

<b>Sunday Sept. 28</b>
<b>17:00 – 20:00 Registration – Welcome Party</b>

<b>Monday Sept. 29</b>	<b>Tuesday Sept. 30</b>	<b>Wednesday Oct. 1</b>
<b>08:15 – 09:15 Registration</b>	Session 5: BIOPOLYMERS Presiding: M. Kosmas, A. Andreopoulos	Session 9: POLYMER DYNAMICS Presiding: D. Vlassopoulos, V. Mavrantzas
<b>09:15 – 09:30 Opening Remarks</b>	<b>09:00 – 09:40 IL5 M. Muthukumar</b> “Packaging biological macromolecules and delivery”	<b>09:00 – 09:40 IL9 D.N. Theodorou</b> “From chemical structure to physical properties of polymers via hierarchical modeling”
Session 1: NANOTECHNOLOGY Presiding: N. Hadjichristidis, G. Floudas	<b>09:40 – 10:00 O12 C. Kiparissides</b> “Synthesis of molecularly imprinted polymers via precipitation polymerization from the selective separation of peptides”	<b>09:40 – 10:00 O27 V. Raptis</b> “A poly(dimethylsiloxane) quantum mechanical force-field: Molecular dynamics calculations for the prediction of physical properties”
<b>09:30 – 10:10 IL1 E.L. Thomas</b> “Periodic polymers for photonics, phononics and mechanics”	<b>10:00 – 10:20 O13 H. Iatrou</b> “Vesicles from well-defined block copolypeptides”	<b>10:00 – 10:20 O28 V. Harmandaris</b> “Structure and dynamics of entangled polystyrene melts through hierarchical multi-scale dynamic simulations”
<b>10:10 – 10:30 O1 M. Pitsikalis</b> “Synthesis and characterization of amphiphilic block copolymers. Association behavior in aqueous solutions. Potential use of the micellar structure as drug carriers”	<b>10:20 – 10:40 O14 P. Papadopoulos</b> “Hierarchies in the structural organization of spider silk – a quantitative model”	<b>10:20 – 10:40 O29 C. Tzoumanekas</b> “Onset of entanglements and transition from Rouse-type to reptation dynamics. A combined topological and dissipative particle dynamics analysis”
<b>10:30 – 10:50 O2 E. Pefkianakis</b> “Synthesis and characterization of polymeric [Ru <sup>2+</sup> ] complexes and their application as dyes in solar cells”	<b>10:40 – 11:00 O15 A. Gfatsas</b> “Self-assembly and dynamics of poly( $\gamma$ -benzyl-L-glutamate) embedded into nanoporous alumina templates”	<b>10:40 – 11:00 O30 G. Tsolou</b> “Topological and dynamical mapping of atomistic simulation data onto the tube model for entangled polymer melts”
<b>10:50 – 11:10 Coffee Break – (Conference Photo)</b>	<b>11:00 – 11:20 Coffee Break</b>	<b>11:00 – 11:20 Coffee Break</b>
Session 2: POLYMER SYNTHESIS Presiding: J. Kallitsis, C. Tsitsilianis	Session 6: SURFACES AND INTERFACES Presiding: G. Floudas, C. Panayiotou	Session 10: POLYMER TECHNOLOGY Presiding: C. Papaspyrides, I. Simitzis
<b>11:10 – 11:50 IL2 N. Hadjichristidis</b> “Well-defined complex macromolecular architectures by anionic polymerization high vacuum techniques”	<b>11:20 – 12:00 IL6 H.-J. Butt</b> “Single polymer binding: Towards a universal adhesive”	<b>11:40 – 12:00 O32 Z. Makrodimitri</b> “Atomistic simulations of poly(dimethylsiloxane) permeability properties to gases and n-alkanes”
<b>11:50 – 12:10 O3 G. C. Vongioukalakis</b> “Vinyl polymerization of norbornene with a novel nickel (II) diphosphinoamine/methylaluminoxane catalytic system”	<b>12:00 – 12:20 O16 D. Vlassopoulos</b> “Viscoelasticity of semifluorinated alkanes at the air-water interface”	<b>12:00 – 12:20 O33 E. Mitsoulis</b> “Transient capillary flow of polytetrafluoroethylene (PTFE) paste: Experiments and simulations”
<b>12:10 – 12:50 IL3 J. Mays</b> “Novel ion-containing polymers via post-polymerization chemistry”	<b>12:20 – 12:40 O17 C. Toprakcioglu</b> “Adsorption of oligomers and polymers in nanoporous alumina”	<b>12:20 – 12:40 O34 D. S. Achilias</b> “Thermal degradation kinetics of light-cured dimethacrylate resins used as biomaterials in dental applications”
