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Education and Training:

2009-2010	The University of Alabama, USA: Chemistry, Postdoctoral Researcher
2007-2009	Queen's University of Belfast, UK: Chemistry, Postdoctoral Research Fellow
2001-2007	The University of Alabama, USA: Chemistry, Ph.D. (Thesis: "New Developments in Carbene and Nitrene Chemistry")
2000-2001	The University of Bucharest, Romania: Chemistry, M.S. (non-Thesis)
1994-1998	The University of Bucharest, Romania: Chemistry, B.S.

Appointments:

2021-	Co-founder and Co-owner, Wyonics SSG LLC, Laramie, WY
2020-	Co-founder and Co-owner, 525 SDT LLC, Tuscaloosa, AL
2017-	Co-founder and Co-owner, Wyonics LLC, Laramie, WY
2016-2024	Associate Research Personnel, The University of Alabama, Tuscaloosa, AL, USA
2016-	Chief Executive Officer, 525 Solutions, Inc., Tuscaloosa, AL, USA
2015-2016	Academic Associate in Green Chemistry, McGill University, Montreal, QC, Canada
2010-2015	Chief Executive Officer, 525 Solutions, Inc., Tuscaloosa, AL, USA
2009-2014	Research Associate, The University of Alabama, Tuscaloosa, AL, USA
2008-2010	Chief Research Officer, 525 Solutions, Inc., Tuscaloosa, AL, USA
2009-2010	Postdoctoral Researcher, The University of Alabama, Tuscaloosa, AL, USA
2007-2009	Postdoctoral Research Fellow, QUILL Research Centre, Queen's University of Belfast, Belfast, NI (UK)
2007-2009	Visiting Fellow, The University of Alabama, Tuscaloosa, AL, USA

Experience and skills:

1. Research:
    - Expert-level organic synthesis (multi-step synthesis of small and large molecules, including APIs, separation, purification, strong command of air free techniques)
    - Solid state (polymorphs, cocrystals) synthesis and characterization
    - Experimental design
    - Results and data analysis
    - Ionic liquids fundamentals and applications design and synthesis of ionic liquids (batch and large scale) for different applications (pharmaceutical, agricultural, biotechnology)
    - Biomass processing in ionic liquids
    - Skilled in identifying and preparing novel biomaterials utilizing ionic liquid processes

- Safety and environmental standards
- Characterization techniques: Nuclear Magnetic Resonance (NMR), Fourier Transform Infrared (FT-IR), Ultraviolet Visible (UV/VIS), Karl-Fisher (KF, water content analysis), Thermal Analysis (Thermogravimetric Analysis, TGA; Differential Scanning Calorimetry, DSC), Microscopy, Ion Chromatography (IC), High-Performance Liquid chromatography (HPLC), Polarimetry, Powder X-ray Diffraction (PXRD), Dynamic Light Scattering (DLS).

2. Technical: Strong problem solver (using scientific rules and methods); acute attention to detail; eager to tackle new challenges.
3. Consulting:
    - prior art replications of APIs
    - performed litigation-based testing
    - served as an expert witness/consultant on patent litigations
    - Available facilities: wet and analytical laboratories/office space housed in a 6,500 square foot facility; equipment: Bruker ATR FT-IR, UV/VIS, Volumetric KF titrator, TGA, DSC, Anton Paar Rheometers, Malvern Zetasizer, Cambridge Lab V4000 viscometer, MaxQ shaker/incubator, Fisher Scientific conductivity/pH meter, Carl Zeiss Scope A1 polarizable microscope, 3D printers, sonicators, ovens, Vacuum Atmosphere Glovebox, 3 L glass jacketed reactor, electrospinning set-up, small laboratory equipment (stirring hot plates, balances, rotavapors, etc.)
4. Leadership: Ability to supervise employees, postdoctoral trainees, graduate, and undergraduate students on multiple projects; strategic planning; decision-making; team leader with excellent interpersonal and communication skills; creating effective, informed and highly motivated teams focused on deliverables; communications with the team in a professional manner.
5. Creativity and Innovation: Creative thinker; well organized; able to elaborate, refine, analyze, and evaluate ideas in order to improve and maximize creative efforts; open and responsive to new and diverse perspectives; incorporate team input and feedback into the work; see failure as an opportunity to learn; understand that creativity and innovation are long-term processes of small successes and repeated mistakes; skills needed to combine experience, discipline, professionalism, and planning as a strategic tool to inspire and motivate the view of the future.
6. Project Development and Management: Ability to design, develop, and direct research projects; coordinate and supervise multidisciplinary project teams; interact with customers, sponsors, consultants, and contractors to guarantee timely delivery of quality services; deliver research results and business strategies in oral and written presentations.
7. Team Management: Laboratory management skills; cognizant of laboratory safety guidelines, inventory upkeep; comprehensive understanding of inventory methodologies; proficient in financial tracking of projects (ensuring time sensitive reporting and that projects are kept on track and stay on budget).
8. Grant Writing: Experienced in small business and academic collaborative grant writing to raise funding from U. S. Federal Agencies and industrial sponsors. During 2008-2024 participated in writing over 140 grant proposals and prepared proposal packages for submission (academic and small business), which led to approximate $14,000,000 (academic) and $3,000,000 (SBIR) funding. (U. S. Federal Agencies: National Science Foundation (NSF), Department of Energy (DOE), U. S. Department of Agriculture (USDA), Environmental Protection Agency (EPA), Department of Defense (DOD), National Aeronautics and Space Administration (NASA); Industrial Sponsors: Abbott Laboratories, Reliance Industries, Monsanto, L'Oreal). PI on four

Phase I (DOE and NSF), one Phase II SBIR (DOE) sponsored projects, a project sponsored by BP to investigate the effect of the Deepwater Horizon Oil Spill in the Gulf of Mexico (chemical degradation and oil clean-up), an Alabama Department of Commerce project (525 Solutions, Inc. subcontract) to develop new technologies and businesses utilizing crustacean waste; PI and co-PI on 60 other proposal applications.

9. Business Development: Extensive experience in market research; technology leader; and manager of processes that achieve increased business value. Accountable for managing the delivery of critical projects and for providing managerial support for all the projects conducted by the company including responsible for costing, estimating and planning projects; monitoring actual expenditure figures against project budgets; producing accurate financial reports; knowledge in developing and administering resource plans and budgets using Federal Accounting Standards (GAAP, FAR 31)
10. Intellectual Property (IP):
    - assisted in IP development and drafting of patent applications
    - performed patentability, marketability, and feasibility studies
    - prior art replications of APIs
    - litigation-based testing
    - Served as an expert witness/consultant on patent litigations

Statistics:

1. Meetings Attended: 34
2. Papers: 47 (46-refereed, 1-non-refereed)
3. Citations: 5698; H-index: 33; i10-index: 43
4. Book Chapters: 4
5. Patents: 5 issued; 15 (applications active); 5 licensed
6. Presentations before National and International Meetings (including collaborators): 67
7. Presentations before Regional and Local Meetings (including collaborators): 10

Synergistic Activities:

