

Curriculum Vitae

Personal details

Full Name: Rafał Marcin Łukasik

Date of Birth: 9th October 1979

Nationality: Polish/Portuguese

Telephone: +351 210924600 ext. 4224

e-mail: rafal.lukasik@lneg.pt

website: www.lneg.pt/colaboradores/rafal.lukasik@lneg.pt;

www.researcherid.com/rid/A-6315-2011,

publons.com/a/952009/

orcid.org/0000-0002-7805-5744

<http://www.scopus.com/inward/authorDetails.url?authorID=6506737268&partnerID=MN8TOARS>

Contact details: Laboratório Nacional de Energia e Geologia, I.P., Unidade de Bioenergia

Estrada do Paço do Lumiar, 22

1649-038 Lisboa, Portugal

Academic Qualifications

- 1) **27.XI.2007:** *Ph.D. in Chemical Engineering* from Universidade Nova de Lisboa, Faculdade de Ciências e Tecnologia (New University of Lisbon, Faculty of Science and Technology), Caparica, Portugal; Thesis title: Synthesis, Physico-Chemical Properties and Application of Alternative Solvents (supervisors: Professor Manuel Nunes da Ponte, Professor Susana Barreiros).
- 2) **16.IX.2002:** *MSc Eng in Chemical Technology*, Warsaw University of Technology, Faculty of Chemistry, Warsaw, Poland; Thesis title: Investigation into physico-chemical properties of low temperature ionic liquids (supervisor: Professor Urszula Domańska-Żelazna).

Past and present activities and regarding scientific and professional involvements

- 1) **III.2017-present:** *Head of Biofuels and Bioproducts R&D Area* of Unit of Bioenergy of Laboratório Nacional de Energia e Geologia, (National Laboratory of Energy and Geology, Unit of Bioenergy), Lisbon, Portugal.
- 2) **III.2017-present:** Member of Strategic Directorate of Unit of Bioenergy of Laboratório Nacional de Energia e Geologia, (National Laboratory of Energy and Geology, Unit of Bioenergy), Lisbon, Portugal.
- 3) **I.2017-present:** *Senior Researcher*, Laboratório Nacional de Energia e Geologia, Unidade de Bioenergia (National Laboratory of Energy and Geology, Unit of Bioenergy), Lisbon, Portugal.
- 4) **III.2013-XII.2015:** *Invited Professor*, FURB – Universidade Regional de Blumenau, Blumenau, Brazil.
- 5) **X.2010-VI.2015:** *Member of scientific committee* of the Coordinating Entity of Compliance with Sustainability Criteria for Biofuels ECS, Laboratório Nacional de Energia e Geologia, LNEG, Lisbon, Portugal.
- 6) **III.2010-II.2013:** *Invited Researcher*, REQUIMTE – Rede de Química e Tecnologia/ Network of Chemistry and Technology - The Associate Laboratory for Green Chemistry, Clean Technologies and Processes, Universidade Nova de Lisboa, Faculdade de Ciências e Tecnologia (New University of Lisbon, Faculty of Science and Technology), Caparica, Portugal.
- 7) **X.2009–XII.2016:** *Research Associate*, Laboratório Nacional de Energia e Geologia, Unidade de Bioenergia (National Laboratory of Energy and Geology, Unit of Bioenergy), Lisbon, Portugal.
- 8) **I.2008–VI.2009:** *Post-doctoral Researcher*, Universidade Nova de Lisboa, Faculdade de Ciências e Tecnologia (New University of Lisbon, Faculty of Science and Technology), Caparica, Portugal.
- 9) **XII.2006-I.2007:** *Marie Curie Early Stage Researcher*, Technische Universität Hamburg-Harburg (Hamburg University of Technology), Hamburg, Germany.

Curriculum Vitae

- 10) **I.2005-XII.2007:** *Marie Curie Early Stage Researcher*, Instituto de Biologia Experimental e Tecnológica (Institute of Experimental Biology and Technology), Oeiras, Portugal.
- 11) **XI.2004-XII.2004:** *Researcher*, Universidade Nova de Lisboa, Instituto de Tecnologia Química e Biológica (New University of Lisbon, Institute of Chemical Technology and Biology), Oeiras, Portugal.
- 12) **II.2003-IV.2003:** *Marie Curie Training Site Researcher*, The Queen's University Ionic Liquid Laboratories Research Centre, Belfast, Northern Ireland, UK.
- 13) **X.2002-IX.2004:** *Researcher*, Warsaw University of Technology, Faculty of Chemistry, Warsaw, Poland.
- 14) **VI.2002-IX.2002:** *Erasmus – Socrates Researcher*, University of Rostock, Rostock, Germany.

Courses Completed

- 1) **IV.2015:** Training about Intellectual and Property Rights – Patent preparation, National Institute of Intellectual Property, Lisbon, Portugal.
- 2) **III.2015:** Training about Intellectual and Property Rights – Patentability requirements/Databases, National Institute of Intellectual Property, Lisbon, Portugal.
- 3) **III.2011:** Training about Intellectual and Property Rights – Patents in Biotechnology, National Institute of Intellectual Property, Lisbon, Portugal.
- 4) **VII.2006:** *Socrates Course on High Pressure Chemical Engineering Processes*, Intensive Programme – New University of Lisbon, Caparica, Portugal.

Invited lectures

- 1) **XI.2017:** *Biomass Pre-treatment for Sustainable Production of Biofuels and Biochemicals*, Abo Akademi, Turku, Finland.
- 2) **X.2017:** *Biomass as a valuable renewable source for the creation of sustainable regions using the concept of circular economy*, XVII Luso-German Seminar of Energy, Lisbon, Portugal.
- 3) **VI.2017:** *Innovative pre-treatment: sustainable paths to reach biorefinery concept*, RRB-13, 13th International Conference on Renewable Resources & Biorefineries, Wroclaw, Poland.
- 4) **III.2016:** *DSC analysis and its consequences in practice*, SOQUIMICA; Lisbon, Portugal.
- 5) **XII.2015:** *The CO₂-adjunctive effect in the integrated biomass valorisation*, Universidade Estadual de Maringá, Brazil
- 6) **XII.2015:** *Relevance of green solvents in the valorization of agrowastes in the frame of the biorefinery concept*, Universidade Federal de Parana, Brazil
- 7) **III.2015:** *Contribution of ionic liquids and carbon dioxide technologies to green biorefineries*, Umeå Renewable Energy Meeting 2015, Umea, Sweden
- 8) **X.2014:** *Green technologies in the valorization of agrofood wastes in the frame of the biorefinery concept*. II International Congress Food Technology, Quality and Safety, Novi Sad, Serbia.
- 9) **VII.2014:** *Green chemistry and biorefineries – common future? Lignocellulosic Crops as Feedstock for Future Biorefineries*, Summer school, Caparica, Portugal.
- 10) **VI.2014:** *Biorefinery concept with green solvents towards the phenolic valorization*, 8th World Congress on Polyphenols Applications, Lisbon, Portugal.
- 11) **IV.2014:** *More sustainable biorefinery concept*, Department of Chemistry, University of Aveiro, Portugal
- 12) **XI.2013:** *Biomass valorisation with ionic liquids*, Regional University of Blumenau, Brazil.
- 13) **XI.2013:** *Sustainability of biofuels*, Regional University of Blumenau, Brazil.
- 14) **VIII.2013:** *Biomass Processing with Alternative Solvents*, UBIOCHEM COST Workshop on the Valorisation of Biomass, Nottingham, UK.
- 15) **IV.2013:** *Green Processing of Biomass to Tailor-made Fuels and Platform Chemicals*, Faculty of Chemical Engineering, Cracow University of Technology, Cracow, Poland.

Curriculum Vitae

- 16) **XI.2012:** *Alternative Solvents in Green Processing of Biomass to Tailor-made Fuels and Platform Chemicals*, Faculty of Chemistry, Warsaw University of Technology, Warsaw, Poland.
- 17) **X.2012:** *Innovative solvents in biomass processing: Perspectives for pre-treatment and hydrolysis*, X Brazilian Seminar of the Enzymatic Technology – ENZITEC, Blumenau, Brazil
- 18) **IX.2011:** *A importância da química verde para as biorrefinarias - An importance of Green Chemistry for biorefineries*, I National Symposium about Biorefineries, Brasilia, Brazil.
- 19) **IX.2011:** *Ionic liquids in biomass transformation*, International Conference on Materials and Technologies for Green Chemistry, Tallinn, Estonia.
- 20) **IV.2011:** *Ionic liquids in biomass processing*, Department of Chemistry, University of Aveiro, Portugal.
- 21) **XII.2010:** *Solubility of carbohydrates in ionic liquids*, The International Chemical Congress of Pacific Basin Societies, Honolulu, USA.
- 22) **V.2009:** *Thermodynamics and kinetics study of supercritical CO₂ application in reaction and separation*, IACHEM, Frankfurt am Main, Germany.
- 23) **VI. 2008:** *Alternative “Green” Solvents – Properties and Applications*, Imperial College, London, UK.
- 24) **V.2008:** *Biorefinery*, Green Chemistry Centre of Excellence, University of York, York, UK.
- 25) **XII.2006:** *Green Solvents in Bioprocesses*, Physical Chemistry Division, Faculty of Chemistry, Warsaw University of Technology, Warsaw, Poland.
- 26) **I.2006:** *Ionic liquids: Synthesis, Properties, and Possible Applications*, Thermal and Separation Processes, Technische Universität Hamburg-Harburg, Hamburg, Germany.

