

Polycarpus Pissis, Curriculum Vitae

Date and place of birth: November 24, 1947, Cyprus.

Education:

Visit of primary and secondary school on Cyprus, leave certificate 1966.

1968-73: Study of Physics at the University of Goettingen (Germany) with a full fellowship from DAAD. Diploma in Physics, Faculty of Science, University of Goettingen, 1973, title of diploma thesis: “Scintillation response of anthracene single crystals bombarded by 1–5 MeV α particles”.

1973- 77: Post-graduate and PhD studies at the University of Goettingen, visit of lectures and seminars in experimental physics, nuclear physics, condensed matter physics, materials science, and chemistry. PhD in Physics, Faculty of Science, University of Goettingen, 1977, title of thesis: “Planar channeling and blocking effects in scintillation response of naphthalene single crystals bombarded by 4.50 MeV α particles”.

Present position:

Emeritus Professor, Physics Department, National Technical University of Athens – NTUA

Address:

Physics Department, National Technical University of Athens, Zografou Campus, 15780 Athens, Greece, tel. +30 210 7722986, fax +30 210 7722932, e-mail ppissis@central.ntua.gr, web page <http://dielectricsgroup.physics.ntua.gr/ppissis>

Previous Employment/Occupation:

2002-2014 Professor, Physics Department, NTUA.

1994-2002 Associate Professor, Physics Department, NTUA.

1985 - 94 Assistant Professor, Physics Department, NTUA.

1982 - 85 Lecturer, Physics Department, NTUA.

1978 - 92 Assistant, Physics Department, NTUA.

1973 - 77 Teaching Assistant, Faculty of Sciences, University of Goettingen (Germany).

Research Activities:

During my studies at the University of Goettingen (Germany) my research work was in the field of condensed matter physics by using methods of nuclear physics. More specifically, I studied the scintillation response of anthracene crystals bombarded by low energy α particles in my diploma thesis and channeling and blocking effects on the scintillation response of naphthalene single crystals bombarded by 4.50 MeV α particles in my PhD thesis. At NTUA, where I was appointed in 1978, my research interests moved more towards materials science. At the beginning I started working on the hydration properties of biomaterials by using thermally stimulated depolarization currents (TSDC) at subzero temperatures, a special dielectric technique in the temperature domain. During that work it proved necessary, for a better understanding of the complex systems under investigation, to

include in the study more basic related systems, such as polycrystalline ice and ice microcrystals dispersed within emulsions. Biomaterials investigated during the period 1978-90 include mono-, oligo- and polysaccharides (both aqueous solutions and hydrated solid samples), amino acids and proteins, DNA, hair keratin, seeds and plant tissues. For the interpretation of the results of dielectric measurements at various levels of water content, water sorption measurements, both dynamic and at equilibrium, proved very effective. The results of these combined studies showed that, next to chemical and physical matrix-water interactions, confinement effects, arising from the formation of water clusters, are significant for hydration properties. For a more fundamental study of such effects, model systems for confining water, zeolites and nanoporous glasses, were investigated. For a better, more fundamental understanding of the hydration properties of biomaterials, mostly biopolymers, the polymer physics concept proved very efficient. So, the next step was to include in the hydration studies synthetic polymers, in particular hydrogels, which are crosslinked hydrophilic polymers. On the other hand, the confinement studies using nanoporous silica as confining geometry were extended to include, next to water, glass forming liquids, and effects of confinement on glass transition were investigated. In the meantime the research group grew up and the experimental facilities of the lab were extended, by using mostly external grants, to include broadband dielectric spectroscopy in the frequency domain (several experimental arrangements) and calorimetry. In addition, we made increasingly use of experimental facilities in other labs, in the frame of the many collaborations developed, as reflected also in the list of publications. The research interests were also extended towards synthetic polymers, including structure-property relationships studies in complex, multicomponent systems, such as polyurethanes, polymer blends, copolymers, interpenetrating polymer networks, composites, and focusing in the last ten years on organic/inorganic polymer nanocomposites. It is typical in such studies that for a complete investigation of structure-property relationships two, three or more expert teams work closely together for the synthesis of the materials, the morphological characterization, the investigation of thermal transitions and dynamics (which is our expertise) and the properties and the performance of the materials according to applications envisaged. A better understanding of these relationships is a prerequisite for optimizing composition and preparation/processing conditions to meet specific end-use requirements. Applications envisaged at present refer to conducting materials for electromagnetic shielding and for sensor applications, hydrogels for tissue engineering, materials with good barrier properties for food packaging, and multi-scale reinforced light-weight thermoplastics for high-performance transport and other applications.

Participation in Research Projects:

Main coordinator / partner in international and national projects.

Publications:

273 refereed journal papers, 14 book chapters, 99 refereed papers in conference proceedings, more than 4800 citations (without self citations), h-index = 39 (web of science).

Conference Participation/Attendance:

more than 450 presentations at international conferences, more than 100 presentations at national conferences.

Teaching Activities:

Teaching activities in the period 1973-77, as Assistant at the University of Goettingen, include laboratory exercises.

From 1978 on, at NTUA, the main activity at the beginning was teaching of the basic courses in Physics for the different engineering faculties. Later special courses in the broader field of materials science were developed for engineers and, in the last ten years, for physicists. At under-graduate level, such courses include Physics of Dielectric Materials, Materials Science, and Advanced Technological Materials. At post- graduate level, where much of the effort is focused on by actively participating in three MSc Programmes, courses on Nanomaterials, Glasses and Nanocomposites, and Organic Nanomaterials have been developed, in all cases with the necessary teaching material.

Faculty coordinator of the Erasmus Programme, active participation in the Programme in the frame of Staff Mobility and teaching activities at several European universities. Active participation in special European projects, such as INTAS, People, and several Cost Actions, providing training to young researchers visiting the lab and giving lectures at workshops and training schools.

Languages:

Greek (mother tongue), English and German (fluent).

SCIENTIFIC PUBLICATIONS

I. THESES

1. P.Pissis, Scintillation response of anthracene single crystals bombarded by 1 – 5 MeV α – particles, Diploma thesis, University of Goettingen (Germany) (1973).
2. P.Pissis, Planar channeling and blocking effects in scintillation response of naphthalene single crystals bombarded by 4.50 MeV α – particles, Ph.D. thesis, University of Goettingen (Germany) (1977).

II. REFEREED SCIENTIFIC JOURNALS

1. P.Pissis, Planar channeling and blocking effects in scintillation response of naphthalene single crystals bombarded by 4.50 MeV α – particles, Z. Physik A 284, 51-55 (1978).
2. Pissis, G. Boudouris, J. C. Garson and J. L. Leveque, Depolarization thermocurrents in ice Ih at low temperature, Z. Naturforsch. 36a, 321-328 (1981).
3. P. Pissis, L. Apekis and G. Boudouris, The low-temperature dielectric relaxation in ice, independent of the concentration of Impurities?, Nuovo Cimento 62B, 365-374 (1981).

4. J. L. Leveque, J. C. Garson, P. Pissis and G. Boudouris, Free water in hair keratin? A depolarization thermal current study, *Biopolymers* 20, 2649-2656 (1981).
5. P. Pissis, L. Apekis, C. Christodoulides and G. Boudouris, Dielectric behaviour of ice microcrystals dispersed within suspensions: A DTC study, *Z. Naturforsch.* 37a, 1000-1004 (1982).
6. P. Pissis, L. Apekis, C. Christodoulides and G. Boudouris, Depolarization thermocurrents in oil-in-water emulsions at subzero temperatures, *J. Phys. D: Appl. Phys.* 15, 2513-2522 (1982).
7. L. Apekis, P. Pissis and G. Boudouris, Depolarization thermocurrents in ice Ih at low temperature depending on the electrode material. Polarization mechanism, *Nuovo Cimento* 2D, 932-946 (1983).
8. L. Apekis, P. Pissis and G. Boudouris, Dielectric study of polycrystalline ice Ih by the depolarization thermocurrent method: The peak at about 220 K, *J. Phys. Chem.* 87, 4019-4021 (1983).
9. P. Pissis, L. Apekis, C. Christodoulides and G. Boudouris, Dielectric study of dispersed ice microcrystals by the depolarization thermocurrent technique, *J. Phys. Chem.* 87, 4034-4037 (1983).
10. P. Pissis, D. Diamanti and G. Boudouris, Depolarization thermocurrents in frozen aqueous solutions of glucose, *J. Phys. D: Appl. Phys.* 16, 1311-1322 (1983)
11. P. Pissis, A thermally stimulated depolarization technique for studying the freezing of water dispersed within emulsions, *J. Phys. D: Appl. Phys.* 17, 787-791 (1984).
12. D. Daoukaki-Diamanti, P. Pissis and G. Boudouris, Depolarization thermocurrents in frozen aqueous solutions of mono- and disaccharides, *Chem. Phys.* 91, 315-325 (1984).
13. P. Pissis, A study of sorbed water on cellulose by the thermally stimulated depolarization technique, *J. Phys. D: Appl. Phys.* 15, 1897-1908 (1985).
14. P. Pissis and D. Daoukaki-Diamanti, Dielectric study of sorbed water in galactose, *Chem. Phys.* 101, 95-104 (1986).
15. C. Christodoulides, L. Apekis and P. Pissis, An algorithm for least-squares curve-fitting of TL and TSDC peaks, *Computer Physics Communications* 41, 35-39 (1986).
16. D. Daoukaki-Diamanti and P. Pissis, Binding modes of water in maltose: a dielectric study, *Zeitschrift für Physikalische Chemie Neue Folge* 149, 27-40 (1986).
17. P. Pissis, A. Anagnostopoulou-Konsta and L. Apekis, Binding modes of water in plant leaves: a dielectric study, *Europhysics Letters* 3, 119-125 (1987).
18. P. Pissis, L. Apekis and C. Christodoulides, Multiplicity of dielectric relaxation times of dispersed ice microcrystals, *Nuovo Cimento D* 9, 195-211 (1987).
19. A. Anagnostopoulou-Konsta and P. Pissis, A study of casein hydration by the thermally stimulated depolarization currents method, *J. Phys. D: Appl. Phys.* 20, 1168-1174 (1987).
20. P. Pissis, A. Anagnostopoulou-Konsta and L. Apekis, A dielectric study of the state of water in plant stems, *J. Exp. Botany*, 38, 1528-1540 (1987).
21. A. Anagnostopoulou-Konsta, L. Apekis and P. Pissis, Dielectric behaviour of cyclodextrin, *Materials Science* 13, 11-14 (1987).
22. L. Apekis, P. Pissis and A. Anagnostopoulou-Konsta, Thermally stimulated depolarization currents in hydrated solid glycine, *Materials Science* 13, 15-18 (1987).
23. D. Daoukaki-Diamanti and P. Pissis, Dielectric study of hydrated solid samples of mono- and disaccharides, *Materials Science* 13, 43-46 (1987).
24. P. Pissis, L. Apekis and C. Christodoulides, Multiplicity of dielectric relaxation times of dispersed ice microcrystals. Time-dependence, *Nuovo Cimento D*, 9, 815-828 (1987).
25. C. Christodoulides, L. Apekis and P. Pissis, Peak parameters from peak area to height ratio in thermally stimulated depolarization and thermoluminescence, *J. Appl. Phys.* 64, 1367-1370 (1988).
26. P. Pissis and D. Daoukaki-Diamanti, Dielectric relaxation of water in the water-methylcellulose system, *Chem. Phys.* 123, 165-173 (1988).
27. P. Pissis and D. Daoukaki-Diamanti, Dielectric study of aqueous solutions and solid samples of methylcellulose, *Progr. Colloid Polym. Sci.* 78, 27-29 (1988).
28. P. Pissis and A. Anagnostopoulou-Konsta, Thermally stimulated depolarization currents in hydrated casein solid samples, *Progr. Colloid Polym. Sci.* 78, 116-118 (1988).
29. C. Christodoulides, L. Apekis, P. Pissis and D. Daoukaki Diamanti, The determination of distributions of the parameters of thermally stimulated depolarization current peaks: Theory, *Phys. stat. solidi (a)* 111, 325-333 (1989).
30. A. Anagnostopoulou-Konsta and P. Pissis, Dielectric study of the hydration process in wood, *Holzforschung* 43, 363-369 (1989).
31. P. Pissis, Dielectric studies of protein hydration, *J. Mol. Liq.* 41, 271-289 (1989)
32. G. Spathis, E. Kontou, V. Kefalas, L. Apekis, C. Christodoulides, P. Pissis, M. Ollivon and S. Quinquenet, Relaxation phenomena and morphology of polyurethane block copolymers, *J. Macromol. Sci. - Phys.*, B29 (1), 31-48 (1990).
33. P. Pissis, The dielectric relaxation of water in plant tissue, *J. Exp. Botany*, 41, 667-684 (1990).