<b>12:50 – 13:10 O4 M. Vamvakaki</b> “Responsive microgel particles”	<b>12:40 – 13:00 O18 B. Loppinet</b> “Dynamics of zwitterion terminated polystyrene at a glass-solution interface studied by evanescent wave dynamic light scattering”	<b>12:40 – 13:00 O35 P.A. Tarrantili</b> “Study of polyblends containing plastics used in electrical and electronic applications”
<b>13:10 – 13:30 O5 N. Zafeiropoulos</b> “Smart multifunctional hybrid microgels”	<b>13:00 – 13:20 O19 G. Kritikos</b> “Theoretical study of adsorption of star-polymers by mean-field theory”	<b>13:00 – 13:20 O36 C. Tsiptsias</b> “Porous materials from polysaccharide gels processed by supercritical CO <sub>2</sub> ”
<b>13:30 – 15:00 Lunch Break</b>	<b>13:20 – 13:40 O20 G. Sakellariou</b> “A general approach to surface initiation polymerizations from multi-wall carbon nanotubes”	<b>13:20 – 13:40 O37 C. Prisacariu</b> “Optimising performance of polyurethanes via control of chemical structure”

<p>Session 3: COLLOIDS/GELS Presiding: D.N. Theodorou, C. Kiparissides</p> <p><b>15:00 – 15:40 IL4 G. Fytas</b> “Tailoring sound propagation by mesoscopic engineering of soft matter”</p> <p><b>15:40 – 16:00 O6 I. Bitsanis</b> “Simulations of temperature induced ageing and crystallization in dense suspensions of ultrasoft colloids”</p> <p><b>16:00 – 16:20 O7 G. Petekidis</b> “Yielding mechanisms and particle rearrangements in colloidal glasses and gels”</p> <p><b>16:20 – 16:40 O8 G. Staikos</b> “Hydrogen-bonded interpolymer complexes soluble at low pH”</p> <p><b>16:40 – 17:00 Coffee Break</b></p>	<p>Session 7: SURFACES AND NANOCOMPOSITES Presiding: S.H. Anastasiadis, C. Galiotis</p> <p><b>15:00 – 15:40 IL7 M. Stamm</b> “Polymer brushes for functional surfaces”</p> <p><b>15:40 – 16:00 O21 P. Pissis</b> “Dynamics of poly(propylene oxide) amines intercalated in clay”</p> <p><b>16:00 – 16:20 O22 K. Chrissopoulou</b> “Crystallization behavior in polymer/layered silicate nanocomposites”</p> <p><b>16:20 – 16:40 O23 K. Triantafyllidis</b> “The use of aliphatic ditriamines (Jeffamines) as clay surface modifiers for the preparation of epoxy-clay nanocomposites”</p> <p><b>16:40 – 17:00 Coffee Break</b></p>	<p><b>13:40 – 14:40 Lunch Break</b></p> <p><b>14:40 – 15:00 O38 L. Zoumpoulakis</b> “Chemical modification of carbon fibers and its evaluation based on their composites with epoxy resin”</p> <p><b>15:00 – 15:20 O39 S.N. Vouyiouka</b> “Post-polymerization in the solid state of sulfonated nylon 66 copolymers”</p> <p><b>15:20 – 15:40 O40 D. Goustouridis</b> “Evaluation of a polymer based chemocapacitive sensor array for the detection of vapor analytes and their mixtures”</p> <p><b>15:40- 16:00 O41 G.C. Psarras</b> “Electrical response of polymer matrix-titanium carbide composites”</p>
<p>Session 4: SELF-ASSEMBLY Presiding: G. Fytas, C. Toprakcioglu</p> <p><b>17:00 – 17:40 IL5 P. Alexandridis</b> “Block copolymer-directed nanomaterials synthesis and organization”</p> <p><b>17:40 – 18:00 O9 S. Pispas</b> “Self-assembled nanostructures from block copolymers and vesicle-forming surfactant in aqueous solutions”</p> <p><b>18:00 – 18:20 O10 E. Ioannou</b> “Effect of Lithium salt concentration on the self-assembly of PEO-based block copolymer electrolytes”</p> <p><b>18:20 – 18:40 O11 D. Tasis</b> “Fabrication of nanoobjects from star-shaped copolymers”</p> <p><b>18:40 – 20:00 Poster Session I</b></p> <p><b>20:00 – 21:00 ELEP</b></p>	<p>Session 8: NANOCOMPOSITES Presiding: A. Avgeropoulos, P. Pissis</p> <p><b>17:00 – 17:40 IL8 M.R. Bockstaller</b> “Tailoring the physical properties of nanocomposite materials- Why structure matters”</p> <p><b>17:40 – 18:00 O24 G. Kortaberria</b> “ Self-assembled nanocomposites based on block copolymers containing magnetic nanoparticles”</p> <p><b>18:00 – 18:20 O25 E. Pavlopoulou</b> “Impregnation of pH-responsive polymeric matrices with metal nanoparticles”</p> <p><b>18:20 - 18:40 O26 G. Bokias</b> “Complexation of anionic polyelectrolytes with <math>\text{Cu}^{2+}</math> ions and/or cationic surfactants: Design of the polymer architecture to control the behavior in aqueous solution”</p> <p><b>18:40 – 20:00 Poster Session II</b></p> <p><b>21:00 – Conference Dinner</b></p>	<p><b>16:00 -16:20 Best Poster Award</b> (Award Committee: D. N. Theodorou, N. Hadjichristidis, G. Fytas) - Closing Remarks</p>

## POSTERS

### A. SYNTHESIS / POLYMER TECHNOLOGY

- [1] **O.-N. Ciocoiu** "Contribution to obtain the graft copolymers of alginic acid with pnpipam"
- [2] **I. Manolakis** "High-temperature iminisation of crystalline poly(aryl ether ketones) using aromatic/aliphatic amines"
- [3] **S.G. Nanaki** "Synthesis, characterization and enzymatic hydrolysis of poly(propylene adipate)-co-poly(*ε*-caprolactone) block copolymers"
- [4] **D.N. Bikiaris** "Synthesis, solid state and enzymatic degradation of novel poly(propylene-co-ethylene succinate)s"
- [5] **E. Kadifi** "b-Lactam functionalized amphiphilic block copolymers from poly(isoprene-*b*-ethylene oxide) copolymers"
- [6] **A. Mateescu** "Responsive polymer brushes on flat surfaces by surface-initiated polymerization"
- [7] **V.A. Kosma** "On the formation of apatite aggregates through precipitation from polymer-containing solutions"
- [8] **D.S. Achilias** "A kinetic investigation of the vinyl neo-decanoate bulk free-radical polymerization over the full monomer conversion"
- [9] **S. Rangou** "Synthesis and characterization of 2<sup>nd</sup> generation dendritic terpolymer"
- [10] **G. Evangelou** "Synthesis of poly(*α*-methylstyrene-*b*-4-hydroxystyrene) diblock copolymers via anionic polymerization"
- [11] **C. Ntaras** "Synthesis of graft copolymers with divinyl-terminated poly(dimethylsiloxane) and polystyrene ("grafting to" approach)"
- [12] **M. Constantinou** "Synthesis of block copolymers with poly(methyl methacrylate) and 2-(Trimethylsilyloxy) ethyl methacrylate [PMMA-*b*-(TMS-HEMA)]"
- [13] **N. Politakos** "Synthesis, molecular and morphological characterization of modified diblock copolymers with organic acid chloride derivatives"
- [14] **K. Misthronis** "Synthesis, molecular and morphological characterization of linear triblock terpolymers where one of the blocks is poly(cyclohexadiene)"
- [15] **G. Zapsas** "Synthesis and characterization of linear tetrablock quaterpolymers consisting of polystyrene, polybutadiene, polyisoprene and poly(methyl methacrylate)"
- [16] **P. Georgopoulos** "Nanostructures from well defined diblock copolymers of polystyrene (PS) and poly(dimethylsiloxane) (PDMS)"
- [17] **E. Grana** "Thiophene conducting copolymers"
- [18] **I. Kalamaras** "Synthesis and characterization of proton exchange membrane nanocomposites for high temperature fuel cells"
- [19] **K.P. Koutroumanis** "Crosslinked 2-carboxybenzylchitosan: Synthesis, characterization and potential use for transdermal delivery of fluconazole"
- [20] **S. Papadaki** "Synthesis of copolymers based on adipic acid, glycolic acids and 1,4-butanediol and their hydrolytic degradation"