1. Organizational: Team Leader of a team of postdoctoral researchers, Ph.D., undergraduate, and exchange summer students
2. Symposiums, workshops, professional affiliations:
    a. Kauffman FastTrac Tech Venture fellow – program completed on 09/06/12
    b. Participant in 2023 and 2024 Department of Energy Phase Shift I program
    c. Participant in the American Chemical Society Entrepreneurial Resources Center Program
    d. Participant in the American Chemical Society Graduate Student/Postdoc Summer Institute pilot program – 'How do you envision the article of the future?'
    e. Business Plan Competitions:
        i. Alabama Launchpad: 2009 (semi-finalist); 2010 (finalist)
        ii. MegaWatt Ventures (focused on clean energy technologies): 2013
    f. Marine Environmental Science Research workshop (Gulf of Mexico Research Initiative): Degradation and Fate of BP-Macondo Well Oil In Coastal Alabama (project PI)
    g. Member of the American Chemical Society: 2001-present

Publications:

A. Refereed Publications:

1. Vilaro, P.; Li, K.; Moyna, G.; Jiang, H.; Gurau, G.; Rogers, R. D. "Use of Ionic Liquids for Hemp Fiber Degumming," ACS Sust. Chem. Eng. **2024**, DOI: 10.1021/ acssuschemeng.4c03260.
2. Gurau, G.; Swadźba-Kwaśny, M.; Lu, X.; Dai, S. "Frontiers of ionic liquids," *Green Chem. Eng.*, **2021**, *2*, 337-338. DOI: 10.1016/j.gce.2021.11.002.
3. Rogers, R. D. and Gurau, G "Is "choline and geranate" an ionic liquid or deep eutectic solvent system?," *P Natl. Acad. Sci. USA* **2018**, *115*, E10999-E10999.
4. Choudhary, H.; Berton, P.; Gurau, G.; Myerson, A. S.; Rogers, R. D. "Ionic Liquids in Cross-Coupling Reactions: "Liquid" Solutions to a "Solid" Precipitation Problem," *Chem. Commun.* **2018**, *54*, 2056-2059. DOI: 10.1039/C7CC09635F.
5. Shamshina, J. L.; Berton, P. Wang, H.; Zhou, X. S., Gurau, G.; Rogers, R. D. "Ionic liquids in the pharmaceutical industry," in *Green Techniques for Organic Synthesis and Medicinal Chemistry*, Zhang, W.; Cue, B. W., Jr. (Eds.), 2nd Edition, JohnWiley & Sons Ltd.: Oxford, 2018; Ch. 20, pp 541-577. ISBN 9781119288176.
6. Shamshina, J. L.; Cojocaru, O. A.; Kelley, S. P.; Bica, K.; Wallace, S. P.; Gurau, G.; Rogers, R. D. "Acyclovir as an Ionic Liquid Cation or Anion Can Improve Aqueous Solubility," ACS Omega 2017, 2, 3483–3493. DOI: 10.1021/acsomega.7b00554.
7. Sun, J.; Shi; J.; Murthy Konda, N. V. S. N., Campos, D.; Liu, D.; Nemser, S.; Shamshina, J.; Dutta, T.; Berton, P.; Gurau, G.; Rogers, R. D.; Simmons, B. A.; Singh, S. "Efficient dehydration and recovery of ionic liquid after lignocellulosic processing using pervaporation," *Biotech. Biofuels*, **2017**. DOI: 10.1186/s13068-017-0842-9.
8. Berton, P.; Di Bona, K. R.; Yancey, D.; Rizvi, S. A. A.; Gray, M.; Gurau, G.; Shamshina, J. L.; Rasco, J. F.; Rogers, R. D. "Transdermal Bioavailability in Rats of Lidocaine in the Forms of Ionic Liquids, Salts, and Deep Eutectic," *ACS Med. Chem. Let.* **2017**, *8*, 498-503. DOI: 10.1021/acsmedchemlett.6b00504.
9. Shamshina, J. L.; Zavgorodnya, S.; Bonner, J. R.; Gurau, G.; Di Nardo, T, Rogers, R. D. ""Practical" Electrospinning of Biopolymers in Ionic Liquids," *ChemSusChem* **2017**, *10*, 106-111.
10. King, C.; Shamshina, J.; Gurau, G.; Berton, P.; Khan, N. F. A. F.; Rogers, R. D. "A platform for more sustainable chitin films from an ionic liquid process," *Green Chem*. **2017**, *19*, 117-126. DOI: 10.1039/C6GC02201D.
11. Shen, X.; Shamshina, J. L.; Berton, P.; Gurau, G.; *Rogers*, R. D. "Hydrogels based on cellulose and chitin: fabrication, properties, and applications," *Green Chem.* **2016**, *18*, 53-75. DOI: 10.1039/C5GC02396C.
12. Shamshina, J. L.; Barber, P. S.; Gurau, G.; Griggs, C. S.; Rogers, R. D. "Pulping of Crustacean Waste Using Ionic Liquids: To Extract or Not To Extract," *ACS Sust. Chem. Eng.*, **2016**, *4*, 6072-6081, DOI: 10.1021/acssuschemeng.6b01434.
13. Shen, X.; Shamshina, J. L.; Berton, P.; Bandomir, J.; Wang, H.; Gurau, G.; Rogers, R. D. "Comparison of hydrogels prepared with ionic-liquid-isolated vs commercial chitin and cellulose," *ACS Sustainable Chem. Eng.*, **2016**, *4*, 471-480. DOI: 10.1021/acssuschemeng.5b01400.
14. Shamshina, J. L.; Kelley, S. P.; Gurau, G.; Rogers, R. D. "Develop ionic liquid drugs," *Nature* **2015**, *528*, 188-189. DOI: 10.1038/528188a.

