JANUSZ GREBOWICZ, PhD

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Hello. I'm an experimental physicist specializing in **applied thermodynamics** for material science. I teach thermophysical properties of materials and conduct research in a world-class lab that I set up. US-based, Europe raised and educated worldwide, so international education is my huge passion.

HONORS AND AWARDS

2014/15 **Fulbright Scholar** at University of Science and Technology (AGH) Kraków, Poland

2019 **Awarded:** Łódź University of Technology Medal of Distinction

2019 **Chemistry and Analytical Techniques International Conference**, San Francisco:

- Keynote speaker
- Chair of Symposium
- Signatory for the conference

Chaired four international symposia:

- GOPE (Gas, Oil, Petroleum Engineering), San Francisco, **2019**
- Journal of Thermal Analysis and Calorimetry Conference, Budapest, **2017**
- International Union of Pure and Applied Chemistry, Warsaw, **2002**
- American Chemical Society, San Fran., **1999**

International Expert for PONdER (Public Opinion of Nuclear Energy) project, Nanyang Technological University, Singapore, **2017-2018**

Featured in "Who is Who in Thermal Analysis", publ. in **2015**

Referee for Fulbright Program (2018-present) serving for Polish-U.S. Fulbright Commission.

EDUCATION AND TRAINING

PhD in Physical Chemistry:

Center of Molecular and Macromolecular Studies Polish Academy of Sciences, Łódź, Poland. Thesis title:
"Phase Structure and Mechanical Properties of Polymer Blends".

Post-doctoral studies:

- Rensselaer Polytechnic Institute, Troy, NY, Polymer Physics
- Max Planck Institute, Mainz, Germany, Polymer liquid crystals
- University of Massachusetts, Amherst, MA, Polymer blends

EMPLOYMENT HISTORY IN THE US

- **University of Houston-Downtown**, Professor of Physics, 2004–present
- **Shell Chemicals, Westhollow Technology Center**, Houston, TX, Staff Research Physicist, Head of Thermal Analysis Lab (global reach) 1989–2004
- **SC Johnson Wax**, Racine WI, Senior Research Scientist, 1988–1989

TEACHING RESPONSIBILITIES

Courses taught to date:

- 1307 College Physics I & II, Lecture and Lab
- 2400 University Physics I & II, Lecture and Lab
- 3402 Thermophysical Properties of Materials, Lecture and Lab
- 3399 Physics, Workshop on Thermal Properties of Oil Shales
- 3300 Undergraduate Research in Physics

Courses taught at AGH UST in Kraków:

- Specialty Methods for the Study of High Temperature Materials (PhD level)
- Modern Material Technologies (2nd year PhD level)

SCHOLARSHIP

I MADE SOME BREAKTHROUGH CONTRIBUTIONS TO MATERIAL PHYSICS.

For example, kinetics of **capillary break-up** in polymer liquid systems (high viscosity), first ever schematic diagram of **all phases and mesophases**, **rigid amorphous phase**, **condis crystals** (I invented the concept and named it). My work resulted in well over 2000 citations, which allowed my colleagues from the field to recognize me as one of the world top thermal analysts. My research is focused on the characterization of morphology, phase structure and transitions, chemical transformation of various materials exposed to temperature change. The temperature range within which I perform experiments is broad: -170ºC (liquid N_2) to 1450ºC (the mouth of volcano). This capability exists today in my research lab at the University of Houston-Downtown, where I pass my experience on to students in College of Sciences and Engineering.

AREAS OF SPECIALIZATION / RESEARCH INTERESTS:

Solid State Physics / Polymer Physics

Material Structure-Processing-Properties Relationship

Thermal Analysis:

- Thermal Properties of Materials (low molecular weight and polymers)
- Thermal Properties of Geological Materials: Hydrocarbon Bearing Rocks, Geological Materials for Underground Repositories of Spent Nuclear Fuels
- Hybrid energy systems

Familiarity with classes of materials:

• Thermoplastic homopolymers • Copolymers and Polymer blends • Elastomers • Thermosets • Mesophase Materials • Films • Fibers • Granules • Bulk materials • Powders and downstream products • Geological materials

Conference presentations:

31 Oral presentations, 10 as keynote or invited speaker, inside the US and internationally. I gave numerous conference presentations prior to my employment at UHD of which I didn't keep track.