- [21] **A.C. Boussia** "Low temperature process for the production of long chain aliphatic polyamides"
- [22] **E. Kasapis** "Synthesis and characterization of styrene/isoprene homopolymers & copolymers grafted from single- and multi-walled carbon nanotubes"
- [23] **A. Tomou** "Incorporation of Magnetic Nanoparticles in a P13, 4-*b*-PB1, 4 polymeric matrix"
- [24] **A. Enotiadis** "Intercalation of an amphiphilic diblock copolymer in layered materials"
- [25] **Th. Vasilakopoulos** "Synthesis of symmetric and asymmetric miktoarm star copolymers (PI)<sub>2</sub>(PEO)<sub>2</sub>"
- [26] **N. Petzetakis** "Titanium catalyzed ring opening polymerization of lactides. A route to novel macromolecular architectures"
- [27] **A. Nikopoulou** "Synthesis of well defined graft polymers"
- [28] **M. Gkikas** "Synthesis of water soluble polypeptides containing (L-) Proline"
- [29] **L.-F. Arakelian** "Synthesis and characterization of triblock copolymers by combination of anionic and atom transfer radical polymerization"
- [30] **A.K. Andreopoulou** "Terpyridine-ruthenium complexes for the decoration of CNTs, semiconducting oligomers and polymers"
- [31] **D. Triantou** "Synthesis of copolymers based on benzene and biphenyl and their characterization by XRD and DSC"
- [32] **P. Georgiou** "Electrochemical surface treatment of laboratorily produced carbon fibers by cyclic voltammetry"
- [33] **I. Zuburtikudis** "Nanofiller effect on the thermal response of poly(3-hydroxybutyrate) nanocomposites and isoconversional kinetic analysis of the thermal degradation"
- [34] **D. Kontziampasis** "Periodic nanodot formation on polymers with plasmas: Towards plasma-directed polymer self-assembly?"
- [35] **C. Kiparissides** "Stochastic prediction of the exact topological characteristics of LDPE produced in Tubular reactors"
- [36] **C. Kiparissides** "Effect of reaction conditions and catalyst design on the rheological properties of polyolefins produced in gas-phase olefin polymerization reactors"
- [37] **C. Kiparissides** "Modeling of industrial catalytic olefin polymerization slurry reactors"
- [38] **E. Voyiatzis** "Viscoelastic tube inflation under constant rate of growth"

- [39] **D. Papapetros** "On-line monitoring of the industrial formaldehyde resin production"
- [40] **C. Prisacariu** "Strain energy recovery on cycling (hysteresis) of copolyurethanes derived from dibenzyl structures"
- [41] **M.M. Karabela** "Effect of the concentration of silane-coupling agent on physical properties of dental resin-nanocomposites"
- [42] **G. Karadimos** "Plain and modified phase inversion membranes for gas separation"
- [43] **N.M. Barkoula** "Effect of the environmental degradation on the viscoelastic response of nano modified epoxies and CFRPs"
- [44] **D.-E. Baci** "Synthesis and characterization of acrylic bone cements reinforced with bioceramics"
- [45] **I. Raptis** "Processing effects on the dissolution properties of thin polymer based chemically amplified photoresist films"
- [46] **A. Pikasi** "Electrical properties of polymeric carbons produced from the precursor system of novolac resin – naphthakene/catalyst – olive stones biomass"
- [47] **Z. Ioannou** "Novolac resin and lignocellulosic materials as precursors for carbonaceous adsorbents"
- [48] **K. Papadimitriou** "New high temperature polymer electrolyte membranes. Influence of the chemical structure on their properties"
- [49] **A. Tsimpliaraki** "The effect of nanoclay content on the electrospun fibrous structure of biodegradable polymer nanocomposites"