Publications

Peer-reviewed papers

- 1) G. V. S. M. Carrera, Z. P. Visak, R. M. Lukasik, M. Nunes da Ponte, CO₂+Methanol+Glycerol: Multiphase behaviour, *J. Supercrit. Fluid.*, 2018, doi: 10.1016/j.superflu.2017.12.032.
- 2) S. Gillet, M. Aguedo, L. Petitjean, A. R. C. Morais, A. M. da Costa Lopes, R. M. Lukasik, P. T. Anastas, Lignin Transformation for High Value Applications: Towards Targeted Modifications Using Green Chemistry, *Green Chem.*, 2017, 19, 4200-4233.
- 3) A. Toscan, A. R. C. Morais, S. M. Paixao, L. Alves, J. Andreaus, M. Camassola, A. J. P. Dillon, R. M. Lukasik, Effective Extraction of Lignin from Elephant Grass Using Imidazole and Its Effect on Enzymatic Saccharification to Produce Fermentable Sugars, *Ind. Eng. Chem. Res.*, 2017, 56, 5138-5145.
- 4) A. Toscan, A. R. C. Morais, S. M. Paixao, L. Alves, J. Andreaus, M. Camassola, A. J. P. Dillon, R. M. Lukasik, High-pressure carbon/dioxide pre-treatment of sugarcane bagasse and elephant grass: assessment of the effect of biomass composition on process efficiency, *Bioresource Technol.*, 2017, 224, 639-647.
- 5) M. Arshadi, T. M. Attard, R. M. Lukasik, M. Brncic, A. M. da Costa Lopes, M. Finell, P. Geladi, L. N. Gerschenson, F. Gogus, M. Herrero, A. J. Hunt, E. Ibáñez, B. Kamm, I. Mateos-Apericio, A. Matias, N. E. Mavroudis, E. Monteneri, A. R. C. Morais, C. Nilsson, E. H. Papaioannou, A. Richel, P. Rupérez, B. Skrbic, M. Bodroza Solarov, J. Svarc-Gajic, K. Waldron, F. Yuste, Pre-treatment and extraction techniques for recovery of added value compounds from wastes throughout the agri-food chain, *Green Chem.*, 2016, 18, 6160-6204.
- 6) É. Torres, R. Bogel-Lukasik, M. N. Berberan-Santos, S. Hofle, A. Colmann, M. J. Brites, N,N'-Diarylperylene-3,9-diamine derivatives: synthesis, characterization and electroluminescence properties, *RSC Adv.*, 2016, 6, 107180-107188.
- 7) A. M. da Costa Lopes, M. Brenner, P. Fale, L. B. Roseiro, R. Bogel-Lukasik, Extraction and purification of phenolic compounds from lignocellulosic biomass assisted by ionic liquid, polymeric resins and supercritical CO₂, *ACS Sustainable Chem. Eng.*, 2016, 4, 3357-3367.

Curriculum Vitae

- 8) A. R. C. Morais, M. D. D. J. Matuchaki, J. Andraus, R. Bogel-Łukasik. A green and efficient approach of selective conversion of xylose and biomass hemicellulose into furfural in aqueous media using high-pressure CO₂ as sustainable catalyst. *Green Chem.*, 2016, 18, 2985-2994.
- 9) A. R. C. Morais, R. Bogel-Lukasik. Highly efficient and selective CO₂-adjunctive dehydration of xylose to furfural in aqueous media with THF. *Green Chem.*, 2016, 18, 2331-2334.
- 10) A. R. C. Morais, V. P. Pinto, D. Nunes, L. B. Roseiro, M. C. Oliveira, E. Fortunato, R. Bogel-Łukasik. Imidazole: Prospect Solvent for Lignocellulosic Biomass Fractionation and Delignification. *ACS Sustainable Chem. Eng.*, 2016, 4, 1643-1652.
- 11) M. H. L. Silveira, A. R. C. Morais, A. M. da Costa Lopes, D. N. Oleksyszzen, R. Bogel-Lukasik, J. Andraus, L. Pereira Ramos, Current pre-treatment technologies for the development of cellulosic ethanol and biorefineries, *ChemSusChem*, 2015, 8, 3366-3390.
- 12) S. Peleteiro, A. M. da Costa Lopes, G. Garrote, R. Bogel-Lukasik, J. C. Parajó, Manufacturing of furfural in biphasic media made up of an ionic liquid and a co-solvent, *Ind. Crop. Prod.*, 2015, 77, 163-166.
- 13) F. M. Relvas, A. R. C. Morais, R. Bogel-Lukasik, Selective hydrolysis of wheat straw hemicellulose using high-pressure CO₂ as catalyst, *RSC Adv.*, 2015, 5, 73935-73944.
- 14) S. Peleteiro, A. M. da Costa Lopes, G. Garrote, J. C. Parajó, R. Bogel-Lukasik, Simple and Efficient Furfural Production from Xylose in Media Containing 1-Butyl-3-Methylimidazolium Hydrogen Sulfate, *Ind. Eng. Chem. Res.*, 2015, 54, 8368-8373.
- 15) M. Almanasrah, C. Brazinha, M. Kallioinen, L. C. Duarte, L. B. Roseiro, R. Bogel-Lukasik, F. Carvalheiro, M. Manttari, J. G. Crespo, Nanofiltration and Reverse Osmosis as a platform for production of natural botanic extracts: the case study of carob by-products, *Sep. Purif. Technol.*, 2015, 149, 389-397.
- 16) A. V. Carvalho, A. M. da Costa Lopes, R. Bogel-Lukasik, Relevance of the acidic 1-butyl-3-methylimidazolium hydrogen sulphate ionic liquid in the selective catalysis of biomass hemicellulose fraction, *RSC Adv.*, 2015, 5, 47153-47164.
- 17) M. Almanasrah, L. B. Roseiro, R. Bogel-Lukasik, F. Carvalheiro, C. Brazinha, J. Crespo, M. Kallioinen, M. Manttari, L. C. Duarte, Selective recovery of phenolic compounds and carbohydrates from carob kibbles using water-based extraction, *Ind. Crop. Prod.*, 2015, 70, 443-450.
- 18) A. M. da Costa Lopes, R. Bogel-Lukasik, Acidic Ionic Liquids as Sustainable Approach of Cellulose and Lignocellulosic Biomass Conversion without Additional Catalysts, *ChemSusChem*, 2015, 8, 947-965.
- 19) F. M. Relvas, A. R. C. Morais, R. Bogel-Lukasik, Kinetic modelling of hemicellulose-derived biomass hydrolysis under high pressure CO₂-H₂O mixture technology, *J. Supercrit. Fluid.*, 2015, 99, 95-102.
- 20) A. R. C. Morais, A. M. da Costa Lopes, R. Bogel-Lukasik, Carbon Dioxide in Biomass Processing: Contributions to the Green Biorefinery Concept, *Chem. Rev.*, 2015, 115, 3-27.
- 21) A. R. C. Morais, S. Dworakowska, A. Reis, L. Gouveia, C. T. Matos, D. Bogdal, R. Bogel-Łukasik, Chemical and biological-based isoprene production: green metrics, *Catal. Today*, 2015, 239, 38-43.
- 22) A. R. C. Morais, A. M. da Costa Lopes, R. Bogel-Lukasik, The phase equilibrium phenomenon in model hydrogenation of oleic acid, *Monatsh. Chem.*, 2014, 145, 1555-1560.
- 23) A. R. C. Morais, A. C. Mata, R. Bogel-Łukasik, Integrated conversion of agroindustrial residue with high pressure CO₂ within biorefinery concept, *Green Chem.*, 2014, 16, 4312-4322.
- 24) A. R. C. Morais, A. M. da Costa Lopes, P. Costa, I. Fonseca, I. N. Nogueira, A. C. Oliveira, R. Bogel-Łukasik, Cattle fat valorisation through biofuel production by hydrogenation in supercritical carbon dioxide, *RSC Adv.* 2014, 4, 32081-32091.
- 25) S. P. Magalhães da Silva, A. R. C. Morais, R. Bogel-Łukasik, The CO₂-assisted autohydrolysis of wheat straw, *Green Chem.*, 2014, 16, 238-246.
- 26) A. R. C. Morais, A. M. da Costa Lopes, E. Bogel-Łukasik, R. Bogel-Łukasik, Ionic liquids' cation and anion influence on aromatic amine solubility, *Ind. Eng. Chem. Res.*, 2013, 52, 14722-14726.
- 27) K. Gurganova, R. Bogel-Łukasik, P. Wawrzyniak, High Pressure Vapour-Liquid Equilibria of Volatiles in Supercritical Carbon Dioxide, *Chem. Proc. Eng.*, 2013, 34, 387-392.

