A N N U A L R E P O R T
2 0 0 1

DEPARTMENT
OF FIBRES AND TEXTILE CHEMISTRY

FACULTY of CHEMICAL and FOOD TECHNOLOGY

SLOVAK UNIVERSITY OF TECHNOLOGY in BRATISLAVA

Radlinského 9

8 1 2 3 7 BRATISLAVA

Slovak Republic

Telephone: 0421 - 2 - 52968598
Fax: 0421 - 2 - 52493198

Head of the Department: Telephone:++421-2-529685598
Assoc. Prof. Anton Marcinčin, PhD Fax: ++421-2-524931198
E-mail: tmarcin@chtf.stuba.sk

I. STAFF

Full Professor:
Eberhard Borsig, DSc;
Associate Professors:
Pavol Hodul, PhD; Michal Krištofič, PhD; Anton Marcinčin, PhD;
Assistant Professors:
Jaroslav Legéň, PhD; Anna Ujhelyiová, PhD;
Research Fellows:
Eva Bolhová; Marcela Hricová; Anna Murárová, PhD; Elena Zemanová, PhD;
PhD Students:
Natália Karabcová; Eva Körmendyová; Zita Mlynarčíková; Silvia Pavlíková;
Technical Staff:
Daniela Dančová; Gabriel Kužel; Albína Pokorná; Edita Štábelová;

II. TEACHING AND RESEARCH LABORATORIES

A.Teaching Laboratories:

Laboratory of Macromolecular Chemistry
Laboratory for Computer Modeling of Structure and Properties of Polymers
Laboratory of Polymer Fibre and Fibrous Material Structure (DSC, TMA, SALS, Surface Properties)
Laboratory of Fibre Technology
Laboratory of Textile Chemistry, Bleaching, Dyeing and Finishing
Laboratory of Fibre and Textile Testing
Laboratory for fibre spinning, drawing and texturing, extruders 16 and 30 mm
Laboratory for dyeing and finishing of fibres and textile materials (Ahiba, Pretema, Multicolor)

B. Research Laboratories:

Equipments:
DSC-Perkin Elmer and DTA (Derivatograph Q 1500 D)
TMA-50 M and TA (thermomechanical measurement)
Instron, model 1112 and Uster for mechanical properties
Dynamic viscoelastomer model Rheo-200
Alambeta for measurement of thermo - properties of textiles
Integral electrometer Polystat PS-1
Capillary rheometer
Computers PC-AT and XT
Unimode semiconductive laser 25mW, 690nm with universal optical set
Microscope Olympus model BHT
Laboratory equipments for light degradation of fibrous materials-Xenotest
for exhaust dyeing process and its evaluation ((Ahiba, Pretema, Multicolor)
Spinning machines with extruders, ø 16 mm and 30 mm respectively

III. TEACHING

A. Undergraduate Study

5th Semester (autumn)		
Macromolecular Chemistry	(2-0 h)	Borsig
6th Semester (spring)		
Technology of Materials	(2-0 h)	Marcinčin
Cosmetic and Indoor Chemistry	(2-0 h)	Hodul
Bachelor Project	(0-0-4 h)	
7th Semester (autumn)		
a) compulsory subjects:		
Macromolecular Chemistry II	(2-1 h)	Borsig
Physics of Polymers and Paper	(2-2 h)	Krištofič
Fiber Sci. and Technology	(2-2 h)	Marcinčin, Legéň
Laboratory of Fiber Sci. and Technology	(0-0-8 h)	Krištofič, Legéň, Karabcová
b) optional subjects:		
Structure of Fibrous Materials	(1-1 h)	Ujhelyiová, Murárová
Modelling of Polymer Structure and Properties	(1-1 h)	Rychlý, Marcinčin
8th Semester (spring)		
a) compulsory subjects:		
Colorants and Textile Auxiliaries	(2-0 h)	Hodul, Murárová
Technical Textiles	(2-0 h)	Krištofič, Borsig
Principles of Textile Engineering	(2-0 h)	Ujhelyiová, Murárová
Laboratory of Textile Engineering	(0-0-8 h)	Legéň, Hodul, Mlynarčíková
b) optional subject:		
Physiology and Comfort of Clothing	(0-2 h)	Murárová
Special Chemical Treatment of Textiles	(0-2 h)	Ujhelyiová, Murárová
9th Semester (autumn)		
Textile Chemistry and Technology	(2-2 h)	Hodul, Murárová
Technology of Polym. Films	(2-0 h)	Marcinčin, Ujhelyiová
Laboratory of Textile Chemistry and Technology	(0-0-10 h)	Hodul, Pavlíková, Bolhová
Fiber and Textile Testing	(2-0 h)	Legéň, Ujhelyiová
10th Semester (spring)		
Seminary	(0-3-0 h)	
Diploma Thesis	(0-0-27 h)	