15. Pernak, J.; Niemczak, M.; Shamshina, J.; Gurau, G.; Głowacki, G.; Praczyk, T.; Marcinkowska, K.; Rogers, R. D. "Metsulfuron-Methyl-Based Herbicidal Ionic Liquids," *J. Agric. Food Chem*. **2015**, *63*, 3357-3366. DOI: 10.1021/jf505782p.
16. Shadid, M.; Gurau, G.; Shamshina, J. L.; Chuang, B.-C.; Hailu, S.; Guan, E.; Chowdhury, S. K.; Wu, J.-T.; Rizvi, S. A. A.; Griffin, R. J.; Rogers, R. D. "Sulfasalazine in ionic liquid form with improved solubility and exposure," *MedChemComm* **2015**, *6*, 1837-1841. DOI: 10.1039/c5md00290g.
17. Pernak, J.; Niemczak, M.; Giszter, R.; Shamshina, J.; Gurau, G.; Cojocaru, O. A.; Praczyk, T.; Marcinkowska, K.; Rogers, R. D. "Glyphosate-Based Herbicidal Ionic Liquids with Increased Efficacy" *ACS Sustainable Chem. Eng.* **2014,** *2*, 2845-2851. DOI:10.1021/sc500612y.
18. Wang, H.; Gurau, G.; Shamshina, J. L.; Cojocaru, O. A.; Janikowski, J.; MacFarlane, D. R.; Davis, J. H. Jr.; Rogers, R. D. "Simultaneous Membrane Transport of Two Active Pharmaceutical Ingredients by Charge Assisted Hydrogen Bond Complex Formation," *Chem. Sci.* **2014**, *5*, 3449-3456. DOI: 10.1039/c4sc01036a.
19. Cheng, F.; Wang, H.; Chatel, G.; Gurau, G.; Rogers R. D. "Facile Pulping of Lignocellulosic Biomass Using Choline Acetate," *Bioresour. Technol.* **2014**, *164*, 394-401. DOI: 10.1016/j.biortech.2014.05.016.
20. Wang, H.; Gurau, G.; Rogers, R. D. "Dissolution of biomass using ionic liquids," in *Structures and Interactions of Ionic Liquids*, Zhang, S.; Wang, l.; Lu X.; Zhou, Q., Eds., Springer-Verlag: Berlin Heidelberg, 2014; Ch. 3 pp 79-106; Structure and Bonding 151. DOI: 10.1007/978-3-642-38619-0_3.
21. Shamshina, J. L.; Gurau, G.; Block, L. E.; Hansen, L., Dingee, C.; Walters, A.; Rogers, R. D. "Chitin-Calcium Alginate Composite Fibers for Wound Care Dressings Spun from Ionic Liquid Solution," *J. Mater. Chem. B* **2014**, *2*, 3924-3936. DOI:10.1039/C4TB00329B.
22. Wang, H.; Gurau, G.; Pingali, S. V.; O'Neill, H. M.; Evans, B. R.; Urban, V. S.; Heller, W. T.; Rogers, R. D. "Physical insight into switchgrass dissolution in the ionic liquid 1-ethyl-3-methylimidazolium acetate" *ACS Sustainable Chem. Eng.* **2014**, *2*, 1264-1269. DOI: 10.1021/sc500088w.
23. Cojocaru, O. A.; Siriwardana, A.; Gurau, G.; Rogers, R. D. "Pharmaceutically active supported ionic liquid phases," In *Supported Ionic Liquids – Fundamentals and Applications*, Fehrmann, R., Riisager, A., Haumann, M., Eds.; Wiley-VCH: Weinheim, Germany, 2014; Chapter 19; pp 387-406. ISBN: 978-3-527-32429-3.
24. Pereira, J. F. B.; Kurnia, K. A.; Cojocaru, O. A.; Gurau, G.; Rebelo, L. P. N.; Rogers, R. D.; Freire, M. G.; Coutinho, J. A. P. "Molecular interactions in aqueous biphasic systems composed of polyethylene glycol and crystalline *vs.* liquid cholinium-based salts," *Phys. Chem. Chem. Phys.* **2014**, *16*, 5723-5731. DOI: 10.1039/C3CP54907K.
25. Barber, P. S.; Griggs, C. S.; Gurau, G.; Liu, Z.; Li, S.; Li, Z.; Lu, X.; Zhang, S.; Rogers, R. D. "Coagulation of Chitin and Cellulose from 1-Ethyl-3-methylimidazolium Acetate Ionic Liquid Solutions Using Carbon Dioxide" *Angew. Chem. Int. Ed.* **2013**, *52*, 12350. DOI: 10.1002/anie.201304604.
26. Arduengo, A. J.; Gurau, G.; Kelley, S. P.; Marshall, W. J.; Runyon, J. W. "Fused Spirocyclic Imidazolone Ketals," *Angew. Chem. Int. Ed.* **2013**, *52*, 10871-10873. DOI:10.1002/anie.201305714.
27. Cojocaru, O. A.; Kelley, S. P.; Gurau, G.; Rogers, R. D. "Procainium acetate versus procainium acetate dihydrate: Irreversible crystallization of a room-temperature active pharmaceutical ingredient-ionic liquid upon hydration," *Cryst. Growth Des.* **2013**, *13*, 3290−3293.

DOI:10.1021/cg400686e.
28. Cojocaru, O. A.; Shamshina, J. L.; Gurau, G.; Syguda, A.; Praczyk, T.; Pernak, J.; Rogers, R. D. "Ionic liquid forms of the herbicide dicamba with reduced volatility and increased efficacy," *Green Chem*. **2013**, *15*, 2110-2120. DOI: 10.1039/C3GC37143C.
29. McCrary, P. D.; Beasley, P. A.; Gurau, G.; Narita, A.; Barber, P. S.; Cojocaru, A.; Rogers, R. D. "Drug specific, tuning of an ionic liquid's hydrophilic–lipophilic balance to improve water solubility of poorly soluble active pharmaceutical ingredients," *New J. Chem.* **2013**, *37*, 2196-2202. DOI: 10.1039/c3nj00454f.
30. Wang, H.; Gurau, G.; Kelley, S. P.; Myerson, A. S.; Rogers, R. D. "Hydrophobic *vs.* hydrophilic ionic liquid separations strategies in support of continuous pharmaceutical manufacturing" *RSC Advances*, **2013**, *3*, 10019-10026. DOI: 10.1039/C3RA41082J.
31. Arduengo, A. J., III; Dolphin, J. S.; Gurau, G.; Marshall, W. J.; Nelson, J. C.; Petrov, V. A.; Runyon, J. W. "Synthesis and complexes of fluoroalkoxy carbenes," *Angew. Chem. Int. Ed.* **2013**, *52*, 5110-5114. DOI:10.1002/anie.201301503.
32. Wang, H.; Maxim, M. L.; Gurau, G.; Rogers, R. D. "Microwave-assisted dissolution and delignification of wood in 1-ethyl-3-methylimidazolium acetate" *Bioresour. Technol.* **2013**, *136*, 739-742. DOI: 10.1016/j.biortech.2013.03.064.
33. Cojocaru, O. A.; Bica, K.; Gurau, G.; Narita, A.; McCrary, P. D.; Shamshina, J. S.; Barber, P. S.; Rogers, R. D. "Prodrug ionic liquids: functionalizing neutral active pharmaceutical ingredients to take advantage of the ionic liquid form," *Med. Chem. Commun.* **2013**, *4*, 559-563. DOI: 10.1039/C3MD20359J.
34. Maxim, M. L.; White, J. F.; Block, L. E.; Gurau, G.; Rogers, R. D. "Advanced Biopolymer Composite Materials from Ionic Liquid Solutions," in *Ionic Liquids: Science and Applications*, Visser, A.; Bridges, N. J.; Rogers, R. D. (Eds), ACS Symposium Series 1117, American Chemical Society: Washington, DC, 2012, pp 167-187, DOI: 10.1021/bk-2012-1117.ch007.
35. Zhao, Y.; Liu, X.; Lu, X.; Zhang, S.; Wang, J.; Wang, H.; Gurau, G.; Rogers, R. D.; Su, L.; Li, H. "The Behavior of Ionic Liquids under High Pressure: A Molecular Dynamics Simulation," *J. Phys. Chem. B*. **2012**, *116*, 10876-10884. DOI: 10.1021/jp3070568.
36. Gurau, G.; Kelley, S. P.; Di Bona, K. R.; Smiglak, M.; Rogers, R. D. "Anhydrous Caffeine Hydrochloride and Its Hydration," *Cryst. Growth Des.* **2012**, *12*, 4658-4662. DOI: 10.1021/cg300878j.
37. Drab, D. M.; Kelley, S. P.; Shamshina, J. L.; Smiglak, M.; Cojocaru, O. A.; Gurau, G.; Rogers, R. D. "Reactivity of N-cyanoalkyl-substituted imidazolium halide salts by simple elution through an azide anion exchange resin," *Science China: Chemistry* **2012**, *55*, 1683-1687. DOI:10.1007/s11426-012-4664-0.
38. Wang, H.; Zhou, X. S., Gurau, G.; Rogers, R. D. "The role of ionic liquids in the pharmaceutical manufacturing processes," in *Green Techniques for Organic Synthesis and Medicinal Chemistry*, Zhang, W.; Cue, B. W., Jr. (Eds.), Wiley-VCH: Weinheim, 2012; Ch. 17, pp 469-496. ISBN 9780470711514.
39. Bica, K.; Rodriguez, H.; Gurau, G.; Cojocaru, O. A.; Riisager, A.; Fehrmann, R.; Rogers, R. D. "Pharmaceutically active ionic liquids with solids handling, enhanced thermal stability, and fast release," *Chem. Commun.* **2012**, *48*, 5422-5424. DOI: 10.1039/C2CC30959A.
40. Gurau, G.; Wang, H.; Qiao, Y.; Lu, X.; Zhang, S.; Rogers, R. D. "Chlorine-free alternatives to the synthesis of ionic liquids for biomass processing*" Pure Appl. Chem.* **2012**, *84*, 745-754. DOI:10.1351/PAC-CON-11-11-10.
41. Wang, H.; Gurau, G.; Rogers, R. D. "Ionic liquid processing of cellulose," *Chem. Soc. Rev.*