SERVICE FOR UHD AND OTHER INSTITUTIONS

Created world class Thermal Analysis Laboratory at UHD. Established cooperation with world class laboratories in several countries. Providing expertise for global energy sector and more. Research open to all UHD students. The lab serves also as a center for education. I have developed upper division course 3402 Thermophysical Properties of Materials, Lecture and Lab, designated also as "W" course. The course combines the basic instruction on Thermal Analysis with the rigor the physics research demands.

Organized/Developed **Physics Minor** at UHD. Program available for all majors at the College of Sciences and Technology.

Introduced **Nuclear Engineering** education to UHD in cooperation with Texas A&M University. Instrumental in its development over a 10-year period (as PI/Co-PI, over 100 students benefitted). It expands Scholars Academy scholarship program and helped to establish Health Physics course.

International Research Experience Program. Organized and manage cooperation with the following institutions:

- University of Gdańsk
- AGH University of Science and Technology
- University of Warsaw
- Karlsruhe Institute of Technology
- Łódź University of Technology
- Adam Mickiewicz University, Poznań
- Białystok University of Technology
- War Studies University, Warsaw

International summer course on reposition of nuclear spent fuel, Oskarshamn. Author of the concept and teacher on three editions. The course continuous, offered by KTH Royal Institute of Technology/Nova. Overall, I established/took part at/proposed 4 different summer schools, which brought me several years of experience with this type of education. Several hundred students benefited from this reach source of knowledge and cultural exchange between students, teachers, and countries.

Academic service for AGH UST. Co-promotor of PhD thesis: Krzysztof Polański, "Numerical Simulation of the Effect of Temperature Change on Stress-Strain Relationship in the Hill in vicinity of the Salt Cavern". Thesis submitted at AGH UST, Krakow. Defended on Oct. 22, 2018.

Initiated **Math & Physics Education** program at UHD. The program is under development by the College of Sciences and Technology.

Referee for Polish-U.S. Fulbright Commission. Served: 2018-present. Fulbright US scholar program is the most important international exchange oportunity. In recogniction of my expertise in the field, Polish-American Fulbright Commission invited me to be a referee of Polish applicants to the Fulbright program. At my university, I became a strong promotor of the Fulbright program. As a result, one of my colleagues lately became a fulbrighter, too (I was a facilitator of her application process).

Worked for/chaired several UHD committees, including International Education, Rank and Tenure, Senior Thesis, Grievance.

PONdER (Public Opinion of Nuclear Energy) project conducted at Nanyang Technological University in Singapore. In 2017-2018, I participated in International Advisory Board meetings held by Wee Kim Wee School of Communication and Information. Together with several leaders in the field from several countries I served as an expert on reposition of spent nuclear fuel for evaluation of the results of the opinion poll regarding development of nuclear energy program in the region.

SELECTED MOST IMPORTANT PUBLICATIONS

BOOKS:

- J.Menczel, J.Grebowicz. **Handbook of Differential Scanning Calorimetry**, Elsevier (2022). *The very first encyclopedic summary of differential scanning calorimetry (DSC): the most important thermal analysis technique used today and the most common thermal analysis instrument found in chemical characterization laboratories.*

- B.Wunderlich, J.Grebowicz. **Thermotropic Mesophases and Mesophase Transitions of Linear, Flexible Macromolecules**, Chapter in Advances in Polymer Sci., Volume: 60/61, 1-59 (1984). *Review paper, first ever systematic organization of all phases and mesophases. New mesophase was defined and new term "CONDIS CRYSTAL" introduced to literature (now classic).*

• B.Wunderlich, M.Moeller, J.Grebowicz and H.Baur. **Conformational Motion and Disorder in Low and High Molecular Mass Crystals**, Advances in Polymer Sci., 87, 1-121, (1988). *This monograph was developed after #1. My chapter was on complete phase diagram of p-phenyls. Second edition issued in 2013.*

REFEREED PAPERS:

• H.Suzuki, J.Grebowicz and B.Wunderlich. "Heat Capacity of Semicrystalline, Linear Polyoxymethylene and Polyoxyethylene", Makromol. Chem. 186, 1109 (1985). *New concept and new term 'rigid amorphous phase' in semicrystalline polymers were introduced (now classic).*

• J.Grebowicz. "Understanding thermal properties of oil shales at high temperature toward application of nuclear energy in extraction of natural hydrocarbons", Journal of Thermal Analysis and Calorimetry, June 2014, Volume 116, Issue 3, pp 1481-1490. *The most important paper published while at UHD.*

• M.Pyda, A.Boller, J.Grebowicz, H.Chuah, B.V.Lebedev and B.Wunderlich. "Heat capacity of Poly(trimethylene terephthalate) ", J. Polym. Sci : Part B : Polym. Phys., 36, 2499 (1998). *I originated this paper. My contribution is the value of the heat of fusion for PTT I determined, and which is now the industry standard to determine degree of Crystallinity of PTT.*

• J.S.Grebowicz. "Thermal Properties of Polycarbonate Grade Bisphenol A", J. Thermal Anal., 46, 1151 (1996). *Complete phase diagram of BPA was presented.*

• J.S.Grebowicz. "On the Formation of Liquid Crystalline Texture in Epoxy Resins", Makromol. Chem., Macromolecular Symp, 104, 191 (1996). *The first paper showing phase diagram for Liquid Crystal thermosets.*

• T.Pakula, J.Grebowicz and M.Kryszewski. "The Kinetics of Spontaneous Changes in Phase Structure of Molten Two-Component Polymer Systems", Polymer Bull. 2, 799 (1980). *This paper is based on the results from my PhD thesis.*

LIST OF ALL REFEREED PAPERS

(in bold UHD undergraduate students)

71. I.Bernal, R.A.Lalancette, **D.Syzdek**, J.Grebowicz. "The effect of temperature on the phase structure and transitions of $[Co(NH_3)_6]Cl_3$ from 100 K until its decomposition", J. Therm. Anal. Calorim. (2022), https://doi.org/10.1007/s10973-022-11291-x

70. R.A.Lalancette, **D.Syzdek**, J.Grebowicz, E.Arslan, and I.Bernal. "The Thermal Decomposition and Analyses of Metal Tris-Acetylacetonates: Free Radical Formation from Al, Cr, Mn, Fe and Co Complexes", Journal of Therm. Anal. Calorim. (2019) 135: 3463.

69. R.A.Lalancette, E.Arslan, I.Bernal, **D.Willhelm**, J.Grebowicz, and M.Pluta. "The thermochemistry and crystallography of the metal tris-acetylacetonates. Part 1. Al and Mn.", Journal of Thermal Analysis and Calorimetry, 131(3), 2809-19, 2017.

68. I.Taraghi, S.Paszkiewicz, A.Buchard, J.Grebowicz, A.Fereidoon, and Z.Roslaniec. "Nanocomposites of Polymeric Biomaterials Containing Carbonate Groups: An Overview", Macromol. Mater. Eng. 2017, 1700042.

67. J.Grebowicz. "Understanding thermal properties of oil shales at high temperature toward application of nuclear energy in extraction of natural hydrocarbons", Journal of Thermal Analysis and Calorimetry, June 2014, Volume 116, Issue 3, pp 1481-1490.

66. R.Jose, **T.J.Patel**, **T.A.Cather**, **D.Willhelm**, J.Grebowicz, H.Han, P.Bhowmik, L.Sharpnack, D.Mae Agra-Kooijman, and S.Kumar. "Thermotropic mesomorphism in catanionic surfactants synthesized from quaternary ammonium surfactants and sodium dodecylbenzenesulfonate: Effect of chain length and symmetry; Colloids

and Surfaces", A: Physicochemical and Engineering Aspects 461, 40-49 (2014).

65. J.Grebowicz. "Thermal Properties of Oil Shales at High Temperature: Towards Integration of Nuclear Power with Production of Natural Hydrocarbons", Proceedings of 41th NATAS Conference, August, 2013.