Curriculum Vitae

- 28) F. Carvalheiro, L. C. Duarte, R. Bogel-Lukasik, P. Moniz, Métodos de fraccionamento de biomassa para as biorrefinarias, *Boletim Biotecnologia*, 2013, 2, 7-10.
- 29) A. R. C. Morais, R. Bogel-Lukasik, *Green Chemistry and Biorefinery Concept, Sustainable Chemical Processes*, 2013, 1:18.
- 30) C. T. Matos, L. Gouveia, A. R. C. Morais, A. Reis, R. Bogel-Lukasik, Green metrics evaluation of isoprene production by microalgae and bacteria, *Green Chem.*, 2013, 15, 2854-2864.
- 31) A. M. da Costa Lopes, K. G. João, E. Bogel-Lukasik, L. B. Roseiro, R. Bogel-Lukasik, Pretreatment and Fractionation of Wheat Straw Using Various Ionic Liquids, *J. Agric. Food Chem.*, 2013, 61, 7874-7882.
- 32) S. P. Magalhães da Silva, A. M. da Costa Lopes, L. B. Roseiro, R. Bogel-Lukasik, Novel pre-treatment and fractionation method for lignocellulosic biomass using ionic liquids, *RSC Adv.*, 2013, 3, 16040-16050.
- 33) A. Duarte dos Santos, C. Melo, A. R. C. Morais, R. Bogel-Lukasik, E. Bogel-Lukasik, Solubility of pharmaceutical compounds in ionic liquids, *Fluid Phase Equilib.*, 2013, 356, 18-29.
- 34) A. M. da Costa Lopes, K. G. João, D. Rubik, E. Bogel-Lukasik, L. C. Duarte, J. Andreaus, R. Bogel-Lukasik, Pre-treatment of lignocellulosic biomass using ionic liquids: wheat straw fractionation, *Bioresource Technol.*, 2013, 142, 198-208.
- 35) A. M. da Costa Lopes, K. G. João, A. R. C. Morais, E. Bogel-Lukasik, R. Bogel-Lukasik, Ionic liquids as a tool for lignocellulosic biomass fractionation, *Sustainable Chemical Processes*, 2013, 1:3.
- 36) C. I. Melo, R. Bogel-Lukasik, M. Nunes da Ponte, E. Bogel-Lukasik, Ammonium ionic liquids as green solvents for drugs, *Fluid Phase Equilib.*, 2013, 338, 209-216.
- 37) S. I. Santos, E. Bogel-Lukasik, R. Bogel-Lukasik, The ionic liquid effect on solubility of aniline, a simple aromatic amine: perspective of solvents' mixture, *Fluid Phase Equilib.*, 2012, 325, 105-110.
- 38) C. Lourenço, C. I. Melo, R. Bogel-Lukasik, E. Bogel-Lukasik, Solubility Advantage of Pyrazine-2-carboxamide: Application of Alternative Solvents on the Way to the Future Pharmaceutical Development, *J. Chem. Eng. Data*, 2012, 57, 1525-1533.
- 39) M. E. Zakrzewska, P. M. S. D. Cal, N. R. Condeias, R. Bogel-Lukasik, C. A. M. Afonso, M. Nunes da Ponte, P. M. P. Gois, Intermolecular C-H insertion catalysed by di-Rhodium (II) complexes using $scCO_2$ as the reaction media, *Green Chem. Lett. Rev.*, 2012, 5, 211-240.
- 40) L. J. A. Conceição, R. Bogel-Lukasik, E. Bogel-Lukasik, Supercritical CO_2 as an effective medium for a novel conversion of glycerol and alcohols in the heterogeneous telomerisation of butadiene, *Green Chem.*, 2012, 14, 673-681.
- 41) C. I. Melo, A. I. Rodrigues, R. Bogel-Lukasik, E. Bogel-Lukasik, Outlook on the Phase Equilibria of the Innovative System of "Protected Glycerol": 1,4-Dioxaspiro[4.5]decane-2-methanol and Alternative Solvents, *J. Phys. Chem. A*, 2012, 116, 1765-1773.
- 42) A. Forte, C. I. Melo, R. Bogel-Lukasik, E. Bogel-Lukasik, A favourable solubility of isoniazid, an antitubercular antibiotic drug, in alternative solvent, *Fluid Phase Equilib.*, 2012, 318, 89-95.
- 43) L. J. A. Conceição, E. Bogel-Lukasik, R. Bogel-Lukasik, A new outlook on solubility of carbohydrates and sugar alcohols in ionic liquids, *RSC Adv.*, 2012, 2, 1846-1855.
- 44) C. I. Melo, R. Bogel-Lukasik, E. Bogel-Lukasik, Combination of supercritical carbon dioxide and ionic liquid in a novel assembly of carvacrol, *J. Supercrit. Fluids*, 2012, 61, 191-198.
- 45) C. I. Melo, R. Bogel-Lukasik, M. Gomes da Silva, E. Bogel-Lukasik, Advantageous heterogeneously catalysed hydrogenation of carvone with supercritical carbon dioxide, *Green Chem.*, 2011, 13, 2825-2830.
- 46) J. M. Lopes, Z. Petrovski, R. Bogel-Lukasik, E. Bogel-Lukasik, Heterogeneous palladium-catalyzed telomerization of myrcene with glycerol derivatives in supercritical carbon dioxide: a facile route to new building blocks, *Green Chem.*, 2011, 13, 2013-2016.
- 47) A. Forte, E. Bogel-Lukasik, R. Bogel-Lukasik, Miscibility phenomena in systems containing polyhydroxy alcohols and ionic liquids, *J. Chem. Eng. Data*, 2011, 56, 2273-2279.
- 48) G. V. S. M. Carrera, Z. Visak, R. Bogel-Lukasik, M. Nunes da Ponte, VLE of CO_2 + glycerol + (ethanol or 1-propanol or 1-butanol), *Fluid Phase Equilib.*, 2011, 303, 180-183.

Curriculum Vitae

- 49) M. E. Zakrzewska, E. Bogel-Łukasik, R. Bogel-Łukasik, Ionic liquid-mediated formation of 5-hydroxymethylfurfural - a promising biomass-derived building block, *Chem. Rev.*, 2011, 397-417.
- 50) R. Bogel-Łukasik, L. M. N. Goncalves, E. Bogel-Łukasik, Phase equilibrium phenomena in solutions involving tannins, flavonoids and ionic liquids, *Green Chem.*, 2010, 12, 1947-1953.
- 51) R. Bogel-Łukasik, D. Matkowska, M. E. Zakrzewska, E. Bogel-Łukasik, T. Hofman, The phase envelopes of alternative solvents (ionic liquid, CO₂) and building blocks of biomass origin (lactic acid, propionic acid), *Fluid Phase Equilib.*, 2010, 295, 177-185.
- 52) E. Bogel-Łukasik, S. Santos, R. Bogel-Łukasik, M. Nunes da Ponte, Selectivity enhancement in the catalytic heterogeneous hydrogenation of limonene in supercritical carbon dioxide by an ionic liquid, *J. Supercrit. Fluids*, 2010, 54, 210-217.
- 53) E. Bogel-Łukasik, J. Wind, R. Bogel-Łukasik, M. Nunes da Ponte, The influence of hydrogen pressure on the heterogeneous hydrogenation of β -myrcene in a CO₂-expanded liquid, *J. Supercrit. Fluids*, 2010, 54, 46-52.
- 54) F. M. Girio, C. Fonseca, F. Carvalheiro, L. C. Duarte, S. Marques, R. Bogel-Łukasik, Hemicellulose for fuel ethanol: A review, *Bioresource Technol.*, 2010, 101, 4775-4800.
- 55) R. Bogel-Łukasik, D. Matkowska, E. Bogel-Łukasik, T. Hofman, Isothermal vapour-liquid equilibria in the binary and ternary systems consisting of an ionic liquid, 1-propanol and CO₂, *Fluid Phase Equilib.*, 2010, 293, 168-174.
- 56) C. A. S. Trindade, Z. P. Visak, R. Bogel-Łukasik, E. Bogel-Łukasik, M. Nunes da Ponte, Liquid-Liquid Equilibrium of Mixtures of Imidazolium-Based Ionic Liquids with Propanediols or Glycerol, *Ind. Eng. Chem. Res.*, 2010, 49, 4850-4857.
- 57) E. Bogel-Łukasik, C. Lourenço, M. E. Zakrzewska, R. Bogel-Łukasik, Insight into the Phase Equilibrium Phenomena of Systems Containing Dienes and Dicyanamide Ionic Liquids as a New Potential Application, *J. Phys. Chem. B*, 2010, 114, 15605-15609.
- 58) M. E. Zakrzewska, E. Bogel-Łukasik, R. Bogel-Łukasik, Solubility of Carbohydrates in Ionic Liquids, *Energy Fuel.*, 2010, 24, 737-745.
- 59) E. Bogel-Łukasik, R. Bogel-Łukasik, M. Nunes da Ponte, Pt- and Pd-catalysed limonene hydrogenation in high-density carbon dioxide, *Monatsh. Chem.*, 2009, 140, 1361-1369.
- 60) E. Bogel-Łukasik, M. Gomes da Silva, I. D. Nogueira, R. Bogel-Łukasik, M. Nunes da Ponte, Study on selectivity of β -myrcene hydrogenation in high-pressure carbon dioxide catalysed by noble metal catalysts, *Green Chem.*, 2009, 11, 1847-1856.
- 61) E. Bogel-Łukasik, A. Szudarska, R. Bogel-Łukasik, M. Nunes da Ponte, Vapour-liquid equilibrium for β -myrcene and carbon dioxide and/or hydrogen and the volume expansion of β -myrcene or limonene in CO₂ at 323.15 K, *Fluid Phase Equilib.*, 2009, 282, 25-30.
- 62) E. Bogel-Łukasik, R. Bogel-Łukasik, M. Nunes da Ponte, Effect of Flow Rate of a Biphasic Reaction Mixture on Limonene Hydrogenation in High Pressure CO₂, *Ind. Eng. Chem. Res.*, 2009, 48, 7060-7064.
- 63) R. Bogel-Łukasik, V. Najdanovic-Visak, S. Barreiros, M. Nunes da Ponte, Distribution ratios of lipase-catalyzed reaction products in ionic liquid supercritical CO₂ systems: Resolution of 2-octanol enantiomers, *Ind. Eng. Chem. Res.*, 2008, 47, 4473-4480.
- 64) E. Bogel-Łukasik, R. Bogel-Łukasik, K. Kriaa, I. Fonseca, Y. Tarasenko, M. Nunes da Ponte, Limonene hydrogenation in high pressure CO₂: effect of hydrogen pressure, *J. Supercrit. Fluids*, 2008, 45, 225-230.
- 65) R. Bogel-Łukasik, N. M. T. Lourenço, P. Vidinha, M. D. R. Gomes da Silva, C. A. M. Afonso, M. Nunes da Ponte, S. Barreiros, Lipase catalysed mono and di-acylation of secondary alcohols with succinic anhydride in organic media and ionic liquids, *Green Chem.*, 2008, 10, 243-248.
- 66) R. Bogel-Łukasik, Sustainable processes employing ionic liquids for secondary alcohols separation, *Monatsh. Chem.*, 2007, 138, 1137-1144.
- 67) E. Bogel-Łukasik, I. Fonseca, R. Bogel-Łukasik, M. Nunes da Ponte, A. Paiva, G. Brunner, Phase equilibrium-driven selective hydrogenation of limonene in high-pressure carbon dioxide, *Green Chem.*, 2007, 9, 427-430.

Curriculum Vitae

- 68) T. V. Vasiltssova, S. P. Verevkin, E. Bich, A. Heintz, R. Bogel-Łukasik, U. Domańska, Thermodynamic properties of mixtures containing ionic liquids. 7. Activity coefficients of aliphatic and aromatic esters and benzylamine in 1-methyl-3-ethylimidazolium bis(trifluoromethyl-sulfonyl)imide using the transpiration method, *J. Chem. Eng. Data*, 2006, 51, 213-218.
- 69) U. Domańska, R. Bogel-Łukasik, Physicochemical properties and solubility of alkyl-(2-hydroxyethyl)-dimethyl-ammonium bromide, *J. Phys. Chem. B*, 2005, 109, 12124-12132.
- 70) U. Domańska, R. Bogel-Łukasik, Solubility of ethyl-(2-hydroxyethyl)-dimethyl-ammonium bromide in alcohols (C₂ - C₁₂), *Fluid Phase Equilib.*, 2005, 233, 220-227.
- 71) T. V. Vasiltssova, S. P. Verevkin, E. Bich, A. Heintz, R. Bogel-Łukasik, U. Domańska, Thermodynamic properties of mixtures containing ionic liquids. Activity coefficients of ethers and alcohols in 1-methyl-3-ethyl-imidazolium bis(trifluoromethylsulfonyl)imide using the transpiration method, *J. Chem. Eng. Data*, 2005, 50, 142-148.
- 72) U. Domańska, E. Bogel-Łukasik, R. Bogel-Łukasik, Solubility of 1-dodecyl-3-methyl-imidazolium chloride in alcohols (C₂ - C₁₂), *J. Phys. Chem. B*, 2003, 107, 1858 –1863.
- 73) U. Domańska, E. Bogel-Łukasik, R. Bogel-Łukasik, 1-Octanol/water partition coefficients of 1-alkyl-3-methylimidazolium chloride, *Chem. Eur. J.*, 2003, 9, 13, 3033 – 3041.