34. P. Pissis and A. Anagnostopoulou-Konsta, Protonic percolation on hydrated hysozyme powders studied by the thermally stimulated depolarization currents method, *J. Phys. D*: 23, 932-939 (1990).
35. P. Pissis, L. Apekis and C. Christodoulides, Evolution with time of the dielectric properties of dispersed ice microcrystals, *Nuovo Cimento D*, 13, 281-290 (1991).
36. P. Pissis and A. Anagnostopoulou-Konsta, Dielectric studies of proton transport in hydrated proteins, *Solid State Ionics*, 46, 141-145 (1991).
37. P. Pissis, A. Anagnostopoulou-Konsta, L. Apekis, D. Daoukaki-Diamanti and C. Christodoulides, Dielectric effects of water in water-containing systems, *J. Non-Cryst. Solids*, 131-133, 1174-1181 (1991).
38. P. Pissis, and L. Apekis, A dielectric study of molecular mobility at glass-transition, *J. Non-Cryst. Solids*, 131-133, 95-98 (1991).
39. A. Anagnostopoulou-Konsta, D. Daoukaki-Diamanti, P. Pissis, G. Loukakis and E. G. Sideris, Dielectric study of DNA-water systems by the thermally stimulated currents method, *J. Non-Cryst. Solids*, 131-133, 1182-1185 (1991).
40. R. Pelster, G. Galeczki, G. Nimtz and P. Pissis, Frequency-dependent processes in dispersed systems of mesoscopic particles, *J. Non-Cryst. Solids*, 131-133, 238-241 (1991).
41. C. Christodoulides, P. Pissis, L. Apekis and D. Daoukaki-Diamanti, Determination of the parameters of thermally stimulated depolarization current peaks, *J. Phys. D: Appl. Physics*, 24, 2050-2054 (1991).
42. P. Pissis, A. Anagnostopoulou-Konsta, L. Apekis, D. Daoukaki-Diamanti, C. Christodoulides and E. G. Sideris, Evidence of glass transition in biological systems from dielectric studies, *IEEE Trans. Electr. Insul.* 27, 820-825 (1992).
43. L. Apekis, P. Pissis, C. Christodoulides, G. Spathis, M. Niaounakis, E. Kontou, E. Schlosser, A. Schoenhals and H. Goering, Physical and chemical network effects in polyurethane elastomers, *Colloid and Polym. Sci.* 90, 144-150 (1992).
44. P. Pissis and D. Daoukaki-Diamanti, Dielectric studies of molecular mobility in hydrated zeolites, *J. Phys. Chem. Solids* 54, 701-709 (1993).
45. P. Pissis, A. Enders and G. Nimtz, Hydration dependence of molecular mobility in phospholipid bilayers, *Chem. Phys.* 171, 285-292 (1993)
46. R. Pelster, A. Kops, G. Nimtz, A. Enders, H. Kietzmann, P. Pissis, A. Kyritsis and D. Woermann, On mesoscopic water droplets dispersed in butyl rubber, *Ber. Bunsenges. Phys. Chem.* 97, 666-675 (1993).
47. C. G. Delides, A. S. Vatalis, P. Pissis and R. A. Pethrick, Dielectric and thermally stimulated discharge current studies of rubber modified epoxy resins, *J. Macromol. Sci. - Phys.* B32(3), 261-274 (1993).
48. A. Kyritsis, P. Pissis, J. L. Gomez Ribelles and M. Monleon Pradas, Depolarization thermocurrent studies in poly(hydroxyethyl acrylate)/water hydrogels, *J. Polym. Sci. Polym. Phys. Ed.*, 32, 1001-1008 (1994).
49. P. Pissis, J. Laudat., D. Daoukaki and A. Kyritsis, Dynamic properties of water in porous Vycor glass studied by dielectric techniques, *J. Non-Cryst. Solids*, 171, 201-207 (1994).
50. A. Kyritsis, P. Pissis, C. Tsonos, J. Laudat and J. Ren, Dielectric and conductivity relaxation in dry and humid solid PEO electrolytes, *J. Non-Cryst. Solids*, 172-174, 1431-1435 (1994).
51. A. Kyritsis, P. Pissis, J. L. Gomez Ribelles and M. Monleon Pradas, Dielectric relaxation spectroscopy in PHEA hydrogels, *J. Non-Cryst. Solids* 172-174, 1041-1046 (1994).
52. P. Pissis, D. Daoukaki-Diamanti, L. Apekis and C. Christodoulides, The glass transition in confined liquids, *J. Phys.: Condens. Matter* 6, L325-L328 (1994).
53. G. Spathis, M. Niaounakis, E. Kontou, L. Apekis, P. Pissis and C. Christodoulides, Morphological changes in segmented polyurethane elastomers by varying the NCO/OH ratio, *J. Appl. Polym. Sci.*, 54, 831 - 842 (1994).
54. A. Kyritsis, P. Pissis and J. Grammatikakis, Dielectric relaxation spectroscopy in poly(hydroxyethyl acrylates) / water hydrogels, *J. Polym. Sci. Polym. Phys. Ed.*, 33, 1737-1750 (1995).
55. P. Pissis, A. Konsta, L. Apekis, A. Kyritsis, R. Pelster, A. Enders and G. Nimtz, Dielectric properties of water dispersed and confined in different systems, *Microwave Aquametry: Electromagnetic Wave Interaction with Water-Containing Materials*, ed. A. Kraszewski, IEEE, Inc., NY 1995, 67-79.
56. A. Kyritsis, P. Pissis, J.L. Gomez Ribelles and M. Monleon Pradas, Polymer-water interactions in poly(hydroxyethyl acrylate) hydrogels studied by dielectric, calorimetric and sorption isotherm measurements, *Polymer gels networks* 3, 445-469 (1995).
57. A.A. Konsta, P. Pissis, A. Kanapitsas and S. Ratkovic, Dielectric and conductivity studies of the hydration mechanism in plant seeds, *Biophys. J.* 70, 1485-1493 (1996).
58. P. Pissis, A.A. Konsta, S. Ratkovic, S. Todorovic and J. Laudat, Temperature and hydration dependence of molecular mobility in seeds, *J. Thermal Analysis*, 47, 1463-1483 (1996).
59. P. Pissis and A. Kanapitsas, Broadband dielectric relaxation spectroscopy at 10^{-4} - 10^{10} Hz, *J. Serb. Chem. Soc.* 61, 703-715 (1996).

60. B. Franck, P. Fruebig and P. Pissis, Water sorption and thermally stimulated depolarization currents in nylon-6, *J. Polym. Sci. Polym. Phys. Ed.* 34, 1853-1860 (1996).
61. P. Pissis, L. Apekis, C. Christodoulides, M. Niaounakis, A. Kyritsis and J. Nedbal, Water effects in polyurethane block copolymers, *J. Polym. Sci. Polym. Phys. Ed.* 34, 1529-1539 (1996).
62. A. Kyritsis and P. Pissis, Dielectric studies of polymer-water interactions and water organization in PEO/water systems, *J. Polym. Sci. Polym. Phys. Ed.* 35, 1545-1560 (1997).
63. P. Pissis and A. Kyritsis, "Electrical conductivity studies in hydrogels", *Solid State Ionics* 97, 105-113 (1997).
64. E. Neagu, P. Pissis, L. Apekis and J. L. Gomez Ribelles, Dielectric relaxation spectroscopy of polyethylene terephthalate (PET) films, *J. Phys. D: Appl. Phys.* 30, 1551-1560 (1997).
65. S. Patkovic and P. Pissis, Water binding to biopolymers in different cereals and legumes: proton NMR relaxation, dielectric and water imbibition studies, *J. Mat. Sci.* 32, 3061-3068 (1997).
66. A. A. Konsta, J. Laudat and P. Pissis, Dielectric investigations of the protonic conductivity in plant seeds, *Solid State Ionics* 97, 97-104 (1997).
67. C. Maggana and P. Pissis, TSDC studies of the effects of plasticizer and water on the sub-T_g relaxations of an epoxy resin system, *J. Macromol. Sci.-Phys.* B36, 749-772 (1997).
68. L. M. Sergeeva, O. P. Grigoryeva, O. N. Zimich, E. G. Privalko, V. I. Shtompel, V. P. Privalko, P. Pissis and A. Kyritsis, Structure-property relationships in thermoplastic pseudo-interpenetrating networks. I. Phase morphology, *J. Adhesion* 64, 161-171 (1997).
69. V. P. Privalko, R. L. Shapoval, E. G. Privalko, E. R. Akhranovich, Yu. E. Savelyev, P. Pissis and G. Georgoussis, Influence of chain extenders and chain end -groups on properties of segmented polyurethanes. Steric immobilization effect, *Proc. Natl. Acad. Sci. Ukraine* 10, 153-156 (1997).
70. G. Barut, P. Pissis, R. Pelster and G. Nimtz, Glass transition in liquids: two versus three-dimensional confinement, *Phys. Rev. Lett.* 80, 3543-3546 (1998).
71. R. Pelster, T. Kruse, H. G. Krauthäuser, G. Nimtz and P. Pissis, Analysis of two-dimensional energy and relaxation-time distributions from temperature-dependent broadband dielectric spectroscopy, *Phys. Rev. B* 57, 8763-8766 (1998).
72. P. Pissis, A. Kyritsis, G. Barut, R. Pelster and G. Nimtz, Glass transition in 2- and 3-dimensionally confined liquids, *J. Non-Cryst. Solids* 235-237, 444-449 (1998).
73. R. Pelster, T. Kruse, H. G. Krauthäuser, V. Grunow, G. Nimtz and P. Pissis, Inversion of dielectric spectra into 2D distributions of activation energy and relaxation time, *J. Non-Cryst. Solids* 235-237, 160-163 (1998).
74. V. A. Bershtein, P. N. Yakushev, N. N. Peschanskaya, A. B. Sinani and P. Pissis, Segmented relaxations in complex polymer system as studied by high resolution laser - interferometric creep rate spectroscopy, *J. Non-Cryst. Solids* 235-237, 584-586 (1998).
75. G. Gallego Ferrer, M. Monleon Pradas, J. L. Gomez Ribelles and P. Pissis, Swelling and thermally stimulated depolarization currents in hydrogels formed by interpenetrating polymer networks, *J. Non-Cryst. Solids* 235-237, 692 - 696 (1998).
76. L. Karabanova, P. Pissis, A. Kanapitsas and E. Lutsyk, Thermodynamic state, temperature transitions, and broadband dielectric relaxation behavior in gradient interpenetrating polymer networks, *J. Appl. Polym. Sci.* 68, 161-171 (1998).
77. A. Kanapitsas, P. Pissis, L. Karabanova, L. Sergeeva and L. Apekis, Broadband dielectric relaxation spectroscopy in interpenetrating polymer networks of polyurethane - copolymer of butylmethacrylate and dimethacrylate triethylene glycol, *Polymer Gels and Networks* 6, 83-102 (1998).
78. Yu. V. Savelyev, E. R. Akhranovich, A. P. Grekov, E. G. Privalko, V. V. Korskanov, V. I. Shtompel, V. P. Privalko, P. Pissis and A. Kanapitsas, Influence of chain extenders and chain end - groups on properties of segmented polyurethanes. I. Phase morphology, *Polymer* 39, 3425-3429 (1998).
79. V. V. Shilov, V. V. Shevchenko, P. Pissis, A. Kyritsis, Yu. P. Gomza, S. D. Nesin and N. S. Klimenko, Single-ion conductors based on the novel polyurethanes, *Functional Materials* 5, 580-585 (1998).
80. P. Pissis, A. Kanapitsas, Yu. V. Savelyev, E. R. Akhranovich, E. G. Privalko and V. P. Privalko, Influence of chain extenders and chain end - groups on properties of segmented polyurethanes. II. Dielectric study, *Polymer* 39, 3431-3435 (1998).
81. C. Tsanos, L. Apekis and P. Pissis, Dielectric properties of hydrated Nafion - (SO₃K) membranes: thermally stimulated depolarization currents, *J. Mater. Sci.* 33, 2221-2226 (1998).
82. P. Pissis, A. Kyritsis, D. Daoukaki, G. Barut, R. Pelster and G. Nimtz, Dielectric studies of glass transition in confined propylene glycol, *J. Phys.: Condens. Matter* 10, 6205-6227 (1998).
83. D. Daoukaki, G. Barut, R. Pelster, G. Nimtz, A. Kyritsis and P. Pissis, Dielectric relaxation at the glass transition of confined N-methyl-ε-caprolactam, *Phys. Rev. B* 58, 5336 - 5345 (1998).
84. V. A. Bershtein, P. N. Yakushev, L. Karabanova, L. Sergeeva and P. Pissis, Heterogeneity of segmental dynamics around T_g and nanoscale compositional inhomogeneity in polyurethane / methacrylate

- interpenetrating networks as estimated by creep rate spectroscopy, *J. Polym. Sci., Part B, Polym. Phys.* 37, 429-441 (1999).
85. P. Pissis, A. Kyritsis, A. A. Konsta and D. Daoukaki, Dielectric studies of molecular mobility in hydrogels, *J. Mol. Struct.* 479, 163-175 (1999)
86. A. Kanapitsas, P. Pissis and A. Garcia Estrella, Molecular mobility in polyurethane/styrene-acrylonitrile blends studied by dielectric techniques, *Eur. Polym. J.*, 35, 932-937 (1999)
87. P. Pissis, A. Kyritsis, A. A. Konsta and D. Daoukaki, Polymer-water interactions in PAA hydrogels” *Colloids Surfaces A* 149, 253-262 (1999).
88. G. Perez Belloch, M. Salmeron Sanchez, J. L. Gomez Ribelles, M. Monleon Pradas, J. M. Meseguer Duenas and P. Pissis, Conformational motions in immiscible blends of polycarbonate and styrene acrylonitrile copolymers, *Polym. Eng. Sci.* 39, 688-698 (1999).
89. A. Kanapitsas, P. Pissis, J. L. Gomez Ribelles, M. Monleon Pradas, E. G. Privalko and V. P. Privalko, Molecular mobility and hydration properties of segmented polyurethanes with varying structure of soft and hard chain segments, *J. Appl. Polym. Sci.* 71, 1209-1221 (1999).
90. C. Maggana and P. Pissis, Water sorption and diffusion studies in an epoxy resin system, *J. Polym. Sci., Part B, Polym. Phys.* 37, 1165-1182 (1999).
91. V. V. Shilov, V. V. Shevchenko, P. Pissis, A. Kyritsis, Yu. P. Gomza, S. D. Nesin and N. S. Klimenko, Morphology and protonic conductivity of the polyurethanes with acid groups in the flexible segment, *Solid State Ionics* 120, 43-50 (1999).
92. A. Kyritsis, P. Pissis, O. P. Grigorieva, L. M. Sergeeva, A. A. Brovko, O. N. Zimich, E. G. Privalko, V. I. Shtompel and V. P. Privalko, Structure – property relationships in thermoplastic – apparent interpenetrating polymer networks based on crystallizable polyurethane and styrene – acrylic acid copolymer, *J. Appl. Polym. Sci.* 73, 385 – 397 (1999).
93. J. L. Gomez Ribelles, M. Monleon Pradas, G. Gallego Ferrer, N. Peidro Torres, V. Perez Gimenez, P. Pissis and A. Kyritsis, Poly(methyl acrylate)/poly(hydroxyethyl acrylate) sequential interpenetrating polymer networks. Miscibility and water sorption behavior, *J. Polym. Sci.:Part B: Polym Phys.* 37, 1587 – 1599 (1999).
94. V. P. Privalko, E. G. Privalko, V. I. Shtompel, P. Pissis, A. Kanapitsas, M. Monleon Pradas and G. L. Gomez Ribelles, Influence of the structure of soft and stiff chain fragments on properties of segmented polyurethanes. I. Phase morphology, *Polym. Eng. Sci.* 39, 1534 – 1540 (1999).
95. P. Pissis, A. Kyritsis and V. V. Shilov, Molecular mobility and protonic conductivity in polymers: hydrogels and ionomers, *Solid State Ionics* 125, 203 – 212 (1999).
96. A. A. Konsta, D. Daoukaki, P. Pissis and K. Vartzei, Hydration and conductivity studies of polymer – water interactions in polyacrylamide hydrogels, *Solid State Ionics* 125, 235 – 241 (1999).
97. G. Georgoussis, A. Kyritsis, P. Pissis, Yu. V. Savelyev, E. R. Akhranovich, E. G. Privalko and V. P. Privalko, Dielectric studies of molecular mobility and microphase separation in segmented polyurethanes, *Eur. Polym. J.* 35, 2007 – 2017 (1999).
98. A. Kanapitsas and P. Pissis, Dielectric relaxation spectroscopy in crosslinked polyurethanes based on polymer polyols, *Eur. Polym. J.* 36, 1241 – 1250 (2000).
99. P. Pissis, A. Kyritsis, G. Georgoussis, V. V. Shilov and V. V. Shevchenko, Structure-property relationships in proton conductors based on polyurethanes, *Solid State Ionics* 136 – 137, 255 – 260 (2000).
100. G. Georgoussis, A. Kanapitsas, P. Pissis, Yu. V. Savelyev, V. Ya. Veselov and E. G. Privalko, Structure-property relationships in segmented polyurethanes with metal chelates in the main chain, *Eur. Polym. J.* 36, 1113 – 1126 (2000).
101. E. Neagu, P. Pissis and L. Apekis, Electrical conductivity effects in polyethylene terephthalate films, *J. Appl. Phys.* 87, 2914 – 2922 (2000).
102. G. Polizos, A. Kyritsis, P. Pissis, V. V. Shilov and V. V. Shevchenko, Structure and molecular mobility studies in novel polyurethane ionomers based on poly(ethylene oxide), *Solid State Ionics* 136 – 137, 1139 – 1146 (2000).
103. E. G. Privalko, Ye. P. Mamunya, E. V. Lebedev, V. P. Privalko, F. J. Balta Calleja and P. Pissis, Structure-dependent microhardness of metal-filled polyvinyl chloride composites, *Proc. Natl. Acad. Sci. Ukraine* 5, 159 - 162 (2000).
104. P. Pissis, G. Georgoussis, A. Schoenhals, E. B. Barmatov and V. P. Shibaev, Molecular mobility and phase transitions in a liquid crystalline polymer studied by dielectric techniques, *Mol. Cryst. and Liq. Cryst.* 352, 93 – 100 (2000).
105. G. Georgoussis, N. A. Nikonorova, E. B. Barmatov and P. Pissis, Molecular mobility in halogen-containing side-chain liquid crystalline polymers studied by dielectric spectroscopy, *Polym. Int.* 49, 975 – 980 (2000).