2012, *41*, 1519-1537. DOI: 10.1039/c2cs15311d.

42. Gurau, G.; Rodríguez, H.; Kelley, S. P.; Janiczek, P.; Kalb, R. S.; Rogers, R. D. "Demonstration of Chemisorption of Carbon Dioxide in 1,3-Dialkylimidazolium Acetate Ionic Liquids," *Angew. Chem. Int. Ed.* **2011**, *50*, 12024-12026. DOI: 10.1002/anie.201105198.
43. Rodriguez, H.; Gurau, G.; Holbrey, J. D.; Rogers, R. D. "Reaction of Elemental Chalcogens with Imidazolium Acetates to Yield Imidazole-2-chalcogenones: direct Evidence for Ionic Liquids as Proto-Carbenes," *Chem. Commun.* **2011**, *47,* 3222-3224. DOI:10.1039/C0CC05223J.
44. Cocalia, V.; Smiglak, M.; Kelley, S. P.; Shamshina, J. L.; Gurau, G.; Rogers, R. D. "Crystallization of uranyl salts from dialkylimidazolium ionic liquids or their precursors," *Eur. J. Inorg. Chem.* **2010,** 2760-2767. DOI: 10.1002/ejic.201000162.
45. Rodríguez, H.; Gurau, G.; Rogers, R. D. "Ionic liquids: growth of a field through the eyes of the I&EC division," In *Innovations in Industrial and Engineering Chemistry: A Century of Achievements and Prospects for the New Millenium*, Flank, W. H.; Abraham, M. A.; Matthews, M. A. (Eds.); ACS Symposium Series 1000; American Chemical Society: Washington DC, 2009; pp 389-400.
46. Gurau, G.; Cocalia, V. A.; Rogers, R. D. "Separations, Coordination, And Solvation In Ionic Liquids; What Is There That Is Unique?" In *Solvent Extraction: Fundamentals to Industrial Applications - Proceedings of ISEC 2008 International Solvent Extraction Conference, (ISEC 2008)*, Moyer, B. A.; Baron, P.; Chagnes, A.; Cole, P. M.; Cote, G.; Dietz, M. L.; Hatton, T. A.; Horwitz, E. P.; de Ortiz, E. S. P.; Ritcey, G. M.; Robinson, D.; Rogers, R. D.; Sole, K. C.; Tasker, P. A.; Todd, T. A.; Virnig, M. J. (Eds.); Canadian Institute of Mining, Metallurgy and Petroleum: Montréal, 2008; Vol. 2; pp 1263-1270.

B. <u>Non-Refereed Reviews, Reports, Articles, and Extended Abstracts</u>:

1. Gurau, G.; Rogers, R. D. "Ionic Liquids: Green Solvents or Advanced Materials?" *Materials World* **2007**, *15*, 25-27.

Patents:

1. Rogers, R. D.; Daly, D. T.; MacFarlane, D.; Scott, J. L.; Seddon, K. R.; Gurau, G.; Bica, K.; Turanjanin, J.; Dean, P. M. "Dual Functioning Ionic Liquids and Salts Thereof," PCT Int. Appl. (2010) WO 2010/078300, 07/08/10; US 2012/0046244 A1 02/23/12; US 9278134 03/08/16.
2. Rogers, R. D.; Barber, P. S.; Griggs, C. S.; Gurau, G.; Lu, X; Zhang, S. "Coagulation of Chitin from Solutions of Crustacean Shells in Ionic Liquids using Super-Critical CO2," PCT Int. Appl. WO 2014125438 A1 08/21/14; "Coagulation of biopolymers from ionic liquid solutions using CO2," U.S. Appl. US 2015/0368371 12/24/15; US 9663589 05/30/17.
3. Swatloski, R. P.; Barber, P. S.; Opichka, T.; Bonner, J. R.; Gurau, G.; Griggs, C. S.; Rogers, R. D. "Process for Electrospinning Chitin Fibers from Chitinous Biomass and Fibers and Articles Produced Thereby," PCT Int. Appl. WO 201401856 A1 01/30/14; US 9683309 06/20/17.
4. Barber, P. S.; Griggs, C. S.; Rogers, R. D. Shamshina, J. L.; Gurau, G. "Chemical pulping of chitinous biomass for chitin and treatment of biomass composition" U.S. Appl. US 20160060363 A1 (03/03/16); "Chemical pulping of chitinous biomass for chitin," US 10100131 (10/16/18).

5. Rogers, R. D.; Gurau, G.; Kelley, S. P.; Kore, R.; Shamshina, J. "Mixed metal double salt ionic liquids with tunable acidity," U.S. Appl. US 20170209858 A1 (07/27/17); US 10357762 (07/23/19).

Patent applications:

1. Campos Toledo Hijo, A. A.; Meirelles, A. J.deA.; Gurau, G.; Rogers, R. D. "Process for the preparation of nutraceutical compositions obtained," Brazil Patent Application BR 10 2020 026974 7 (12/29/20).
2. Hanik, P.; Hanes, R.; Rogers, R. D.; Uppara, P.; Gurau, G. "Polymerization compositions and methods for making and using same" US Patent Application US 20200002443 A1(01/02/20); PCT Int. Appl. WO 2020226890 A1 (11/12/20)
3. Di Bona, K.R.; Hill, C.M.; Gurau, G.; and Rogers, R. D. "Ionic liquid-based processes for the extraction of rare earth elements, critical materials, and other products from rare earth element-containing materials (including: coal, coal by-products, ore, waste), and generation of novel compositions thereof" U.S. Provisional Patent Application No. 62/993,141 (3/23/20).
4. Rogers, R. D.; Zavgorodnya, O; Shamshina, J. L.; Gurau, G. "Printing of biopolymers from ionic liquid" PCT Int. Appl. WO 2019173689 A1 (09/12/19)
5. Rogers, R. D.; Zavgorodnya, O; Shamshina, J. L.; Gurau, G. "Graphene-biopolymer composite materials and methods of making thereof" US Patent Application 15/936,056 filed on March 26, 2018; PCT Int. Appl. WO 2018176037 A1 (09/27/19)
6. Rughani, R.; Moreau, M.; Hitce, J.; Dalko, M.; Cavezza, A.; Blaise, C.; Rogers, R. D.; Rachiero, G. P.; Gurau, G. "Hair care compositions comprising thiolactic acid-based ionic liquids or ionic mixtures," PCT Int. Appl. WO 2018065827 A1 (04/12/18), US20190216705A1 (07/18/19).
7. Rogers, R. D.; Cojocaru, O. A.; Gurau, G.; Shamshina, J.; Pernak, J. "Double salt ionic liquids of herbicides," PCT Int. Appl. (2016), WO 2016077290 A1 (05/19/16).
8. Rogers, R. D.; Cojocaru, O. A.; Gurau, G.; Shamshina, J.; Pernak, J. "Double salt ionic liquids of herbicides," US Patent Application (62/078,132) filed on 11/11/14.
9. Barber, P. S.; Griggs, C. S.; Rogers, R. D. Shamshina, J. L.; Gurau, G. "Chemical pulping of chitinous biomass for chitin," US Patent Application (62/042,392) filed on 08/27/14.
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Presentations (Presenter or Co-Author):