Patents

- 1) R. Łukasik, A. M. da Costa Lopes, Production of monosaccharides originated in hemicellulose of lignocellulosic biomass using aqueous system with ionic liquids. 20/06/2016 (PT 109467).
- 2) R. Bogel-Lukasik, A. M. da Costa Lopes, Selective extraction and purification of triclin from lignocellulosic biomass. 28/04/2015 (PT 108402).
- 3) R. Bogel-Lukasik, A. R. C. Morais, Fractionation of lignocellulosic biomass and depolymerization of lignin in the presence of imidazole and/or its derivatives (Fracionamento de biomassa lenhocelulósica e despolimerização da lenhina na presença de imidazole e/ou seus derivados. 03/03/2015 (PT 108264).
- 4) R. Bogel-Lukasik, A. M. da Costa Lopes, Three-step fractionation process of lignocellulose into cellulose, hemicellulose and lignin. (Processo de fracionamento de biomassa lenhocelulósica para a obtenção de celulose, hemicelulose e lenhina em três passos) 20/05/2013 (PT 106947).
- 5) R. Bogel-Łukasik, L. C. Duarte, A. M. da Costa Lopes, K. G. João, F. M. Gírio, Methods for the selective fractionation of lignocellulosic biomass to produce high purity cellulose, hemicellulose and lignin. (Processo de fracionamento seletivo de biomassa lenhocelulósica para a recuperação simultânea de celulose, hemicelulose e lenhina com elevado grau de pureza) 20/01/2013 (PT 106743).
- 6) M. J. Earle, U. Frohlich, S. Huq, S. Katdare, R. M. Łukasik, E. Bogel, N. V. Plechkova, K. R. Seddon, Base stable ionic liquids (WO 2006072785, EP 2319621, US2009216015, MX 2007008160, KR 20070101301, JP 2008526822, CN 101137436).

Books (Editor)

- 1) R. M. Łukasik (Editor), *High Pressure Technologies in Biomass Conversion*, RSC Publishing, 2017. <http://pubs.rsc.org/en/content/ebook/978-1-78262-485-1#!divbookcontent>.
- 2) R. Bogel-Lukasik (Editor), *Ionic Liquids in the Biorefinery Concept*, RSC Publishing, 2015, <http://pubs.rsc.org/en/content/ebook/978-1-84973-976-4#!divbookcontent>.

Books (Chapter)

- 1) A. M. da Costa Lopes, A. R. C. Morais, R. M. Łukasik, Sustainable Catalytic Strategies for C₅-Sugars and Biomass Hemicellulose Conversion Towards Furfural Production; Production of Platform Chemicals from Sustainable Resources. Ed. Z. Fang, Chapter 2, Springer, 2017, 45-80.
- 2) A. R. C. Morais, R. M. Łukasik, Hydrothermal Pretreatment Using Supercritical CO₂ in the Biorefinery Context; Hydrothermal Processing in Biorefineries, Eds. H. A. Ruiz, H. Trajano, M. H. Thomsen, Chapter 14, Springer, 2017, 353-376.

Curriculum Vitae

- 3) A. R. C. Morais, R. M. Lukasik, Direct conversion of natural polymers using high-pressure CO₂ and CO₂-H₂O mixtures; High Pressure Technologies in Biomass Conversion, Ed. R. M. Lukasik, Chapter 5, RSC Publishing, 2017, 83-114.
- 4) R. M. Lukasik, Perspectives of the development of high-pressure technologies; High Pressure Technologies in Biomass Conversion, Ed. R. M. Lukasik, Chapter 9, RSC Publishing, 2017, 181-189.
- 5) A. M. da Costa Lopes, R. Bogel-Lukasik, ABS Constituted by Ionic Liquids and Carbohydrates; Ionic-Liquid-Based Aqueous Biphasic Systems: Fundamentals and Applications, Ed. M. G. Freira, Chapter 3., Springer-Verlag Berlin, 2016, 37-60.
- 6) A. M. da Costa Lopes, L. B. Roseiro, R. Bogel-Lukasik, Relevance of Ionic Liquids and Biomass Feedstocks for Biomolecule Extraction; Ionic Liquids in the Biorefinery Concept, Ed. R. Bogel-Lukasik, Chapter 5., RSC Publishing, 2015, 121-167.
- 7) R. Bogel-Lukasik, E. Bogel-Lukasik, Ionic Liquids, An introduction to green chemistry methods, Future Science Publisher, Eds. Rafael Luque, Juan Carlos Colmenares, 2013, 70-83. <http://www.futuremedicine.com/doi/pdf/10.4155/ebo.13.5>
- 8) F. Girio, F. Carvalheiro, L. C. Duarte, R. Bogel-Lukasik, Deconstruction of the Hemicellulose Fraction from Lignocellulosic Materials into Simple Sugars; D-Xylitol, Fermentative Production, Application and Commercialization, Eds. Silvio Silvério da Silva, Anuj Kumar Chandel, Chapter 1., Springer-Verlag Berlin, 2012, 3-38.
- 9) R. Bogel-Lukasik, A Importância da Química Verde para as Biorrefinarias, Biorrefinarias: Cenários e Perspectivas (The importance of Green Chemistry for Biorefineries, Biorefineries: Scenarios and Perspectives), Ed. Sílvia Vaz Jr., Embrapa, Brazil, 2012, 117-129.
- 10) E. Bogel-Lukasik, A. Serbanovic, R. Bogel-Lukasik, A. Banet-Osuna, V. Najdanovic-Visak, M. Nunes da Ponte, Hydrogenation of CO₂-Expanded Liquid Terpenes: Phase Equilibrium-Controlled Kinetics, ACS Symposium Series 106, Gas-Expanded Liquids and Near-Critical Media: Green Chemistry and Engineering, Chapter 9., Washington, DC, USA, 2009, 191-201.
- 11) U. Domańska, A. Marciniak, R. Bogel-Lukasik, Phase equilibria (SLE, LLE) of N,N-dialkylimidazolium hexafluorophosphate or chloride, ACS Symposium Series 901, Ionic Liquids IIIA: Fundamentals, Progress, Challenges, and Opportunities, Chapter 20., Washington, DC, USA, 2005, 256-269.

Others

- 1) R. Bogel-Lukasik, A Importância da Química Verde para as Biorrefinarias (The importance of Green Chemistry for Biorefineries), Agroenergia em Revista, Ed. Manoel Teixeira Souza Júnior, Embrapa, Brazil, 2012, 4, 23.
- 2) F. Girio, C. T. Matos, A. C. Oliveira, L. Silva, R. Bogel-Lukasik, R. Aguiar, Typical greenhouse gas emissions in the cultivation phase of raw materials for the production of biofuels - report from Portugal drawn up pursuant to Article 19(2) of Directive 2009/28/EC, 2011, http://ec.europa.eu/energy/renewables/reports/doc/2009_0028_19_2_emissions.zip
- 3) M. E. Zakrzewska, E. Bogel-Lukasik, R. Bogel-Lukasik, Solubility of Carbohydrates in Ionic Liquids, American Chemical Society, Ionic Liquids Virtual Special Issue, 2011, Mar. 2, Vol. 1, Issue 2, <http://pubs.acs.org/page/vi/2011/ionicliquids.html>
- 4) M. E. Zakrzewska, E. Bogel-Lukasik, R. Bogel-Lukasik, Solubility of Carbohydrates in Ionic Liquids, American Chemical Society, Biofuel Virtual Special Issue, 2010, Nov. 11, Vol. 1, Issue 1, <http://pubs.acs.org/page/vi/2010/biofuels.html>

Conference Proceedings

- 1) G. V. S. M. Carrera, Z. P. Visak, R. M. Lukasik, M. Nunes da Ponte, Phase Behaviour of the System CO₂ + methanol + glycerol, Proceeding of 16th European Meeting on Supercritical Fluids, Lisbon, Portugal, 2017 on CD.
- 2) A. M. da Costa Lopes, S. P. Magalhães da Silva, A. V. Carvalho, M. Brenner, L. B. Roseiro, R. Bogel-Lukasik, Development of ionic liquid technologies for the integration of pre-treatment, fractionation,