- [50] **S. Siengchin** "Development of water mediated continuous technique to produce thermo-plastic polymer based nanocomposites"
- [51] **M. Siskos** "Type II photoinitiator systems based on novel fluorenone and fluorene chromophores. A mechanistic study by Laser flash photolysis"
- [52] **A. Touris** "New approach to 'click chemistry' - Combination of 'click chemistry' and anionic polymerization"
- [53] **E. Driva** "Controlled functional nanoparticles"

## **B. NANOTECHNOLOGY / SELF-ASSEMBLY / COLLOIDS / BIOPOLYMERS / SURFACES AND INTERFACES / NANOCOMPOSITES / POLYMER DYNAMICS**

- [1] **G. Choudalakis** "Measurements of free volume in polymer nanocomposite coatings using positron annihilation lifetime spectroscopy"
- [2] **E. Anyfantakis** "Light-induced micro-fiber formation in transparent polymer solutions"
- [3] **P. Voudouris** "Does Brillouin light scattering probe the primary glass transition process?"
- [4] **K. Raftopoulos** "A thermal and dielectric study of molecular dynamics in polyurethane-POSS hybrids"
- [5] **A. Kanapitsas** "Dielectric-mechanical and thermal studies of molecular mobility and phase morphology in epoxy-amine/carbon black nanocomposites"
- [6] **A. Pamvouxoglou** "Dynamics and rheology in suspensions and glasses of soft colloids"
- [7] **E. Logakis** "Thermal and electrical properties of multi-walled carbon nanotube nanocomposites prepared by diluting a masterbatch with various types of modified and non-modified polypropylenes"
- [8] **A. Stathopoulos** "Dielectric studies of molecular dynamics in swollen poly(ethyl acrylate) networks with non-polar solvents"
- [9] **S. Soulis** "Dynamic mechanical and tensile properties of thermally oxidized homopolymer pan fibers"
- [10] **G. Tsoukleri** "Synthesis and mechanical properties of  $A_nB_n$  star copolymers and  $A_n(B-b-C)_n$  star terpolymers"
- [11] **G. Mitsis** "Influence of maleic anhydride component of cured polyesters on their relaxations determined by dielectric spectroscopy (DS) and dynamic mechanical thermal analysis (SMTA)"
- [12] **G. Floudas** "Self-assembly and dynamics of discotic liquid crystals"
- [13] **A. Gitsas** "Effect of architecture on the self-assembly and dynamics of model diblock and star copolypeptides"
- [14] **M. Yiannourakou** "Modeling the lateral aggregation of membrane proteins"
- [15] **M. Karayianni** "Complexation of hen egg with lysozyme with sodium (sulfamate-carboxylate) isoprene polyelectrolytes"
- [16] **A. Hasimi** "Study of the release kinetics of a drug and an MRI contrast agent from poly(vinyl alcohol) matrices"
- [17] **K. Tsougeni** "Wetting, optical property and protein adsorption control of polymer surfaces by plasma nanotexturing"
- [18] **A. Horechly** "Synthesis and selective segregation of  $Fe_3O_4$  nanoparticles inside of the poly-2-vinylpyridine domain of poly(styrene-*b*-2-vinylpyridine)"
- [19] **A. Panagopoulou** "Bulk and interfacial dynamics of PDMS/Titania nanocomposites"

- [20] A. Giannakas "Synthesis and properties of unmodified LDPE/organosilicate nanocomposites"
- [21] S. Fotiadou "Organic-inorganic nanocomposites: A study of the structure and dynamics in confined geometry"
- [22] Th. V. Kosmidou "Glass transition, structural characterization and segmental dynamics in epoxy/carbon fillers nanocomposites"
- [23] C.G. Delides "Dynamics of epoxy nanocomposites: The effect of filler's content and the size structure and geometry of the nanoparticles"
- [24] A. Voulomenou "Study of silicone rubber nanocomposites reinforced with organophilic montmorillonite"
- [25] P. Maroulas "Molecular mobility studies in hybrid PCN clay nanocomposites"
