

CURRICULUM VITAE

ISMAIL KUL

Widener University
Department of Chemistry
One University Place
Chester, PA 19013

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EDUCATION

- Aug. 2001 Ph.D., Physical Chemistry , Clemson University, Clemson SC
 Advisor : Prof. Dr. Adolph L. Beyerlein
 Co-advisor : Prof. Dr. Darryl D. DesMarteau
 Thesis Title: Mixtures of fluorinated ether and sulfur derivatives as
 CHF₂Cl (R-22) alternatives
- Dec. 1996 M.S., Chemistry, Clemson University, Clemson SC
 Advisor : Prof. Dr. Adolph L. Beyerlein
 Thesis Title: Novel fluorinated compounds and their mixtures as CFC and
 HCFC alternatives for Stratospheric Ozone protection
- May 1992 B.S., Chemistry Ege University, Izmir Turkey
 Advisor : Prof. Dr. Turhan Altunata
 Thesis Title: Hydrogen bonding studies between phenol and caffeine

RESEARCH EXPERIENCE

- 2008-present Associate Professor, Widener University
- Novel cancer drugs and their thermophysical properties in aqueous solutions, and in MDM2 protein
 - Thermophysical and volumetric properties of trans-resveratrol in ethanol
 - Photochemical reactions of metal carbonyls with 4-amino-3-hydrazino-5-mercapto-1,2,4-triazole (AHMT) and 3-amino-5-mercapto-1,2,4-triazole (AMT)
 - Thermophysical properties of aqueous solutions of pyridine and piperidine derivatives
 - Thermophysical properties of ionic liquids and their mixtures in water and n-alcohols
 - CO₂ solubility measurements in ionic liquids
 - Thermophysical and volumetric properties of phenyl boronic acids in aprotic solvents
 - Thermophysical properties of aqueous solutions of pyridine and piperidine
 - Liquid heat capacity studies of selected organic compounds and their mixtures using Differential Scanning Calorimetry (DSC)
 - Thermophysical properties of ionic liquids at high temperatures and pressures
- 2004-2007 Assistant Professor, Widener University

- Thermodynamic properties of novel fluorinated compounds and their mixtures as R-22 alternatives
- Determination of lower flammability limits of partially fluorinated hydrocarbons and their mixtures and analysis of data using percolation theory
- Experimental analysis of universal constants of Percolation Theory via flammability measurements
- Molecular modeling of natural organic matters isolated from various surface waters
- Thermophysical properties of fluorinated surfactant solutions
- Thermophysical properties of ionic liquids
- Development of new physical chemistry laboratory experiments
- Structural analyses of natural organic matter (NOM) samples isolated from various surface waters using computational methods

2001-2004

Visiting Assistant Professor, Kennesaw State University

- Determination of lower flammability limits of partially fluorinated hydrocarbons and their mixtures and analysis of data using percolation theory
- Vapor-liquid equilibria and densities of ternary mixtures of fluorinated ethers and CF_3SF_5 with HFCs as R-22 alternatives
- Theoretical analysis of thermodynamic properties of fluorinated mixtures using experimental data
- Vibrational-rotational spectra of HCl/DCl mixture and comparison of experimental data using computational methods with different basis sets
- Analysis of ball, jell and fountain pens using spectrophotometric techniques for forensic applications
- Characterization of natural organic matter (NOM) samples isolated from various surface waters using ^{13}C -NMR

1994-2001

Research Assistant, Clemson University

- Synthesis of novel fluorinated ethers, sulfur and fluorinated hydrocarbons under the direction of Dr. Darryl D. DesMarteau
- Determination of the physical properties of novel compounds and their mixtures
- Analysis of the thermodynamic efficiencies of the selected compounds and mixtures as potential alternatives for CFCs and HCFCs
- Directing and supervising undergraduate researchers

1993-1994

Research Assistant, Izmir Institute of Technology, Izmir-Turkey

1991-1992

Undergraduate directed research

- Analysis of hydrogen bonding between phenol and caffeine molecules using UV-Vis and fluorescence techniques

TEACHING EXPERIENCE

2004-present

Widener University

- Taught various undergraduate courses in chemistry and biochemistry;

CHEM 097, Developmental Chemistry
 CHEM 106 General Organic & Biochemistry Lab I
 CHEM 125, Introduction to Forensic Science
 CHEM 145, General Chemistry I
 CHEM146, General Chemistry II
 CHEM 147, General Chemistry laboratory I
 CHEM 148, General Chemistry laboratory II
 CHEM385, Physical Chemistry I
 CHEM386, Physical Chemistry II
 CHEM 389, Physical Chemistry Lab
 BCH 102, Biochemistry Seminar II