Curriculum Vitae

- extraction, hydrolysis and conversion of biomass in the frame of the biorefinery concept, 24th European Biomass Conference & Exhibition, Amsterdam, The Netherlands, 2016.
- 3) A. R. C. Morais, A. M. da Costa Lopes, A. C. Mata, A. V. Carvalho, F. R. Relvas, M. Brenner, S. P. Magalhães, L. B. Roseiro, L. C. Duarte, R. Bogel-Lukasik, Where are we with green biorefineries?, 3rd Iberoamerican Congresso on Biorefineries, 4th Latin American Congress, 2nd International Symposium on Lignocellulosic Materials Biorefineries, Concepción, Chile, 2015, 36-37.
 - 4) F. Girio, R. Bogel-Lukasik, C. Matos, A. Oliveira, L. Silva, Biocombustíveis: uma Oportunidade ou um Problema para Portugal, II Workshop (Bio)Energia, Universidade de Évora, Portugal, 2013, 86-91.
 - 5) A. M. da Costa Lopes, K. G. João, R. Bogel-Lukasik, Fractionation of wheat straw using ionic liquids as a tool of pre-treatment, 2nd Iberoamerican Congresso on Biorefineries, Jaen, Spain, 2013, 165-166.
 - 6) F. Carvalheiro, L. C. Duarte, P. Moniz, F. M. Gírio, R. Bogel-Lukasik, Emerging Biomass Fractionation Processes and Their Potential in the Biorefineries, 1st Iberoamerican Congresso on Biorefineries, Los Cabos, Baja California, Mexico, 2012, 294-300.
 - 7) M. Nunes da Ponte, A. Serbanovic, E. Bogel-Lukasik, R. Bogel-Lukasik, Phase equilibrium and reaction on biphasic solvents ionic liquid + supercritical carbon dioxide. Proceeding of 12th European Meeting on Supercritical Fluids: New Perspectives in Supercritical Fluids – Materials, Nanoscience and Processing, Graz, Austria, 2010 on CD.
 - 8) E. Bogel-Lukasik, R. Bogel-Lukasik, M. Nunes da Ponte, Vapour-liquid-equilibrium for binary and ternary systems containing β -myrcene, CO₂ and H₂. Volume expansion studies of terpene in CO₂. Proceeding of 24th European Symposium on Applied Thermodynamics, Santiago de Compostela, Spain, 2009, 249-250.
 - 9) E. Bogel-Lukasik, R. Bogel-Lukasik, M. Nunes da Ponte, Limonene Hydrogenation in High Pressure CO₂: Effect of Flow. Proceeding of 11th European Meeting on Supercritical Fluids, Barcelona, Spain, 2008, 249.
 - 10) R. Bogel-Lukasik, M. Nunes da Ponte, S. Barreiros, Supercritical carbon dioxide/ionic liquid system for separation of biotransformation products. Proceeding of 11th European Meeting on Supercritical Fluids, Barcelona, Spain, 2008, 121.
 - 11) E. Bogel-Lukasik, R. Bogel-Lukasik, K. Kriia, I. Fonseca, Y. Tarasenko, M. Nunes da Ponte, How limonene hydrogenates employing carbon dioxide green solvent? Proceeding of I Iberoamerican Conference of Supercritical Fluids PROSCIBA 2007, Former Brazilian Meeting on Supercritical Fluids, Iguassu Falls, Brazil, 2007 on CD
 - 12) R. Bogel-Lukasik, N. M. T. Lourenco, C. A. M. Afonso, M. Nunes da Ponte, S. Barreiros, Bioseparation of alcohol enantiomers. Proceeding of I Iberoamerican Conference of Supercritical Fluids PROSCIBA 2007, Former Brazilian Meeting on Supercritical Fluids, Iguassu Falls, Brazil, 2007 on CD
 - 13) R. Bogel-Lukasik, M. Nunes da Ponte, S. Barreiros, A. Paiva, G. Brunner, VLE measurements of ternary systems with supercritical CO₂ Proceeding of the 8th Conference on Supercritical Fluids and Their Applications, Ischia, Italy, 2006, T2, 629-632.
 - 14) R. Bogel-Lukasik, P. Vidinha, N. M. T. Lourenco, M. D. R. Gomes da Silva, C. A. M. Afonso, M. Nunes da Ponte, S. Barreiros, Enzymatic Resolution of a Racemic Mixture by Acylation in Ionic Liquids. Proceeding of the 10th European Meeting on Supercritical Fluids, Colmar, France, 2005, 96.

Conferences and meetings

Oral communications

- 1) R. M. Lukasik, Breakthrough in Biomass Pre-treatment for Sustainable Production of Biofuels and Biochemicals, IX.2017, LNEG, Lisbon, Portugal.
- 2) A. M. da Costa Lopes, R. M. Lukasik, Ionic Liquids: Solvent Design for Diverse Sustainable Biomass Valorisation, 2017 AIChE Annual Meeting, X-XI.2017, Minneapolis, MN, USA.

Curriculum Vitae

- 3) A. R. C. Morais, R. M. Lukasik, A highly selective dehydration of D-xylose and wheat straw C5-sugars into furfural by using supercritical CO₂ as catalyst: A green and efficient approach, 2017 AIChE Annual Meeting, X-XI.2017, Minneapolis, MN, USA.
- 4) A. R. C. Morais, R. M. Lukasik, Supercritical CO₂ pretreatment of wheat straw: hydrolysis performance, enzymatic yields and comprehensive mass balances, 2017 AIChE Annual Meeting, X-XI.2017, Minneapolis, MN, USA.
- 5) A. M. da Costa Lopes, S. P. Magalhães da Silva, A. V. Carvalho, M. Brenner, R. M. G. Lins, L. B. Roseiro, R. A. Rebelo, R. M. Lukasik, Two strategies for green and sustainable valorization of biomass with ionic liquids, The International Symposium on Green Chemistry – ISGC 2017, V.2017, La Rochelle, France.
- 6) A. M. da Costa Lopes, S. P. Magalhães da Silva, A. V. Carvalho, M. Brenner, R. M. G. Lins, L. B. Roseiro, R. A. Rebelo, R. M. Lukasik, Two strategies for green and sustainable valorization of biomass with ionic liquids, World Sustainable Energy Days – Young Researchers Conference, III.2017, Wels, Austria.
- 7) R. M. Lukasik, New biomass-derived, non-toxic green solvents for food-net residues valorisation, The Future of Food Waste: Challenges and Opportunities for Valorisation in Europe - COST TD1203 Conference, IX.2016, Wageningen, The Netherlands.
- 8) S. P. Magalhães da Silva, A. V. Carvalho, M. Brenner, A. M. da Costa Lopes, L. B. Roseiro, R. Bogel-Lukasik, Development of ionic liquid technologies for the integration of pre-treatment, fractionation, extraction, hydrolysis and conversion of biomass in the frame of the biorefinery concept, 24th European Biomass Conference & Exhibition, VI.2016, Amsterdam, The Netherlands.
- 9) R. Bogel-Lukasik, The involvement of green solvents in the biomass pre-treatment, 38th Symposium on Biotechnology for Fuels and Chemicals, IV.2016, Baltimore, USA.
- 10) A. R. C. Morais, F. M. Relvas, A. C. Mata, S. P. Magalhães, R. Bogel-Lukasik, Highly efficient and selective high-pressure CO₂-H₂O pre-treatment of agro-industrial residues into C5-sugars with simultaneously high saccharification process yields, 38th Symposium on Biotechnology for Fuels and Chemicals, IV.2016, Baltimore, USA.
- 11) R. Bogel-Lukasik, A. R. C. Morais, F. M. Relvas, A. C. Mata, S. P. Magalhães, L. B. Roseiro, M. D. D. J. Matuchaki, J. Andreaus, High pressure technologies in the delivery of value added products from biomass – green biorefinery approach, IV Iberoamerican Conference on Supercritical Fluids PROSCIBA 2016, III-IV.2016, Vina del Mar, Chile.
- 12) A. R. C. Morais, R. Bogel-Lukasik, Supercritical CO₂ – a highly selective catalyst for dehydration of lignocellulose-derived pentoses into furfural in aqueous media with THF, IV Iberoamerican Conference on Supercritical Fluids PROSCIBA 2016, III-IV.2016, Vina del Mar, Chile.
- 13) R. Bogel-Lukasik, Green Chemistry and the biorefinery, WP1 COST TD1203 meeting, II.2016, Kaunas, Lithuania.
- 14) A. M. da Costa Lopes, A. V. Carvalho, R. Lins, M. A. Rodrigues, L. B. Roseiro, R. Bogel-Lukasik, Intensification and selective processing of lignocellulosic biomass using acidic ionic liquids, WP1 COST TD1203 meeting, II.2016, Kaunas, Lithuania.
- 15) P. C. Passarinho, P. Costa, R. Bogel-Lukasik, A. C. Oliveira, A contribuição do projeto BIOFFA para a valorização energética de gorduras animais, Encontro Nacional da Bioenergia, XI.2015, Portoalegre, Portugal.
- 16) A. R. C. Morais, A. M. da Costa Lopes, A. C. Mata, A. V. Carvalho, F. R. Relvas, M. Brenner, S. P. Magalhães da Silva, L. B. Roseiro, L. C. Duarte, R. Bogel-Lukasik, Where are we with green biorefineries?, 3rd Iberoamerican Congresso on Biorefineries, 4th Latin American Congress, 2nd International Symposium on Lignocellulosic Materials Biorefineries, XI.2015, Concepcion, Chile.
- 17) R. M. G. Lins, B. C. B. Gramkow, E. J. Zonta, S. L. Mireski, I. M. Begnini, R. A. Rebelo, R. Bogel-Lukasik, Preparação de novos líquidos iônicos (LIs) derivados do Safrol como potenciais solvents para o pré-tratamento de material lignocelulósico, XXII Encontro de Química da Região Sul, XI.2015, Joinville, Brazil.