- 106.** A. Kyritsis, P. Pissis, S.-M. Mai and C. Booth, Comparative dielectric studies of segmental and normal mode dynamics of poly(oxybutylene) and poly(oxyethylene) – poly(oxybutylene) diblock copolymers, *Macromolecules* 33, 4581 – 4595 (2000).
- 107.** A. S. Vatalis, C. G. Delides, O. P. Grigoryeva, L. M. Sergeeva, A. A. Brovko, O. N. Zimich, V. I. Shtompel, G. Georgoussis and P. Pissis, Thermoplastic apparent interpenetrating polymer networks of polyurethane and Styrene/acrylic acid copolymer obtained by melt mixing. Structure-property Relationships, *Polym. Eng. Sci.* 40, 2072 – 2085 (2000).
- 108.** A. Kyritsis, P. Pissis, A. Konsta, S.-M. Mai and C. Booth, Molecular dynamics in homopolymers, diblock and triblock copolymers studied by dielectric relaxation spectroscopy, *IEEE Trans. on Dielectrics and E.I.* 7, 509 – 516 (2000).
- 109.** A. Kyritsis, M. Siakantari, A. Vassilikou-Dova, P. Varotsos and P. Pissis, Dielectric and electrical properties of polycrystalline rocks at various hydration levels, *IEEE Trans. Dielectrics E.I.* 7, 493 – 497 (2000).
- 110.** A. S. Vatalis, A. Kanapitsas, C. G. Delides, K. Viras and P. Pissis, Phase behavior and molecular mobility in polyurethane/styrene-acrylonitrile blends, *J. Appl. Polym. Sci.*, 80, 1071 – 1084 (2001).
- 111.** G. Polizos, G. Georgoussis, A. Kyritsis, V. V. Shilov, V. V. Shevchenko, Yu. P. Gomza, S. D. Nesin, N. S. Klimentko, S. Wartewig and P. Pissis, Structure and electrical conductivity in novel polyurethane ionomers, *Polym. Int.* 49, 987 – 992 (2000).
- 112.** R. M. Neagu, E. Neagu, A. Kyritsis and P. Pissis, Dielectric studies of dipolar relaxation processes in Nylon 11, *J. Phys. D: Appl. Phys.* 33, 1921 – 1931 (2000).
- 113.** P. Pissis, A. Kyritsis, G. Gallego Ferrer, M. Monleon Pradas and J. L. Gomez Ribelles, Water in hydrogels studied by dielectric, thermal and water sorption/diffusion techniques, Special issue of *Subsurface Sensing Technologies and Application (SSTA Journal) on Subsurface Aquametry I*, 417 – 439 (2000).
- 114.** V. V. Shilov, V. V. Shevchenko, P. Pissis, A. Kyritsis, G. Georgoussis, Yu. P. Gomza, S. D. Nesin and N. S. Klimentko, Morphology, dielectric relaxation and conductivity of the novel polyurethanes with acid and ionic groups in the polyether segments, *J. Non-Cryst. Solids* 275, 116 – 136 (2000).
- 115.** M. Monleon Pradas, J.L. Gomez Ribelles, A. Serrano Aroca, G. Gallego Ferrer, J. Suay Anton and P. Pissis, Interaction between water and polymer chains in poly(hydroxyethyl acrylate) hydrogels, *Colloid Polym. Sci.*, 279, 323 – 330 (2001).
- 116.** R.M. Neagu, E. Neagu, N. Bonanos and P. Pissis, Electrical conductivity studies in nylon 11, *J. Appl. Phys.* 88, 6669 – 6677 (2000).
- 117.** G. Georgoussis, A. Kyritsis, V.A. Bershtein, A.M. Fainleib and P. Pissis, Dielectric studies of chain dynamics in homogeneous semi-interpenetrating polymer networks, *J. Polym. Sci.:Part B: Polym Phys.* 38, 3070 – 3087 (2000).
- 118.** A. Kyritsis, M. Siakantari, A. Vassilikou – Dova, P. Pissis and P. Varotsos, Large low frequency dielectric constant exhibited by hydrated rock materials, *Proc. Japan Acad.*, 77 (B), 19 – 23 (2001).
- 119.** M. Monleon Pradas, J.L. Gomez Ribelles, A. Serrano Aroca, G. Gallego Ferrer, J. Suay Anton and P. Pissis, Porous poly(2-hydroxyethyl acrylate) hydrogels, *Polymer*, 42, 4667 – 4674 (2001).
- 120.** A.S. Vatalis, A. Kanapitsas, C.G. Delides and P. Pissis, Relaxation phenomena and morphology in polymer blends based on polyurethanes investigated by various thermal analysis techniques, *Thermochemica Acta*, 372, 33 – 38 (2001).
- 121.** A.S. Vatalis, C.G. Delides, G. Georgoussis, A. Kyritsis, O.P. Grigorieva, L.M. Sergeeva, A.A. Brovko, O.N. Zimich, V.I. Shtompel, E. Neagu and P. Pissis, Characterization of thermoplastic interpenetrating polymer networks by various thermal analysis techniques, *Thermochemica Acta*, 371, 87 – 93 (2001).
- 122.** N. Nikonorova, T. Borisova, V. Shibaev, E. Barmatov, G. Georgoussis and P. Pissis, Dielectric spectroscopy and low temperature molecular dynamics of thermotropic side-chain polymethacrylates with side halogen terminal groups, *Macromol. Chem. Phys.* 202, 33 – 38 (2001).
- 123.** V.A. Bershtein, L.M. Egorova, V.A. Ryzhov, P.N. Yakushev, A.M. Fainleib, T.A. Shantalii and P. Pissis, Structure and segmental dynamics heterogeneity in hybrid polycyanurate-polyurethane networks, *J. Macromol. Sci. – Phys.*, B40, 105 – 131 (2001).
- 124.** G. Polizos, V.V. Shilov and P. Pissis, Molecular mobility and protonic conductivity studies in telechelics based on poly(ethylene oxide) capped with hydroxyl groups at both ends, *Solid State Ionics* 145, 93 – 100 (2001).
- 125.** S. Zhukov, B. Stuhn, T. Borisova, E. Barmatov, M. Barmatova, V. Shibaev, F. Kremer and P. Pissis, Dielectric and IR spectroscopy of the macromolecular reaction of anhydridization in a functionalized side – chain liquid crystalline copolymer containing acrylic acid groups, *Macromolecules*, 34, 3615 – 3625 (2001).
- 126.** Ye.P. Mamunya, Yu.V. Muzychenko, P. Pissis, E.V. Lebedev and M.I. Shut, Processing, structure and electrical properties of metal – filled polymers, *J. Macromol. Sci.- Phys.* B40, 591 – 602 (2001).

127. J.M. Meseguer Duenas, D. Torres Escuriola, G. Gallego Ferrer, M. Monleon Pradas, J.L. Gomez Ribelles, P. Pissis and A. Kyritsis, Miscibility of poly(butyl acrylate) – poly(butyl methacrylate) sequential interpenetrating polymer networks, *Macromolecules* 34, 5525 – 5534 (2001).
128. Y.P. Mamunya, Y.V. Muzychenko, P. Pissis, E.V. Lebedev and M.I. Shut, Percolation phenomena in polymers containig dispersed iron, *Polym. Eng. Sci.* 42, 90 – 100 (2002).
129. V. V. Shilov, V. V. Shevchenko, P. Pissis, A. Kyritsis, G. Georgoussis, Yu. P. Gomza, S. P. Nesin and N. S. Klimenko, Morphology, dielectric relaxation and conductivity of the novel polyurethane ionomers based on poly(tetramethylene oxide), *Mol. Cryst. Liq. Cryst.*, 361, 269 – 274 (2001).
130. G. Polizos, V. V. Shilov and P. Pissis, Temperature and pressure effects on molecular mobility and ionic conductivity in telechelics based on poly(ethylene oxide) capped with hydroxyl groups at both ends, *J. Non-Cryst. Solids* 305, 212 – 217 (2002).
131. V. A. Bershtein, L. M. Egorova, P. N. Yakushev, O. Meszaros, P. Sysel, L. David, E. Duval. A. Kanapitsas and P. Pissis, Nanostructure and molecular dynamics in rod-like polyimide / flexible-chain polyimide molecular composites, *J. Macromol. Sci.- Phys.* B41, 419 – 450 (2002).
132. P. Pissis, A. Kanapitsas, G. Georgoussis, V. A. Bershtein and P. Sysel, Structure-property relationships in novel hybrid nanostructured organic/organic and organic/inorganic materials, *Uzbek Journal of Physics* 3, 54 – 60 (2001).
133. N. A. Nikonorova, T. I. Borisova, E. B. Barmatov, P. Pissis, R. Diaz-Calleja, Comparative dielectric and TSDC studies of molecular mobility in liquid-crystalline side-chain poly(methacrylate), *Polymer* 43, 2229 – 2238 (2002).
134. Ye. P. Mamunya, V. V. Davydenko, P. Pissis, E. V. Lebedev, Electrical and thermal conductivity of polymers filled with metal powders, *Eur. Polym. J.* 38, 1887 – 1897 (2002).
135. V. A. Bershtein, L. David, L. M. Egorova, A. Kanapitsas, O. Meszaros, P. Pissis, P. Sysel, P. N. Yakushev, Structure-property relationships in polyimide molecular composites, *Mat. Res. Innovat.* 5, 230 – 237 (2002)
136. P. Pissis, G. Georgoussis, V. A. Bershtein, E. Neagu, A. M. Fainleib, Dielectric studies in homogeneous and heterogeneous polyurethane / polycyanurate interpenetrating polymer networks, *J. Non-Cryst. Solids* 305, 150 – 158 (2002).
137. A. Kanapitsas, P. Pissis, R. Kotsilkova, Dielectric studies of molecular mobility and phase morphology in polymer – layered silicate nanocomposites, *J. Non-Cryst. Solids* 305, 204 – 211 (2002).
138. A. Fainleib, N. Kozak, O. Grigoryeva, Yu. Gritsenko, P. Pissis, G. Boiteux, Structure – thermal property relationships for polycyanurate – polyurethane linked interpenetrating polymer networks, *Polymer Degradation and Stability* 76, 393 – 399 (2002).
139. V. A. Bershtein, L. M. Egorova, P. N. Yakushev, P. Pissis, P. Sysel, L. Brozova, Molecular dynamics in nanostructured polyimide-silica hybrid materials and their thermal stability, *J. Polym. Sci. Part B Polym. Phys.* 40, 1056 – 1069 (2002).
140. C. Chaibundit, W. Mingvanish, C. Booth, S.-M. Mai, S. C. Turner, J. P. A. Fairclough, A. J. Ryan, P. Pissis, The effect of architecture on the crystal morphology of block copolymers. Small-angle X-ray scattering and differential scanning calorimetry, *Macromolecules* 35, 4838 – 4840 (2002).
141. P. Pissis, A. Kanapitsas, G. Georgoussis, V.A. Bershtein, P. Sysel, Dielectric studies of phase morphology and molecular mobility in novel nanocomposites based on polyimide, *Advanced Composites Letters* 11, 49 – 58 (2002).
142. V.V. Shilov, Yu.P. Gomza, V.V. Klepko, V.I Slisenko, A.A. Vasilkevich, E.M. Shembel, M.V. Burmistr, P. Pissis, Gel electrolyte system based on polyvinyl chloride with addition of LiClO₄ / propylene carbonate: structure, morphology, thermal and conductivity properties, *IEEE Trans. Dielectrics E.I.* 9, 551 – 554 (2002).
143. H. Valentova, J. Nedbal, M. Ilavsky, P. Pissis, Dynamic mechanical and water sorption behaviour of ordered polyurethanes, *J. Non – Cryst. Solids* 307 – 310, 304 – 310 (2002).
144. V.A. Bershtein, V.M. Egorov, L.M. Egorova, P.N. Yakushev, L. David, P. Sysel, V. Sindelar, P. Pissis, Poly(imide-amide) – poly(ethylene adipate) hybrid networks. I. Nanostructure and segmental dynamics, *Polymer* 43, 6943 – 6953 (2002).
145. A. Kanapitsas, P. Pissis, C.G. Delides, P. Sysel, V. Sindelar, V.A. Bershtein, Poly(imide-amide) – poly(ethylene adipate) hybrid networks. II. Dielectric studies, *Polymer* 43, 6955 – 6963 (2002).
146. V.P. Privalko, P. Pissis, G. Polizos, V.V. Korskanov, E.G. Privalko, V.I. Dolgoshey, V.Yu. Kramarenko, W. Huhn, F. Hollman, B. Rieger, Dielectric relaxation of the alternating terpolymers of ethylene, propylene, and carbon monoxide, *J. Macromol. Sci. – Physics* B41, 99 – 116 (2002).
147. O. Grigoryeva, A. Fainleib, P. Pissis, G. Boiteux, Effect of hybrid network formation on adhesion properties of polycyanurate/polyurethane semi-interpenetrating polymer networks, *Polym. Eng. Sci.* 42, 2440 – 2448 (2002).