64. **Z.Jaco** and Janusz Grebowicz. "Combined Methods of Thermal Analysis for Characterization of Rocks Containing Hydrocarbons", Proceedings of 41th NATAS Conference, August, 2013.

63. S.Massoud, E.Taylor, Y.Liu, J.Grebowicz, R.Vicente, R.Lalancette, U.Mukhopadhyay, I.Bernal, and S.F.Watkins. "Synthesis, Structure, Thermal, Magnetic Properties and Quantum Mechanical Calculations of Bridged [Bis(di(2-pyridylmethyl)amine)-(μ2-1,2-bis(4-pyridyl)ethane)-tetraperchlorato-dicopper(II)] Dihydrate Complex (I)", CrystEngComm, 2014, 16, 175-183.

62. R.Jose, **T.J.Patel**, **T.A.Cather**, J.Grebowicz, H.Han, P.K.Bhowmik, D.M.Agra-Kooijman, and S.Kumar. "Room temperature thermotropic liquid crystalline phases of catanionic surfactants derived from quaternary ammonium surfactants and bis(2-ethylhexyl)sulfosuccinate", Journal of Colloid and Interface Science 411 (2013) 61–68.

61. F.R.Louka, M.L.Spell, J.Grebowicz, J.H.Albering, F.A.Mautner, and S.S.Massoud. "Coordination Chemistry of 1,4-bis{bis(2-pyridylmethyl)aminomethyl}benzene with copper(II)", Journal of Molec. Struc. 995 (2011) 103-108.

60. F.A.Mautner, J.Grebowicz, P.J.Deifik, R.S.Perkins, and S.S.Massoud. "Structural characterization of copper(II) complexes based on a new 10-membered binucleating 1,6-diazecine ligand", Journal of Molec. Struc., 933 (2009) 69-76.

59. S.S.Massoud, E.Druel, M.Dufort, R.Lalancette, **J.Kitchen**, J.Grebowicz, R.Vicente, U.Mukhopadhyay, I.Bernal, and F.A.Mautner. "Versatile binding properties of di-pyridyl ligands with Cu(II) complexes. The syntheses, structural characterization and thermal analysis of six new species", Polyhedron, 28 (2009) 3849-57.

58. H.H.Chuah, J.Grebowicz, D.R.Kelsey, J.M.Olvera, B.Scardino, and C.Tse. "Effects of an Isophtalate Comonomer on Poly(trimethylene terephtalate) Fiber Spinning and Properties", J. Applied Polymer Science, Jan. (2009). DOI: 10.1002/app.30103.

57. F.R.Louka, F.A.Mautner, J.Grebowicz, R.S.Perkins, and S.S.Massoud. "Structural characterization of copper(II) complexes based on a new 10-membered binucleating 1,6-diazecine ligand", J. Molec. Struc., 933 (2009) 69-76.

56. J.S.Grebowicz and R.N.French. "Phase structure and sorption-desorption in Poly(trimethylene terephtalate) (PTT)", Thermochimica Acta, 396, 133 (2003).

55. J-M.Olvera, H.H.Chuah, and J.S.Grebowicz. "Crystallization of Poly(Trimethylene terephtalate)(PTT)", Paper presented at the 30th NATAS Conference, Pittsburgh, PA, September 23-25 (2002). See Proceedings, pg. 223.110.

54. Y-Z.Hu, C.Chamchoumis, J.S.Grebowicz, and R.P.Thummel. "Unique 2:1 Complex with trans-Chelating Bis-Pyridine Ligand", Inorganic Chemistry, Vol. 41, No. 8, 2296 (2002).

53. B.Wang, C.Y.Li, J.Hanzlicek, S.Z.D.Cheng, P.H.Geil, J.S.Grebowicz, and R.-M. Ho. "Poly(trimethylene terephthalate) crystal structure and morphology in different length scales", Polymer, 42(16), 7171-7180 (2001)

52. J.S.Grebowicz, H.Brown, H.Chuah, J.M.Olvera, A.Wasiak, P.Sajkiewicz, and A.Ziabicki. "Deformation of undrawn poly(trimethylene terephtalate) (PTT) fibers", Polymer, 42, 7153 (2001).