B. PhD study:

a) subjects:

Physics of Polymers	Krištofič
Macromolecular Chemistry	Borsig
Technology of Polymeric Materials	Marcinčin
Organic Chemistry	
Physical Chemistry	

b) Seminaries

Experience from international conferences on polymers held in the year 2000, E.Borsig, Jan. 12, 2001
Polypropylene composite fibres, S. Pavlíková, Jan. 21, 2001
Modification of polymers by solid additives A. Marcinčin, Feb. 8, 2001
Isotopically pure uniform polymers, O. Vogl, March 2nd, 2001
Evaluation of fibres by TMA method, E. Zemanová, March 16, 2001
Technical fibres and textiles, Š. Kišš, Tatrabent, May 14, 2001
Mechanical and thermal properties of PP/PA blend, Z. Mlynarčíková, Dec. 7, 2001

IV. CURRENT RESEARCH PROJECTS

A. Dispersion of organic pigments in synthetic polymers with particle size close to nano-scale (Anton Marcinčin), VEGA č. 1/8106/01

Investigations of pigment dispersability in polypropylene (PP) and polyethylene terephtalate (PET), evaluation of the polymeric additives influence and processability of the system PET + pigment Black 7 during the preparation of fibres were examined.

On the base of the rheological measurements and mechanical-physical properties of fibres some low molecular additives for dispergation of antibacterial additives in PP fibres and the composition of blended fibres PET-polybuthyleneterephtalate-Black 7 (with better dispergation of Black 7) were found.

B. Fibre-forming Polypropylene-Polar Polymer Blends (Eberhard Borsig), VEGA č. 1/6159/99

In the framework of this project polypropylene fibres modified with polymer additives based on:
a) polyethylene terephtalate
b) etylen - vinylacetate copolymer (EVAC)
and with some low- and high-molecular compatibilizers e.g. reactive compatibilizer - PP grafted by maleinanhydrid (PP-MAH) and alkyldiamid of carboxylic acid (ADCA) were prepared and their properties were investigated as well.

Influence of these compatibilizers on morphology of blend PP/PET fibres was investigated. Favourable influence of ADCA on compatibility of PP and PET components was found and this system rends multifibrillar type of fibres with higher elastic properties and higher sorption of disperse dyes as well. By using polyvinylacetate and ethylene-vinylalcohol copolymer this polyfibrillar structure of fibres becomes finer or even get lost. Simultaneously a good processability and disperse dyes uptake is conserved.

Some experiments about the preparation of PP composite fibres, using the filter SO MASIF C16 (capable to create inorganic nano-partides) and PP-MAH as the compatibiliser were made as well. Composite PP fibres were drawn at different drawing ratios which influence the degree of exfoliation and that of crystallization of created nano-particle as well. Nano-particle in PP fibres generally cause a decrease the fibre tensile strength but elongation (orientation) of fibres cause a relatively higher increase of their tensile strength than at non-filled PP fibres. In some cases the tensile strenght of oriented fibres is very close to that of non - filled PP fibres with the same drawing ratio.

Thermal characteristics of blended PP/PET fibres (melting temperature, T_m,, enthalpy of fusion, ΔH_m,, at first and second heating, enthalpy of crystallization, ΔH_c,) were estimated and showed (besides the supposed termodynamical incompatibility) mutual influence of two components of polymer blend. Minor component accelerates crystallization ability of major component. Non-isothermal measurements of these fibres led to the calculation of surface energi of crystallites in PP/PET fibres.

The results of thermo-mechanical measurements showed that higher elasticity and relaxation of PP/PET fibres is a consequence of the absence of interphace compound.