1. Gurau, G.; Rogers, R. D.; Bonner, R. J.; Di Bona, K. R.; Wozny, J.; Spigel, A.; Hill, C. M.; Dai, S. "Novel Adsorbents for Li Recovery from Unconventional Sources," poster presentation presented by Gurau G before the Gordon Research Conference on Ionic Liquids (August 4-9, 2024), Sunday River Resort, Newry, ME.
2. Gurau, G. "Innovation, development, and commercialization of sustainable technologies: The challenges of getting a business off the ground.," Presented by Gurau G before Rocky Mountain Regional Meeting (RMRM), (September 14-17, 2023), Laramie, WY.
3. Gurau, G.; Rogers, R. D.; Di Bona, K. R.; Hill, C. Reshaping bio-based waste streams into valuable products using ionic liquids (ILs): Innovative technologies to increase the domestic supply of critical materials," Presented by Gurau G before Rocky Mountain Regional Meeting (RMRM), (September 14-17, 2023), Laramie, WY.
4. Spigel, A.; Zalewski, N.; Bonner, J.; Rogers, R. D.; Gurau, G.; Hill, C.; Di Bona, K. R. "Ionic liquid processing of biopolymers for sustainable applications: Challenges and opportunities," Presented by Spiegel A. before Rocky Mountain Regional Meeting (RMRM), (September 14-17, 2023), Laramie, WY.
5. Zalewski, N.; Spigel, A.; Gurau, G.; Rogers, R, D.; Bonner, J.; Hill, C.; Di Bona, K. R. "Innovative applications of electrospinning natural polymers," poster presented by Zalewski N before Rocky Mountain Regional Meeting (RMRM), (September 14-17, 2023), Laramie, WY.
6. Gurau, G.; Bonner, J.; Rogers, R. D.; Di Bona, K. R.; Hill, C. M.; Dai, S. "Novel Adsorbents for Li Recovery from Unconventional Sources," presented by Gurau G before the AMMTO & IEDO joint peer review meeting (May 16-18, 2023), Washington D.C.
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8. Gurau, G and Rogers, R.D. "From Waste to Unique Materials - Ionic Liquids, A Leading Way to New Sustainable Technologies," Presented by Gurau G. before the 8th Congress on Ionic Liquids, COIL-5 (May 13-17, 2019).
9. Di Bona, K.; Hill, C.; Gurau, G.; Rogers, R. D. "Ionic liquid processes for the extraction of rare earth elements from coal," Presented by Di Bona K. before the 257th ACS National Meeting (March 31-April 4, 2019)
10. G. Gurau, J. L. Shamshina, R. D. Rogers. "Uranium from seawater extraction to commercial chitin extraction" Presented by G. Gurau before the 20th Separation Science and Technology Symposium (October 21-24, 2018), Gatlinburg, TN (Invited Presentation).
11. G. Gurau and R. D. Rogers, "Which Part of a Shrimp Has More Economic Value, the Shell or the Meat?" Presented by G. Gurau before the 21st International Symposium on Molten Salts and Ionic Liquids part of the 2018 ECS and SMEQ Joint International Meeting of the 234th

Meeting of the Electrochemical Society and the XXXIII Congreso de la Sociedad Mexicana de Electroquímica (September 30-October 4, 2018), Cancun, Mexico, Abstract 1864.

12. R. D. Rogers and G. Gurau, "Using ionic liquids to take advantage of the many facets of chitin: Tailor-made high surface area nanofibrous sorbent mats for selective separations of metal ions," Presented by R. D. Rogers before the 256th ACS National Meeting (August 19-23, 2018), Boston, MA, Abstract COLL 9.
13. G. Gurau, J. L. Shamshina, R. D. Rogers. "Ionic Liquids as Solvents for Natural Material Processing-A Translational Research Roadmap" Presented by G. Gurau before the Gordon Research Conference on Ionic Liquids (August 12-17, 2018), Sunday River Resort, Newry, ME (Invited Presentation).
14. N. Delgado-Mellado, M. Larriba, P. Navarro, M. Ayuso, H. Choudhary, G. Gurau, J. García, F. Rodríguez, and R. D. Rogers. "The Relationship between Aromatic hydrocarbon solubility in ionic liquids and liquid clathrate formation," Presented by N. Delgado-Mellado before the Gordon Research Conference on Ionic Liquids (August 12-17, 2018), Sunday River Resort, Newry, ME, Abstract Poster 13.
15. R. D. Rogers and G. Gurau, "Advanced biodegradable/biorenewable sorbents for uranium extraction from seawater," Presented by R. D. Rogers before the 255th ACS National Meeting (March 18-22, 2018), New Orleans, LA, Abstract ANYL 261.
16. J. L. Shamshina, G. Gurau, and R. D. Rogers, "Can chemists think & work towards sustainability if it means eliminating the chemicals industry?" Presented by R. D. Rogers before the 252nd National Meeting of the American Chemical Society (August 21-25, 2016), Philadelphia, PA, Abstract MPPG 013.
17. J. L. Shamshina, G. Gurau, and R. D. Rogers, "Pulping of Crustacean Shells using Ionic Liquids: To Extract or Not to Extract," Presented by J. L. Shamshina before the Gordon Research Conference on Ionic Liquids for Future Technologies (August 14-19, 2016), Sunday River Resort, Newry, ME, Abstract Poster 52.
18. C. King, P. Berton, J. L. Shamshina, G. Gurau, and R. D. Rogers, "Chitin films from an ionic liquid process: a platform for sustainable high end materials," Presented by C. King before the Gordon Research Seminar (August 13-14, 2016), Abstract Poster 8, and the Gordon Research Conference on Ionic Liquids for Future Technologies (August 14-19, 2016), Sunday River Resort, Newry, ME, Abstract Poster 28.
19. T. Cutfield, J. L. Shamshina, G. Gurau, L. E. Block, and R. D. Rogers, "Chitinous Beads via Ionic Liquid: Production, Characterization and Potential Applications," Presented by T. Cutfield before the Gordon Research Seminar (August 13-14, 2016), Abstract Poster 3, and the Gordon Research Conference on Ionic Liquids for Future Technologies (August 14-19, 2016), Sunday River Resort, Newry, ME, Abstract Poster 12. P. Berton, G. Gurau, J. L. Shamshina, and R. D. Rogers, "In search of green chemistry and sustainability: Polymeric materials based on renewable polymers," Presented by R. D. Rogers before the 26th EUCHEM Conference on Molten Salts and Ionic Liquids (July 3-8, 2016), Vienna, Austria, Abstract PL-6.
20. R. D. Rogers, C. A. King, J. L. Shamshina, S. P. Kelley, and G. Gurau, "Ionic Liquids as Material Forms for Active Pharmaceutical Ingredients," Presented by R. D. Rogers before the 99th Canadian Chemistry Conference and Exhibition (June 5-9, 2016), Halifax, NS, Canada, Abstract 01072.
21. J. L. Shamshina, G. Gurau, S. P. Kelley, and R. D. Rogers, "Uranium-from-seawater sorbents from fishing industry waste – cost reduction through solvent recycle." Presented by J. L.