- 2001-2004 Visiting Assistant Professor, Kennesaw State University
- Taught various undergraduate courses in chemistry;
 CHEM 1211/L, General Chemistry I/General Chemistry I Lab
 CHEM 1212/L, General Chemistry II/General Chemistry II Lab
 CHEM 1151/L, Fundamentals of Chemistry/ Fundamentals of Chemistry Lab
 CHEM 1152L, Organic & Biochemistry Lab
 CHEM 3601/L, Physical Chemistry I/Physical Chemistry I Lab
 CHEM 3602/L Physical Chemistry II/Physical Chemistry II Lab
 CHEM 4490/L, Forensic Chemistry I/ Forensic Chemistry I Lab
- 2002-2003 Visiting Lecturer, Emory University
- Taught an undergraduate inorganic chemistry course and two forensic chemistry lab courses;
 CHEM 250, Inorganic Chemistry I
 CHEM 292L, Integrated Lab II
 CHEM 297L, Integrated Lab II
- Summer 2001 Lecturer, Clemson University
- Taught General Chemistry I, CH 101
- 2000-2001 Director of Physical Chemistry laboratory, Clemson University, CH 339 and CH 340
- Supervised and directed 4 graduate students and 6 sections of labs (~80 students) per semester
- 1996-2000 Graduate Teaching Assistant, Clemson University
- Teaching assistant for physical chemistry laboratory CH 339 and CH 340

PROFESSIONAL EXPERIENCE

- 1999-2000 Equi-Tox, Incorporated Center for Applied Technology
 Sum. 1991 Undergraduate Summer Intern, Ormo Inc. (Textile Factory), Bursa-Turkey
- Research and Development in the dye department

CONSULTANT

- 1999-2001 Equi-Tox, Incorporated Center for Applied Technology

- Determination and evaluation of the liquid density and viscosity measurements of two pharmaceutical preparations (gel and paste) as a function temperature

NOMINATIONS AND PROFESSIONAL AWARDS

Fall 2003	Nominated for the College of Science and Mathematics Distinguished Teaching Award. Kennesaw State University, GA.
Sum 2003	Computational Chemistry and Theoretical Chemistry workshop supported by NSF at Georgia Institute of Technology, GA.
Sum 2003	Molecular Modeling workshop supported by NSF at Georgia State University, GA.
Sum 2002	Forensic Science workshop supported by NSF at Williams College, MS.
2000-2001	Director of Physical Chemistry laboratory, Clemson University
1993-1996	Recipient of Turkish Higher Education Counsel's Ph.D. scholarship award (\$75000)

GRANT

Spring 2014	Provost Grant. "Carbon dioxide solubility in 1-butyl-3-methyl-imidazolium-bis(trifluoromethylsulfonyl)imide at the wide range of temperature and high pressures". <i>Funded</i> .
Fall 2013	Faculty Development grant for research. <i>Funded</i> .
Spring 2013	Provost Grant. "Thermodynamic properties of binary system of N,N-dimethylformamide, N,N-dimethylacetamide and Piperidine with water". <i>Funded</i> .
Fall 2012	Faculty Development grant for research. <i>Funded</i> .
Spring 2012	Provost Grant. "Thermodynamic properties of binary system of N,N-dimethylformamide, N,N-dimethylacetamide and Piperidine with water". <i>Funded</i> .
Fall 2011	Faculty Development grant for research. <i>In progress</i> .
Fall 2010	Faculty Development grant for research. <i>Funded</i> .
Spring 2010	NSF TUES Type 1 Project "Using NMR to Develop and Assess Critical Thinking Skills", Van Bramer, S.E.; Bastin, Bhat, K.; Fischer-Drowos, S; Kul, I. May 2010. \$249,745. <i>Not Funded</i> .
Spring 2011	Provost Grant. "Thermodynamic properties of binary system of N,N-dimethylformamide, N,N-dimethylacetamide and Piperidine with water". <i>Funded</i> .
Fall 2009	Faculty Development grant for research. <i>Funded</i> .
Spring 2010	Provost Grant. "Thermodynamic properties of binary system of N,N-dimethylformamide, N,N-dimethylacetamide and Piperidine with water". <i>Funded</i> .
Fall 2008	Faculty Development grant for research. <i>Funded</i> .
Spring 2009	Provost Grant. "Thermodynamic properties of binary system of N,N-dimethylformamide, N,N-dimethylacetamide and Piperidine with water". <i>Funded</i> .
Fall 2007	Faculty Development grant for research, "Thermodynamic properties of aqueous solutions of pyridine and piperidine". 2008 <i>Funded</i> .
Spring 2008	Provost Grant. Lower Flammability Limits of binary mixture of CF ₃ CH ₂ F (R-134a)/CH ₃ CF ₂ H and Percolation Theory. 2007 <i>Funded</i> .
Fall 2006	Faculty Development grant for research. <i>Funded</i> .
Spring 2007	Provost Grant. Lower Flammability Limit Studies of CH ₂ FCF ₂ H (R-143). 2006 <i>Funded</i> .
Spring 2005	Faculty development grant. Development of Laboratory Course for Science and Engineering Majors. <i>Funded</i>