Modified PP fibres have better dyeability by exhaustion process. Dye uptake from the dyeing bath is considerably influenced by modification of fibre in the lateral and longitudinal direction. Changes in the linear density and mainly in the shape of fibre cross-section essentially improve dyeability of fibres which can be evaluated by K/S value from Kubelka-Munk equation.

PP/PET fibres with triangular 3 hollow cross-section have K/S value nearly 5 times higher in comparison with classic circular cross-section.

PP/EVAC blend circular fibres have their K/S value 4-13 times higher according to the amount and type of EVAC (5wt.% - 15wt.%) and according to the presence or absence of ADCA agent. Some other properties of yarns formed from these modified PP fibres (mainly physiologic) can be improved.

V. COOPERATION

A. Cooperation in Slovakia:

Research Institute for Man-Made Fibres, Svit
Research Institute of Textile Chemistry, Žilina
Polymer Institute, Slovak Academy of Sciences, Bratislava
Slovenský hodváb a.s.,Senica
Chemosvit a.s., Svit
Rhodia Industrial Yarn a.s., Humenné
Nylstar a.s., Humenné
Merina a.s., Trenčín
Istrochem a.s., Bratislava

B. International Cooperation:

Chemical Fibre Institute, Lodž, Poland
-Organisation of the 2nd Central European Conference
Technical University, Liberec, Czech Republic
-Exchange of staff members and students in the CEEPUS network
University of Maribor, Faculty of Mechanical Engineering, Maribor, Slovenia

-Cooperation in the CEEPUS project

University of Zagreb, Faculty of Textile Technology, Croatia

-Cooperation in the CEEPUS project

C. Membership in Domestic Organizations and Societies:

Advisory Board of scientific Journal Autex Res. J. (A. Marcinčin)
Chairman of Editorial Board of scientific journal Vlákna a textil (Fibres and Textiles) (A. Marcinčin)
Advisory Board of scientific journal Vlákna a textil (Fibres and Textiles), (A. Marcinčin, P. Hodul, A. Ujhelyiová, A. Murárová)
Executive Editor of scientific journal Vlákna a textil (Fibres and Textiles), (P. Hodul)
Co-editor of scientific journal Vlákna a textil (Fibres and Textiles), (A. Ujhelyiová, A. Murárová)
Commission of the Grant Agency VEGA of the Ministry of Education and Science SR (A. Marcinčin)
Slovak Chemical Society, Bratislava (E. Borsig, P. Hodul, M. Krištofič, A.Murárová, J. Legéň, E. Zemanová, A Ujhelyiová)

D. Membership in International Organizations and Societies:

Assocation of Universities for Textiles (AUTEX), Gent, Belgium (A. Marcinčin)
Committee for Slovak-Polish Conference (A. Marcinčin)
Scientific council TU Liberec, Czech Rep. (A. Marcinčin)
EPF, European Polymer Federation, Eidhoven, Holland (E. Borsig)
Scientific Committe of Polymer Congres EPF (E. Borsig)
Advisory Board of Scientific Journal Chemické listy (Chemical letters), Prague, Czech Republic (E. Borsig)
Journal of Macromolecular Science, Pure and Applied Chemistry, USA, (E. Borsig)

F. International Scientific Program:

CEEPUS
SI-007 Objective Measurements Technology in Textile and Clothing Engineering
M. Krištofič, network is formed by:
Faculty of Mechanical Engineering, University of Maribor, Slovenia - coordinator
Faculty of Textile Technology, University of Zagreb, Croatia
Faculty of Textile ScienceTechnical University of Liberec, Czech Republic
Textile Faculty, Technical University of Lódž, Poland
Faculty of Mechanical Engineering, Technical University of Budapest, Hungary
Faculty of Mechanical Engineering, Technical College for Light Industry, Hungary
January - December 2001

G.Visitors from Abroad:

Nagy Veronika, Budapest University of Technology and Economics (BUTE) Hungary, January 10 - February 8 (CEEPUS)
Studničková Jarmila, Technical University of Liberec, Czech Rep. April 26 - May 24 (CEEPUS)
Martincová Alice, Technical University of Liberec, Czech Rep. March, 1st -30 (CEEPUS)