Shamshina before the 249th National Meeting of the American Chemical Society (March 22-26, 2015), Denver, CO, Abstract I&EC 50.

22. G. Gurau, J. L. Shamshina, S. P. Kelley, and R. D. Rogers, "Uranium-from-seawater sorbents from industry waste – from batch to continuous production." Presented by G. Gurau before the 249th National Meeting of the American Chemical Society (March 22-26, 2015), Denver, CO, Abstract I&EC 30.
23. S. P. Kelley, J. L. Shamshina, G. Gurau, and R. D. Rogers, "Dual functional sorbents for coextraction of aqueous copper and uranium." Presented by S. P. Kelley before the 249th National Meeting of the American Chemical Society (March 22-26, 2015), Denver, CO, Abstract I&EC 48.
24. R. D. Rogers, S. P. Kelley, G. Gurau, G., and J. L. Shamshina, "Nanofiber chitin mats for coextraction of value added metals from seawater: Improving the economics of uranium recovery." Presented by R. D. Rogers before the 249th National Meeting of the American Chemical Society (March 22-26, 2015), Denver, CO, Abstract I&EC 15.
25. J. Bandomir, S. P. Kelley, J. L. Shamshina, G. Gurau, and R. D. Rogers, "Homogeneous blending of chitin with biopolymers for advanced biodegradable sorbents for uranium extraction from seawater." Presented by P. Berton before the 249th National Meeting of the American Chemical Society (March 22-26, 2015), Denver, CO, Abstract I&EC 47.
26. R. M. Hanes, J. L. Shamshina, G. Gurau, T. Di Nardo, P. Berton, S. P. Kelley, and R. D. Rogers, "Uranium-from-Seawater Sorbents from Fishing Industry Waste – Pilot Testing and Financial Analysis," Presented by R. M. Hanes before the DOE-NE Fuel Resources Summer 2015 Working Group Meeting (August 6-7, 2015), College Park, MD (No Abstract).
27. G. Gurau, J. L. Shamshina, N. Abdul Faruk Khan, S. P. Kelley, P. Berton, and R. D. Rogers, "Sustainable materials for energy harvesting – how shrimp shell waste and ionic liquids can make an impact on today's society," Presented by G. Gurau before the 2015 International Chemical Congress of Pacific Basin Societies, Pacifichem 2015 (Dec. 15-20, 2015), Honolulu, HI, Abstract SCTY 335.
28. J. L. Shamshina, G. Gurau, and R. D. Rogers, "Translational research: From academia to industry. Following the pathway of George Washington Carver," Presented by R. D. Rogers before the 251st National Meeting of the American Chemical Society (March 13-17, 2016), San Diego, CA, Abstract I&EC 054.
29. P. Berton, G. Gurau, J. L. Shamshina, and R. D. Rogers, "In search of green chemistry and sustainability: Polymeric materials based on renewable polymers," Presented by R. D. Rogers before the 251st National Meeting of the American Chemical Society (March 13-17, 2016), San Diego, CA, Abstract I&EC 109.
30. S. Nemser, D. Campos, P. R. Campos, J. Bowser, S. Majumdar, B. A. Simmons, S. Singh, J. Sun, J. Shi, R. D. Rogers, G. Gurau, and F. Cheng, "Perfluorinated Membranes for the Dehydration of Ionic Liquids for Processing Biomass," Presented by S. Nemser before the 2014 AIChE Annual Meeting (November 16-21, 2014), Atlanta, GA, USA.
31. A. J. Arduengo, J. W. Runyon, G. Gurau, S. P. Kelley, W. J. Marshall, J. C. Nelson, and W. Taylor, "Advances in ligand design for catalysis with earth-abundant metals," Presented by A. J. Arduengo before the 49th Midwest Regional Meeting of the American Chemical Society (November 12-15, 2014), Columbia, MO, USA, Abstract 85.
32. A. J. Arduengo, G. Gurau, W. Taylor, J. C. Nelson, S. P. Kelley, W. J. Marshall, and J. W. Runyon, "Chelated first-row carbene metal complexes," Presented by J. W. Runyon before the

6th Southeast Regional Meeting of the American Chemical Society (October 16-19, 2014), Nashville, TN, USA, Abstract SERMACS-768.

33. G. Gurau, J. L. Shamshina, and R. D. Rogers, "High Throughput Electrospinning of Uranium Selective Chitin Adsorbents – A Sustainable Ionic Liquid Technology," Presented by G. Gurau before Gordon Research Conference on Ionic Liquids: Solvents, Materials, or Medicines?, (August 17-22, 2014), Sunday River Resort, Newry, ME, USA, Abstract 23.
34. J. L. Shamshina, G. Gurau, L. E. Block, L. K. Hansen, C. Dingee, A. Walters, and R. D. Rogers, "Chitin-Calcium Alginate Composite Fibers for Wound Care Dressings Spun from an Ionic Liquid," presented by J. L. Shamshina before Gordon Research Conference on Ionic Liquids: Solvents, Materials, or Medicines?, (August 17-22, 2014), Sunday River Resort, Newry, ME, USA, Abstract 48.
35. S. Yerkimbekova, J. L. Shamshina, G. Gurau, A. Zazybin, V. Yu1, and R. D. Rogers, "Ionic Liquids as Electrolytes," Presented by S. Yerkimbekova before Gordon Research Conference on Ionic Liquids: Solvents, Materials, or Medicines?, (August 17-22, 2014), Sunday River Resort, Newry, ME, USA, Abstract 64.
36. S. Nemser, P. R. Campos, D. Campos, S. Majumdar, R. D. Rogers, G. Gurau, B. A. Simmons, S. Singh, and J. Sun, "Dehydration of ionic liquids by pervaporation with perfluorinated membranes," Presented by S. Nemser before the 2nd International Conference on Ionic Liquids in Separation and Purification Technology (ILSEPT; June 29 – July 2, 2014), Toronto, Canada, Abstract O17.1.
37. J. F. B. Pereira, K. A. Kurnia, O. A. Cojocaru, G. Gurau, L. P. N. Rebelo, M. G. Freire, J. A. P. Coutinho, and R. D. Rogers, "Are crystalline cholinium salts really different from liquid cholinium salts in the formation of aqueous biphasic systems with polyethylene glycol?" Presented by J. F. B. Pereira before the 2nd International Conference on Ionic Liquids in Separation and Purification Technology (ILSEPT; June 29 – July 2, 2014), Toronto, Canada, Abstract O15.1.
38. M. Shadid, G. Gurau, B.-C. Chuang, M. Liao, S. Chowdhury, J.-T. Wu, S. A. A. Rizvi, R. D. Rogers, and R. J. Griffin, "Investigating the ADME properties of an ionic liquid salt form of sulfasalzine, a novel approach to improve drug exposure," Presented by M. Shadid before the 10th International Meeting of the International Society for the Study of Xenobiotics (September 30 – October 3, 2013), Toronto, Ontario, Canada, Abstract P127.
39. R. D. Rogers and G. Gurau, "Novel chitin fibers for wound care," Presented by D. T. Daly before the 246th ACS National Meeting (September 8-12, 2013), Indianapolis, IN, USA, Abstract SCHB 19.
40. J. L. Shamshina, G. Gurau, and R. D. Rogers. "Wound dressings through an ionic liquid process – filling a gap in the wound care sector", Presented by J. L. Shamshina before the 2013 BioAlabama Annual Meeting and Science Symposium (May 16, 2013), Birmingham, AL, USA, Oral.
41. J. Shamshina, P. D. McCrary, O. A. Cojocaru, G. Gurau, and R. D. Rogers, "Formation of pure liquid salt forms from active pharmaceutical ingredients to establish new drug delivery systems with superior properties," Presented by J. Shamshina before the 5th Congress on Ionic Liquids, COIL-5 (April 21-25, 2013), Algarve, Portugal, Abstract P85.
42. P. D. McCrary, P. A. Beasley, G. Gurau, P. S. Barber, and R. D. Rogers, "Drug specific, tuning of an ionic liquid's hydrophilic-lipophilic balance to improve water solubility of poorly soluble pharmaceutical ingredients," Presented by P. D. McCrary before the 5th Congress on Ionic Liquids, COIL-5 (April 21-25, 2013), Algarve, Portugal, Abstract P104.