Spring 2006	Provost Grant. Understanding of flame propagation and Lower Flammability limit of trifluoroethane (R-143a) (CF ₃ CH ₃) Percolation theory. <i>Funded</i>
Spring 2005	Provost Grant. Synthesis, thermodynamic and flammability properties of novel fluorinated compounds and their mixture as CHF ₂ Cl (R-22) alternatives for Stratospheric Ozone protection. <i>Funded</i>
Fall, 2004	FIPSE, DUNS NO: 06-920-4659. Forensic Chemistry at Kennesaw State University
Fall, 2003	FIPSE, DUNS NO: 06-920-4650. Improving interest in chemistry at undergraduate colleges by infusing forensic chemistry into the curriculum

PATENTS

DesMarteau, D.D.; Beyerlein, A.L. and Kul I. Ternary refrigerant compositions which contain perfluoroorgano sulfur compounds as replacements for R-22. US Serial No.:6,546,740. April 15, 2003

DesMarteau, D.D.; Beyerlein, A.L. and Kul I. Ternary refrigerant compositions containing fluorinated ethers as replacements for R-22. US Serial No.:6,574,973. June 10, 2003

PUBLICATIONS **Peer-reviewed Journals** (*Names of Undergraduate Co-authors Underlined*)

Safarov, J., Geppert-Rybczynska, M., **Kul I.**, Hassel, E. Thermophysical properties 1-butyl-3-methylimidazolium acetate over a wide range of temperatures and pressures, Fluid Phase Equilibria, **2014**, 383, 144-155.

Hamidova, R., **Kul, I.**, Safarov, J., Shahverdiyev, A., Hassel, E. Thermophysical properties of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide at high temperatures and pressures, Brazilian Journal of Chemical Engineering, **2014**, *In press*.

Safarov, J.; Hamidova, R.; Stephan, M.; **Kul, I.**; Shahverdiyev, A.; Hassel, E. Carbon dioxide solubility in 1-hexyl-3-methyl-imidazolium-bis(trifluoromethylsulfonyl)imide in a wide range of temperatures and pressures, The Journal of Physical Chemistry B, **2014**, 118(24), 6829-6838.

S. Sener, **I. Kul**, K. Bhat. Photochemical reactions of metal carbonlys [M(CO)₆ (M=Cr, Mo, W), Mn(CO)₃ Cp] with 4-amino-3-hydrazino-5-mercapto-1,2,4-triazole (AHMT) and 3-amino-5-mercapto-1,2,4-triazole (AMT), Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, **2014**. *In press*

Safarov, J.; Hamidova, R.; Stephan, M.; Schmotz, N.; **Kul, I.**; Shahverdiyev, A.; Hassel, E.. Carbon dioxide solubility in 1-butyl-3-methyl-imidazolium-bis(trifluoromethylsulfonyl)imide at wide range of temperatures and pressures, The Journal of Chemical Thermodynamics, **2013**, 67, 181–189

Safarov, J.; Hamidova, R.; Stephan, Z.; Schmidta, H.; **Kul, I.**; Shahverdiyeva, A.; Hassel, E. Thermophysical properties of 1-hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide at high temperatures and pressures, Journal of Molecular Liquids, **2013**, 187, 137-156

Ismail Kul, Krishna Bhat, Megan Hums, Michael R. Miller, A Comparative Study of The Thermodynamic Properties of Aqueous Solutions of 2,3-Pyridyl And Piperidine Methanols, Fluid Phase Equilibria, **2013**, 351, 94-104

Schmidt, H., Stephan, M., Safarov, J., **Kul, I.**, Nocke, J., Abdulagatov, I.M., Hassel, E. Experimental study of the density and viscosity of 1-ethyl-3-methylimidazolium ethyl sulfate, The Journal of Chemical Thermodynamics **2012**, 47, 68-75

Safarov, J., **Kul, I.**, El-Awady, W.A., Shahverdiyev, A., Hassel, E. Thermophysical Properties of 1-Butyl-4-methylpyridinium tetrafluoroborate, The Journal of Chemical Thermodynamics, **2012**, 51, 82–87

Safarov, J., **Kul, I.**, El-Awady, W.A., Shahverdiyev, A., Hassel, E. Thermodynamic Properties of 1-Butyl-3-methylpyridinium tetrafluoroborate, The Journal of Chemical Thermodynamics **2011**, 43, 1315-1322

Ismail Kul, and Tam Lieu. Thermodynamic Properties Of Aqueous Solutions Of Pyridine And Piperidine. Fluid Phase Equilibria, **2010**, 290, 95-102

Chris Blaszkowski, and Ismail Kul. Flammability Studies of Isomeric Structures of Ethane Derivatives and Percolation Theory. Int. Journal of Thermophysics. Fall 2007. Int. Journal of Thermophysics. Vol.28, No:3, June 2007.

