congress material).

Name Badge-Scanning

All participants, upon confirmation of their registration at the Secretariat, will be provided with a name badge that bears a unique barcode. It must be clearly understood that barcode badges must be scanned before entering AND after exiting the Lecture Hall.

Notes:

- It is obligatory - for all participants to wear their badges always during the Congress
- Barcode name badge already appointed for recording attendance cannot be replaced with a second badge
- Name badges are also necessary for admittance to the social events

Certificate of attendance

All registered participants are entitled to receive a Certificate of Attendance. The certificate will be available electronically through the official website of the Congress (www.polyconf12.gr) using the provided registration barcode.

Onsite presentation

You are kindly requested to deliver your presentation(s) to the technical support personnel at least **one (1) hour before the beginning of the Session** (in order to ensure on time they run smoothly and to be able of making any possible changes). If the presentation is scheduled early in the morning, you are kindly requested to check your presentation with the technical support personnel the day before.

e-Program

By downloading the application named “**Polyconf12**”, all participants have the opportunity to look for necessary information regarding this year’s Congress. The application “**Polyconf12**” is compatible to all mobile devices (iOS, Android, Windows). Discover the highlights of the congress through the e-program and save them on your device. Browse the day program or a specific speaker, save sessions in your calendar and make your own program.



The Organizing Committee would like to thank the following for their important contribution to the organization of this congress:



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12th

Hellenic Polymer Society International Conference

2018

30 September - 3 October

Ioannina, Greece

Main Ceremony Hall, University of Ioannina:
"Georgios Mylonas"