148. V.P. Privalko, C.V. Mudrak, E.G. Privalko, A.A. Usenko, P. Pissis, Structure-property relationships for film-forming copoly(amide imide)s, *Polym. Adv. Technol.* 14, 96 – 102 (2003).
149. S. Kriptou, P. Pissis, V.A. Bershtein, P. Sysel, R. Hobzova, Dielectric studies of molecular mobility in hybrid polyimide-poly(dimethylsiloxane) networks, *Polymer* 44, 2781 – 2791 (2003).
150. M.V. Burmistr, V.V. Shilov, K.M. Sukhoi, P. Pissis, G. Polizos, Dielectric relaxation and ionic conductivity of oxyethylene-alkylaromatic polyionenes, *Polymer Science, Ser. A.* 45, 785 – 794 (2003).
151. P.E. Lagouvardos, P. Pissis, A. Kyritsis, D. Daoukaki, Water sorption and water-induced molecular mobility in dental composite resins, *J. Mater. Sci.: Mater. Med.* 14, 753 – 759 (2003).
152. T. Cajkovski, M. Davidovic, P. Pissis, G. Polizos, D. Cajkovski, V. Likar-Smiljanic, R. Biljic, Z. Nedic, U.B. Mioc, Dielectric investigation of electrical conductivity in copper salt of the 12-tungstophosphoric acid hydrate, *Solid State Ionics* 162 – 163, 203 – 208 (2003).
153. A.G. Charnetskaya, G. Polizos, V.I. Shtompel, E.G. Privalko, Yu.Yu. Kercha, P. Pissis, Phase morphology and molecular dynamics of a polyurethane ionomer reinforced with a liquid crystalline filler, *Eur. Polym. J.* 39, 2167 – 2174 (2003).
154. N. Nikonorova, T. Borisova, E. Barmatov, P. Pissis, R. Diaz-Calleja, Dielectric relaxation and thermally stimulated discharge currents in liquid-crystalline side-chain polymethacrylates with phenylbenzoate mesogens having tail groups of different length, *Macromolecules* 36, 5784 – 5791 (2003).
155. R. M. Neagu, J. N. Marat-Mendes, E. R. Neagu, P. Pissis, Space charge and dipolar contributions from amorphous and crystalline phases in ferroelectric polymer, *Ferroelectrics* 294, 113 – 122 (2003).
156. V. Yu. Kramarenko, T. A. Shantali, I. L. Karpova, K. S. Dragan, E. G. Privalko, V. P. Privalko, D. Frigiadakis, P. Pissis, Polyimides reinforced with the sol-gel derived organosilicon nanophase as low dielectric permittivity materials, *Polym. Adv. Technol.* 15, 144 – 148 (2004).
157. M. Roussos, A. Konstantopoulou, I. M. Kalogeras, A. Kanapitsas, P. Pissis, Yu. Savelyev, A. Vassilikou-Dova, Comparative dielectric studies of segmental mobility in novel polyurethanes, *e-Polymers*, no. 042 (2004).
158. K. Raftopoulos, I. Zegkinoglou, A. Kanapitsas, S. Kriptou, I. Christakis, A. Vassilikou-Dova, P. Pissis, Yu. Savelyev, Dielectric and hydration properties of segmental polyurethanes, *e-Polymers*, no. 043 (2004).
159. J. Zbytovska, S. Raudenkolb, S. Wartewig, W. Huebner, W. Rettig, P. Pissis, A. Hrabalek, P. Dolezal, R. H. H. Neubert, Phase behavior of transkarbam 12, *Chem. Phys. Lipids* 129, 97 – 109 (2004).
160. Ye. P. Mamunya, V. I. Shtompel, E. V. Lebedev, P. Pissis, A. Kanapitsas, G. Boiteux, Structure and water sorption of polyurethane nanocomposites based on organic and inorganic components, *Europ. Polym. J.* 20, 2323 – 2331 (2004).
161. A. Serrano Aroca, A. J. Campillo Fernandez, J. L. Gomez Ribelles, M. Monleon Pradas, G. Gallego Ferrer, P. Pissis, Porous poly(2-hydroxyethyl acrylate) hydrogels prepared by radical polymerisation with methanol as diluent, *Polymer* 45, 8949-8955 (2004)
162. A. Espadero Berzosa, J. L. Gomez Ribelles, S. Kriptou, P. Pissis, Relaxation spectrum of polymer networks formed from butyl acrylate and methyl methacrylate monomeric units, *Macromolecules* 37, 6472-6479 (2004)
163. R. Kotsilkova, D. Frigiadakis, P. Pissis, Reinforcement effect of carbon nanofiller in epoxy resin system: rheology, molecular dynamics and mechanical properties, *J. Polym. Sci. Part B Polym. Phys.* 43, 522 - 533 (2005)
164. P. Xynogalas, A. Kanapitsas, V. Konstantinou-Kokotou, P. Pissis, K. Viras, Phase transitions in crystals of racemic long chain 2-amino alcohols, *Chem. Phys. Lipids* 135, 83-92 (2005)
165. G. Gallego Ferrer, J. M. Soria Melia, J. Hernandez Canales, J. M. Meseguer Duenas, F. Romero Colomer, M. Monleon Pradas, J. L. Gomez Ribelles, P. Pissis, G. Polizos, Poly(2-hydroxyethyl acrylate) hydrogel confined in a hydrophobous porous matrix, *Colloid Polym. Sci.* 283, 681-690 (2005)
166. D. Frigiadakis, P. Pissis, L. Bokobza, Glass transition and molecular dynamics in poly(dimethylsiloxane)/silica nanocomposites, *Polymer* 46, 6001-6008 (2005)
167. M. V. Burmistr, K. Sukhyy, V. V. Shilov, P. Pissis, G. Polizos, A. Spanoudaki, Y. P. Gomza, Structure, thermal properties and ionic conductivity of polymeric quaternary ammonium salts (polyionenes) containing ethylene oxide and aliphatic chain fragments, *Solid State Ionics* 176, 1787-1792 (2005)
168. T. Cajkovski, M. Davidovic, P. Pissis, G. Polizos, D. Cajkovski, V. Likar-Smiljanic, S. Sredic, U.B. Mioc, Dielectric relaxation spectroscopy of montmorillonite doped with 12-tungstophosphoric acid, *J. Non-Cryst. Solids* 351, 2842-2848 (2005)
169. H. Valentova, J. Nedbal, M. Ilavsky, P. Pissis, DSC, dielectric and dynamic mechanical behavior of two- and three-component ordered polyurethanes, *Polymer* 46, 4175-4182 (2005)
170. I. M. Kalogeras, M. Roussos, A. Vassilikou-Dova, A. Spanoudaki, P. Pissis, Y. V. Savelyev, V. I. Shtompel, L. P. Robota, Structure and relaxation dynamics of poly(amide urethane)s with bioactive transition metal acetyl acetonates in hard blocks, *Eur. Phys. J. E* 18, 467-481 (2005)

171. M. V. Burmistr, K. M. Sukhy, V. V. Shilov, P. Pissis, A. Spanoudaki, I. V. Sukha, V. I. Tomilo, Y. P. Gomza, Synthesis, structure, thermal and mechanical properties of nanocomposites based on linear polymers and layered silicates modified by polymeric quaternary ammonium salts (ionenes), *Polymer* 46, 12226-12232 (2005)
172. A. Fainleib, O. Grigoryeva, P. Pissis, Modification of Polycyanurates by Polyethers, Polyesters and Polyurethanes. Hybrid and Interpenetrating Polymer Networks, *J. Balkan Tribolog. Assoc.* 11(3), 303-334 (2005)
173. S. Kriptomou, P. Pissis, P. Sysel, V. Sindelar, V. A. Bershtein, Structure-property relationships in novel poly(imide-amide)-poly(ethylene glycol) hybrid networks, *Polymer* 47, 357-366 (2006)
174. M. V. Burmistr, K. M. Sukhoy, V. V. Shilov, V. S. Sperkach, P. Pissis, G. Polizos, Yu. P. Gomza, Acoustic relaxation and ionic conductivity of oxyethylene aliphatic polyionenes, *Polymer Science A* 48, 314-324 (2006)
175. S. Kriptomou, P. Pissis, E. Kontou, A. M. Fainleib, O. Grygoryeva, I. Bey, Structure-property relationships in brittle polymer networks modified by flexible crosslinks, *Materials Science-Poland* 24, 477-492 (2006)
176. O. Slisenko, E. Lebedev, P. Pissis, A. Spanoudaki, E. Kontou, O. Grigoryeva, Novel polymer blends based on poly(ether-urethane) ionomer and ion-containing styrene copolymer, *J. Therm. Anal. Cal.* 84, 15-19 (2006)
177. O. Grigoryeva, A. Fainleib, A. Tolstov, P. Pissis, A. Spanoudaki, A. Vatalis, C. Delides, Thermal analysis of thermoplastic elastomers based on recycled polyethylenes and ground tyre rubber, *J. Therm. Anal. Cal.* 86, 229-233 (2006)
178. V. A. Bershtein, L. M. Egorova, P. N. Yakushev, P. Sysel, R. Hobzova, J. Kotek, P. Pissis, S. Kriptomou, P. Maroulas, Hyperbranched polyimides crosslinked with ethylene glycol diglycidyl ether: glass transition dynamics and permeability, *Polymer* 47, 6765-6772 (2006)
179. P. Maroulas, S. Kriptomou, P. Sysel, R. Hobzova, J. Kotek, P. Pissis, Molecular dynamics in hyperbranched polyimides cross-linked with ethylene glycol diglycidyl ether, *J. Non-Cryst. Solids* 352, 4800-4803 (2006)
180. D. Fragiadakis, P. Pissis, L. Bokobza, Modified chain dynamics in poly(dimethylsiloxane) / silica nanocomposites, *J. Non-Cryst. Solids* 352, 4969-4972 (2006)
181. A. Kanapitsas, E. Lebedev, O. Slisenko, O. Grigoryeva, P. Pissis, Thermoplastic apparent interpenetrating polymer networks of polyurethane and styrene/acrylic acid block copolymer: structure-property relationships, *J. Appl. Polym. Sci.* 101, 1021-1035 (2006)
182. Y. P. Mamunya, Y. V. Muzychenko, E. V. Lebedev, G. Boiteux, G. Seytre, C. Boullanger, P. Pissis, PTC effect and structure of polymer composites based on polyethylene / polyoxymethylene blend filled with dispersed iron, *Polym. Eng. Sci.* 47, 34-42 (2007)
183. V. A. Bershtein, V. M. Egorov, P. N. Yakushev, L. David, A. M. Fainleib, O. P. Grigorieva, I. Bei, S. Kriptomou, P. Pissis, Structure and dynamic/compositional heterogeneity in polycyanurate-poly(tetramethylene glycol) hybrid networks, *J. Macromol. Sci. – Physics* 46, 207-230 (2007)
184. P. Pissis, D. Fragiadakis, Dielectric studies of segmental dynamics in epoxy nanocomposites, *J. Macromol. Sci. – Physics* 46, 119-136 (2007)
185. N. A. Nikonorova, A. V. Yakimansky, N. N. Smirnov, V. V. Kudryavtsev, R. Diaz-Calleja, P. Pissis, Dielectric relaxation in copolymethacrylates containing side-chain nonlinear optical chromophores, *Polymer* 48, 556-563 (2007)
186. V. A. Bershtein, L. M. Egorov, P. N. Yakushev, V. Sindelar, P. Sysel, T. E. Sukhanova, I. P. Dobrovolskaya, A. I. Grigoriev, S. Kriptomou, P. Pissis, Poly(imide-amide)-poly(ethylene glycol) hybrid networks: nanostructure, molecular dynamics and membrane properties, *Polymer Bulletin* 58, 65-74 (2007)
187. S. Kriptomou, P. Pissis, E. Kontou, A. M. Fainleib, O. Gigiryeva, I. Bey, Polycyanurate networks modified by polyoxytetramethylene glycol, *Polymer Bulletin* 58, 93-104 (2007)
188. J. A. Gomez Tejedor, T. Rodríguez Acosta, J. L. Gomez Ribelles, G. Polizos, P. Pissis, Poly(ethyl methacrylate-co-hydroxyethyl acrylate) random co-polymers: Dielectric and dynamic-mechanical characterization, *J. Non-Cryst. Solids* 353, 276-285 (2007)
189. S. Kriptomou, L. Apekis, C. Rapti, K. Vartzeli-Nikaki, P. Pissis, M. Mravcakova, M. Omastova, Thermal transitions of polypropylene in blends and composites with polypyrrole and polypyrrole/montmorillonite, *International Journal of Polymeric Materials* 56, 865-884 (2007)
190. V. M. Gun'ko, M. V. Borysenko, P. Pissis, A. Spanoudaki, N. Shinyashiki, I. Y. Sulim, T. V. Kulik, B. B. Palyanytsya, Polydimethylsiloxane at the interfaces of fumed silica and zirconia/fumed silica, *Applied Surface Science* 253, 7143-7156 (2007)
191. V. M. Gunko, V. I. Zarko, E. V. Goncharuk, L. S. Andriyko, V. V. Turov, Y. M. Nychiporuk, R. Leboda, J. Skubiszewska-Zieba, A. L. Gabchak, V. D. Osovskii, Y. G. Ptushinskii, G. R. Yurchenko, O. A.

- Mishchuk, P. P. Gorbik, P. Pissis, J. P. Blitz, TSDC spectroscopy of relaxational and interfacial phenomena, *Adv. Colloid Interf. Sci.* 131, 1-89 (2007)
192. N. A. Nikonorova, E. B. Barmatov, D. A. Pebalk, M. V. Barmatova, G. Dominguez-Espinosa, R. Diaz-Calleja, P. Pissis, Electrical properties of nanocomposites based on comb-shaped nematic polymer and silver nanoparticles, *J. Phys. Chem. C* 111, 8451-8458 (2007)
193. V. M. Gunko, P. Pissis, A. Spanoudaki, V. I. Zarko, Y. M. Nychiporuk, L. S. Andriyko, E. V. Goncharuk, R. Lebeda, J. Skubiszewska-Zieba, V. D. Osovskii, Y. G. Ptushinskii, Relaxation phenomena in poly(vinyl alcohol) / fumed silica affected by interfacial water, *J. Colloid Interface Sci.* 312, 201-213 (2007)
194. A. Jigounov, Z. Sedlakova, S. Kriptou, P. Pissis, J. Nedbal, J. Baldrian, M. Ilavsky, Dielectric and thermal behavior of liquid crystalline comb-like polybutadiene-diols with mesogenic groups in side chains, *Polymer* 48, 5721-5733 (2007)
195. D. Fragiadakis, P. Pissis, Glass transition and segmental dynamics in poly(dimethylsiloxane)/silica nanocomposites studied by various techniques, *J. Non-Cryst. Solids* 353, 4344-4352 (2007)
196. N. Shinyashiki, S. Sudo, S. Yagihara, A. Spanoudaki, A. Kyritsis and P. Pissis, Relaxation processes of water in the liquid to glassy states of water mixtures studied by broadband dielectric spectroscopy, *J. Phys. C: Condens. Matter*, 19, 205113 (2007)
197. V. Peoglos, E. Logakis, Ch. Pandis, P. Pissis, J. Piontek, P. Poetschke, M. Micusik, M. Omastova, Thermal and electrical characterization of multi-walled carbon nanotubes reinforced polyamide 6 nanocomposites, *J. of Nanostructured Polymers and Nanocomposites* 3/4, 116-124 (2007)
198. V. M. Gun'ko, P. Pissis, A. Spanoudaki, A. A. Turova, V. V. Turov, V. I. Zarko, E. V. Goncharuk, Interfacial phenomena in starch/fumed silica at varied hydration levels, *Colloid Surf. A* 320, 247-259 (2008)
199. V. A. Bershtein, A. M. Fainleib, P. Pissis, I. M. Bei, F. Dalmas, L. M. Egorova, Y. P. Gomza, S. Kriptou, P. Maroulas, P. N. Yakushev, Polycyanurate-organically modified montmorillonite nanocomposites: structure-dynamics-properties relationships, *J. Macromol. Sci. – Physics* 47, 555-575 (2008)
200. Th. V. Kosmidou, A. S. Vatalis, C. G. Delidis, E. Logakis, P. Pissis, G. C. Papanikolaou, Structural, mechanical and electrical characterization of epoxy-amine/carbon black nanocomposites, *Express Polymer Letters* 2, 364-372 (2008)
201. S. Sredic, M. Davidovic, A. Spasjevic-Bire, U. B. Mioc, M. Todorovic, D. Segan, D. Jovanovic, G. Polizos, P. Pissis, Inorganic-inorganic nanocomposite: Surface and conductive properties, *J. Phys. Chem. Solids* 69, 1883-1890 (2008)
202. C. Pandis, E. Logakis, V. Peoglos, P. Pissis, M. Omastova, M. Mravcakova, A. Janke, J. Piontek, Y. Peneva, L. Minkova, Morphology, microhardness, and electrical properties of composites based on polypropylene, montmorillonite, and polypyrrole, *J. Polym. Sci. Part B Polym. Phys.* 47, 407-423 (2009)
203. Y. V. Savelyev, V. Y. Veselov, V. K. Kharitonova, O. A. Savelyeva, V. I. Shtompel, A. I. Perekhrest, T. V. Travinskaya, A. Kanapitsas, P. Pissis, Synthesis and structural peculiarities of 1, 1-dimethylhydrazine-based polyurethanes, *J. Appl. Polym. Sci.* 112, 2732-2740 (2009)
204. E. Logakis, C. Pandis, V. Peoglos, P. Pissis, C. Stergiou, J. Piontek, P. Poetschke, M. Micusik, M. Omastova, Structure-property relationships in polyamide 6 / multi-walled carbon nanotubes nanocomposites, *J. Polym. Sci. Part B Polym. Phys.* 47, 764-774 (2009)
205. M. Micusik, M. Omastova, I. Krupa, J. Prokes, P. Pissis, E. Logakis, C. Pandis, P. Poetschke, J. Piontek, A comparative study on the electrical and mechanical behaviour of multi-walled carbon nanotube composites prepared by diluting a masterbatch with various types of polypropylenes, *J. Appl. Polym. Sci.* 113, 2536-2551 (2009)
206. T. Kourkoutsaki, E. Logakis, I. Kroutilova, L. Matejka, J. Nedbal, P. Pissis, Polymer dynamics in rubbery epoxy networks / polyhedral oligomeric silsesquioxanes nanocomposites, *J. Appl. Polym. Sci.* 113, 2569-2582 (2009)
207. P. Maroulas, S. Kriptou, P. Pissis, A. Fainleib, I. Bei, V. Bershtein, Y. Gomza, Molecular mobility in polycyanurate/clay nanocomposites studied by dielectric techniques, *Journal of Composite Materials* 43, 943-958 (2009)
208. E. Logakis, Ch. Pandis, V. Peoglos, P. Pissis, J. Piontek, P. Poetschke, M. Micusik, M. Omastova, Electrical/dielectric properties and conduction mechanism in melt processed polyamide/multi-walled carbon nanotubes composites, *Polymer* 50, 5103-5111 (2009)
209. A. Stathopoulos, P. Klonos, A. Kyritsis, P. Pissis, C. Christodoulides, J. C. Rodriguez Hernandez, M. Monleon Pradas, J. I. Gomez Ribelles, Water sorption and polymer dynamics in hybrid poly(2-hydroxyethyl-co-ethyl acrylate)/silica hydrogels, *Eur. Polym. J.* 46, 101-111 (2010)
210. E. Logakis, E. Pollatos, Ch. Pandis, V. Peoglos, I. Zuburtikudis, C. G. Delidis, A. Vatalis, M. Gjoka, E. Syskakis, K. Viras, P. Pissis, Structure-property relationships in isotactic polypropylene/multi-walled carbon nanotubes nanocomposites, *Compos. Sci. Technol* 70, 328-335 (2010)