Curriculum Vitae

- 18) R. Bogel-Lukasik, Bioacceptable CO₂- and IL-pre-treated agro-food residues, WP2 COST TD1203 meeting, IX.2015, Potsdam, Germany.
- 19) M. Almenara Rodrigues, A. M. da Costa Lopes, R. Bogel-Lukasik, The use of 1-ethyl-3-methylimidazolium hydrogen sulphate as a meaning for transforming sugar cane bagasse, as a source of high valued chemicals, WP3 COST TD1203 meeting, IX.2015, Tallinn, Estonia.
- 20) M. D. D. J. Matuchaki, A. R. C. Morais, L. M. da Fontoura, M. Rau, R. A. Rebelo, J. Andreus, R. Bogel-Lukasik, Pre-treatment of sugarcane bagasse using high-pressure CO₂-H₂O technology, Reunião Anual da SBQ, V.2015, Águas de Lindóia, Brazil
- 21) A. M. da Costa Lopes, D. Rubik, K. G. João, A. V. Carvalho, S. P. Magalhães da Silva, M. Brenner, E. Bogel-Lukasik, J. Andreus, L. B. Roseiro, L. C. Duarte, R. Bogel-Lukasik, Líquidos iónicos: solventes alternativos para o pré-tratamento e fracionamento de biomassa no âmbito das biorrefinarias, 10 Seminário de Engenharia das Energias Renováveis e Ambiente, V.2015, Portalegre, Portugal.
- 22) L. C. Duarte, F. Carvalheiro, P. C. Branco, P. Moniz, T. Silva-Fernandes, L. B. Roseiro, R. Bogel-Lukasik, I. Torrado, O papel das biorrefinarias na nova economia: Tendências, oportunidades e desafios, Novas Valorizações de Matérias Primas e Resíduos Agroindustriais e Agrofloretais, NEWVAL, III.2015, Beja, Portugal.
- 23) A. M. da Costa Lopes, R. Bogel-Lukasik, Ionic liquid technologies towards the green and sustainable valorization of lignocellulosic biomass, Regional University of Blumenau, XII.2014, Blumenau, Brazil.
- 24) A. R. C. Morais, F. M. Relvas, A. C. Mata, S. P. Magalhães da Silva, R. Bogel-Lukasik, High pressure CO₂-H₂O technology in the valorisation of lignocellulosic biomass within the green biorefinery concept, Regional University of Blumenau, XII.2014, Blumenau, Brazil.
- 25) A. R. C. Morais, R. Bogel-Lukasik, High pressure technologies in the valorisation of wastes, COST Action TD 1203 Workshop on Valorisation of Vegetable Waste, VIII.2014, Novi Sad, Serbia.
- 26) A. M. da Costa Lopes, V. Carvalho, S. P. Magalhães da Silva, L. B. Roseiro, R. Bogel-Lukasik, Ionic liquids as new solvents for residues, COST Action TD 1203 Workshop on Valorisation of Vegetable Waste, VIII.2014, Novi Sad, Serbia.
- 27) L. C. Duarte, P. C. Branco, I. Torrado, P. Moniz, T. Fernandes, L. B. Roseiro, R. Bogel-Lukasik, A. Shatalov, F. Carvalheiro, The use of lignocellulosic crops within the biorefinery concept, Summer school, Lignocellulosic Crops as feedstock for Future Biorefineries, VIII.2014, Caparica, Portugal.
- 28) I. Cabrita, F. Carvalheiro, L. C. Duarte, F. Girio, R. Bogel-Lukasik, Industry-Based Biorefineries, VII.2014, Lisbon, Portugal.
- 29) A. M. da Costa Lopes, R. Bogel-Lukasik, Using ionic liquids for the valorisation of agricultural wastes: extraction of phenolic compounds from wheat straw, COST Action TD 1203 Workshop, I.2014, Toulouse, France.
- 30) A. R. C. Morais, A. C. Mata, S. P. Magalhães da Silva, R. Bogel-Lukasik, Producing oligosaccharide-rich solutions from agro-industrial residues using high-pressure technologies, COST Action TD 1203 Workshop, I.2014, Toulouse, France.
- 31) F. Girio, I. Cabrita, L. C. Duarte, F. Carvalheiro, R. Bogel-Lukasik, T. Silva-Fernandes, C. Matos, S. Marques, C. Fonseca, Biorefinery Concepts for Modern Pulp & Paper-based Industries. XXII TECNICELPA Conferência Internacional da Floresta, Pasta e Papel. X.2013, Tomar. Portugal.
- 32) A. R. C. Morais, S. Dworakowska, C. Matos, L. Gouveia, A. Reis, D. Bogdał, R. Bogel-Lukasik, Green Metrics Evaluation of the Isoprene Production by Petrochemical and Biological Routes. COST Action CM 0903 4th Workshop, X.2013, Valencia, Spain.
- 33) A. M. da Costa Lopes, K. G. João, E. Bogel-Lukasik, L. C. Duarte, R. Bogel-Lukasik, Lignocellulosic Biomass Fractionation with Ionic Liquids. 6th International Conference on Green and Sustainable Chemistry, VIII.2013, Nottingham, UK.
- 34) C. T. Matos, L. Gouveia, A. R. C. Morais, A. Reis, C. Oliveira, R. Bogel-Lukasik, Green metrics of bio-based isoprene. 6th International Conference on Green and Sustainable Chemistry, VIII.2013, Nottingham, UK.

Curriculum Vitae

- 35) I. Cabrita, F. Carvalho, L. C. Duarte, F. Girio, R. Bogel-Lukasik, Industry-Based Biorefineries, VII.2013, Lisbon, Portugal.
- 36) F. Girio, C. Matos, C. Oliveira, L. Silva, R. Bogel-Łukasik, A. Cardoso, M. Jogo, Biofuels policy implementation in Portugal, European Biodiesel V.2013, Lisbon, Portugal.
- 37) A. M. da Costa Lopes, R. Bogel-Lukasik, Novel biomass pre-treatment processes, COST Action TD 1203, Workshop, V.2013, Stockholm, Sweden.
- 38) L. C. Duarte, F. Carvalho, L. B. Roseiro., R. Bogel-Lukasik, P. Lourenço, P. Moniz, T. Fernandes, P. C. Branco, I. Torrado, F. Gírio, A importância sócio-económica das biorrefinarias. Bioenergia Portugal, V.2013, Portalegre, Portugal
- 39) R. Bogel-Łukasik, Biofuels from waste and residues - Sustainability of biofuels, COST Action TD 1203, Workshop, IV.2013, Rome, Italy.
- 40) F. Carvalho, L. Roseiro, L. C. Duarte, A. R. C. Morais, R. Bogel-Łukasik, Upgrading strategies for Mediterranean agro-food lignocellulosic wastes: Past undertakes and current projects, COST Action TD 1203, Workshop, IV.2013, Athens, Greece.
- 41) R. Bogel-Łukasik, C. Matos, A. Reis, L. Gouveia, A. R. C. Morais, P. Moniz, D. Bogdał, S. Dworakowska, Isoprene sustainability metrics, COST Action CM 0903 4th Workshop, I.2013, Palermo, Italy.
- 42) K. G. João, A. Lopes, E. Bogel-Łukasik, R. Bogel-Łukasik, The biomass pre-treatment with ionic liquids, COST Action CM 0903 3rd Workshop, XI.2012, Thessaloniki, Greece.
- 43) L. J. Conceição, E. Bogel-Łukasik, R. Bogel-Łukasik, Supercritical CO₂ as an effective medium for a novel conversion of glycerol in the heterogeneous telomerisation of butadiene, COST Action CM 0903 3rd Workshop, XI.2012, Thessaloniki, Greece.
- 44) F. Carvalho, L. C. Duarte, F. M. Gírio, R. Bogel-Łukasik, Emerging Biomass Fractionation Processes and Their Potential in the Biorefineries, 1st Iberoamerican Congresso on Biorefineries, X.2012, Los Cabos, Baja California, Mexico.
- 45) K. G. João, A. Lopes, E. Bogel-Łukasik, D. Rubik, B. Ribeiro, L. Duarte, J. Andreaus, F. Gírio, R. Bogel-Łukasik, Innovative solvents in biomass processing: Perspectives for pre-treatment and hydrolysis, X Brazilian Seminar of the Enzymatic Technology – ENZITEC, X.2012, Blumenau, Brazil.
- 46) R. Bogel-Łukasik, K. G. João, A. Lopes, Evaluation of fractionation of different types of lignocellulosic biomass using ionic liquids, PROETHANOL2G Meeting, VI.2012, Madrid, Spain.
- 47) A. Lopes, K. G. João, E. Bogel-Łukasik, R. Bogel-Łukasik, Fractionation of lignocellulosic biomass using ionic liquids, 1st IAMAW International Workshop, VI.2012, Santarém, Portugal.
- 48) F. Gírio, A. Reis, C. Fonseca, C. Oliveira, F. Pinto, F. Carvalho, I. Marques, L. Gouveia, L. Duarte, R. Bogel-Łukasik, O papel das biorrefinarias de biomassa como estratégia de sustentabilidade industrial e do território (The role of biomass to biorefineries sustainability strategy and the industrial area). 2^a Conferência Anual ENERGYIN. (2nd Annual Conference ENERGYIN), III.2012, Lisbon, Portugal.
- 49) L. C. Duarte, P. Moniz, T. Fernandes, I. Torrado, L. B. Roseiro, R. Bogel-Łukasik, F. Carvalho, Co-productos en las biorrefinerías (Co-products in biorefineries). Tercer Seminario Internacional: “Desarrollo y Perspectivas de Biorrefinerías en Iberoamérica” (Third International Seminar "Development and Prospects in Latin America Biorefineries"), XI.2011, Viña del Mar, Chile.
- 50) C. T. Matos, F. M. Gírio, A. C. Oliveira, L. M. Silva, R. Bogel-Łukasik, Biocombustíveis: em busca da sustentabilidade (Biofuels: search for sustainability), Palestra sobre Biocombustíveis, LNEG, XI.2011, Lisbon, Portugal.
- 51) C. T. Matos, F. M. Gírio, A. C. Oliveira, L. M. Silva, R. Bogel-Łukasik, Implementation of sustainability criteria for biofuels and bioliquids in Portugal. BIOGRACE Public Workshop, XI.2011, Madrid, Spain.
- 52) C. T. Matos, C. Oliveira, L. Silva, R. Bogel-Łukasik, F. Girio, Sustentabilidade de biocombustíveis: Implementação da estratégia Europeia (Sustainable biofuels: Implementation of the European strategy) Sociedade Ibero-Americana para o Desenvolvimento das Biorrefinarias (Ibero-American Society for the Development of Biorefineries), IX.2011, Lisbon, Portugal.