Kul I.; DesMarteau, D.D. and Beyerlein, A.L. Coefficient of performance of fluorinated ether and fluorinated ether mixtures. ASHRAE Transactions. Vol.110, Part 2 , July 9, 2004.

Kul I.; Gnann D.; Beyerlein, A.L.; DesMarteau, D.D. Lower Flammability Limit of Difluoromethane and Percolation Theory. Int. Journal of Thermal Physics. Vol.25, No:4, July 2004.

Kul I.; Beyerlein, A.L.; DesMarteau, D.D. Vapor-Liquid Equilibria and Densities of Ternary Mixtures of Fluorinated Ethers and Trifluoromethyl Sulfur Pentafluoride with hydrofluorocarbons as R22 Alternatives. Fluid Phase Equilibria. Vol.222-223 July 2004.

Kul I.; DesMarteau, D.D. and Beyerlein, A.L. Vapor-liquid equilibria for CF₃OCF₂H/fluorinated ethane and CF₃SF₅/fluorinated ethane mixtures as potential R-22 alternatives. Fluid Phase Equilibria, 185, 2001.

Kul I.; DesMarteau, D.D. and Beyerlein, A.L. Vapor-liquid equilibria of novel chemicals and mixtures as R-22 alternatives. Fluid Phase Equilibria, 173: (2) 2000.

Kul I.; DesMarteau, D.D. and Beyerlein, A.L. Physical properties of RE-143a (CF₃OCH₃)/RE-218 (CF₃OCF₂CF₃) mixtures as R-12 or R-22 alternatives., ASHRAE Transactions, 106(1)1999.

Beyerlein, A.L.; Kul I.; DesMarteau, D.D. and Gang Z. Properties of novel

fluorinated compounds and their mixtures as alternative refrigerants. Fluid Phase Equilibria, 150-151(1998), p.287-296.

REPORTS

Kul I. Determination and evaluation of the liquid density and viscosity measurements of two pharmaceutical preparations (gel and paste) as a function of temperature. Part of a bioequivalence/chemical equivalence study/submission submitted to FDA 1999.

PRESENTATIONS

(Names of Undergraduate Co-authors Underlined)

Safarov, J., Hamidova, R., **Kul, I.**, Shahverdiyev, A., Hassel, E. Thermophysical properties of ionic liquids at high pressures and over a wide range of temperature, 21st European Conference on Thermophysical Properties, August 31st - September 4th 2014, Porto, Portugal.

Hamidova, R., Safarov, J., **Kul, I.**, Shahverdiyev, A., Hassel, E. Thermophysical properties of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide at the wide range of temperatures and pressures, VDI "Thermodynamik-Kolloquium" und "Ingenieurdaten", 7.-9. October 2013, Hamburg, Germany.

Hamidova, R., Zepik, S., Schmidt, H., **Kul, I.**, Safarov, J., Shahverdiyev, A., Hassel, E. Thermodynamic properties of 1-hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide at high state parameters, 19th Turkish National Thermal Sciences and Technology Congress, 9-12 September 2013, Samsun, Turkey.

Hamidova, R., Stephan, M., Schmotz, N., **Kul, I.**, Safarov, J., Shahverdiyev, A., Hassel, E. CO₂ solubility in ionic liquid [HMIM][NTf₂] at high pressures and various temperatures, 19th Turkish National Thermal Sciences and Technology Congress, 9-12 September 2013, Samsun, Turkey.

M. Karmesis, I. Kul, and K.L. Bhat. "Investigative Search for Resveratrol Derivatives Using Green Chemistry" 4th Annual Arts & Science Research Symposium, Widener University, September 6, 2013.

Hamidova, R., Schmotz, N., Safarov, J., **Kul, I.**, Shahverdiyev, A., Hassel, E. CO₂ solubility in 1-ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide at high pressures and various temperatures, 5th Congress on Ionic Liquids, 21-25 April 2013, Algarve, Portugal.