- 211.** S. Kriptou, P. Pissis, Yu. V. Savelyev, L. P. Robota, T. V. Travinskaya, Polymer dynamics in polyurethane/clay nanocomposites studied by dielectric and thermal techniques, *J. Macromol. Sci. – Physics* 49, 86-110 (2010)
- 212.** E. Pollatos, E. Logakis, P. Chatzigeorgiou, V. Peoglos, I. Zuburtikudis, M. Gjoka, K. Viras, P. Pissis, Morphological, thermal and electrical characterization of syndiotactic polypropylene/multi-walled carbon nanotubes composites, *J. Macromol. Sci. – Physics* 49, 1044-1056 (2010)
- 213.** K. N. Raftopoulos, Ch. Pandis, L. Apekis, P. Pissis, B. Janowski, K. Pielichowski, J. Jaczewska, Polyurethane-POSS hybrids: Molecular dynamics studies, *Polymer* 51, 709-718 (2010)
- 214.** Ch. Boutopoulos, Ch. Pandis, K. Giannakopoulos, P. Pissis, I. Zergioti, Polymer/carbon nanotube composite patterns via laser induced forward transfer, *Appl. Phys. Lett.* 96, 041104 (2010)
- 215.** A. Kanapitsas, C. Tsonos, D. Triantis, I. Stavrakas, C. Anastasiadis, P. Photopoulos, P. Pissis, V. Em. Vamvakas, Thermally activated conduction mechanisms in Silicon Nitride MIS structures, *Thin Solid Films* 518, 2357-2360 (2010)
- 216.** P. Klonos, P. Pissis, V.M. Gun'ko, A. Kyritsis, N.V. Guzenko, E.M. Pakhlov, V.I. Zarko, W. Janusz, J. Skubiszewska-Ziba, R. Lebeda, Interacion of poly(ethylene glycol) with fumed silica and alumina/silica/titania, *Colloid Surf. A* 360, 220-231 (2010)
- 217.** E. Logakis, P. Pissis, D. Pospiech, A. Korwitz, B. Krause, U. Reuter, P. Poetschke, Low electrical percolation threshold in poly(ethylene terephthalate)/multi-walled carbon nanotube nanocomposites, *Eur. Polym. J.* 46, 928-936 (2010)
- 218.** C. Tsonos, A. Kanapitsas, D. Triantis, C. Anastasiadis, I. Stavrakas, P. Pissis, Low temperature dielectric relaxations in ZnO varistor, *Jpn. J. Appl. Phys.* 49, 051102 (2010)
- 219.** P. Klonos, A. Panagopoulou, L. Bokobza, A. Kyritsis, V. Peoglos, P. Pissis, Comparative studies on effects of silica and titania nanoparticles on crystallization and complex segmental dynamics in poly(dimethylsiloxane), *Polymer* 51, 5490-5499 (2010)
- 220.** R. Sabater i Serra, A. Kyritsis, J.L. Escobar Ivirico, A. Andrio Balado, J.L. Gómez Ribelles, P. Pissis, M. Salmerón-Sánchez, Structure and dynamics in poly(L-lactide) copolymer networks, *Colloid Polym. Sci.* 288, 555-565 (2010)
- 221.** E. Logakis, Ch. Pandis, A. Kyritsis, P. Pissis, M. Micusik, M. Omastova, J. Piontek, Indirect methods for the determination of optimal processing conditions in conductive polypropylene/carbon nanotubes composites, *Chem. Phys. Lett.* 498, 125-128 (2010)
- 222.** C. Tsonos, A. Kanapitsas, D. Triantis, C. Anastasiadis, I. Stavrakas, P. Pissis, E. Neagu, Interface states and MWS polarization contributions to the dielectric response of low voltage ZnO varistor, *Ceramics International* 37, 207-214 (2011)
- 223.** M. Micusik, M. Omastova, J. Piontek, C. Pandis, E. Logakis, P. Pissis, Influence of surface treatment of multiwall carbon nanotubes on the properties of polypropylene/carbon nanotubes nanocomposites, *Polym. Adv. Technol.* 22, 38-47 (2011)
- 224.** P. Klonos, A. Panagopoulou, A. Kyritsis, L. Bokobza, P. Pissis, Dielectric studies of segmental dynamics in poly(dimethylsiloxane)/titania nanocomposites, *J. Non-Cryst. Solids* 357, 610-4 (2011)
- 225.** E. Ivanof, R. Kotsilkova, E. Krusteva, E. Logakis, A. Kyritsis, P. Pissis, C. Silvestre, D. Duraccio, M. Pezzuto, Effects of processing conditions on rheological, thermal, and electrical properties of multiwall carbon nanotube/epoxy resin composites, *J. Polym. Sci. Part B Polym. Phys.* 49, 431-442 (2011)
- 226.** A. T. Stathopoulos, A. Kyritsis, F. J. Romero Colomer, J. L. Gomez Ribelles, N. Shinyashiki, C. Christodoulides, P. Pissis, Polymer segmental dynamics and solvent thermal transitions in poly(ethyl acrylate)/p-xylene mixtures, *J. Polym. Sci. Part B Polym. Phys.* 49, 455-466 (2011)
- 227.** E. Logakis, Ch. Pandis, P. Pissis, J. Piontek, P. Poetschke, Highly conducting poly(methyl methacrylate)/carbon nanotubes composites: Investigation on their thermal, dynamic-mechanical, electrical and dielectric properties, *Compos. Sci. Technol.* 71, 854-862 (2011)
- 228.** A. Panagopoulou, A. Kyritsis, A.-M. Aravantinou, D. Nanopoulos, R. Sabater i Serra, J. L. Gomez Ribelles, N. Shinyashiki, P. Pissis, Glass transition and dynamics in lysozyme-water mixtures over wide ranges of composition, *Food Biophysics* 6, 199-209 (2011)
- 229.** N. Shinyashiki, A. Spanoudaki, W. Yamamoto, E. Nambu, K. Yoneda, A. Kyritsis, P. Pissis, R. Kita, S. Yagihara, Segmental relaxation in hydrophilic poly(vinylpyrrolidone) in chloroform studied by broadband dielectric spectroscopy, *Macromolecules* 44, 2140-2148 (2011)
- 230.** Th. V. Kryston, A. B. Georgiev, P. Pissis, A. G. Georgakilas, Role of oxidative stress and DNA damage in human carcinogenesis, *Mutat. Res.* 711, 193-201 (2011)
- 231.** A. Kyritsis, G. Vikelis, P. Maroulas, P. Pissis, B. Milosheva, R. Kotsilkova, A. Toplijska, Cl. Silvestre, D. Duraccio, Polymer Dynamics in epoxy/alumina nanocomposites studied by various techniques, *J. Appl. Polym. Sci.* 121, 3613-3627 (2011)

- 232.** Ch. Pandis, A. Spanoudaki, A. Kyritsis, J. C. Rodriguez Hernandez, J. L. Gomez Ribelles, M. Monleon Pradas, Water sorption characteristics of poly(2-hydroxyethyl acrylate)/silica nanocomposite hydrogels, *J. Polym. Sci. Part B Polym. Phys.* 49, 657-668 (2011)
- 233.** R. Sabater I Serra, A. Kyritsis, J. L. Escobar Ivirico, J. L. Gomez Ribelles, P. Pissis, M. salmeron Sanchez, Molecular mobility in biodegradable poly(ϵ -caprolactone)/poly(hydroxyethyl acrylate) networks, *Eur. Phys. J. E* 34, 37 (2011) DOI 10.1140/epje/i2011-11037-4
- 234.** D. Fragiadakis, L. Bokobza, P. Pissis, Dynamics near the particle surface in natural rubber-silica nanocomposites, *Polymer* 52, 3175-3182 (2011)
- 235.** Ch. Pandis, E. Logakis, A. Kyritsis, P. Pissis, V. V. Vodnik, E. Dzunuzovic, J. M. Nedeljkovic, V. Djokovic, J. C. Rodriguez Hernandez, J. L. Gomez Ribelles, Glass transition and polymer dynamics in silver/poly(methyl methacrylate) nanocomposites, *Eur. Polym. J.* 47, 1514-1525 (2011)
- 236.** K. N. Raftopoulos, B. Janowski, L. Apekis, K. Pielichowski, P. Pissis, Molecular mobility and crystallinity in polytetramethylene ether glycol in the bulk and as soft component in polyurethanes, *Eur. Polym. J.* 47, 2120-2133 (2011)
- 237.** A. Kyritsis, A. Spanoudaki, C. Pandis, L. Hartmann, R. Pelster, N. Shinyashiki, J. C. Rodriguez Hernandez, J. L. Gomez Ribelles, M. Monleon Pradas, P. Pissis, Water and polymer dynamics in poly(hydroxy ethyl acrylate-co-ethyl acrylate) copolymer hydrogels, *Eur. Polym. J.* 47, 2391-2402 (2011)
- 238.** A. Panagopoulou, A. Kyritsis, R. Sabater i Serra, J. L. Gomez Ribelles, N. Shinyashiki, P. Pissis, Glass transition and dynamics in BSA-water mixtures over wide ranges of composition studied by thermal and dielectric techniques, *Biochim. Biophys. Acta* 1814, 1984-1996 (2011)
- 239.** A. T. Stathopoulos, A. Kyritsis, G. Gallego Ferrer, J. L. Gomez Ribelles, C. Christodoulides, P. Pissis, Cooperative segmental motions in ethyl acrylate / triethylene glycol dimethacrylate copolymer networks studied by dielectric techniques, *Macromolecules* 44, 8233-8244 (2011)
- 240.** A. Panagopoulou, A. Kyritsis, N. Shinyashiki, P. Pissis, Protein and water dynamics in bovine serum albumin – water mixtures over wide ranges of composition, *J. Phys. Chem. B* 116, 4593-4602 (2012)
- 241.** A. Kyritsis, A. Spanoudaki, C. Pandis, L. Hartmann, R. Pelster, N. Shinyashiki, J. C. Rodriguez Hernandez, J. L. Gomez Ribelles, M. Monleon Pradas, P. Pissis, Thermal transitions and dynamics in nanocomposite hydrogels, *J. Therm. Anal. Calorim.* 108, 1067-1078 (2012)
- 242.** Yu. Bolbukh, V. Tertykh, P. Klonos, P. Pissis, DSC study in polyhydroxyethylmethacrylate filled with modified silicas, *J. Therm. Anal. Calorim.* 108, 1111-1119 (2012)
- 243.** A. Kyritsis, A. Panagopoulou, P. Pissis, R. Sabater i Serra, J. L. Gomez Ribelles, N. Shinyashiki, Water and protein dynamics in protein-water mixtures over wide ranges of composition, *IEEE Trans. Dielect. Electr. Insul.* 19, 1239-1246 (2012)
- 244.** P. Klonos, C. Pandis, S. Kripotou, A. Kyritsis, P. Pissis, Interfacial effects in polymer nanocomposites studied by dielectric and thermal techniques, *IEEE Trans. Dielect. Electr. Insul.* 19, 1283-1290 (2012)
- 245.** P. Pissis, A. Kyritsis, Hydration studies in polymer hydrogels, *J. Polym. Sci. Part B Polym. Phys.*, 51, 159-175 (2013)
- 246.** A. Panagopoulou, A. Kyritsis, M. Vodina, P. Pissis, Dynamics of uncrystallized water and protein in hydrated elastin studied by thermal and dielectric techniques, *Biochim. Biophys. Acta* 1834, 977-988 (2013)
- 247.** K. N. Raftopoulos, B. Janowski, L. Apekis, P. Pissis, K. Pielichowski, Direct and indirect effects of POSS on the molecular mobility of polyurethanes with varying segment MW, *Polymer* 54, 2745-2754 (2013)
- 248.** P. Jyotishkumar, E. Logakis, S. M. George, J. Pionteck, I. Hauessler, R. Hassler, P. Pissis, S. Thomas, Preparation and properties of multiwalled carbon nanotube/epoxy-amine composites, *J. Appl. Polym. Sci.* 127, 3063-3073 (2013)
- 249.** P. Klonos, S. Kaprinis, V. I. Zarko, V. Peoglos, E. M. Pakhlov, P. Pissis, V. M. Gunko, Thermal and dielectric studies of PEG/C/AST nanocomposites, *J. Appl. Polym. Sci.* 128, 1601-1615 (2013)
- 250.** K. Kyriakos, K. N. Raftopoulos, P. Pissis, A. Kyritsis, F. Naether, L. Hauessler, D. Fischer, A. Vyalikh, U. Scheler, U. Reuter, D. Pospiech, Dielectric and thermal studies of the segmental dynamics of poly(methyl methacrylate)/silica nanocomposites prepared by the sol-gel method, *J. Appl. Polym. Sci.* 128, 3771-1781 (2013)
- 251.** A. Panagopoulou, J. Vazquez Molina, A. Kyritsis, M. Monleon Pradas, A. Valles Lluch, G. Gallego Ferrer, P. Pissis, Glass transition and water dynamics in hyaluronic acid hydrogels, *Food Biophys.* 8, 192-202 (2013)
- 252.** M. Kandyla, C. Pandis, S. Chatzandroulis, P. Pissis, I. Zergioti, Direct laser printing of thin-film polyaniline devices, *Appl. Phys. A* 110, 623-628 (2013)
- 253.** K. N. Raftopoulos, M. Jancia, D. Aravopoulou, E. Hebda, K. Pielichowski, P. Pissis, POSS along the hard segments of polyurethanes. Phase separation and molecular dynamics, *Macromolecules* 46, 7378-7386 (2013)
- 254.** C. Stamatopoulou, P. Klonos, S. Koutsoumpis, V. Gunko, P. Pissis, L. Karabanova, Hydrophilic nanocomposites based on polyurethane/poly(2-hydroxyethyl methacrylate) semi-IPNs and