51. M.Pyda, M.L.Di Lorenzo, J.Pak, P.Kamasa, A.Buzin, J.Grebowicz, and B.Wunderlich. "Reversible and Irreversible Heat Capacity of Poly[carbonyl(ethylene-copropylene)] by Temperature – Modulated Calorim.", J. Polymer Sci: Part B: Polym. Phys., Vol. 39, 1565 (2001).

50. D.R.Kelsey, B.MScardino, J.S.Grebowicz, and H.H.Chuah. "High Impact, Amorphous Terephtalate Copolyester of Rigid 2,2,4,4-Tetramethyl-1,3-cyclobutanediol with Flexible Diols", Macromolecules, 33, 5810 (2000).

49. M.Levin, J.M.Olvera, C.Garcia, and J.Grebowicz. “A Study of the Energetics of Oligomer/Polymer Decomposition”, Proceedings AIChE South Texas Section 1998 Process Plant Safety Symposium (Oct. 26-27, 1998).

48. H.Brown, C.Hwo, and. J.Grebowicz. “Poly(trimethylene terephtalate) Polymer for Spunbond and Meltblown Fibers”, Proceedings of the 8th TANDEC Meeting, Knoxville, TN, 1998 8th, Paper 5.2.

47. M.Pyda, A.Boller, J.Grebowicz, H.Chuah, B.V. Lebedev, and B. Wunderlich. “Heat capacity of Poly(trimethylene terephtalate)”, J. Polym. Sci: Part B: Polym. Phys., 36, 2499 (1998).

46. K.Yshikiriyama, M.Pyda, G.Zhang, T.Forschner, J.Grebowicz, and B.Wunderlich. “Heat Capacity of Poly-p-dioxanone”, J. Macomol. Sci.– Phys., B37(1), 27 (1998).

45. J.S.Grebowicz. “Thermal Properties of Polycarbonate Grade Bisphenol A”, J. Thermal Anal., 46, 1151 (1996).

44. J.S.Grebowicz. “On the Formation of Liquid Crystalline Texture in Epoxy Resins”, Makromol. Chem., Macromolecular Symp., 104, 191 (1996).

43. S.M.Beshouri, J.S.Grebowicz, and H.H.Chuah. “Thermal Properties of Poly(pivalolactone)”, Polym. Eng. Sci., 34(1), 69 (1994).

42. M.Varma-Nair, B.Wunderlich, J.Grebowicz, and R.Bauer. “Thermal Behavior of Epoxy Resins”, Thermochim. Acta, 226, 99 (1993), also Proc. 21st NATAS Conference in Atlanta, GA, Sept 13-16, pgs. 54-59, (1992).

41. K.Liang, J.Grebowicz, E.Valles, F.E.Karasz, and W.J.MacKnight. “Thermal and Rheological Properties of Miscible Polyethersulfone/Polyimide Blends”, J. Polymer Sci., Part B: Polymer Physics, 30, 465 (1992).

40. J.Grebowicz, M.Varma-Nair, and B.Wunderlich. “The Thermal Properties of Poly(pivalolactone)”, Polymers for Adv. Technol.,3, 51 (1992).

39. J.Grebowicz. “Thermal Properties of Poly(vinylcyclohexane)”, Polymer Eng. and Sci., 32(17), 1228 (1992).

38. K.Liang, L.Wu, J.Grebowicz, F.E.Karasz, and W.J.MacKnight. “Miscibility Behavior in Poly(ethersulfone)/Polyimide Blends with and without solvents”, in Progress in Pacific Polymer Science, ed. B.C.Anderson and Y.Imaniski, Springer-Verlag, Heidelberg, 1991, pp.213-225.

37. G.Smyth, E.M.Valles, S.K.Pollack, J.Grebowicz, P.J.Stenhouse, L.S.Hsu, and W.J.MacKnight. “Development of Crystallinity in a Polyuretane Containing Mesogenic Units. 1. Morphology and Mechanism”, Macromolecules, 23, 3389, (1990).

36. K.J.Miller, H.B.Hollinger, J.Grebowicz, and B.Wunderlich. “On the Conformations of Poly(pxylylene) and Its Mesophase Transitions”, Macromolecules, 23(16), 3855 (1990).