Hamidova, R., Safarov, J., **Kul, I.**, Shahverdiyev, A., Hassel, E. Thermophysical Properties of ionic liquids at high temperatures and pressures, 5th Congress on Ionic Liquids, 21-25 April 2013, Algarve, Portugal.

Hamidova, R., Safarov, J., **Kul, I.**, Shahverdiyev, A., Hassel, E. Vapor pressure of ionic liquid 1-hexyl-3-methylimidazolium

bis(trifluoromethylsulfonyl)imide with methanol or ethanol, 5th Congress on Ionic Liquids, 21-25 April 2013, Algarve, Portugal.

Hamidova, R., Safarov, J., **Kul, I.**, Shahverdiyev, A., Hassel, E. Thermophysical properties of 1-hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide at high temperatures and pressures, 2nd Symposium of Thermophysical Properties for Technical Thermodynamics, Rostock, 28.-29. March 2013, Rostock, Germany.

J. Azarewicz, **I. Kul**, K. Bhat. A Study of the Physical Properties of Resveratrol in protic solvents, 13th Annual ACS YCC, Drexel University, PA. February 21, 2013

M. Polen, I. Kul, K. L. Bhat, A. Nagengast. "A Study of the Physical properties of Resveratrol" 13th Annual ACSYCC Poster Session, Drexel University, PA, February 21, 2013.

Stephan, M., Hamidova, R., Schmotz, N., Safarov, J., **Kul, I.**, Shahverdiyev, A., Hassel, E. CO₂ solubility in ionic liquids at high pressures and wide range of temperatures, International conference: "Problems and perspectives using renewable energy sources", 29-30 November 2012, p. 57-59, Baku, Azerbaijan.

J. Safarov, M. Stephan, M. Scherpelz, R. Hamidova, **I. Kul**, A. Shahverdiyev, E. Hassel. Thermophysical Properties of Ionic Liquids, Chemie Ingenieur Technik **2012**, 84, No. 8, 1409–1416

J. Azarewicz, **K. Blattner**, I. Kul, K.L. Bhat. "Spectroscopic Analysis for Isomeric Percentage Composition of Commercially Available Resveratrol Sources", 3rd Annual Arts & Sciences Research Symposium, Widener University, September 7, 2012. Won 1st Place.

Ismail Kul, Anna Miller, Krishna Bhat. Thermophysical properties of phenylboronic acid in aqueous solutions at selected temperatures, 18th Symposium on Thermophysical Properties, , Boulder, CO. June – 24-29, 2012.

Ismail Kul, Krishna Bhat, Megan Hums, Michael, R. Miller. A comparative study of the thermodynamic properties of aqueous solutions of 2,3-pyridyl and piperidine methanols, 18th Symposium on Thermophysical Properties, Boulder, CO. June – 24-29, 2012.

Javid Safarov, **Ismail Kul**, Andreas Heintz and Egon Hassel. Vapor Pressure of Ionic Liquids with Methanol or Ethanol Binary Mixtures, 18th Symposium on Thermophysical Properties, Boulder, CO. June – 24-29, 2012.

Javid Safarov, **Ismail Kul**, Egon Hassel. (p,p,T) Measurements of Ionic Liquids, 18th Symposium on Thermophysical Properties, Boulder, CO. June – 24-29, 2012.

Hamidova, R., Stephan, M., Safarov, J., **Kul, I.**, Shahverdiyev, A., Hassel, E. Carbon dioxide solubility in ionic liquids at high temperatures and pressures, VDI "Thermodynamik-Kolloquium" und "Ingenieurdaten", 8.-10. Oktober 2012, Potsdam, Germany.

Stephan, M., Scherpelz, M., Hamidova, R., Safarov, J., **Kul, I.**, Shahverdiyev, A., Hassel, E. Thermophysical properties of Ionic Liquids, ProcessNet-Jahrestagung und 30. Jahrestagung der Biotechnologen 2012, 10-13 September 2012, Karlsruhe, Chemie Ingenieur Technik, 2012, 8, 1414-1415, Germany. [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1522-2640](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1522-2640)

Stephan, M., Hamidova, R., Scherpelz, M., **Kul, I.**, Schmotz, N., Safarov, J., Shahverdiyev, A., Hassel, E. Solubility of supercritical and normal CO₂ in ionic liquids at high pressures, 10th National Conference on Chemical Engineering, 3-6 September 2012, Istanbul, Turkey.

A. Miller, K. L. Bhat, I. Kul. "Partial Molar Volume of Phenylboronic Acid in Protic Solvents at Selected Temperatures", Widener University Student Project Day, April 13, 2012.