- modified/unmodified nanosilica for biomedical applications, *J. Polym. Sci. Part B: Polym. Phys.* 52, 397-408 (2014)
255. V. M. Gun'ko, V. V. Turov, A. A. Turova, T. V. Krupska, P. Pissis, R. Lebeda, J. Skubiszewska-Zieba, Interactions of poly(dimethylsiloxane) with nanosilica and silica gel upon cooling-heating, *J. Colloid Interface Sci.* 426, 48-55 (2014)
256. M. V. Galaburda, P. Klonos, V. M. Gunko, V. M. Bogatyrov, M. V. Borysenko, P. Pissis, Dielectric properties and thermal destruction of poly(dimethylsiloxane)/Fe₂O₃/SiO₂ nanocomposites, *Applied Surface Science* 305, 67-76 (2014)
257. G. Z. Papageorgiou, Z. Terzopoulou, D. Bikiaris, K.S. Triantafyllidis, E. Diamanti, D. Gournis, P. Klonos, E. Giannoulidis, P. Pissis, Evaluation of the formed interface in biodegradable poly(L-lactic acid)/graphene oxide nanocomposites and the effect of nanofillers on mechanical and thermal properties, *Thermochimica Acta* 597, 48-57 (2014)
258. I. Sulym, P. Klonos, M. Borysenko, P. Pissis, V.M. Gun'ko, Dielectric and Thermal studies of Segmental Dynamics in Silica/PDMS and Silica/Titania/PDMS nanocomposites, *J. Appl. Polym. Sci.* 131, 41154 (2014)
259. G. Georgousis, C. Pandis, A. Kalamiotis, P. Georgiopoulos, A. Kyritsis, E. Kontou, P. Pissis, M. Micusik, K. Czanikova, J. Kulicek, M. Omastova, Strain sensing in polymer/carbon nanotube composites by electrical resistance measurement, *Composites: Part B* 68, 162-169 (2015)
260. P. Klonos, I. Ya. Sulym, M. V. Borysenko, V. M. Gun'ko, S. Kriptou, A. Kyritsis, P. Pissis, Interfacial interactions and complex segmental dynamics in systems based on silica-polydimethylsiloxane core-shell nanoparticles: Dielectric and thermal study, *Polymer* 58, 9-21 (2015)
261. P. Klonos, I. Ya. Sulym, K. Kyriakos, I. Vangelidis, S. Zidropoulos, D. Sternik, M. V. Borysenko, A. Kyritsis, A. Derylo-Marczewska, V. M. Gun'ko, P. Pissis, Interfacial phenomena in core-shell nanocomposites of PDMS adsorbed onto low specific surface area fumed silica nanooxides: Effects of surface modification, *Polymer* 68, 158-167 (2015)
262. S. Kriptou, Ch. Pandis, A. Kyritsis, D. Pospiech, D. Jehnichen, P. Pissis, Semifluorinated Methacrylate Random Copolymers: Phase Transitions and Molecular Dynamics, *Mol. Cryst. Liq. Cryst.* 611, 27-39 (2015)
263. D. Georgopoulos, S. Kriptou, E. Argyraki, A. Kyritsis, P. Pissis, Study of Isothermal Crystallization Kinetics of 5CB with Differential Scanning Calorimetry and Broadband Dielectric Spectroscopy, *Mol. Cryst. Liq. Cryst.* 611, 197-207 (2015)
264. G. Georgousis, C. Pandis, C. Chatzimanolis-Moustakas, A. Kyritsis, E. Kontou, P. Pissis, J. Krajci, I. Chodak, J. Tabaciariova, M. Micusik, M. Omastova, Study of the reinforcing mechanism and strain sensing in a carbon black filled elastomer, *Composites: Part B* 80, 20-26 (2015)
265. P. Klonos, S. Kriptou, A. Kyritsis, G. Z. Papageorgiou, D. Bikiaris, D. Gournis, P. Pissis, Glass transition and segmental dynamics in poly(L-lactic acid)/graphene oxide nanocomposites, *Thermochimica Acta* 617, 44-53 (2015)
266. P. Klonos, A. Kyritsis, P. Pissis, Effects of surface modification and thermal annealing on the interfacial dynamics in core-shell nanocomposites based on silica and adsorbed PDMS, *Eur. Polym. J.* 70, 342-359 (2015)
267. P. Klonos, A. Kyritsis, P. Pissis, Interfacial dynamics of polydimethylsiloxane adsorbed on fumed metal oxide particles of a wide range of specific surface area, *Polymer* 77, 10-13 (2015)
268. K. N. Raftopoulos, S. Koutsoumpis, M. Jancia, J. P. Lewicki, K. Kyriakos, H. E. Mason, S. J. Harley, E. Hebda, C. M. Papadakis, K. Pielichowski, P. Pissis, Reduced phase separation and slowing down of dynamics in polyurethanes with three-dimensional POSS-based cross-linking moieties, *Macromolecules* 48, 1420-1441 (2015)
269. S. Kriptou, D. Gorgopoulos, A. Kyritsis, P. Pissis, Phase transitions and molecular mobility in 5CB and CE8 studied by dielectric techniques, *Mol. Cryst. Liq. Cryst.* 623, 407-423 (2015)
270. N. Nikonorova, P. Pissis, Molecular mobility in liquid crystalline side-chain polyacrylates and polymethacrylates with cyanobenzene side groups: Dielectric spectroscopy and thermally stimulated depolarization currents, *Mol. Cryst. Liq. Cryst.* 623, 424-432 (2015)
271. P. Klonos, V. Chatzidogiannaki, K. Roumpos, E. Spyratou, P. Georgiopoulos, E. Kontou, P. Pissis, Yu. Gomza, S. Nesin, O. Bondaruk, L. Karabanova, Structure-properties investigations in hydrophilic nanocomposites based on polyurethane/poly(2-hydroxyethyl methacrylate) semi-IPNs and modified silica nanoparticles, *J. Appl. Polym. Sci.* 133, 43122 (2016)
272. P. Klonos, G. Dapei, I. Ya. Sulym, S. Zidropoulos, D. Sternik, A. Derylo-Marczewska, M. V. Borysenko, V. M. Gun'ko, A. Kyritsis, P. Pissis, Morphology and molecular dynamics investigation of PDMS adsorbed on titania nanoparticles: effects of polymer molecular weight, *Eur. Polym. J.* 74, 64-80 (2016)
273. P. Klonos, A. Kyritsis, P. Pissis, Interfacial and confined dynamics of PDMS adsorbed at the interfaces and in the pores of silica gel: effects of surface modification and thermal annealing, *Polymer* 84, 38-51 (2016)

III. REFEREED INTERNATIONAL CONFERENCE PROCEEDINGS

1. G. Boudouris, J. L. Leveque, P. Pissis, D. Pittlinger and K. Stephanis, Study of dielectric materials by the depolarization thermocurrents method, In: F. Milia (ed), "Nuclear Resonance in Solids", (Athens: NRC "Democritos", 1978) (abstract only).
2. P. Pissis, D. Diamanti and G. Boudouris, Bound water in aqueous mono- and disaccharide solutions: a depolarization thermocurrent study, In: Annual Report on the 1983 Conference on Electrical Insulation and Dielectric Phenomena (New York, USA: IEEE 1983), p. 378-383.
3. P. Pissis, L. Apekis, G. Boudouris, D. Diamanti and C. Christodoulides, Bound water in frozen aqueous solutions of biological materials: a dielectric study by the DTC technique, Proceedings of the II International Conference on Applications of Physics to Medicine and Biology, edited by Z. Bajzer, P. Baxa and C. Franconi (World Scientific Publ. Singapore, 1984) p. 567-568.
4. P. Pissis and A. Anagnostopoulou-Konsta, Depolarization thermocurrents in hydrated cellulose, Proceedings of the 5th International Symposium on Electrets, edited by G.M. Sessler and R. Gerhard-Mulhaupt (New York: IEEE 1985) pp. 842-847.
5. L. Apekis and P. Pissis, Study of the multiplicity of dielectric relaxation times in ice at low temperatures, Proceedings of the VIIth Symposium on the Physics and Chemistry of Ice, J. de Physique C1, 127-133 (1987).
6. P. Pissis, L. Apekis and C. Christodoulides, A comparative study of the dielectric behaviour of ice in water-containing systems, Proceedings of the VIIth Symposium on the Physics and Chemistry of Ice. J. de Physique C1, 135-141 (1987).
7. P. Pissis, L. Apekis and C. Christodoulides, Dielectric study of food emulsions at subzero temperatures by the thermally stimulated depolarization (TSD) technique, In: R. Jowitt, F. Escher, M. Kent, B. McKenna and M. Roques (eds). "Physical Properties of Foods-2", COST 90 bis Final Seminar Proceedings (Elsevier, London, 1987) pp. 229-230.
8. D. Daoukaki-Diamanti and P. Pissis, "A dielectric study of the binding modes of water in mono- and disaccharides". In: R. Jowitt, F. Escher, M. Kent, B. McKenna and M. Roques (eds), "Physical Properties of Foods-2", COST 90 bis Final Seminar Proceedings, (Elsevier, London, 1987) pp. 231-233.
9. L. Apekis, C. Christodoulides and P. Pissis, Dielectric properties of paper as a function of moisture content, Proceedings of the Fifth International Conference on Dielectric Materials, Measurements and Applications (IEE, London, 1988) pp. 97-100.
10. A. Anagnostopoulou-Konsta and P. Pissis, The influence of humidity on the dielectric properties of wood, Proceedings of the Fifth International Conference on Dielectric Materials, Measurements and Applications (IEE, London, 1988) pp. 105-108.
11. A. Anagnostopoulou-Konsta, N. H. J. Gangas, P. Pissis, L. Apekis and D. Petridis, Dielectric study of Al-hydroxy-nontronite, Proceedings of the 6th International Symposium on Electrets, edited by D.K. Das-Gupta and A.W. Pattullo (IEEE, New York, 1988) pp. 266-270.
12. A. Anagnostopoulou-Konsta, D. Daoukaki-Diamanti, P. Pissis and E. Sideris, Dielectric study of the interaction of DNA and water, Proceedings of the 6th International Symposium on Electrets, edited by D.K. Das-Gupta and A.W. Pattullo (IEEE, New York, 1988) pp. 271-275.
13. L. Apekis, P. Pissis, C. Christodoulides, G. Spathis, E. Kontou and V. Kefalas, Dielectric properties of polyurethane block copolymers, Proceedings of the 6th International Symposium on Electrets, edited by D.K. Das-Gupta and A.W. Pattullo (IEEE, New York, 1988) pp. 281-285.
14. P. Pissis, L. Apekis and C. Christodoulides, Effect of water on dielectric relaxations in polymers, Proceedings of the 2nd International Conference on Electrical, Optical and Acoustic Properties of Polymers.
15. A. Anagnostopoulou-Konsta, P. Pissis, L. Apekis, D. Daoukaki-Diamanti, C. Christodoulides and E.G. Sideris, Dielectric study of the hydration process in biological materials, In: L. Peliti (ed). "Biologically Inspired Physics". (Plenum Publ. Co, N.Y. 1991), pp. 229-240.
16. L. Apekis, P. Pissis, C. Christodoulides, E. Schlosser, A. Schoenhals and H. E. Carius, Dielectric properties of polyurethane elastomers, Proc. 7th International Symposium on Electrets (ISE7), ed. R. Gerhard-Mulhaupt, W. Kunstler, L. Brehmer, R. Danz (IEEE, New York, 1991) pp. 651-656.
17. P. Pissis, A. Anagnostopoulou-Konsta, L. Apekis, D. Daoukaki-Diamanti, C. Christodoulides and E. G. Sideris, Evidence of glass transition in biological systems from dielectric studies, Proc. 7th International Symposium on Electrets (ISE7), ed. R. Gerhard-Mulhaupt, W. Kunstler, L. Brehmer, R. Danz (IEEE, New York, 1991) pp. 706-710.
18. D. Daoukaki-Diamanti and P. Pissis, Dielectric studies of zeolite-water systems, Proc. 7th International Symposium on Electrets (ISE7), ed. R. Gerhard-Mulhaupt, W. Kunstler, L. Brehmer, R. Danz (IEEE, New York, 1991) pp. 221-225.
19. P. Pissis, A. Enders and G. Nimtz, Dynamic properties of phospholipid-water multilayers studied by dielectric relaxation spectroscopy, Proc. 7th International Symposium on Electrets (ISE7), ed. R. Gerhard-Mulhaupt, W. Kunstler, L. Brehmer, R. Danz (IEEE, New York, 1991) pp. 227-231.