35. K.J. Miller, J.Grebowicz, J.P.Wesson, and B.Wunderlich. “Conformations of Poly(diethylosiloxane) and Its Mesophase Transitions”, Macromolecules, 23(2), 851 (1990).

34. J.Grebowicz, R.Pan, and B.Wunderlich. “Thermal Properties of Drawn Poly(tetrafluoroethylene)”, J. Appl. Polymer Sci., 38, 707 (1989).

33. G.Smyth, J.Grebowicz, P.Stenhouse, W.J.MacKnight, and S.W.Kantor. “Thermal Transitions and Structure Analysis of a Mesomorphic Polyuretane”, Proceedings of 17th NATAS Conference, Orlando, FL, 1988, p.424.

32. B.Wunderlich, M.Moeller, J.Grebowicz, and H.Baur. “Conformational Motion and Disorder in Low and High Molecular Mass Crystals”, Advances in Polymer Sci., 87, 1- 121 (1988).

31. R.Rosenau-Eichin, M. Ballauff, J.Grebowicz, and E.W.Fischer. “Structures and Thermal Transitions of Copolymers of metha-and para-Hydroxybenzoic Acids”, Polymer 29, 58 (1988).

30. H.G.Wiedemann, J.Grebowicz, and B.Wunderlich. “Condis Crystals of Small Molecules. II. The Polymorphs of

N, N'-bis(4-n-octyloxy benzal)-1,4-phenylenediamine (OOPDA)", Mol. Cryst. Liq. Cryst. 140, 219 (1986).

29. J.Grebowicz, S.Cheng, and B.Wunderlich. "Kinetics of Transitions Involving Condis Crystals", J. Polym. Sci., Polymer Phys. Ed. 24, 675 (1986).

28. J.Grebowicz, W.Aycock, and B.Wunderlich. "Heat Capacities of 1, 4- Polybutadienes", Polymer 27, 575 (1986).

27. B.Wunderlich and J.Grebowicz. "Thermal Analysis of Liquid Crystals and Condis Crystals", Amer. Chem. Soc. Polymer Sci. Preprints 26(1), 1 (1985), Miami, FL; update: Analysis of Condis Crystals, in "Integration of Fundamental Polymer Science and Technology", II, P. J.Lemstra and L.A.Kleinjiens, eds., Elsevier, London 1988.

26. H.Suzuki, J.Grebowicz, and B.Wunderlich. "Glass Transition of Polyoxymethylene", Brit. Polymer J. 17, 1(1985).

25. H.Suzuki, J.Grebowicz, and B.Wunderlich. "Heat Capacity of Semicrystaline, Linear Polyoxymethylene and Polyoxyethylene", Makromol. Chem. 186, 1109 (1985).

24. J.Grebowicz, H.Suzuki, and B.Wunderlich. "Heat Capacities of Polyethylene and Linear Aliphatic Polyoxides", Polymer 26, 561(1985).

23. B.Wunderlich and J.Grebowicz. "Do Condis Crystals Exist?", in Polymeric Liquid Crystals, p. 145, A. Blumstein ed., Plenum 1985.

22. J.Grebowicz and B.Wunderlich. "On Cp to Cv Conversion for Solid Linear Macromolecules", J. Thermal Anal. 30, 227 (1985).

21. B.Wunderlich and J.Grebowicz. "Characterization of Conformationally Disordered Crystals by DSC", Am. Chem. Soc. Org. Coating Appl. Polymer Sci. Preprints 50, 144 (1984).

20. J.Grebowicz, S.-F.Lau, and B.Wunderlich. "Thermal Properties of Polypropylene", J. Polymer Sci., Polymer Symp. 71, 19 (1984).

19. B.Wunderlich, J.Grebowicz. "Thermotropic Mesophases and Mesophase Transitions of Linear, Flexible Macromolecules", Adv. in Polymer Sci., Volume: 60/61, 1-59 (1984).

18. J.Grebowicz. "Mesophase Polypropylene", ibid. p. 303.

17. H.G.Wiedeman, J.Grebowicz, J.Wesson, and B.Wunderlich. "Investigation and Discussion of Liquid Crystals, Plastic Crystals and Condis Crystals by Microscopy and Calorimetry", Proc. 12th NATAS Conference, Williamsburg, VA, J.C.Buckled. p. 259 (1983).