Dr. Kokas-Palicska Livia, Technical College for Light Industry, Budapest, Hungary, May 25-June, 4, (CEEPUS)
Feher Csilla, Technical College for Light Industry, Budapest, Hungary, June 18-July 13, (CEEPUS)
Wilk Eva, Technical University of Lódž, Poland, June 19-July 13, (CEEPUS)

H. Visits of Staff Members and PhD Students to Foreign Institutions:
E. Borsig, EPF Symposium Eidhoven, July 2001, (The Nederlands), 3 days
E. Borsig, Swiezedov Zdroj, September 2001, (Poland), 2 days
E. Borsig, Albert-Ludwigs Universität Freiburg, May 2001, (Germany), 30days
S. Pavlíková, University Gent, ERASMUS-SOCRATES, July 3.-Sept. 30, 2001, (Belgium), 30 days
Z. Mlynarčíková, University Gent, ERASMUS-SOCRATES, July 3.-Sept. 30, 2001, (Belgium), 30 days
Marcinčin, A. University of Terasse (Spain), University do Miňho (Portugal), Tecnitex 2001 (Technical Textiles), and 2001 International Textile Congres, June 16- July 3, 2001, 19 days

Visits of Students to Foreign Institutions:
Barníková, A. TU Liberec, Czech Rep. (CEEPUS), March-April 2001, 1month
Karabcová, N. Technical College for Light Industry Budapest, Hungary (CEEPUS), March-April 2001, 1month
Chovancová, L. BUTE , Hungary (CEEPUS), March-April 2001, 1month
Križanová, Z. TU Liberec, Czech Rep. (CEEPUS), March-April 2001, 1month

VI. THESES AND DISSERTATIONS

A. Graduate Thesis (MS Degree) for state examinations after five years of study (supervisors are written in brackets):
1. Barníková A.: Influence of rheological properties of pigmented concentrates on spun-dyeing process of synthetic fibres (Marcinčin A.)
2. Bernáth J.: Decolourization of waste water after dyeing with reactive dyes (Hodul P.)
3. Bolhová E.: Thermal properties of blended synthetic fibres (Ujhelyiová, A.)
4. Chovancová L.: Preparation of polypropylene composite fibres filled with inorganic filler (Borsig E.)
5. Karabcová N.: Synthetic fibres based on polymer blend with modified cross-section (Legéň J.)
6. Kolníková E.: Evaluation of supermolecular orientation of synthetic fibres (Zemanová E.)
7. Križanová Z.: Evaluation of geometric and structural unevennes of synthetic fibres (Ujhelyiová A.)
8. Kucháriková D.: Physical modification of synthetic fibres for improving some properties (Krištofič M.)
9. Rafajová A.: Influence of geometric parameters of PET fibres on their dyeing (Murárová A.)

B.Dissertations (PhD):-
C.Dissertations (DSc):-

D.Habilitation Thesis: A. Marcinčin, Modification of synthetic fibres with solid partides, October 2, 2001

VII. PUBLICATIONS

A. Journals (*registered in Current Contents)

[1]* Kósa, Cs., Danko, M., Fiedlerová, A., Hrdlovič, P., Borsig, E., Weiss, R. G.: Pyrenyl Flourescence as a Probe of Polymer Structure and Diffusion in a Polyethylene: Poly(butylmetacrylate)-co-polystyrene Interpenetrating Network and Related Polymers. Macromolecules 34, 2673-2681 (2001)

[2]* Greco, R., Iavarone, M., Fiedlerová, A., Borsig, E.: Optical properties of IPN-like networks polyethylene/poly(butylmethacrylate-co-styrene) copolymer systems. III. Influence of copolymer crosslinker. Polymer 42, 5089- 5095 (2001)

[3]* Danko, M., Hrdlovič, P., Borsig, E.: Spectral Characteristics of Free and Linked Pyrene-Type Chromophores in Solution, Polymer Matrices, and Interpenetrating Networks. J. Macromol. Sci.-Pure Appl. Chem. A38(5&6) 467-486 (2001)

[4]* Borsig, E., Thomann, R., Fiedlerová, A., Müllhaupt, R.: Morphology of the Transparent IPN-like System PE: (BMA-co-S). J. Appl. Polym. Sci., 81, 2615-2620 (2001)