43. G. Gurau, L. E. Block, J. Shamshina, and R. D. Rogers, "Wound dressings through an ionic liquid process – filling a gap in the wound care sector" Presented by G. Gurau before the 5th Congress on Ionic Liquids, COIL-5 (April 21-25, 2013), Algarve, Portugal, Abstract OP3.
44. K. R. Di Bona, D. Yancey, S. Rizvi, M. Gray, G. Gurau, J. L. Shamshina, J. F. Rasco, and R. D. Rogers, "Transdermal Pharmacokinetic Studies of Ionic Liquids Composed Entirely of Active Pharmaceutical Ingredients," Presented by K. R. Di Bona before the 5th Congress on Ionic Liquids, COIL-5 (April 21-25, 2013), Algarve, Portugal, Abstract P339.
45. O. A. Cojocaru, J. Shamshina, K. Bica, G. Gurau, A. Narita, P. D. McCrary, P. S. Barber, and R. D. Rogers, "Prodrug ionic liquids: functionalizing neutral active pharmaceutical ingredients to take advantage of the ionic liquid form," Presented by J. Shamshina before the 5th Congress on Ionic Liquids, COIL-5 (April 21-25, 2013), Algarve, Portugal, Abstract P342.
46. J. W. Runyon, G. Gurau, Y. Uchiyama, J. S. Dolphin, J. C. Nelson, and A. J. Arduengo, III, "Tricks with Polydentate Carbenes and Iminium Salts," Presented by J. W. Runyon before the 65th Southeast Regional Meeting of the American Chemical Society (November 13-16, 2013), Atlanta, GA, USA, Abstract SERM-362.
47. R. D. Rogers and G. Gurau, "Extraction and Manufacturing of Nanochitin Materials from Shrimp Shell Waste Using Ionic Liquids," 15th International Biotechnology Symposium and Exposition (IBS 2012), "Innovative Biotechnology for a Green World and Beyond" (Sept. 16-21, 2012), Daegu, South Korea, Abstract cd O-S8-0086. (Invited Speaker).
48. R. D. Rogers and G. Gurau, "Unique Roles for Ionic Liquids in a Biorefinery: Extraction, Separation, and Processing of Lignin, Cellulose, Hemicellulose, and Chitin," Presented by R. D. Rogers before the 3rd Asian-Pacific Conference on Ionic Liquids and Green Processes, APCIL'12 (Sept. 17-19, 2012), Beijing, China, Abstract P-01, p. 1. (Invited Plenary Speaker).
49. G. Gurau, C. S. Griggs, P. S. Barber, and R. D. Rogers, "Shell Fish and Ionic Liquids – Turning Waste into Advance Materials," Presented by G. Gurau before the 3rd Asian-Pacific Conference on Ionic Liquids and Green Processes, APCIL'12 (Sept. 17-19, 2012), Beijing, China, Abstract G-13, p. 176.
50. J. F. B. Pereira, T. Mourão, O. A. Cojocaru, G. Gurau, L. P. N. Rebelo, R. D. Rogers, J. A. P. Coutinho, and M. G. Freire, "Biodegradable and biocompatible aqueous biphasic systems composed of polymers and choline-based ionic liquids," Presented by J. F. B. Pereira before the 4th International IUPAC Conference on Green Chemistry (August 25-29, 2012), Foz do Iguaçu/PR, Brazil, Abstract Book p 74.
51. R. D. Rogers, P. S. Barber, C. S. Griggs, S. P. Kelley, and G. Gurau, "Extraction of uranium with regenerated chitin from the dissolution of shrimp shells in ionic liquid," Presented by R. D. Rogers before the 244th ACS National Meeting (August 19-23, 2012), Philadelphia, PA, USA, Abstract I&EC 106.
52. C. S. Griggs, P. S. Barber, S. P. Kelley, G. Gurau, and R. D. Rogers, "Electrospun chitin nanofibers for uranyl absorbant materials," Presented by C. S. Griggs before the 244th ACS National Meeting (August 19-23, 2012), Philadelphia, PA, USA, Abstract I&EC 58.
53. S. P. Kelley, A. Narita, H. Wang, O. A. Cojocaru, G. Gurau, and R. D. Rogers "Ionic Liquids, Ionic Cocrystals, and Salts: Structural Consequences of Proton Sharing via Strong Hydrogen Bonds," Presented by S. P. Kelley before the Gordon Research Conference on Crystal Engineering (June 10-15, 2012), Waterville Valley Resort, NH, USA, Abstract 41.
54. G. Gurau, H. Wang, and R. D. Rogers, "Polymorphs, Salts, and Cocrystals of Active Pharmaceutical Ingredients and the FDA Proposed Classifications: What will they think of

Ionic Liquid Forms?," Presented by G. Gurau before the Gordon Research Conference on Crystal Engineering (June 10-15, 2012), Waterville Valley Resort, NH, USA, Abstract 34.