20. C. Christodoulides, P. Pissis, L. Apekis and D. Daoukaki-Diamanti, Experimental analysis of distributed relaxation processes by TSDC techniques, Proc. 7th International Symposium on Electrets (ISE7), ed. R. Gerhard-Multhaupt, W. Kunstler, L. Brehmer, R. Danz (IEEE, New York, 1991) pp. 640-644.
21. A. Kyritsis, P. Pissis, J. L. Gomez Ribelles and M. Monleon Pradas, Hydration properties of PHEA/KEVLAR composites studied by dielectric, DSC and sorption isotherm measurements, Proc. 7th International Symposium on Electrets (ISE7), ed. R. Gerhard- Multhaupt, W. Kunstler, L. Brehmer, R. Danz (IEEE, New York, 1991) pp. 215-219.
22. L. Apekis, C. Christodoulides, P. Pissis, G. Spathis, E. Kontou and V. Kefalas, Dielectric study of polyurethane block copolymers, Phase Interaction in Composite Materials, Proceedings of Comp'88, ed. by S.A. Paipetis and G. C. Papanicolaou (Wallington, Omega Scientific, 1992), pp. 483-488.
23. P. Pissis, Glass transitions in biological systems, In: T. Bountis (ed.). "Proton Transfer in Hydrogen-Bonded Systems", (Plenum Press, N.Y. 1992) pp. 207-216.
24. A. Anagnostopoulou-Konsta, P. Pissis and E. G. Sideris, Investigation of the water-biomolecules interaction using dielectric techniques, Proc. Water-Biomolecules Interactions, M.U. Palma, M.B. Palma-Vittorelli and F. Parak (eds) (SIF, Bologna, 1993) pp. 219-222.
25. P. Pissis, A. Enders and G. Nimtz, Dielectric studies of molecular mobility in phospholipid bilayers, Proc. Water-Biomolecules Interactions, M.U. Palma, M.B. Palma-Vittorelli and F. Parak (eds) (SIF, Bologna, 1993) pp. 223-226.
26. P. Pissis, J. Laudat, D. Daoukaki-Diamanti and A. Kyritsis, Structure and dynamic properties of water confined in small volumes, Proc. Hydrogen Bond Networks, M. C. Bellissent-Funel and J. C. Dore (eds), (Kluwer Academic Publishers, Dordrecht, 1994) pp. 425-432.
27. L. Apekis, P. Pissis, C. Christodoulides and A. Kanapitsas, Dielectric relaxation spectroscopy in blends of polyurethane and styrene acrylonitrile, Proc. 8th International Symposium on Electrets (ISE8), ed. J. Lewiner, D. Morisseau, C. Alquie (IEEE, New York, 1994) pp. 363-368.
28. P. Pissis, J. Laudat, C. Tsonos, L. Apekis and A. Kyritsis, Electrical and dielectric measurements in conducting poly(ethylene oxide)- based electrolytes, Proc. 8th International Symposium on Electrets (ISE8), ed. J. Lewiner, D. Morisseau, C. Alquie (IEEE, New York, 1994) pp. 392-397.
29. C. Maggana, G. Spathis, P. Pissis, A. Kanapitsas, C. G. Delides and A. S. Vatalis, Thermally stimulated currents in epoxy resin systems and epoxy resin/rubber blends, Proc. 8th International Symposium on Electrets (ISE8), ed. J. Lewiner, D. Morisseau, C. Alquie (IEEE, New York, 1994) pp. 546-551.
30. A. F. Sergeeva, S. N. Fedosov and P. Pissis, Some features of the electric relaxation in PVDF and PVDF-PZT composites, Proc. 8th International Symposium on Electrets (ISE8), ed. J. Lewiner, D. Morisseau, C. Alquie (IEEE, New York, 1994) pp. 748-753.
31. A.A. Konsta, P. Pissis and J. Laudat, Dielectric study of the hydration mechanism in plant seeds, Proc. 9th International Symposium on Electrets (ISE 9), ed. Xia Zhongfu, Zhang Hongyan (IEEE, New York, 1996) pp. 723-728.
32. A.A. Konsta, D. Daoukaki, A. Kyritsis and P. Pissis, Dielectric studies of polyacrylamide hydrogels, Proc. 9th International Symposium on Electrets (ISE 9), ed. Xia Zhongfu, Zhang Hongyan (IEEE, New York, 1996) pp. 772-777.
33. E.R. Neagu, P. Pissis, J.N. Marat-Mendes, J.L. Gomez Ribelles and R.M. Neagu, The dipolar α peak and space charge ρ peak in the electrical polarized materials, Proc. 9th International Symposium on Electrets (ISE 9), ed. Xia Zhongfu, Zhang Hongyan (IEEE, New York, 1996) pp. 545-550.
34. E.R. Neagu, R.M. Neagu, P. Pissis, and D.K. Das Gupta, The characterization of insulating materials using triangular signals of very high period, Proc. 9th International Symposium on Electrets (ISE 9), ed. Xia Zhongfu, Zhang Hongyan (IEEE, New York, 1996) pp. 585-590.
35. P. Pissis, A. Kanapitsas and C. Delides, Dielectric and hygrothermal studies in rubber modified epoxy resins, Proc 7th International Conference on Dielectric Materials, Measurements and Applications (IEE, London, 1996) pp. 56-59.
36. A. Kanapitsas, P. Pissis, L. Karabanova, L. Sergeeva and L. Apekis, Dielectric relaxation spectroscopy in interpenetrating polymer networks, Proc. 7th International Conference on Dielectric Materials, Measurements and Applications (IEE, London, 1996) pp. 60-63.
37. A. Kanapitsas, P. Pissis, A. Garcia Estrella and M. Ulcnik, Dielectric investigations of microphase separation in polyurethane - styrene/acrylonitrile blends, Proc. 7th International Conference on Dielectric Materials, Measurements and Applications (IEE, London, 1996) pp. 230-233.
38. A. Kyritsis and P. Pissis, Dielectric relaxation spectroscopy in poly(ethylene oxide) water systems, 12th European Symposium on Polymer Spectroscopy (ESOPS-12), Macromol. Symp. 119, 15-24 (1997).
39. C. Maggana, G. Spathis, E. Kontou and P. Pissis, Water effect to the α -relaxation process of epoxy resin systems, Proc. 5th European Conference on Advanced Materials and Processes and Applications, Vol. 2, L.A.J.L. Sarton and H. B. Zeedijk (eds) (FEMS, 1997) pp. 159 -162.

40. A. Kanapitsas, P. Pissis, L.V. Karabanova and K. G. Vyras, Microphase Separation in interpenetrating polymer networks, Proc. 5th European Conference on Advanced Materials and Processes and Applications, Vol. 2, L.A.J.L. Sarton and H. B. Zeedijk (eds) (FEMS, 1997) pp. 191-194.
41. P. Pissis, A. Kanapitsas and C.G. Delides, Molecular mobility and hygrothermal studies in rubber modified epoxy resins, Proc. 5th European Conference on Advanced Materials and Processes and Applications, Vol. 2, L.A.J.L. Sarton and H. B. Zeedijk (eds) (FEMS, 1997) pp. 195-198.
42. G. Georgoussis, A. Kanapitsas, A. Kyritsis, P. Pissis, Yu. V. Savelyev, E. R. Akhranovich, E. G. Privalko and V. P. Privalko, Structure – property relationship in “charged” segmented polyurethanes, Proc. Slow Dynamics in Complex Systems, M. Tokuyama and I. Oppenheim (eds) (AIP, New York, 1999) pp. 651-652.
43. P. Pissis, A. Kyritsis, V. V. Shilov and V. V. Shevchekno, Structure and molecular mobility studies in ionomers based on polyurethanes, Proc. Slow Dynamics in Complex Systems, M. Tokuyama and I. Oppenheim (eds) (AIP, New York, 1999) pp. 653-654.
44. V. A. Bershtein, L. M. Egorova, P. N. Yakushev, G. Georgoussis, A. Kyritsis, P. Pissis, P. S. Sysel and L. Brozova, Molecular dynamics in nanostructured polyimide – silica hybrid materials and their thermal stability, Macromol. Symp. 146, 9-16 (1999).
45. V. A. Bershtein, L. M. Egorova, V. M. Egorov, A. M. Fainleib, P. Pissis, P. Sysel and P. N. Jakushev, The anomalies of segmental dynamics in complex polymer systems as studied by combined laser-interferometric creep rate spectroscopy / DSC approach, Proc. Annual North-American Thermal Analysis Society Conference, Orlando (USA), October 2000. pp.604-610.
46. R. Kotsilkova, P. Pissis, A. Kanapitsas and S. Rousseva, Rheological and dielectric measurements of epoxy/smectite hybrids – a tool for evaluation of the molecular dynamics at the nanoscale interfaces, Proc. 2nd Workshop on Nanotechnology, November 2000, Sofia (Bulgaria), p. 57 – 58.
47. P. Pissis, A. Kyritsis, J.M. Meseguer Duenas, M.M. Pradas, D.T. Escuriola, G.G. Ferrer and J.L. Gomez Ribelles, Dielectric and dynamic mechanical studies in homogeneous PBA/PBMA interpenetrating polymer networks, Macromol. Symp., 171, 151 – 162 (2001) .
48. H. Zois, P. Pissis and L. Bokobza, Dielectric study of interfaces in SBR – silica nanocomposites, Proc. Hellas – Comp, June 2001, Patras (Greece)
49. A. Kanapitsas, P. Pissis, R. Kotsilkova, I. Nedkov and S. Stavrev, Phase morphology and molecular mobility in hybrid nanocomposites, Proc. Hellas – Comp, June 2001, Patras (Greece)
50. P. Pissis, A. Kanapitsas, G. Georgoussis, V.A. Bershtein and P. Sysel, Dielectric studies of phase morphology and molecular mobility in novel nanocomposites based on polyimide, Proc. Hellas – Comp, June 2001, Patras (Greece)
51. Y. P. Mamunya, E. G. Privalko, E. V. Lebedev, V. P. Privalko, F. J. Balta Calleja, Structure-dependent conductivity and microhardness of metal-filled PVC composites, Macromol. Symp., 169, 297 – 306 (2001).
52. P. Pissis, A. Kyritsis, G. Polizos, G. Gallego Ferrer, M. Monleon Pradas and J. L. Gomez Ribelles, Dielectric studies of polymer-water interactions in hydrogels, Proc. Fourth International Conference on Electromagnetic Wave Interaction with Water and Moist Substances, May 2001, Weimar (Germany), pp.8-15.
53. P. Pissis, G. Apostolescu, A. Cailfan, G. Polizos, I. Rosca, N. Apostolescu, I. Rusu, Influence of some thermal stabilizers on the dielectric properties of poly(vinyl chloride), Proc. International Conference on Advances in Processing, Testing and Application of Dielectric Materials (ARTADM'2001), Przegląd Elektrotechniczny LXXVII, Sigma Not, Wroclaw, 2001, pp.187 – 188.
54. O. Grigoryeva, L. Sergeeva, O. Starostenko and P. Pissis, Phase transitions in blends of functionalized thermoplastics, Proc. IX International Macromolecular Colloquium, November 2001, Gramado/RS, Brazil, pp.260 – 262.
55. V. A. Bershtein, V.M. Egorov, P.N. Yakushev, L. David, P. Pissis, P. Sysel, Anomalous segmental dynamics in polyimide – containing hybrid networks and PI/PI molecular composites, Proc. International Conference "Polymerwerkstoffe – 2002", September 2002, Halle, Germany, pp. 218 – 221.
56. P. Frubing, A. Kremmer, J. Ganster, P. Pissis, R. Gerhard-Multhaupt, Dielectric relaxation and resonance spectra of ferroelectric polyamide 11, 11th International Symposium on Electrets, October 2002, Melbourne, Australia, pp. 88 – 91.
57. D. Fragiadakis, M. Bouga, A. Kyritsis, P. Pissis, K. Viras, W. Mingvanish, C. Booth, Molecular order and dynamics in block copolymers of poly(oxybutylene) and poly(oxyethylene), Macromol. Symp. 191, 21 – 30 (2003).
58. Y. Mamunya, A. Kanapitsas, P. Pissis, G. Boiteux, E. Lebedev, Water sorption and electrical/dielectric properties of organic-inorganic polymer blends, Macromol. Symp. 198, 449 – 459 (2003).
59. V. A. Bershtein, V. M. Egorov, P. N. Yakushev, L. David, P. Sysel, V. Sindelar, P. Pissis, Segmental dynamics and nanostructure in poly(imide amide)-poly(ethylene adipate) hybrid networks as membrane materials, Polyimides and High Performance Polymers, Proc. 6th European Technical Symposium on

- Polyimides and High Performance Functional Polymers, May 2002, Montpellier, France, M. J. M. Abadie and B. Sillion (eds), pp.99 – 106.
60. D. Fragiadakis, P. Pissis, C. Ellie, A. Kanapitsas, R. Kotsilkova, S. Stavrev, I. Nedkov, Dielectric studies of interfacial phenomena in polymer nanocomposites, Proc. 10th International Conference on Mechanics and Technology of Composite Materials, September 2003, Sofia, Bulgaria, pp. 45 – 50.
61. H. Zois, A. Kanapitsas, P. Pissis, L. Apekis, E. Lebedev, Ye. P. Mamunya, Dielectric properties and molecular mobility of organic/inorganic polymer composites, *Macromol. Symp.* 205, 263 – 272 (2004).
62. P. Pissis, A. Kanapitsas, S. Kriptou, C. G. Delides, A. Vatalis, Ye. P. Mamunya, V. I. Shtompel, E. V. Lebedev, G. Boiteux, Structure-property relationships in organic-inorganic nanocomposites, *Nanoscience & Nanotechnology* 4, 213-216 (2004).
63. A. Spanoudaki, D. Fragiadakis, P. Pissis, J. C. Rodriguez Hernandez, F. J. Ivanco Delgado, M. Monleon Pradas, Water effects in hydrogels studied by dielectric techniques, Proc. ISEMA 2005 6th International Conference on Electromagnetic Wave Interaction with Water and Moist Substances, May-June 2005, Weimar (Germany), pp. 49-56.
64. O. Grigoryeva, A. Fainleib, A. Tolstov, P. Pissis, A. Spanoudaki, A. Vatalis, C. Delides, Application of thermal analysis methods for investigation of phase structure and components compatibility in thermoplastic elastomers based on recycled polyethylenes and ground tyre rubber, Proc. MEDICTA 2005, ed. M Lalia-Kantouri, 7th Mediterranean Conference on Calorimetry and Thermal Analysis, July 2005, Thessaloniki (Greece), pp. 129-132.
65. O. Slisenko, E. Lebedev, P. Pissis, A. Spanoudaki, E. Kontou, O. Grigoryeva, Application of thermal analysis methods for structure-property characterization of polymer blends based on poly(ether-urethane) ionomer and ion-containing styrene copolymer, Proc. MEDICTA 2005, ed. M Lalia-Kantouri, 7th Mediterranean Conference on Calorimetry and Thermal Analysis, July 2005, Thessaloniki (Greece), pp. 37-42.
66. D. Fragiadakis, E. Logakis, P. Pissis, Y. Yu. Kramarenko, T. A. Shantalii, I. L. Karpova, K. S. Dragan, E. G. Privalko, A. A. Usenko, V. P. Privalko, Polyimide/silica nanocomposites with low values of dielectric permittivity, Proc. Second Conference on Microelectronics, Microsystems and Nanotechnology, Journal of Physics: Conference Series 10 (2005) 139-142.
67. P. Pissis, D. Fragiadakis, F. Tserotas, L. Bokobza, Modified chain dynamics in elastomer/silica nanocomposites, Proc. 1st International Workshop on Nanoscience & Nanotechnology IWON 2005, November 2005, Belgrade (Serbia and Montenegro), pp. 60-63.
68. E. Logakis, D. Fragiadakis, P. Pissis, Low-k polyimide/silica nanocomposites for microelectronics applications, Proc. 25th International Conference on Microelectronics (MIEL 2006), Belgrade, Serbia and Montenegro, 14-17 May 2006, vol. 1, pp. 119-122.
69. A. Kanapitsas, C. Tsonos, E. Logakis, C. Pandis, P. Pissis, E. Kontou, Y. P. Mamunya, E. V. Lebedev, C. G. Delides, PTC effect and structure of polymer composites based on polypropylene/co-polyamide blend filled with dispersed iron, Proc. 25th International Conference on Microelectronics (MIEL 2006), Belgrade, Serbia and Montenegro, 14-17 May 2006, vol. 2, pp. 391-394.
70. A. Spanoudaki, D. Fragiadakis, K. Vartzeli-Nikaki, P. Pissis, J. C. Rodriguez Hernandez, Manuel Monleon Pradas, Nanostructured and nanocomposite hydrogels for biomedical applications, In J. P. Blitz, V. M. Gun'ko (Editors) *Surface Chemistry in Biomedical and Environmental Science*, Springer Verlag, Berlin, 2006, pp. 229-240.
71. D. Fragiadakis, C. G. Delides, A. S. Vatalis, P. Pissis, Modified chain dynamics in polymer nanocomposites, Proc. 11th International Conference on Mechanics and Technology of Composite Materials, 2-4 October 2006, Sofia, Bulgaria, pp. 24 – 30.
72. E. Logakis, Ch. Pandis, V. Peoglos, P. Pissis, A. Kanapitsas, J. Pionteck, P. Poetschke, M. Micusik, M. Omastova, Thermal and electrical properties of polyamide / multi-walled carbon nanotubes nanocomposites *NSTI Nanotech* 2007, Vol. 2, pp. 96-99, 2007.
73. Ch. Pandis, E. Logakis, M. Chorianopoulos, A. Spanoudaki, A. Kyritsis, V. Peoglos, P. Pissis, M. Micusik, I. Krupa, M. Omastova, J. Pionteck, P. Poetschke, Thermal and electrical characterization of polypropylene/carbon nanotube nanocomposites, *NSTI Nanotech* 2007, Vol. 2, pp. 166-169, 2007.
74. A. Kanapitsas, E. Logakis, C. Pandis, I. Zuburtikudis, P. Pissis, C. G. Delides, A. S. Vatalis, Dielectric and thermomechanical properties of polypropylene/multi-walled carbon nanotubes nanocomposites, *Mater. Res. Soc. Symp. Proc.* Vol. 1056, 1056-HH11-39, 2008.
75. P. Pissis, D. Fragiadakis, A. Kanapitsas, K. Delidis, Broadband dielectric relaxation spectroscopy in polymer nanocomposites, *Macromol. Symp.* 265, 12-20 (2008)
76. A. Spanoudaki, N. Shinyashiki, A. Kyritsis, P. Pissis, Dielectric spectroscopy on propylene glycol / poly(vinyl pyrrolidone) solutions: Polymer and solvent dynamics in hydrogen-bonding systems, CP982, *Complex Systems*, 5th International Workshop on Complex Systems, M. Tokoyama, I. Oppenheim, and H. Nishiyama (eds), American Institute of Physics, 2008, pp. 125-130