[5]* Marcinčin, A., Jurčišinová, Z., Borsig, E., Krištofič, M., Marcinčinová, T.: Fiber - forming Blend Polypropylene-Polyvinyl Alkohol. Polym. Adv. Technol. 12, 461-465 (2001)

[6]* Borsig, E., Fiedlerová, A.: Transparentný systém vzájomne preniknutých polymérových sietí. Transparent System of an Interpenetrating Polymer Networks. Plasty a kaučuk, Plastics and Rubber 38, 70-73 (2001)

[7] Hodul, P., Korcová, D., Lokaj, J., Murárová, A.: Effect of Additives on Soil Removal in Crease Resistant Finishing. Vlákna a textil 8(1) 8-12 (2001)

[8] Murárová, A.: Fyziológia odievania I. Tepelná regulácia človeka. Physiology of Clothing I. Men´s Thermal Regulation. Vlákna a textil 8(1) 48-49 (2001)

[9] Murárová, A.: Fyziológia odievania II. Odev ako "fyziologický" systém. Physiology of Clothing II. Apparel as a Physiological System. Vlákna a textil 8 (1) 50-52 (2001)

[10] Jambrich, M., Budzák, D., Marcinčin, A., Revús, M.: História rozvoja chemických vlákien vo svete a na Slovensku. Current Development of Chemical Fibers-Wide and in Slovakia. Vlákna a textil 8 (2) 77-89 (2001)

[11] Marcinčin, A.: Synthetic Fibres Based on Polymer Blends. Vlákna a textil 8 (2) 126-134 (2001)

[12] Hodul, P.: Biotechnológie v textilnom zošľachťovaní. Biotechnology in Textile Finishing. Vlákna a textil 8 (3) 211-217 (2001)

[13] Smole, S. M., Zemanová, E.: Structure and Properties of Supercritical Fluid, Water and Hot Air Treated PET Fibres. Vlákna a textil 8 (2) 184-186 (2001)

[14] Marcinčin, A., Brejka, O., Budzák, D., Hricová, M.: Vývoj polypropylénových vlákien farbiteľných vyťahovacím postupom a potlačou. Development of polypropylene fibres dyeable by exhaust proces and printing. Vlákna a textil (Fibres and Textiles) 8(1), 2001, p. 36-41

[15] Marcinčin, A., Ujhelyiová, A.: Pigmentácia syntetických vlákien v hmote. Masspigmenting of Synthetic Fibres. Vlákna a textil, 8(1), 2001, p. 42-47

B. Conferences (*International conferences)

[1]* Borsig, E., Lazár, M., Fiedlerová, A., Hrčková, Ľ., Marcinčin, A.: Some aspects of the solid state polypropylene grafting using peroxides. In: CD-ROM Proceedings of the European polymer Federation (EPF) Congress, Eidhoven (The Netherlands), July 15 - 20, 2001, Session 3, KN9

[2]* Murárová, A., Hodul, P., Jambrich, M.: Influence of Geometric PET Fibre Modification on Dyeing. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 1, Lódž, Poland 2001, 133-134

[3]* Hodul, P., Weberová, M., Marcinčin, A., Jedlovská, M.: β-cyklodextrine in textile finishing. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 1, Lódž, Poland 2001, 79-85

[4]* Krištofič, M.: PA6/Copolyamides Fibre-Forming Blends. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 1, Lódž, Poland 2001, 247-259

[5]* Marcinčin, A., Ujhelyiová, A., Hricová, M., Marcinčinová, T.: Modification of Polypropylene Fibres by Polymeric Additives. In: International Millenium Congress on Innovations in Fibre, Yarn Fabric Technology and Finishing, Terrassa, June 15-17, 2001, Spain

[6]* Borsig, E., Fiedlerová, A., Schulze, U., Pionteck, J.: Synthesis of IPN as a Method of Preparation of new Polymer Materials from Known Polymer Components. In: XV. Konferencja naukowa Modyfikacja polimerów Wroclav 2001 87-90