16. A.Galeski, J.Grebowicz, and M.Kryszewski. "Interpenetration of Spherulites in Polymer Blends", Makromol. Chem. 184, 184 (1983).

15. J.Grebowicz and B.Wunderlich. "Phase Transition in Mesophase Macromolecules. 4. The Transitions in Poly(oxy-2-2'-dimethylazoxybenzene-4,4'-diyloxydodecanedioyl)", J. Polym. Sci., Polym. Phys. Ed. 21, 141 (1983).

14. A.Wrobel, J.Kowalski, J.Grebowicz, and M.Kryszewski. "Thermal Decomposition of Plasma-Polymerized Organosilicon Thin Films", J. Macromol: Sci., Chem. A17.3, 433 (1982).

13. B.Wunderlich and J.Grebowicz. "Glass Transition of Mesophase Macromolecules", Thermal Analysis, Proc. 7th ICTA Meeting, B.Miller ed. Hayden-Willey, Chichester, Vol. 2, p. 1084 (1982).

12. J.Grebowicz and B.Wunderlich. "The Glass Transition of p-Alkyl-p'-Alkoxy-Azoxybenzene Mesophases", Molec. Cryst. Liq. Cryst. L6, 287 (1982).

11. J.Grebowicz and T.Pakula. "Crystallization and Melting of Components in Polyethylene-Polypropylene Blends: in Polymer Blends: Processing, Morphology and Properties", E. Martuscelli, R. Palumbo and M. Kryszewski eds. Plenum Press, N.Y. 1980.

10. J.Grebowicz, V.Shilov, Yu.Lebedev, V.Privalko, Yu.Lipatov, and M.Kryszewski. “The Phase Structure and Some Mechanical Properties of Polystyrene-Poly(methyl metacrylate) Blends”, Polimery-Tworzywa 12, 37 (1980).

9. J.Grebowicz, T.Pakula, A.Wrobel, and M.Kryszewski. “Phase Structure of Thin Polysilazane Films Obtained by Glow Discharge Polymerization”, Thin Solid Films 65, 351(1980).

8. T.Pakula, J.Grebowicz, and M.Kryszewski. “The Kinetics of Spontaneous Changes in Phase Structure of Molten Two-Component Polymer Systems”, Polymer Bull. 2, 799 (1980).

7. J.Grebowicz, Z.Pelzbauer, T.Pakula, and M.Kryszewski. “Scanning E.M. studies of Helically-Oriented Polypropylene Fibers”, Polymer 20, 1281(1979).

6. J.Grebowicz, T.Pakula, and M.Kryszewski. “The influence of Phase Structure on Young Modulus of Polystyrene-Polypropylene and Polystyrene-Polyethylene Blends”, Polimery-Tworzywa (Polish) 12, 425 (1978).

5. M.Kryszewski, A.Galeski, T.Pakula, and J.Grebowicz. “Supermolecular Structure of Polyethylene- Polypropylene Blends”, Vysokomol. Soed. 7, 1969 (1974).

4. T.Pakula, M.Kryszewski, J.Grebowicz, and A.Galeski. “Two-Dimensional Model of Mechanical Properties of Polymer Blends: Application to Polyethylene and Polypropylene Blends”, Polymer J. 2, 94 (1974).

3. M.Kryszewski, A.Galeski, T.Pakula, and J.Grebowicz. “Transport Phenomena in Polymer Blends”, J. Colloid Interph. Sci. 1, 85 (1973).

2. M.Kryszewski, A.Galeski, T.Pakula, and J.Grebowicz. “Supermolecular Structures in Blends of Polyethylene and Polypropylene with Ethylene-Propylene Rubber”, Collection of Papers on Composite Materials, Nauka, Kiev, 1973.

1. M.Kryszewski, A.Galeski, T.Pakula, and J.Grebowicz. “Supermolecular Structure in Blends of Polypropylene and Ethylene-Propylene Rubber”, J. Appl. Polym. Sci. 15, 1139 (1971).