77. K. Raftopoulos, C. Pandis, L. Apekis, P. Pissis, K. Pielichowski, B. Janowski, Molecular dynamics in polyurethane-POSS nanocomposites, Proc. Modern polymeric materials for environmental applications, 3rd International Seminar, Krakow (Poland), May 2008, K. Pielichowski (ed), Polish Academy of Arts and Sciences, pp. 209-214
78. L. Hartmann, A. Spanoudaki, A. Kyritsis, P. Pissis, R. Pelster, N. Shinyashiki, J. C. Rodriguez Hernandez, J. L. Gomez Ribelles, M. Monleon Pradas, Dielectric studies of molecular dynamics and hydration properties of poly(hydroxy ethyl acrylate)-co-poly(ethyl acrylate) copolymers, Proc. ISEMA 2009, 8th International Conference on Electromagnetic Wave Interaction with Water and Moist Substances, June 2009, Helsinki (Finland)
79. A. Papagiannopoulos, P. Pissis, A. Kyritsis, N. Shinyashiki, S. Yagihara, W. Yamamoto, T. Yoshinari, Water and protein dynamics in protein-water mixtures studied by dielectric techniques, Proc. ISEMA 2009, 8th International Conference on Electromagnetic Wave Interaction with Water and Moist Substances, June 2009, Helsinki (Finland)
80. C. Tsonos, A. Kanapitsas, A. Karagounis, I. Stavrakas, D. Triantis, C. Anastasiadis, P. Photopoulos, V. Em. Vamvakas, P. Pissis, Probing the electrical properties of the Si Nitride/Si interface, Proc. 27th International Conference on Microelectronics (MIEL 2006), Nis, Serbia and Montenegro, 16-19 May 2010, pp. 465-468
81. K. Raftopoulos, B. Janowski, L. Apekis, K. Pielichowski, P. Pissis, Polyurethane-POSS organic-inorganic hybrid materials. The effect of soft segment length and nanoparticle content on the molecular dynamics, Proc. Modern polymeric materials for environmental applications, 4th International Seminar, Krakow (Poland), December 2010, K. Pielichowski (ed), Crakow University of Technology, Vol. 4, Iss. 2, pp. 81-90
82. L. Hartmann, A. Spanoudaki, A. Kyritsis, P. Pissis, R. Pelster, N. Shinyashiki, J. C. Rodriguez Hernandez, J. L. Gomez Ribelles, M. Monleon Pradas, Water and polymer dynamics in hydrogels, Proc. Modern polymeric materials for environmental applications, 4th International Seminar, Krakow (Poland), December 2010, K. Pielichowski (ed), Crakow University of Technology, Vol. 4, Iss. 1, pp. 109-118
83. A. Panagopoulou, A. Kyritsis, A.-M. Aravantinou, D. Nanopoulos, J. L. Gomez Ribelles, R. Sabater i Serra, N. Shinyashiki, P. Pissis, Glass transition and dynamics in hydrated proteins over wide ranges of composition studied by thermal and dielectric techniques, Proc. ISEMA 2011, 9th International Conference on Electromagnetic Wave Interaction with Water and Moist Substances, May-June 2011, Kansas City (USA), pp. 62-69
84. A. Kyritsis, A. Panagopoulou, P. Pissis, R. S. i Serra, J. L. Gomez Ribelles, N. Shinyashiki, Water and protein dynamics in protein-water mixtures over wide ranges of composition, Proc. 14th International Symposium on Electrets, August 2011, Montpellier (France), F. Henn, S. Devautour-Vinot, J. Castellon (Eds), IEEE, pp.49-50
85. P. Pissis, P. Klonos, A. Kyritsis, Interfacial effects in polymer nanocomposites studied by dielectric and thermal techniques, Proc. 14th International Symposium on Electrets, August 2011, Montpellier (France), F. Henn, S. Devautour-Vinot, J. Castellon (Eds), IEEE, pp.67-68
86. C. Pandis, G. Georgoussis, V. Peoglos, A. Kyritsis, P. Pissis, P. Georgiopoulos, E. Kontou, Electrical resistance measurement for in situ health monitoring of carbon nanotube/polymer composites, Emerging Technologies in Non-Destructive Testing V, A.S. Paipetis, T.E. Matikas, D.G. Aggelis, D. Van Hemelrijck (Eds), Taylor and Francis Group, London, 2012, pp. 367-372
87. C. Pandis, G. Georgoussis, V. Peoglos, A. Kyritsis, P. Pissis, P. Georgiopoulos, E. Kontou, Strain and damage sensing in carbon fiber polymer-matrix composite by electrical resistance measurement, Emerging Technologies in Non-Destructive Testing V, A.S. Paipetis, T.E. Matikas, D.G. Aggelis, D. Van Hemelrijck (Eds), Taylor and Francis Group, London, 2012, pp. 367-372
88. G. Georgoussis, C. Pandis, A. Kalamiotis, P. Georgiopoulos, A. Kyritsis, E. Kontou, P. Pissis, M. Micusik, M. Omastova, Strain sensing in polymer/carbon nanotube composites by electrical resistance measurement, Procedia Engineering 47, 774-777 (2012) (Proceedings Eurosenors XXVI, September 9-12, 2012, Krakow, Poland)
89. K. Sasaki, A. Panagopoulou, M. Miyara, K. Fujita, W. Yamamoto, P. Pissis, A. Kyritsis, R. Kita, N. Shinyashiki, S. Yagihara, Dynamics of protein and hydrated gelatine in partially crystallized mixtures, AIP Conf. Proc. 1518, 288 (2013), pp. 288-291
90. P. Pissis, P. Klonos, S. Kriptou, A. Kyritsis, Thermal transitions and segmental dynamics in polymer nanocomposites, Proc. Modern polymeric materials for environmental applications, 5th International Seminar, Krakow (Poland), May 2013, K. Pielichowski (ed), Crakow University of Technology, Vol. 5, Iss. 2, pp. 135-142
91. K. N. Raftopoulos, M. Jancia, D. Aravopoulou, K. Pielichowski, P. Pissis, Segmental dynamics and microphase separation of polyurethane-POSS hybrids with particles as part of the hard segments of the main chain, Proc. Modern polymeric materials for environmental applications, 5th International Seminar, Krakow (Poland), May 2013, K. Pielichowski (ed), Crakow University of Technology, Vol. 5, Iss. 2, pp. 177-186

92. G. Georgoussis, C. Pandis, A. Kalamiotis, P. Georgiopoulos, A. Kyritsis, E. Kontou, P. Pissis, M. Micusik, K. Czanikova, M. Omastova, Damage evaluation of PVDF with MWCNTs nanocomposites under tensile load by monitoring their electrical behavior, Proceedings 5th International Conference on NDT of HSNT - IC MINDT 2013, May 20-22, 2013, Athens, Greece
93. P. Klonos, G. Z. Papageorgiou, Z. Terzopoulou, S. K. Triantafyllidis, D. Gournis, D. N. Bikiaris, A. Kyritsis, P. Pissis, Effects of graphene oxide on molecular dynamics, thermal and mechanical properties of poly(L-lactic acid), Proceedings ECCM16 – 16th European Conference on Composite Materials, Seville, Spain, 22-26 June 2014
94. P. Pissis, P. Klonos, A. Kyritsis, V. M. Gun'ko, Interfacial effects in core-shell polymer nanocomposites, Proceedings ICCM20 – 20th International Conference on Composite Materials, Copenhagen, Denmark, 19-24 July 2015
95. P. Pissis, G. Georgoussis, C. Pandis, P. Georgiopoulos, A. Kyritsis, E. Kontou, M. Micusik, K. Czanikova, M. Omastova, Strain and damage sensing in polymer composites and nanocomposites with conducting fillers, *Procedia Engineering* 114, 590-597 (2015) (Proceedings 1st International Conference on Structural Integrity, September 1-4, 2015, Madeira, Portugal)
96. P. Pissis, C. Pandis, P. Maroulas, A. Kyritsis, E. Kontou, Electrical/dielectric measurements for monitoring polymerization, morphology and mechanical integrity in polymer nanocomposites, *Procedia Engineering* 114, 598-605 (2015) (Proceedings 1st International Conference on Structural Integrity, September 1-4, 2015, Madeira, Portugal)
97. P. Ketikis, S. Koutsoumpis, L. Bokobza, D. Georgopoulos, G. Georgoussis, E. Kontou, A. Kyritsis, P. Pissis, Molecular dynamics and thermal transitions in PDMS/CNTs nanocomposites, Proc. Modern polymeric materials for environmental applications, 6th International Seminar, Krakow (Poland), April 2016, K. Pielichowski (ed), Crakow University of Technology, Vol. 6, pp. 133-142
98. S. Koutsoumpis, K. N. Raftopoulos, J. Ozimek, P. Pissis, E. Hebda, C. M. Papadakis, K. Pielichowski, Impact of POSS particles on morphology, thermal properties and molecular dynamics of polyurethane elastomers based on HDI, Proc. Modern polymeric materials for environmental applications, 6th International Seminar, Krakow (Poland), April 2016, K. Pielichowski (ed), Crakow University of Technology, Vol. 6, pp. 151-160
99. K. N. Raftopoulos, S. Koutsoumpis, E. Hebda, C. M. Papadakis, K. Pielichowski, P. Pissis, Architecture effects on the morphology and segmental dynamics in polyurethane-POSS organic inorganic hybrids, Proc. Modern polymeric materials for environmental applications, 6th International Seminar, Krakow (Poland), April 2016, K. Pielichowski (ed), Crakow University of Technology, Vol. 6, pp. 297-306

IV. BOOK CHAPTERS

1. P. Pissis, A. Kyritsis, G. Georgoussis and V. V. Shilov, Structure-property relationships in polyurethane ionomers, Chapter 6 in *Advanced Functional Polymers and Composites*, H. S. Nalwa (Ed.), The Gordon and Breach Publishing Group, Tokyo, 2001, pp. 317-349.
2. P. Pissis, Water in polymers and biopolymers studied by dielectric techniques, Chapter 3 in *Electromagnetic Wave Interaction with Water and Moist Substances*, K. Kupfer (Ed.), Springer, Berlin Heidelberg New York, 2005, pp. 39-70.
3. P. Pissis, G. Polizos, Molecular dynamics and ionic conductivity studies in polyurethane thermoplastic elastomers, Chapter 14 in *Handbook of Condensation Thermoplastic Elastomers*, S. Fakirov (Ed.), Wiley-VCH, Weinheim, 2005, pp.381-434.
4. V.A. Bershtein, L. David, V.M. Egorov, P. Pissis, P. Sysel, P.N. Yakushev, Peculiarities of segmental dynamics in complex polyimide materials for advanced technologies, in *Polyimides and Other High Temperature Polymers*, Vol. 3, K. Mittal (Ed.), VSP, Utrecht Boston, 2005, pp. 353-399.
5. A. Fainleib, O. Grigoryeva, P. Pissis, Modification of Polycyanurates by Polyethers, Polyesters and Polyurethanes. Hybrid and Interpenetrating Polymer Networks, in "Chemical and Biological Kinetics. New horizons", Vol. 1 *Chemical Kinetics*, E.B. Burlakova, A.E. Shilov, S.D. Varfolomeev, G.E. Zaikov (Eds), VSP International Publ., Leiden-Boston, 2005, pp. 405-437.
6. A. Fainleib, O. Grigoryeva, P. Pissis, Modification of Polycyanurates by Polyethers, Polyesters and Polyurethanes. Hybrid and Interpenetrating Polymer Networks, In: *Focus on Natural and Synthetic Polymer Science*, Ed. C. Vasile and G. E. Zaikov (Eds), Nova Science Publishers, New York, chapter 3, pp. 49-84 (2006)

7. V. M. Gunko, V. I. Zarko, V. V. Turov, E. V. Goncharuk, Y. M. Nychiporuk, L. S. Andriyko, A. A. Turova, O. A. Mischuk, Y. G. Ptushinskii, P. P. Gorbik, R. Leboda, J. Skubiszewska-Zieba, P. Pissis, J. P. Blitz, Regularities in the behavior of nanomaterials in different media caused by surface structure and particle morphology, in A. P. Shibak, P. P. Gorbik (Eds), *Physicochemistry of Nanomaterials and Supramolecular Structures*, Vol. 1, Naukova Dumka, Kiev, 2007, pp. 157-226 (in Russian).
8. P. Pissis, Molecular dynamics in thermoset nanocomposites, Chapter 5 in *Thermoset Nanocomposites for Engineering Applications*, R. Kotsilikova (Ed.), Rapra Technology, Schropshire, U. K., 2007
9. P. Pissis, S. Kripotou, A. Kyritsis, Dielectric relaxation in polymer-clay nanocomposites, Chapter 7 in *Physical Properties and Applications of Polymer Nanocomposites*, S. C. Tjong and Y.-W. Mai (Eds), Woodhead Publishing, Oxford, U. K., 2010, pp.247-279
10. P. Pissis, S. Kripotou, P. Maroulas, A. Fainleib, Dielectric studies of chain dynamics in polycyanurate hybrid networks and nanocomposites, Chapter 8 in *Thermostable Polycyanurates*, A. Fainleib (Ed), Nova Science Publishers, New York, 2010, pp. 247-295
11. M. Davidovic, M. Kutin, S. Linic, U. Mioc, Z. Nedic, S. Sredic, A. Nikolic, D. Jovanovic, P. Pissis, Nanocomposite based on natural materials, Chaper 3 in *Advances in Diverse Industrial Applications of Nanocomposites*, B. Reddy (Ed.), InTech Open Access Publisher, 2011, pp. 37-56
12. P. Pissis, A. Kyritsis, D. Fragiadakis, Dielectric spectroscopy and thermally stimulated depolarization current analysis of multiphase polymer systems, Chapter 12 in *Handbook of multiphase polymer systems*, A. Boudenne, L. Ibos, Y. Candau, S. Thomas (Eds), Wiley, 2011, pp. 479-517
13. N. Bonanos, P. Pissis, J. R. Macdonald, Impedance spectroscopy of dielectrics and electronic conductors, In: *Characterization of Materials*, E. N. Kaufmann (Ed.), Wiley on line library, 2012, 14 pages
14. G. S. Gunko, C. Pandis, Yu. M. Bolbukh, G. P. Prikhod'ko, P. Pissis, V. A. Tertykh, Electrophysical characteristics of polystyrene/MWCNTs composites ordered by a magnetostatic field, Chapter 17 in *Nanoscience Advances in CBRN Agents Detection, Information and Energy Security*, NATO Science for Peace and Security Series A: Chemistry and Biology, P. petkov et al. (Eds), Springer Science+Business Media Dordrecht 2015, pp. 167-174