[7]* Marcinčin, A., Ujhelyiová, A., Zemanová, E., Marcinčinová, T.: Mass pigmenting of polypropylene and polyethylene terephtalate fibres. In: Fibre Grade Polymers, Chemical Fibres and Special Textiles. Central European Conference Monograph Series Vol. 1, pp. 145-155, Lodz 2001, Poland

[8]* Marcinčin, A., Legéň, J., Hudecová, D., Marcinčinová, T., Šesták, J., Spevárová, E.: Antibacterial Chemical Fibres and Fibrous Materials, 1st AUTEX Conference "Tecnitex 2001" Technical Textile, Designing Textiles for Technical Application. Povoa de Varzim (Univerzity of Minho), June 26-29, 2001 Portugal

[9]* Marcinčin, A., Ujhelyiová, A.: Morphology and Properties of PP/LDPE and PP/PET Blend Fibres. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. -7. 9. 2001, 244-251

[10]* Krištofič, M.: Copolyamides Based on ε-caprolactam and Isophtalic Acid. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. -7. 9. 2001, 252-255

[11]* Krištofič, M., Murárová, A.: Fibre- Forming Blends of Polar Polymers. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. - 7. 9. 2001, 256-259

[12]* Murárová, A., Krištofič, M., Hodul, P., Jambrich, M.: The Influence of Cross-section of PET Fibres on Dyeing In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5.-7. 9. 2001, 260-263

[13]* Pavlíková, S., Borsig, E., Marcinčin, A.: PP Nanocomposite Fibres. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. - 7. 9. 2001, 275-279

[14]* Marcinčin, A., Zemanová, E., Marcinčinová, T., Brejka, O., Budzák, D.: Rheological Properties of Polyester Pigment Concrentrates. In: CEC Monograph Series, "Fibre-Grade

Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. -7. 9. 2001, 290-294

[15]* Mlynarčíková, Z., Borsig, E.: Physical Properties of Polypropylene/Polyamide 6 Blend Fibres. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. -7. 9. 2001, 295-298

[16]* Sroková, I., Ebringerová, A., Hodul, P.: Biopolymers from Polysaccharides. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. -7. 9. 2001, 299-302

[17]* Legéň, J., Karabcová, N., Krištofič, M., Zemanová, E.: Blend Fibres Polypropylene/ Polyethylene Terephtalate. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. -7. 9. 2001, 346-348

[18]* Ujhelyiová, A., Bolhová, E.: Non-Isothermal Crystallization of PP/PET Blend Fibres. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. -7. 9. 2001, 363-365

[19]* Körmendyová, E., Marcinčin, A.: Estimation of Miscibility of Polymer Blend and the Influence of Molecular Structure on Polymer Miscibility. In: CEC Monograph Series, "Fibre-Grade Polymers, Chemical Fibres and Special Textiles", Vol. 2, Bratislava 5. -7. 9. 2001, 366-370

[20]* Krištofič, M., Hricová, M., Ujhelyiová, A.: Modification of PP Fibres with Alkaline Copolyamides, Macromolecular Symposia 170, - Property Tailoring of Thermoplastics-Based Blends and Composites, Bratislava June 2001, 291 - 299

[21]* Marcinčin, A., Legéň, J., Marcinčinová, T.: Antibacterial Viscose Fibres. In: Proceedings of 2nd Central European Conference on Fibre Grade Polymers, Chemical Fibres and Special Textiles (CEC Monograph Series Vol. 2), Slovak Univeszity of Technology, Bratislava 2001, p. 239-243

[22]* Hricová, M., Marcinčin, A., Šesták, J., Kabátová, V.: Rheological Behaviour of Inorganic Pigments in Model Liquids. In: Proceedings of 2nd Central European Conference on Fibre Grade Polymers, Chemical Fibres and Special Textiles (CEC Monograph Series Vol. 2), Slovak University of Technology, Bratislava 2001, p. 269-274

[23]* Ujhelyiová, A., Bolhová, E., Marcinčin, A.: Thermal Properties of PP/PET Blend Fibres. In: Proceedings of 2nd Central European Conference on Fibre Grade Polymers, Chemical Fibres and Special Textiles (CEC Monograph Series Vol. 2), Slovak University of Technology, Bratislava 2001, p. 284-289