- [26] P. Efthymiopoulos "A theoretical study on the size and the shape of linear dendronized polymers in good and selective solvents"
- [27] M. Kosmas "On the conformational properties of a DNA chain with loops"
- [28] A.N. Rissanou "Collapse transitions in thermosensitive alternating copolymers: A Monte Carlo study"
- [29] I. Tanis "Molecular dynamics of PAMAM dendrimers and their complexes with linear polymers in aqueous solutions"
- [30] C. Vlahos "Off lattice monte carlo simulations of AB and ABA hybrid star dendritic copolymers"
- [31] A. G. Koutsoubas "Neutron reflectivity and computer simulation studies of centrally adsorbed star polymer brushes"
- [32] Th. E. Raptis "Detection of diffusive jumps of small penetrants dispersed in polymer systems"
- [33] G.S. Dritsas "Investigation of thermodynamic properties of polyethylene glycol by inverse gas chromatography and computer simulations"
- [34] G. Tsoiou "Atomistic simulations of the sorption of small gas molecules in polyisobutylene"
- [35] E. Ioannou "Lithium ion induced nanophase ordering and ion mobility in ionic block copolymers"
- [36] C. Mantzaridis "Reversible self-assembled nanostructures from block polyampholytes"
- [37] K. Dimitroulopoulos "Self-assembly in mixed amphiphilic diblock copolymers-zwitterionic surfactants aqueous solutions"
- [38] S. Papadimitriou "Self-assembly core-shell PCL-co-PSu nanoparticles based on crystalline amorphous moieties for efficient controlled drug release"
- [39] A. Meristoudi "Formation of gold nanoparticles in the corona of di- and triblock copolymers"
- [40] K. Mpoukouvalas "Charge transport of conjugated polymer coated core-shell nanoparticles"
- [41] S.I. Marras "Microcellular nanocomposite polymers prepared with supercritical CO<sub>2</sub>: The role of nanoclays on porous structure"
- [42] A.A. Vassiliou "Poly(ethylene succinate) nanocomposites with a multifunctional nanofiller: Mechanical properties and biodegradability"
- [43] C.A. Stergiou "A new approach of segmental orientation in amorphous epoxy resin/carbon black nanocomposites"
- [44] D.S. Achilleos "End-grafted polymer chains onto inorganic nanoparticles"
- [45] S. Karagiovanaki "Adsorption of oligomers and polymers in nanoporous alumina"
- [46] S.K. Papadopoulou "Fluorinated methacrylic homopolymers: Polymerization, characterization, surface properties and effectiveness for the protection of stone"
- [47] A. Kakalis "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"
- [48] I. Hiotelis "Clustering behaviour of end-adsorbed polystyrene chains"
- [49] K.E. Christodoulakis "Colloidal microgel particles carrying acidic or basic moieties"
- [50] E. K. Oikonomou "Cu<sup>2+</sup>-induced gelation in aqueous solutions of maleic acid-containing polyelectrolytes"
- [51] Ch. Pandis "Hydration properties of nanostructured hydrogels based on poly(2-hydroxyethyl acrylate) and poly(2-hydroxyethyl-co-ethyl acrylate)"
- [52] G.Z. Kyzas "Molecularly imprinted polymers (MIPs) as selective sorbents in trichromatic dye mixtures"
- [53] Z. Iatridi "pH-controlled quenching of the fluorescence of hydrophobic probes solubilized in ternary poly(acrylic acid) – surfactant-Cu<sup>+2</sup> complexes in aqueous solution"
- [54] A.A. Stefopoulos "Development of new semiconducting polymer functionalized carbon nanotubes"
- [55] M. Iakovidis "Structural and electronic properties of Nb nanowires by tight binding molecular dynamics calculations"
- [56] M. Gialambouki "Structural and electronic properties of Ti and TiO<sub>2</sub> on C nanotubes by ab-initio calculations"