Schmidt, H., **Kul, I.**, Safarov, J., Nocke, J., Shahverdiyev, A., Hassel, E. Thermodynamic Properties of Ionic Liquids at High Temperatures and Pressures, VDI "Thermodynamik-Kolloquium" und "Ingenieurdaten", 4./6. Oktober 2011, Frankfurt/Main, Germany.

Safarov, J., Engelmann, M., Schmidt, H., Stephan, M., **Kul, I.**, El-Awady, W.A., Shahverdiyev, A., Hassel, E. Thermodynamic Properties of Ionic Liquids at High Temperatures and Pressures, 8th European Congress of Chemical Engineering, 25-29 September 2011, Berlin, Germany.

Safarov, J., **Kul, I.**, El-Awady, W.A., Shahverdiyev, A., Hassel, E. Vapor pressure of binary 1-Butyl-3-methylpyridinium tetrafluoroborate and methanol or ethanol solutions, 8th European Congress of Chemical Engineering, 25-29 September 2011, Berlin, Germany.

Safarov, J., **Kul, I.**, El-Awady, W.A., Shahverdiyev, A., Hassel, E. Density of 1-Butyl-3-methylpyridinium tetrafluoroborate at high temperatures and pressures, 19th European Conference on Thermophysical Properties, 28 August-01 September 2011, Thessaloniki, Greece.

Kul, I., Safarov, J., Mammadova, E., Nocke, J., Shahverdiyev, A., Hassel, E. Thermo-physical properties of geothermal water resources of Germany and Azerbaijan, 25th National Chemistry Congress with international participation, 26 June – 02 July 2011, Erzurum, Turkey.

Kul, I., Safarov, J., Nocke, J., Shahverdiyev, A., Hassel, E. High pressure density measurements of 1-Ethyl-3-methylimidazolium ethylsulfate, 25th National Chemistry Congress with international participation, 26 June – 02 July 2011, Erzurum, Turkey.

Safarov, J., **Kul, I.**, El-Awady, W.A., Shahverdiyev, A., Hassel, E. Thermodynamic Properties of 1-Butyl-4-methylpyridinium tetrafluoroborate at High Temperatures and Pressures, 4th Congress on Ionic Liquids, 15-18 June 2011, Washington, U.S.A.

Safarov, J., **Kul, I.**, El-Awady, W.A., Shahverdiyev, A., Hassel, E. Vapor pressures and activity coefficients of n-alcohols in binary mixtures with 1-butyl-4-methylpyridinium tetrafluoroborate, 4th Congress on Ionic Liquids, 15-18 June 2011, Washington, U.S.A.

Ismail Kul, Anna Miller, and Krishna Bhat. Thermophysical Properties of Phenylboronic Acid in Aqueous Solutions at Selected Temperatures, 25th National Chemistry Congress with international participation, 26 June – 02 July 2011, Erzurum, Turkey.

M. Hums, M. Miller, K.L. Bhat, **I. Kul**. “Thermodynamic Properties of Aqueous Solutions of Pyridine and Piperidine Derivatives”, Widener University Student Project Day, April 15, 2011.

Ismail Kul, Anna Miller, and Krishna Bhat. Thermophysical Properties of Phenylboronic Acid in Aqueous Solutions at Selected Temperatures, 50th Eastern Analytical Symposium, November 15, 2011.

Anna Miller, K.L. Bhat, **I. Kul**. “Partial Molar Volume of Phenyl boronic acid in Aqueous Solutions at Selected Temperatures”, NCUR, Ithaca, N.Y., April 1-2, 2011.

Ismail Kul. Thermophysical Properties of Alternative Refrigerants to R-22. 17th Symposium on Thermophysical Properties, Boulder, CO. June 21-26, 2009.

Ismail Kul, and Tam Lieu. Thermodynamic Properties Of Aqueous Solutions Of Pyridine And Piperidine. 17th Symposium on Thermophysical Properties, Boulder, CO. June 21-26, 2009.

Ismail Kul. Thermophysical Properties of Alternative Refrigerants to R-22. 19th Winter Fluorine Conference, St. Pete Beach, FL. Jan 10-15. 2009

Scott Van Bramer, Andrea Martin, Louise Sands, and **Ismail Kul**. Revising a POGIL general chemistry laboratory to improve student outcomes. 236th ACS National Meeting, Philadelphia, PA. Aug 17-21, 2008.

Robert Rodgers, Andrew Miller, Chris Blaszkowski, and Ismail Kul. Analysis of Critical Index Constant in Percolation Theory Via Flammability Studies of Partially Fluorinated Hydrocarbons. The 232nd ACS National Meeting, Boston, MA, August 2007.

Robert Rodgers , Andrew Miller, and Ismail Kul. Flammability Studies of Isomeric Structures of Ethane Derivatives and Percolation Theory. Student project Day at Widener University, April 2007.

