A N N U A L R E P O R T
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DEPARTMENT
OF FIBRES AND TEXTILE CHEMISTRY
SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA

Faculty of Chemical Technology

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DEPARTMENT OF FIBRES AND TEXTILE CHEMISTRY

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I. STAFF

Full Professor:
Eberhard Borsig, DrSc;
Associate Professors:
Pavol Hodul, PhD.; Krištofič Michal, PhD.; Anton Marcinčin, PhD.;
Assistant Professors:
Jaroslav Legéň, PhD.; Anna Ujhelyiová, PhD.;
Research Fellows:
Valéria Demianová, PhD.; Anna Murárová, PhD.; Elena Zemanová, PhD.;
PhD. Students:
Martina Bednarčíková; Eva Körmendyová; Silvia Pavlíková;
Technical Staff:
Alžbeta Ferenčáková; Gabriel Kužel; Albína Pokorná; Edita Štábelová;
Ivana Bobríková;

II. TEACHING AND RESEARCH LABORATORIES

A. Teaching Laboratories:

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

B. Research Laboratories:

DSC-Perkin Elmer and DTA (Derivatograph Q 1500 D)
TMA-50 M and TA (Thermomechanical measurement)
Gas Chromatography CHROM-5
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
Zetameter EKA
Langmuir balance
Capillary viscosimeter
Computers PC-AT and XT (386, 486)I
Picture analyser
Unimode semiconductive Laser 25mW 690nm with universal optical set
Microscope Olympus Model BHT
Laboratory equipments for light degradation of fibrous materials Xenotest

III. TEACHING

A. Undergraduate Study

5th Semester (autumn)

Macromolecular Chemistry I.	(2-0 h)	Borsig
6th Semester (spring)		
Material Technology	(2-0 h)	Marcinčin
7th Semester (autumn)		
Macromolecular Chemistry II	(2-1 h)	Borsig
Physics of Polymers and Paper	(2-2 h)	Krištofič
Fiber Sci. and Technology	(3-0 h)	Marcinčin
Seminary Fiber Sci. and Technology	(0-2 h)	Marcinčin
Structure of Fibrous Materials	(2-1 h)	Ujhelyiová Murárová
Modeling of Polymer Structure and Properties	(2-1 h)	Rychlý
Laboratory of Fiber Sci. and Technology.	(0-0-8)	Krištofič Legéň
8th Semester (spring)		
Coloristics and Textile Auxiliaries	(2-0 h)	Hodul
Fibrous Composites	(2-0 h)	Krištofič
Textile Engineering	(2-0 h)	Neckář
Seminary Textile Engineering	(0-2 h)	Křemenáková
Laboratory II.	/0-0-10/	Legéň Hodul
Excursion and Technical Experience		Marcinčin Demianová
9th Semester (autumn)		
Textile Chemistry and Technology	(3-1 h)	Hodul
Technology of Polym. Films	(2-0 h)	Marcinčin
Laboratory of Textile Chemistry and Technology	(0-0-10)	Hodul
Fiber and Textile Testing	(2-0 h)	Legéň
10th Semester (spring)		
Seminary	(0-3-0)	
Diploma work	(0-0-27)	

B. PhD.study:

Physics of Polymers
Macromolecular Chemistry
Technology of Polymeric Materials
Organic Chemistry
Physical Chemistry

IV. CURRENT RESEARCH PROJECTS

Fibre-forming Polypropylene – Polar Polymer Blends (Eberhard Borsig)

1.By the DSC analysis of fibre-forming polypropylene-polyethylene blend it was found that the components in the semicrystalline PP-TI 9O2 and LPDE SA 200 blend fibres behave at melting and crystallization process as independent individual polymer components with individual peaks on thermograms. Decrease of the total melting enthalpy of the blends indicates a physical or chemical interaction (partial miscibility) of PP and LPDE.

2.Fibres from copolyamides and blend fibres containing polyamide 6 and copolyamides have been prepared and their properties have been evaluated.