55. G. Gurau and R. D. Rogers, "Nanochitin Materials from Shrimp Shell Waste – Manufacturing Challenges in an Ionic Liquid Process," Presented by G. Gurau before the 2012 Materials Research Society Spring Meeting & Exhibit (April 9-13, 2012), San Francisco, CA, USA, Abstract BBB 3.6. (Invited Speaker)
56. H. Wang, A. Kumar, G. Gurau, and R. D. Rogers, "Extraction of Sandalwood Oil from Sandalwood using Ionic Liquids," Presented by H. Wang before the 2012 Materials Research Society Spring Meeting & Exhibit (April 9-13, 2012), San Francisco, CA, USA, Abstract BBB 4.8. (Invited Speaker)
57. R. D. Rogers, P. S. Barber, C. S. Griggs, E. L. Stoner, and S. P. Kelley, "Ionic Liquids for Extraction and Functionalization of Uranium Selective Chitin Sorbents," Presented by G. Gurau before the 2012 Materials Research Society Spring Meeting & Exhibit (April 9-13, 2012), San Francisco, CA, USA, Abstract BBB 6.3. (Invited Speaker)
58. G. Gurau, D. T. Daly, and R. D. Rogers, "Ionic liquid (IL) base drugs for the $1.2B pain management sector: New disruptive directions in pain management," Presented by G. Gurau before the 243rd ACS National Meeting (March 25-29, 2012), San Diego, CA, USA, Abstract COMSCI 8.
59. J. R. Canada, O. A. Cojocaru, G. Gurau, J. Pernak, and R. D. Rogers, "Using Herbicidal Ionic Liquids to Reduce the Impact on the Environment," Presented by O. A. Cojocaru before the 243rd ACS National Meeting (March 25-29, 2012), San Diego, CA, USA, Abstract I&EC 325.
60. O. A. Cojocaru, G. Gurau, D. T. Daly, J. Pernak, and R. D. Rogers, "Improved Efficacy and Delivery of Herbicides in Ionic Liquid Form," Presented by O. A. Cojocaru before the 243rd ACS National Meeting (March 25-29, 2012), San Diego, CA, USA, Abstract I&EC 324.
61. H. Wang, G. Gurau, and R. D. Rogers, "Membrane transport of active pharmaceutical ingredient-based ionic liquids," Presented by H. Wang before the 243rd ACS National Meeting (March 25-29, 2012), San Diego, CA, USA, Abstract I&EC 292.
62. G. Gurau and R. D. Rogers, "Ionic liquids and shrimp shell waste – emerging technologies for the manufacture of nanochitin materials," Presented by G. Gurau before the 243rd ACS National Meeting (March 25-29, 2012), San Diego, CA, USA, Abstract I&EC 117.
63. R. D. Rogers, O. A. Cojocaru, A. Siriwardana, H. Holding, K. Bica, H. Rodriguez, G. Gurau, A. Riisager, and R. Fehrmann, "Ionic liquid active pharmaceutical ingredients loaded on silica: Solids handling for liquid pharmaceutical forms," Presented by R. D. Rogers before the 243rd ACS National Meeting (March 25-29, 2012), San Diego, CA, USA, Abstract I&EC 93. (Invited Award Presentation).
64. D. T. Daly, R. D. Rogers, and G. Gurau, "Disruptive technology for biomass processing using ionic liquids," Presented by D. T. Daly before the 242nd ACS National Meeting (Aug. 28 – Sept. 1, 2011), Denver, CO, USA, Abstract BMGT 15.
65. O. A. Cojocaru, J. L. Shamshina, J. P. Edgeworth, G. Gurau, R. S. Ruoff, and R. D. Rogers, "Improved Electrical Energy Storage with Electrochemical Double Layer Capacitance Basedon Novel Carbon Electrodes," Presented by O. A. Cojocaru before the 4th Congress on Ionic Liquids (COIL-4) (June 15-18, 2011), Washington, DC., USA, Abstract 160.
66. G. Gurau, H. Rodríguez, S. P. Kelley, and R. D. Rogers, "Looking at the reactivity of 1-ethyl-3-methylimidazolium acetate with CO_2 and biomass from crystal structures: Will chemistry explain the controversies?" Presented by G. Gurau before the 4th Congress on Ionic Liquids (COIL-4) (June 15-18, 2011), Washington, DC, USA, Abstract 310.

67. H. Wang, G. Gurau, M. L. Maxim and R. D. Rogers, "Microwave-assisted dissolution and delignification of wood using 1-ethyl-3-methylimidazolium acetate ([emim]OAc)", Presented by H. Wang before the 4th Congress on Ionic Liquids (COIL-4) (June 15-18, 2011), Washington, DC, USA, Abstract 368.
68. J. R. Canada, P. D. McCrary, G. Gurau, and R. D. Rogers, "Building a Career in Chemistry: The Importance of Undergraduate Research," Presented by J. R. Canada before the 241st ACS National Meeting (2011), Anaheim, CA, USA, Abstract I&EC 120.
69. G. Gurau and R. D. Rogers, "Ionic liquids as active pharmaceutical ingredients (IL-APIs) – the challenges of commercialization," Presented by G. Gurau before the 241st ACS National Meeting (2011), Anaheim, CA, USA, Abstract I&EC 119.
70. N. Sun, X. Jiang, W. Li, X. Lu, and R. D. Rogers, "Wood Pulping Using Ionic Liquids," Presented by G. Gurau substituting for R. D. Rogers before the 4th International Symposium on Emerging Technologies of Pulping and Papermaking, 4th ISETPP (2010), Guangzhou, China. (Invited Plenary Lecture).
71. R. D. Rogers, D. T. Daly, and G. Gurau, "Open innovation and the faculty entrepreneur: Opportunities and perils", Presented by D. T Daly before the 240th ACS National Meeting (August 22-26, 2010), Boston, MA, USA, Abstract BMGT-37.
72. G. Gurau and R. D. Rogers, "Importance of benchmarking Green Chemistry", presented by R. D. Rogers before the 239th ACS National Meeting (March 21-25, 2010), San Francisco, CA, USA, Abstract CINF-26.
73. M. Smiglak, G. Gurau, D. M. Drab, J. L. Shamshina, S. P. Kelley, V. Cocalia, S. T. Griffin, A.-V. Mudring, and R. D. Rogers, "Crystallization of actinides from ionic liquids," Presented by R. D. Rogers before the 239th ACS National Meeting (March 21-25, 2010), San Francisco, CA, USA, Abstract NUCL 16. (Invited Speaker)
74. G. Gurau and R. D. Rogers, "At the Intersection of Cocrystals and Ionic Liquids", Presented by G. Gurau before the 3rd Congress on Ionic Liquid (COIL-3) (May 31-June 4, 2009), Cairns, Australia, Abstract Poster 211.
75. R. D. Rogers, K. Bica, G. Gurau, M. Smiglak, H. Rodríguez, and J. Shamshina, "Ionic Liquids at the Intersections," Presented by R. D. Rogers before the 3rd International Congress on Ionic Liquids (COIL-3) (May 31-June 4, 2009), Cairns, Australia, Abstract Oral 41. (Invited Plenary Presentation)
76. G. Gurau, K. Rogers, and R. D. Rogers, "Caffeine ionic liquids – dream or reality?" Presented by G. Gurau before the 236th ACS National Meeting (August 17-21, 2008), Philadelphia, PA, USA, Abstract I&EC 111.
77. A. J. Arduengo, G. Gurau, and J. W. Runyon, "Tridentate carbene ligand for the synthesis of transition metal complexes and hypervalent compounds," Presented by A. J. Arduengo before the 235th ACS National Meeting (April 6-10, 2008), New Orleans, LA, USA, Abstract ORGN-390.

Selected SBIR Project News Releases:

Biocomposite fibers for wound care applications:

1. http://armas3.typepad.com/blog/2012/05/university-of-alabama-news-ua-in-the-news-may-17-2012.html
2. http://blog.al.com/spotnews/2012/05/university_of_alabama_team_tur.html
3. http://www.terutalk.com/May-2012.html#0506-1
4. http://blog.al.com/huntsville-times-business/2012/05/shrimp_seaweed_and_diabetic_ba.html

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