Chris Blaszkowski, Robert Rogers, and Ismail Kul. Flammability Properties of Partially Fluorinated Hydrocarbons and Percolation Theory. 18th Winter Fluorine Conference. St. Petersburg, FL, January 2007.

Chris Blaszkowski, and Ismail Kul. Flammability Properties of Partially Fluorinated Hydrocarbons and Percolation Theory. The 232nd ACS National Meeting, San Francisco, CA, September 2006.

Bastin, L. I. Kul, Mark Schneider, and Jim Patterson. Synthesis, Analysis, and Application of Azo-Dyes: An Organic Chemistry or Joint Organic/Physical Chemistry Experiment. The 232nd ACS National Meeting, San Francisco, CA, September, 2006.

Bastin, L., I. Kul , M. Schneider, S. Selfe, and J. Patterson. Synthesis, Analysis, and Application of Azo-Dyes: An Organic Chemistry or Joint Organic/Physical Chemistry Experiment. 19th Biennial Conference on Chemical Education, at Purdue University. July 2006.

Ismail Kul. Thermophysical properties of alternative refrigerants and flammability studies. Widener University, Science Seminar. April 2006.

Chris Blaszkowski, Fene Richemond and Ismail Kul. Thermodynamic properties of novel fluorinated compounds and their mixture as CHF_2Cl (R-22) alternatives for stratospheric ozone protection. Poster presentation at NCUR® 20 at the University of North Carolina, Asheville, NC, April 2006.

Ismail Kul. Thermophysical properties of alternative refrigerants for R-22. 19th International Conference on Chemical Thermodynamics. Boulder, CO, July 2006.

Chris Blaszkowski, and Ismail Kul. Flammability Properties of Partially Fluorinated Hydrocarbons. 16th Symposium on Thermophysical Properties. Boulder, CO. July 2006.

Chris Blaszkowski, Fene Richemond and Ismail Kul. Thermodynamic properties of novel fluorinated compounds and their mixture as CHF_2Cl (R-22) alternatives for stratospheric ozone protection. 6th Annual Delaware ACS section Student-industry poster session meeting, April 2006.

Chris Blaszkowski, and Ismail Kul .Flammability properties of partially fluorinated hydrocarbons and Percolation Theory. Honors Week at Widener University, 2006.

Chris Blaszkowski, and Ismail Kul .Flammability properties of partially fluorinated hydrocarbons and Percolation Theory. Student project Day at Widener University, April 2006.

Ismail Kul. Forensic Science. Middle Atlantic Association of Liberal Arts Colleges at Widener University. October 2005.

Ismail Kul. Thermophysical properties of Alternative refrigerants for R-22. Second International Conference on Applied Thermodynamics. Istanbul-Turkey. May 2005.

Chris Blaszkowski, Fene Richemond and Ismail Kul. Thermodynamic properties of novel fluorinated compounds and their mixture as CHF₂Cl (R-22) alternatives for stratospheric ozone protection. 5th Annual Delaware ACS section Student-industry poster session meeting, April 2005.

Chris Blaszkowski and Ismail Kul. Understanding of flame propagation and Lower Flammability limit of difluoromethane (R-32) (CH₂F₂) Percolation theory. Student Project Day at Widener University, April 2005.

Fene Richemond and Ismail Kul. Thermodynamic properties of novel fluorinated compounds and their mixture as CHF₂Cl (r-22) alternatives for stratospheric ozone protection. Student project Day at Widener University, April 2005.

Huggins Z. Msimanga and Ismail Kul. An introductory forensic chemistry course at Kennesaw State University. 18th Biennial Conference on Chemical Education, Ames, IA, July 2004.

Kul I.; DesMarteau, D.D. and Beyerlein, A.L. Coefficient of performance of fluorinated ether and fluorinated ether mixtures. ASHRAE Annual Meeting, Nashville, TN, June 2004

Kul I.; Gnann D.; Beyerlein, A.L.; DesMarteau, D.D. Lower Flammability Limit of Difluoromethane and Percolation Theory. 15th Symposium on Thermophysical Properties, Boulder, CO, June 2003.

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Kul I.; DesMarteau, D.D. and Beyerlein, A.L. Novel fluorinated chemicals and mixtures as alternative refrigerants. IUPAC Workshop on Thermochemical, Thermodynamic and Transport Properties of Halogenated Hydrocarbons and Mixtures. Pisa- Italy, December 1999.

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Ismail Kul, Gang Zhao, Yuan Xie, A.L. Beyerlein And D.D. Desmarteau. Synthesis And Physical Properties Of Potential New Alternatives For Current HCFCs And CFCs. Proceedings Of The Fifth Japan-U.S. Workshop On Global Change. Uses Of Improved Global Change Information. Hawaii, March 10, 1997.

