Attila Levente GERGELY

Address: Akron Engineering Research Center
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Date of birth: 10 April 1984

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HIGHLIGHTS

Carbocationic polymerization of isobutylene, alloocimene, isoprene and styrene
Thermoplastic elastomers
Compounding and curing
Language: Hungarian (native), English, Romanian
International exposure in research environment: Romania, Germany, U.S.A.

EDUCATION

2010-present The University of Akron, Akron, OH
Collage of Polymer Science and Engineering
Ph.D. of Polymer Science, (expected graduation 08/2014)
Dissertation: "Synthesis and Characterization of poly(alloocimene-b-isobutylene) Thermoplastic Elastomers"
Advisor: Dr. Judit E. Puskas
Current GPA: 3.715/4.0

2008-2010 Transylvania University of Brasov, Brasov, Romania
Collage of Mechatronics and Fine Mechanics
M.Sc. of Mechatronics Engineering
Thesis: "Development of wireless and sound control systems for Lego Mindstorm NXT robots"
Advisor: Prof. Dr. ing. Adrian Dumitriu
GPA: 3.5/4.0

2002-2008 Sapientia-Hungarian University of Transylvania, Tg-Mures, Romania
Collage of Technological and Human Sciences
B.S. of Mechatronics Engineering
Thesis: "The design of a 4 DOF Delta Parallel Robot"
Advisor: Dr. Zoltan Forgo
GPA: 3.9/4.0

EXPERIENCE

Research

The University of Akron, Akron, OH;

Graduate student at the Department of Polymer Science, 2010-present
Advisor: Dr. Judit E Puskas
Synthesis and characterization of poly(alloocimene-b-isobutylene) based thermoplastic elastomers
Compounding and testing of butyl rubber and polyiosobutylene based thermoplastic elastomers

The University of Bayreuth, Bayreuth, Germany,

Visiting graduate student at the Department of Polymer Engineering, summer of 2012
Advisor: Dr. Volker Altstädt, Dr. Judit E. Puskas
Investigation of the fatigue properties of poly(alloocimene-b-isobutylene) thermoplastic elastomers with the hysteresis method.

The Sapientia University, Tg-Mures, Romania,

Junior researcher at the Department of Mechanical Engineering, 2005-2007.
Advisor: Dr Istvan Papp
Determination of the movement equations of mechanisms using the constraints equation method.

Industrial

Matrita S.A., Odorheiu-Secuiesc, Romania

Position: Design Engineer

Tool design using Autodesk Inventor and Solidwoks designer software.
Technical drawing.
Programing CNC lath machine.
Tool manufacturing price estimate.

Plasmaterm S.A., Tg-Mures, Romania

Position: Quality Supervisor Assistant

Determine sources of defects on precision molded objects.

Teaching

The University of Akron, Akron, OH

Mentor: Research Experience for Undergraduate Program (REU), Andrew McClain, Department of Biomedical Engineering, The University of Akron, Akron, OH. 2013 May-July.

The University of Akron, Akron, OH

Mentor: Honors Project, Jonathan Russell, Department of Chemical Engineering, The University of Akron, Akron, OH, 2012 June-August.

SKILLS

Carbocationic polymerization, cryogenic conditions and air free system.
Glove Box operation and maintenance
Gel Permeation Chromatography system operation and maintenance
Polymer characterization (GPC, NMR, TGA, DSC, TEM, AFM, DMTA)
Polymer compounding, curing and testing (Brabender mixer, Tensile, Mooney viscosity, RPA, MDR, fatigue – hysteresis method, Shore A, Compression set, Melt flow index)

Engineering:	Design Software (AutoCAD, Autodesk Inventor, Solid Works)
Other:	Microsoft Office (Word, Excel, PowerPoint)
	Programming skills (C++, Turbo Pascal)
	Symbolic Math Systems (MathCAD, MathLab, LabView)
	Astra (Wyatt), ChemDraw, ACD ChemSketch

AWARDS

2014	Department of Polymer Science Travel Award to the 247th ACS 2014 Fall Conference
2012	Best Graduate Poster presentation award on the Rubber Expo and 182nd Technical Meeting & Educational Symposium, 2012, October 9 – 12, Cincinnati, OH, USA.
2010 – 2012	CHDP Scholarship
2008	Ferber Scholarship
2002 – 2008	Honors Scholarship of the Department of Mechanical Engineering at Sapientia University

CONFERENCES

Oral presentations

Gergely, A.L.; Puskas, J.E. Synthesis of block copolymers of isobutylene and alloocimene, 247th ACS Technical Meeting, **2014**, Dallas, TX, USA.

Gergely, A.L.; Puskas, J.E.; Kaszas, G. A New Class of Polyisobutylene-Based Thermoplastic Elastomers, PPS-29, **2013**, Nuremberg, Germany.

Puskas, J.E.*; **Gergely, A.L.**; Kaszas, G. Living Carbocationic Polymerization in a Two-phase System, 10th IUPAC APME, **2013**, Durham, United Kingdom.

Gergely, A.L.; Puskas, J.E.*; Kaszas, G. Novel Two-Phase Living Carbocationic Polymerization, IP'13, **2013**, Awaji, Japan.

Gergely, A.L.; Papp, I. *Determination the movement equation of the Pétervar-i screw using the method of constraint equations*, FMTU, **2006**, Kolozsvár, Romania.

Poster presentations

Gergely, A.L.; Puskas, J.E., Altstädt, V. Dynamic Fatigue Properties of Polyisobutylene-based Thermoplastic Elastomers, PPS-30, Polymer Processing Society, June 8 – 12, **2014**, Cleveland, OH, USA.

Gergely, A.L.; Puskas, J.E.; Kaszas, G. Novel Filler Reinforced Polyisobutylene-based Thermoplastic Elastomers, International Elastomer Conference, October 7 – 11, **2013**, Cleveland, OH, USA.

Gergely A.L.; Puskas, J.E., Altstädt, V. Dynamic Fatigue Properties of Polyisobutylene-based Thermoplastic Elastomers: The Effect Of Carbon Black Reinforcement, PPS-29, Polymer Processing Society, July 14 – 19, **2012**, Nuremberg, Germany, Europe.

Puskas, J.E; **Gergely, A.L.** Diene-funcionalized Polyisobutylene and Butyl Rubber for Improved Filler Interaction, Center for Tire Research Fall 2013 Meeting, **2013**, October 15 – 16, Akron, OH, USA.

Puskas, J.E; **Gergely, A.L.** Diene-funcionalized Polyisobutylene and Butyl Rubber for Improved Filler Interaction, Center for Tire Research Spring 2012 Meeting, **2013**, June 3 – 5, Akron, OH, USA.

Puskas, J.E; **Gergely, A.L.** Diene-funcionalized Polyisobutylene and Butyl Rubber for Improved Filler Interaction, Center for Tire Research Fall 2012 Meeting, **2012**, October 15 – 16, Akron, OH, USA.

Gergely, A.L.; Puskas, J.E.; Kaszas, G. A New Polyisobutylene Based Thermoplastic Elastomer Rubber Expo and 182nd Technical Meeting & Educational Symposium, **2012**, October 9 – 12, Cincinnati, OH, USA. (Best poster)

Gergely, A.L.; Puskas, J.E.; Kaszas, G. Controlled Carbocationic Copolymerization of Isobutylene with Alloocimene, MACRO2012, Wold Polymer Congress, **2012**, June 24 – 29 Blacksburg, VA, USA.

PUBLICATIONS

Gergely, A.L.; Turkarslan, O.; Puskas, J.E.; Kaszas, G. "*The Role of Electron Pair Donors in the Carbocationic Copolymerization of Isobutylene with Alloocimene*", *J. Polym. Sci. Part A: Polym. Chem* **2013**, *51*, 4717-4721.

Puskas, J.E.; **Gergely, A.L.;** Kaszas,G. "*Controlled/Living Carbocationic Copolymerization of Isobutylene with Alloocimene"*, *J. Polym. Sci. Part A: Polym. Chem* **2013**, *51*, 29-33

Gergely A. L.; Papp, I. *"Determination the movement equation of the Pétervar-i screw using the method of constraint equations*" Proceedings 131-136, XI. Fiatal Műszakiak Tudományos Ülésszaka (FMTU), 2006. March 24-25., Kolozsvár, Romania

LEADERSHIP & EXTRACURRICULAR ACTIVITIES

2013-2014	Officer of ACS Rubber Division Student Chapter at the University of Akron
2011-2012	Officer of Polymer Science Student Organization
2012	Volunteer at the Engineering Career Day at Firestone High School, Akron, Ohio
2012	Volunteer at the The All American Soap Box Derby, Akron Ohio
2011	Volunteer at the Akron Regional Science Fair
2011	Part of organizer team: International Symposium on Ionic Polymerization (IP 2011), Akron, USA, 10–15 July 2011
2004-2005	Officer of student government at The Sapientia University

AFFILIATIONS

ACS Polymeric Materials Science and Engineering (2011- present)
ACS Rubber division (2011-present)

PERSONAL INTEREST

Travel, outdoors (hiking, biking, camping), team sports (football, basketball), billiard.

REFERENCE LIST

Dr. Judit E. Puskas
The University of Akron
Professor of Chemical and Biomolecular Engineering
Professor of Polymer Science, Integrated Bioscience and Chemistry
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