[24]* Zemanová, E., Marcinčin, A., Legéň, J.: Characterisation of Shrinkage in Oriented PP/PET Fibres by TMA. In: Proceedings of 2nd Central European Conference on Fibre Grade Polymers, Chemical Fibres and Special Textiles (CEC Monograph Series Vol. 2), Slovak University of Technology, Bratislava 2001, p. 349-354

[25]* Marcinčin, A., Lučivjanský, J., Zimány, V., Ujhelyiová, A.: Relaxation of Polypropylene Spun Dyed Fibres. In: Proceedings of 2nd Central European Conference on Fibre Grade Polymers, Chemical Fibres and Special Textiles (CEC Monograph Series Vol. 2), Slovak University of Technology, Bratislava 2001, p. 2354-362

[26]* Körmendyová, E., Marcinčin, A.: Estimation of Miscibility of Polymer Blend and Influence of Molecular Structure on Polymer Miscibility. In: Proceedings of 2nd Central European Conference on Fibre Grade Polymers, Chemical Fibres and Special Textiles (CEC Monograph Series Vol. 2), Slovak University of Technology, Bratislava 2001, p.

366-370

[27]* Murárová, A., Krištofič, M., Jambrich, M., Hodul, P.: Požiadavky na textílie pre odievanie. Requirements for textiles clothing In: Zborník príspevkov z 53. Zjazdu chemických spoločností, E-P14, Banská Bystrica, 3. - 6. 9. 2001, 73-74

[28]* Borsig, E., Fiedlerová, A., Greco, R., Iavarone, M.: Transparentné vzájomne preniknuté polymérové siete na báze PE/metakrylátové kopolyméry. Transparent interpenetrating polymer networks on the basis of PE/methacrylate copolymer. In: 53. zjazd chemických spoločností, Banská Bystrica, 3. – 6. .9. 2001, F - P1, 5-6

[29]* Hrdlovič, P., Chmela, Š., Danko, M., Borsig, E.: Značky chromofór-stérický tienený amín: využitie pri charakterizácii polymérov. The flourescence probe chromophore-steric hindered amine, its use for polymer characterization. In: 53. zjazd chemických spoločností, Banská Bystica, 3. - 6. 9. 2001, F-P24, 50-51

[30]* Fiedlerová, A., Borsig, E., Greco, R., Iavarone, M.: Optické vlastnosti PN systémov: PE/BMA-co-MMA. Optical properties of IPN-like networks PE/BMA-co- MMA. In: 53. zjazd chemických spoločností,Banská Bystrica, 3. - 6. 9. 2001, F-PO7, 80-81

[31]* Kósa, Cs., Danko, M., Fiedlerová, A., Hrdlovič, P., Borsig, E., Weiss, R. G.: Pyrenylová flourescencia ako značka pre štúdium štruktúry polyméru a difúzii v PE.: poly (butylmetakrylát-co-polystyrén) obsahujúca vzájomne preniknutú sieť a príbuzné systémy. Pyrenyl flourescence as a probe of polymer structure and diffusion in a polyethylene: poly(butylmethacrylate-co-polystyrene) interpenetrating network and related polymers. In: 53. zjazd chemických spoločností, Banská Bystica, 3. - 6. 9. 2001, F-PO13, 92

[32]* Hrčková, Ľ., Lazár, M., Borsig, E.: Polymerizácia dodecylmetakrylátu do vysokej konverzie. Polymerization of dodecylmethacrylate to high conversion. In: 53. zjazd chemických spoločností, Banská Bystica, 3. - 6. 9.2001, F-PO16, 96-97

[33]* Jambrich, M., Jambrich, P., Lučivjanský, J., Michlík, P., Murárová, A., Papajová, V., Revús, M.: The Development of Polypropylene Fibres in Slovakia. In: Proccedings I., 40th International Petroleum Conference, Bratislava, 17. - 19. 9. 2001, PE – 42

[34]* Hudecová D., Marcinčin A.,Augustín J.: Bioaktívne textilné vlákna na báze irgasanu. Bioactive textile fibres on the base of Irgasan. 22. Kongres československej spoločnosti mikrobiologickej, Univerzita veterinárneho lekárstva, Košice, 5.-9.9.2001

C. Books and Textbooks

D. Patents

E. Research Reports: