

SEFIK TUNC

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Tel: (207)299-0771

15 Cedar Street
Orono, ME 04473

OBJECTIVE

Seeking research position utilizing skills in bio-refinery/ bio-energy

EDUCATION

UNIVERSITY OF MAINE, ORONO, USA

Doctor of Philosophy (PhD.), Chemical Engineering, Expected graduation: Fall 2007

Thesis: Hemicellulose extraction of hardwood

UNIVERSITY OF MAINE, ORONO, USA

Master of Science, Chemical Engineering, Graduated: May 2003

Thesis: Development of a Measurement Method of Alkaline Pulp Yield

UNIVERSITY OF ANKARA, ANKARA, TURKEY

Bachelor of Science, Chemical Engineering, July 1996

Graduate study, Chemical Engineering, 1998-1999

WORK AND MANAGEMENT EXPERIENCE

Lab Management:

- Senior graduate researcher in bio-refinery, instructing students in carbohydrate analysis
- Responsible for maintaining lab safety, University of Maine, 2006-present

Research Engineer:

- Pulp and Paper Processing Development Center, University of Maine, 2003-04

PROJECTS

University of Maine

- Integrated Forest Product Bio-refinery, 2004-07
 - In cooperation with the US Department of Energy and International Paper Co.
 - Utilized High Performance Anion Exchange Chromatography for carbohydrates analyses
 - Utilized HPLC for acetic acid, furfural, HMF, ethanol etc.
 - Modified and utilized ASE-100 extractor for hemicelluloses removal from biomass
- Further Development of Alkaline Pulp Yield Measurement Method, 2001-03

University of Ankara

- Adsorptions of organic poly-molecular compounds from wastewater by clay, 1999
- The effect of chemical media to fullerene production, 1998

TECHNICAL SKILLS

Wood Product Development Machinery:

- HPAEC-PAD, HPLC, UV, Refinery, Extractor, Centrifuges etc.

Computer/Modeling Skills:

- MatLab, MathCAD, ChemCAD, VisSim, Visio

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ACADEMIC AWARDS & HONORS

- Research Assistantship (for PhD), Chemical and Biological Engineering, UMaine, 2004-07
- Research Assistantship (for Masters), Chemical Engineering, UMaine, 2002-03
- Full Scholarship, from Turkish Government, to pursue a Master's Degree in the USA, 2001-03
- University of Ankara Chemical Engineering Department-best student, Fall 1996
- University of Ankara Chemical Engineering second place-graduating student for B.Sc, 1996
- Fellowship, from Turkish Government, to support B.Sc. in Chemical Engineering, 1992-96

PROFESSIONAL AFFILIATIONS

- The American Institute of Chemical Engineers, 2007-present
- Pulp and Paper Technical Association of Canada, 2002-present
- Francis Crowe Society, 2002- present

LANGUAGES

- English, Turkish, Kurdish

EXTRACURRICULAR ACTIVITIES AND INTERESTS

University of Maine Sponsored Activities

- Senator, University of Maine Graduate Student Government, 2007-present
- Turkish Representative/Member, International Student Club, 2002-04 and 2004-07
- Captain, multiple intramural soccer tournaments, 2004-07

Recreational Interests

- Bicycling, swimming, fishing, reading, soccer, music, hiking, photography

REFERENCES

Adriaan R. P. van Heiningen

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LIST OF PUBLICATIONS

Tunc M.S., Van Heiningen A.R.P and Lawoko, M., "The importance of Lignin-Carbohydrate Bonds in the Hot Water Pre-extraction of Hemicelluloses from Wood", Submitted to *Holzforschung*, (2007)

Tunc, M.S. and A.R.P., Van Heiningen, "Hemicelluloses Extraction of Mixed Southern Hardwood with Water at 150°C : Effect of Extraction Time", Submitted to *Industrial Engineering Chemistry Research* (2007)

Tunc, M.S. and A.R.P., Van Heiningen, "Hydrothermal Dissolution of Mixed Southern Hardwood", Submitted to *Holzforschung*, (2007)

Tunc, M.S. and A.R.P., Van Heiningen, "Hemicelluloses Extraction of Mixed Southern Hardwood with Water: Effect of Temperature" 2007 AIChE Annual Meeting, **November 4 -9, Salt Lake City, Utah**, (2007)

Tunc, M.S. and A.R.P., Van Heiningen, "Hemicelluloses Pre-extraction of Southern Hardwood Mixture with Water", *14th Int. Symp. on Wood and Pulping Chemistry*, Durban, South Africa, June 25-28 (2007) Oral Proceedings

Tunc, M.S. and A.R.P., Van Heiningen, "Hemicelluloses Pre-extraction of Southern Hardwood Mixture with Water", Submitted to *Bioresource Technology*, January (2007)

Van Heiningen, Adriaan R. P.; **Tunc, Mehmet S.**, "Influence of operation conditions on the extraction yield of hemicellulose from mixed southern hardwood" *229th ACS National Meeting*, San Diego, CA, United States, March 13-17, (2005) Oral proceedings

Van Heiningen, A.R.P, **Tunc, M.S.** and MacEvan, K., "Extraction of Hemicellulose from mixed southern hardwood using hot water extraction", *AIChE Annual Meeting Cincinnati*, OH, November 3th (2005) Oral Proceedings

Van Heiningen, A.; **Tunc, M. S.**; Gao, Y.; da Silva Perez, D., "Relationship between alkaline pulp yield and the mass fraction and degree of polymerization of cellulose in the pulp", *Journal of Pulp and Paper Science*, 30(8), 211-217 (2004)

A.R.P., van Heiningen, Y., Gao and **M.S., Tunc**, "A new pulp yield prediction method applied to Kraft, Kraft-AQ, Polysulfide and PSAQ pulping of Rock Maple", *Journal of Tianjin University of Science and Technology*, Vol.19 No.2 P.317-323, (2004)

Tunc, M. S., Y. Gao and A. R. P. van Heiningen, "Pulp Yield Prediction of Polysulfide-Anthraquinone Cooks from the Mass Fraction and Degree of Polymerization of Cellulose", *Proc. 12th Int. Symp. on Wood and Pulping Chemistry*, Vol. 1,p. 199-202, Madison, WI. USA. June 9-12 (2003)

A., Van Heiningen, **M.S., Tunc**, Y., Gao and D. da Silva Perez, "Relationship between Alkaline Pulp Yield and the Mass Fraction and Degree of Polymerization of Cellulose in Pulp", *Proceedings 2003 Annual PAPTAC Meeting*, Montreal, Quebec, Canada, Paper 0610, January 26-30 (2003)