Kul I.;Gang Z.; Xie Y.; Beyerlein, A.L. and DesMarteau, D.D. Synthesis and physical properties of potential new alternatives for current HCFCs and CFCs. 13th Fluorine Conference, St. Petersburg, FL, Jan. 1997.

MANUALS

Kul I. Physical Chemistry Laboratory Manual (CHEM 389), 2004.

Kul I. Physical Chemistry Laboratory-1 Manual (CHEM 3601-L), 2001.

Kul I. Physical Chemistry Laboratory-2 Manual (CHEM 3602-L), 2003.

Msimanga H. and Kul I. Introductory Forensic Chemistry Laboratory. 2003.

WIDENER UNIVERSITY SERVICE: UNIVERSITY LEVEL

2014-2015	Arts and Science Representative to Technology & Instructional Resources Committee
2013-2014	Arts and Science Representative to Faculty Council Institutional Review Board (IRB)
2012-2013	Arts and Science Representative to Faculty Council Institutional Review Board (IRB)
2011-2012	Institutional Review Board (IRB)
2010-2011	Institutional Review Board (IRB)
2009-2010	Institutional Review Board (IRB)
2008-2009	Institutional Review Board (IRB) Arts and Science Representative to Academic Computing Services
2007-2008	Institutional Review Board (IRB) Arts and Science Representative to Academic Computing Services
2006-2007	Institutional Review Board (IRB)
2005-2006	Institutional Review Board (IRB)

WIDENER UNIVERSITY SERVICE: ARTS AND SCIENCES LEVEL

2014-2015	Curriculum and Planning Committee A&S Technology and Instructional Resources Committee
2013-2014	Curriculum and Planning Committee
2010-2011	Promotion and Tenure Committee (Associate Professor Representative from Science)
2009-2010	Promotion and Tenure Committee (Associate Professor Representative from Science)

WIDENER UNIVERSITY SERVICE: SCIENCE DIVISION LEVEL

2014-2015	Chair, Mentoring Committee Chair, Curriculum and Planning Committee, Chemistry Department Representative
2013-2014	Chair, Mentoring Committee Recruitment & Retention Committee, Chemistry Department Representative Chair, Curriculum and Planning Committee, Chemistry Department Representative
2012-2013	Science Division Department Chairs (Biochemistry) Chair, Mentoring Committee Recruitment & Retention Committee, Chemistry Department Representative
2011-2012	Science Division Department Chairs (Biochemistry)

	Recruitment & Retention Committee, Chemistry Department Representative
2010-2011	Science Division Department Chairs (Biochemistry) Recruitment & Retention Committee, Chemistry Department Representative Promotion and Tenure Committee (Associate Professor Representative)
2009-2010	Recruitment & Retention Committee, Chemistry Department Representative Promotion and Tenure Committee (Associate Professor Representative)
2005-2009	Recruitment & Retention Committee, Chemistry Department Representative Curriculum and Planning Committee, Chemistry Department Representative
2004-2005	Recruitment & Retention Committee, Chemistry Department Representative

WIDENER UNIVERSITY SERVICE: DEPARTMENT LEVEL

2010-2013	Chair, Department of Biochemistry
2013-2014	Senior Thesis Advisor for Jeff Walters (Chemistry)
2012-2013	Senior Thesis Advisor for Jualianne Azarewicz (Biochemistry)
2011-2012	Senior Thesis Advisor for Anna Miller (Chemistry)
2010-2011	Chair, Search Committee for Visiting Lecturer in Chemistry
2007-2008	Chemistry Stockroom Manager Search Committee
2004-2005	Chemistry Curriculum Revision Committee
2007-2013	Science Accepted Student's Day (Chemistry)
2004-2010	Widener Days, Chemistry and /or Biochemistry) Representative
2005	Co-President of Middle Atlantic Association of Liberal Arts College Teachers (MAALACT) at Widener University

COMMUNITY SERVICE IN AREA OF EXPERTISE

2006-Present	Vice-president of Board of Trustees of TrueBright Science Academy Charter School in Philadelphia
2013	Invited jury member to represent Physical Chemistry Division at the 40th Annual Silver Symposium at University of Delaware Chemistry & Biochemistry Departments
2005-2006	Founding President for TrueBright Science Academy Charter School Project in Philadelphia

ACADEMIC CITIZENSHIP AT KENNESAW STATE UNIVERSITY

Academic Years 2001 – 2004

- a. Chemistry & Biochemistry Department Faculty

Academic Years 2002 – 2004

Co-chair of Establishing New Forensic Chemistry Track Program