Curriculum Vitae

- 53) L. C. Duarte, P. Moniz, T. Fernandes, P. C. Branco, I. Torrado, L. B. Roseiro, R. Bogel-Łukasik, F. Carvalheiro. Upgrading and valorization routes for hemicellulose streams. 1st European Summer School on Biorefining: Principles and Technologies, VIII.2011, Paris, France.
- 54) M. Nunes da Ponte, A. Serbanovic, V. Najdanovic-Visak, M. Zakrzewska, E. Bogel-Łukasik, R. Bogel-Łukasik, Biphasic mixtures of ionic liquids + supercritical CO₂ in reaction/separation processes, Flucomp 2011, V Reunion de Expertos en Tecnologias de Fluidos Comprimidos (V Meeting of Experts in Technologies with Supercritical Fluids), VI.2011, Burgos, Spain.
- 55) M. Nunes da Ponte, A. Serbanovic, E. Bogel-Łukasik, R. Bogel-Łukasik, Phase equilibrium and reaction on biphasic solvents ionic liquid + supercritical carbon dioxide. 12th European Meeting on Supercritical Fluids: New Perspectives in Supercritical Fluids – Materials, Nanoscience and Processing, V.2010, Graz, Austria.
- 56) R. Bogel-Łukasik, M. Nunes da Ponte, Solubility of glycerol in CO₂-rich phase: modelling & prediction, The ERANET Meeting, X.2008, Dortmund, Germany.
- 57) R. Bogel-Łukasik, M. Nunes da Ponte, VLE, Partition Coefficients and Separation Factors of Supercritical CO₂/Ionic Liquid Systems for Separation of Biotransformation Products – The 20th IUPAC International Conference on Chemical Thermodynamics, VIII.2008, Warsaw, Poland.
- 58) E. Bogel-Łukasik, R. Bogel-Łukasik, M. Nunes da Ponte, Hydrogenation of CO₂-Expanded Liquid Terpenes: Phase Equilibrium Controlled Kinetics – The 20th IUPAC International Conference on Chemical Thermodynamics, VIII.2008, Warsaw, Poland.
- 59) R. Bogel-Łukasik, M. Nunes da Ponte, S. Barreiros, Supercritical Carbon Dioxide/Ionic Liquid System for Separation of Biotransformation Products – 11th European Meeting on Supercritical Fluids, V.2008, Barcelona, Spain.
- 60) E. Bogel-Łukasik, A. Serbanovic, R. Bogel-Łukasik, A. Banet-Osuna, M. Nunes da Ponte, Hydrogenation of CO₂-Expanded Liquid Terpenes: Phase Equilibrium-Controlled Kinetics – SUPERGREENCHEM Network Meeting, X.2007, Maribor, Slovenia.
- 61) R. Bogel-Łukasik, Alternative Solvents: Applications in Biocatalysis and Separation – SUPERGREENCHEM Network Meeting, X.2007, Maribor, Slovenia.
- 62) R. Bogel-Łukasik, S. Barreiros, M. Nunes da Ponte, Partition Coefficient Measurements Leading to Separation of Biotransformation Components – 2nd International Congress on Ionic Liquids (COIL), VIII.2007, Yokohama, Japan.
- 63) R. Bogel-Łukasik, “Green” Separation of Racemic Compounds – SUPERGREENCHEM Network Meeting, III.2007, Seville, Spain.
- 64) R. Bogel-Łukasik, Half Time Pass... – Mid Term Review Meeting of the SUPERGREENCHEM Network, IX.2006, St. Andrews, Scotland, UK.
- 65) R. Bogel-Łukasik, Enantiomers separation in alternative solvents and... – SUPERGREENCHEM Network Meeting, VII.2006, Caparica, Portugal.
- 66) R. Bogel-Łukasik, P. Vidinha, N. M. T. Lourenço, C. A. M. Afonso, M. Nunes da Ponte, S. Barreiros, Chiral Resolution of an Alcohol by Enzymatic Acylation in Ionic Liquids – SUPERGREENCHEM Network Meeting, VI.2005, Tallinn, Estonia.
- 67) R. Bogel-Łukasik, Chiral Resolution of Alcohols by Enzymatic Acylation in Ionic Liquids – SUPERGREENCHEM Network Workshop, II.2005, Oeiras, Portugal.
- 68) U. Domańska-Żelazna, R. Bogel-Łukasik, DSC Data, Thermal Decomposition and Solubility of N-Alkyl-N,N-Dimethylethanolammonium Ionic Liquids – 13th International Conference on Thermal Analysis and Calorimetry, IX.2004, Chia-Laguna, Sardinia, Italy.
- 69) R. Bogel-Łukasik, U. Domańska-Żelazna, Synthesis and Physico-Chemical Properties of n-(Hydroxyalkyl)-Dimethyl-Ethyl Ammonium Ionic Liquids – The 18th IUPAC International Conference on Chemical Thermodynamics and The 12th National Conference on Chemical Thermodynamics and Thermal Analysis, VIII.2004, Beijing, China.
- 70) R. Bogel-Łukasik, New Kind of Third Generation of Ionic Liquids and Their Intermediates: Synthesis and Physical Properties – Thermodynamics Applied For Environmental Purposes – Thermodynamics Polish-French Days, XI.2003, Warsaw, Poland.

Curriculum Vitae

Posters

- 1) A. A. Fierro, R. M. Rodriguez, J. A. Ascacio, A. Saenz, R. M. Lukasik, H. A. Ruiz, Extraction of lignin using sequential process of autohydrolyse pretreatment with organosolv for valorization of agave bagasse within the biorefinery concept, XVII National Congress of Biotechnology and Bioengineering of Mexican Society of Biotechnology and Bioengineering, VI.2017, Puerto Vallarta, Mexico.
- 2) A. R. C. Morais, F. R. Relvas, A. C. Mata, M. Brenner, S. P. Magalhães da Silva, R. Bogel-Lukasik, high pressure CO₂-H₂O mixture – promising technology for development of green biorefinery concept, 3rd Iberoamerican Congresso on Biorefineries, 4th Latin American Congress, 2nd International Symposium on Lignocellulosic Materials Biorefineries, XI.2015, Concepcion, Chile.
- 3) A. M. da Costa Lopes, M. Brenner, K. João, S. P. Magalhães da Silva, L. B. Roseiro, L. C. Duarte, R. Bogel-Lukasik, Fractionation of lignocellulosic biomass and recovery of phenolic compounds assisted by ionic liquid and supercritical carbon dioxide technology, 3rd Iberoamerican Congresso on Biorefineries, 4th Latin American Congress, 2nd International Symposium on Lignocellulosic Materials Biorefineries, XI.2015, Concepcion, Chile.
- 4) A. Papadaki, A. M. Dionisio, P. C. Branco, F. Carvalho, R. Bogel-Lukasik, L. B. Roseiro, S. Papanikolaou, A. Koutinas, L. C. Duarte, Biotechnological Production of importante platform organic acids using carob by-products derived media, 3rd Iberoamerican Congresso on Biorefineries, 4th Latin American Congress, 2nd International Symposium on Lignocellulosic Materials Biorefineries, XI.2015, Concepcion, Chile.
- 5) A. R. C. Morais, F. M. Relvas, A. C. Mata, S. P. Magalhães da Silva, R. Bogel-Lukasik, Pre-treated wheat straw as feedstock for efficient enzymatic hydrolysis, WP2 COST TD1203 meeting, IX.2015, Potsdam, Germany.
- 6) M. Almanasrah, C. Brazinha, M. Kallioinen, L. C. Duarte, L. B. Roseiro, R. Bogel-Lukasik, F. Carvalho, M. Manttari, J. G. Crespo, Separation and concentration of valuable phenolic compounds from sugars in natural botanic extracts: the case study of carbon residues. 8th World Congress on Polyphenols Applications, VI.2014, Lisbon, Portugal.
- 7) A. M. da Costa Lopes, M. Brenner, V. Carvalho, S. P. Magalhães da Silva, L. B. Roseiro, R. Bogel-Lukasik, Extraction of phenolic compounds from wheat straw using ionic liquids, 8th World Congress on Polyphenols Applications, VI.2014, Lisbon, Portugal.
- 8) A. R. C. Morais, A. M. da Costa Lopes, F. M. Relvas, A. C. Mata, L. B. Roseiro, R. Bogel-Lukasik, The application of green technologies in production and extraction of phenolic compounds from industrial residues in the frame of the biorefinery concept, 8th World Congress on Polyphenols Applications, VI.2014, Lisbon, Portugal.
- 9) A. M. da Costa Lopes, R. Bogel-Lukasik, Valorisation of agriculture wastes: extraction of phenolic compounds from wheat straw using ionic liquids Utilization of capillary electrophoresis technique to analyse sugars in ionic liquids, COST Action TD 1203 Workshop, V.2014, Athens, Greece.
- 10) A. M. da Costa Lopes, T. Aid, M. Vaher, R. Bogel-Lukasik, M. Koel, Utilization of capillary electrophoresis technique to analyse sugars in ionic liquids, COST Action CM 0903 4th Workshop, X.2013, Valencia, Spain.
- 11) F. Bandeira, I. Torrado, C. Ferreira, R. Bogel-Lukasik, F. Carvalho, L. C. Duarte, Xylitol Production in *Arundo donax* L. hemicellulosic hydrolysate, COST Action CM 0903 4th Workshop, X.2013, Valencia, Spain.
- 12) N. Santos, P. Moniz, L. C. Duarte, R. Bogel-Lukasik, C. Melo, F. Carvalho, Effect of Carbon Dioxide on Hydrothermal Processing of Corn Straw, COST Action CM 0903 4th Workshop, X.2013, Valencia, Spain.
- 13) A. M. Dionisio, P. Moniz, I. Torrado, P. C. Branco, R. Bogel-Lukasik, L. B. Roseiro, F. Carvalho, L. C. Duarte, Autohydrolysis of peach seed shells for the production of oligosaccharides, COST Action CM 0903 4th Workshop, X.2013, Valencia, Spain.
- 14) C. I. Melo, N. Scotti, F. Zaccheria, R. Bogel-Lukasik, N. Ravasio, Supported Metal Catalysts for Free Fatty Acid Rich Residues, COST Action CM 0903 4th Workshop, X.2013, Valencia, Spain.

Curriculum Vitae

- 15) S. Muto, F. Zaccheria, N. Ravasio, R. Bogel-Lukasik, Heterogenously Catalytic Hydrogenation of Animal Fatty Acids in Supercritical CO₂, COST Action CM 0903 4th Workshop, X.2013, Valencia, Spain.
- 16) L. C. Duarte, L. B. Roseiro, M. Fernandes, L. Neves, T. Bras, P. M. Lourenco, R. Bogel-Lukasik, F. Pinto, Xylitol Production from Extracted Olive Pomace – an Added-Value Valorization Option, II Encontro Ibérico do Azeite, II.2013, Abrantes, Portugal.
- 17) F. Carvalheiro, V. Guerra, R. C. Morais, I. Torrado, R. Bogel-Lukasik, P. Lourenço, L. C. Duarte, Optimization of dilute acid hydrolysis of extracted olive pomace, COST Action CM 0903 3rd Workshop, XI. 2012, Thessaloniki, Greece.
- 18) A. Reis, L. Gouveia, R. C. Morais, R. Bogel-Lukasik, Biological pathways of isoprene production, COST Action CM 0903 3rd Workshop, XI.2012, Thessaloniki, Greece.
- 19) C. I. Melo, E. Bogel-Lukasik, R. Bogel-Lukasik, Combination of supercritical carbon dioxide and ionic liquid in terpene processing, COST Action CM 0903 3rd Workshop, XI.2012, Thessaloniki, Greece.
- 20) L. M. N. Gonçalves, E. Bogel-Lukasik, R. Bogel-Lukasik, Solubility of tannins and flavonoids in alternative solvents, COST Action CM 0903 3rd Workshop, XI.2012, Thessaloniki, Greece.
- 21) L. C. Duarte, P. R. Bernardo, R. Bogel-Lukasik, P. Moniz, T. Silva-Fernandes, M. Viegas, P. Lourenço, F. Carvalheiro, Autohydrolysis: A search for an on-line monitoring strategy, COST Action CM 0903 3rd Workshop, XI.2012, Thessaloniki, Greece.
- 22) L. J. A. Conceição, E. Bogel-Lukasik, R. Bogel-Lukasik, Solubility of carbohydrates and sugar alcohols in novel ionic liquids, COST Action CM 0903 3rd Workshop, XI.2012, Thessaloniki, Greece.
- 23) A. M. da Costa Lopes, K. G. João, D. Rubik, E. Bogel-Lukasik, J. Andreas, R. Bogel-Lukasik, Fractionation of lignocellulosic biomass using ionic liquids, 4th International IUPAC Conference on Green Chemistry, VIII.2012, Foz do Iguaçu, Brazil.
- 24) K. G. João, A. M. da Costa Lopes, R. Bogel-Lukasik, A novel methodology for lignocellulosic feedstock pre-treatment with ionic liquids, 1st IMAW International Workshop, VI.2012, Santarem, Portugal.
- 25) C. I. Melo, M. Gomes da Silva, R. Bogel-Lukasik, M. Nunes da Ponte, E. Bogel-Lukasik, Catalytic hydrogenation of carvone in high-pressure CO₂ into valuable products, 11th International Conference on Carbon Dioxide Utilization, ICCDU XI, VI.2011, Dijon, France.
- 26) D. Matkowska, R. Bogel-Lukasik, E. Bogel-Lukasik, T. Hofman, M. Nunes da Ponte, Isothermal high-pressure vapour-liquid-equilibria in the ionic liquid, 1-propanol and CO₂ systems, ChemSession'10, V.2010, Warsaw, Poland.
- 27) E. Bogel-Lukasik, R. Bogel-Lukasik, M. Nunes da Ponte, Vapour-liquid-equilibrium for binary and ternary systems containing β -myrcene, CO₂ and H₂. Volume expansion studies of terpene in CO₂, 24th European Symposium on Applied Thermodynamics, VI/VII.2009, Santiago de Compostela, Spain.
- 28) R. Bogel-Lukasik, M. Nunes da Ponte, How Supercritical CO₂ Alters the Hydrogen Concentration in Poly(Ethylene Glycol)s-Rich Phase? The 20th IUPAC International Conference on Chemical Thermodynamics, VIII.2008, Warsaw, Poland.
- 29) E. Bogel-Lukasik, R. Bogel-Lukasik, M. Nunes da Ponte, Limonene Hydrogenation in High Pressure CO₂: Effect of Flow, 11th European Meeting on Supercritical Fluids, V.2008, Barcelona, Spain.
- 30) E. Bogel-Lukasik, R. Bogel-Lukasik, K. Kriaa, I. Fonseca, Y. Tarasenko, M. Nunes da Ponte, Limonene Hydrogenation in High Pressure CO₂: Effect of Hydrogen Pressure, I Iberoamerican Conference of Supercritical Fluids PROSCIBA 2007, IV.2007, Iguassu Falls, Brazil.
- 31) R. Bogel-Lukasik, N. Lourenco, C. Afonso, M. Nunes da Ponte, S. Barreiros, Bioseparation of Alcohol Enantiomers, I Iberoamerican Conference of Supercritical Fluids PROSCIBA 2007, IV.2007, Iguassu Falls, Brazil.
- 32) R. Bogel-Lukasik, M. Nunes da Ponte, S. Barreiros, Screening Ionic Liquids for Finding a Suitable Solvent for Biocatalysis, Green Solvents for Processes Conference, X.2006, Friedrichshafen, Germany.
- 33) R. Bogel-Lukasik, M. Nunes da Ponte, S. Barreiros, A. Paiva, G. Brunner, VLE Measurements of Ternary Systems with Supercritical CO₂, 8th Conference on Supercritical Fluids and Their Applications, V.2006, Ischia, Italy.

Curriculum Vitae

- 34) R. Bogel-Łukasik, P. Vidinha, N. M. T. Lourenço, M. D. R. Gomes da Silva, C. A. M. Afonso, M. Nunes da Ponte, S. Barreiros, Enzymatic Resolution of a Racemic Mixture by Acylation in Ionic Liquids, Requirnte Meeting, III./IV.2006, Fatima, Portugal.
- 35) R. Bogel-Łukasik, P. Vidinha, N. M. T. Lourenço, M. D. R. Gomes da Silva, C. A. M. Afonso, M. Nunes da Ponte, S. Barreiros, Enzymatic Resolution of a Racemic Mixture by Acylation in Ionic Liquids, 10th European Meeting on Supercritical Fluids, XII.2005, Colmar, France.
- 36) R. Bogel-Łukasik, U. Domańska-Żelazna, Synthesis and Phase Equilibria of Alkyl-(2-Hydroxyethyl)-Dimethyl-Ammonium Ionic Liquids, 1st International Congress on Ionic Liquids (COIL), VI.2005, Salzburg, Austria.
- 37) R. Bogel-Łukasik, P. Vidinha, N. M. T. Lourenço, C. A. M. Afonso, M. Nunes da Ponte, S. Barreiros, Chiral Resolution of an Alcohol by Enzymatic Acylation in Ionic Liquids, Conference on Knowledge-based Materials and Technologies for Sustainable Chemistry, VI.2005, Tallinn, Estonia.
- 38) E. Bogel-Łukasik, R. Bogel-Łukasik, U. Domańska-Żelazna, Study on Acidity and Conductivity of Systems Consisting of [bmim][Cl] and an Alcohol, 9th International Symposium on Polymer Electrolytes, VIII.2004, Mragowo, Poland.
- 39) E. Bogel-Łukasik, R. Bogel-Łukasik, U. Domańska-Żelazna, Solution Thermodynamics of [C₄-, or C₁₀mim][Cl] and an Alcohol, Thermodynamics 2003 Conference, IV. 2003, Cambridge, UK.
- 40) U. Domańska-Żelazna, E. Bogel, R. Łukasik, L. Mazurowska, Solubilities of Imidazolium Chlorides Ionic Liquids in Selected Organic Solvents, 19th European Seminar on Applied Thermodynamics ESAT, IX.2002, Santorini, Greece.
- 41) E. Bogel, U. Domańska-Żelazna, R. Łukasik, L. Mazurowska, Solubilities of Ionic Liquids [alkylmim][Cl] in Alcohols and Water, 17th IUPAC Conference on Chemical Thermodynamics, VII./VIII.2002, Rostock, Germany.

Scientific meetings organisation

- 1) **X-XI.2017:** Member of the Scientific Committee of Total Food 2017 conference, Norwich, UK.
- 2) **VII.2016:** Member of the Organising Committee of eseia International Summer School 2016 - Novel Development of Biorefineries, Lisbon, Portugal.
- 3) **X.2013-VII.2014:** Chair of the Organising Committee of EUBIS COST Action Training School, Lisbon, Portugal.
- 4) **X.2013:** Member of the Scientific Committee of the UBIOCHEM-IV Workshop, Valencia, Spain
- 5) **XI.2012:** Member of the Scientific Committee of the UBIOCHEM-III Workshop, Thessaloniki, Greece.
- 6) **III.2012:** A member of organising committee of the ERA-IB Products from Lignocellulose Project Meeting, Lisbon, Portugal.
- 7) **II.2012:** A member of organising committee of the REFUREC Meeting, Lisbon, Portugal.
- 8) **II.2010:** A member of organising committee of the PROETHANOL2G Project Meeting, Lisbon, Portugal.
- 9) **XI.2003:** A member of organising committee of Thermodynamics Applied For Environmental Purposes – Thermodynamics Polish-French Days, Warsaw, Poland.
- 10) **VII/VIII.2002:** A member of organising committee for 17th IUPAC Conference on Chemical Thermodynamics, Rostock, Germany.

“Funding ID”

Current

- 1) Biomass and Bioenergy Research Infrastructure – BBRI – P2020-SAICT-45-2016-01 **VII.2017 – VI.2020** *Team member*
- 2) Biofuels Research Infrastructure for Sharing Knowledge II – BRISK II – INFRAIA-01-2016-2017, Integrating and opening research infrastructures of European interest **V.2017 – IV.2021** *Team member*

Curriculum Vitae

- 3) Biobased Products from Integrated Biomass Sustainable Valorisation Technology - PIVOT, R&D Project of Portuguese Foundation for Science and Technology, Investigador FCT 2015. **I.2017-XII.2021**. *Team leader*
- 4) Advanced biofuel production with energy system integration - AMBITION – LCE-33-2016 European Common Research and Innovation Agendas (ECRIAs) in support of the implementation of the SET Action Plan **XII.2016-XI.2019** *Team member*
- 5) People for the European bio-ENERgy MIX – PHOENIX H2020-MSCA-RISE-2015 **XII.2015-XI.2018**, *Team member*
- 6) Development of modular small scale integrated biorefineries to produce an optimal range of bioproducts from a variety of rural agricultural and agroindustrial residues/wastes with a minimum consumption of fossil energy – SMIBIO – ERANET-LAC **X.2015-IX.2018**, *Team member*
- 7) Sustainable solvent-assisted biotransformation – R&D project in the frame of the bilateral cooperation between Brazil and Portugal. **III.2014-XII.2017**. *Team leader*

Past

- 8) Green solvents in the biorefinery – tool to produce high value added products – Green Value, R&D Exploratory Project of Portuguese Foundation for Science and Technology, Investigador FCT 2013. **II.2014-XII.2016**. *Team leader*
- 9) COST Action “Food Waste Valorisation for Sustainable Chemicals, Materials & Fuels (EUBIS)” TD1203 **XI.2012-XI.2016**. The objective of the Action is to provide an integrated alternative renewable source of carbon for the production of industrially relevant bio-derived chemicals, fuels and material via the exploration of novel and advanced routes for food supply chain waste valorisation. *National Delegate Substitute Member*
- 10) Pesquisador Visitante Especial (Special Visiting Researcher) Sustainable solvents-assisted transformation of biomass in the biorefinery concept – Regional University of Blumenau, Brazil – R&D Project of CAPES and CNPq **III.2013-XII.2015**. *Team leader*
- 11) BioSustain – Sustainable mobility: Future perspective for biofuel production – R&D Project of Portuguese Foundation for Science and Technology **VI.2013-V.2015**. *Team member*
- 12) Green Metrics in Bioenergy – R&D project in the frame of the bilateral cooperation between Poland and Portugal. **III.2013-VII.2015**. *Team leader*
- 13) Project EU-Brazil PROETHANOL2G (2009-2010) in the EU call ENERGY-2009.3.2.3: Second generation biofuels “EU-Brazil Coordinated Call”: “PROETHANOL2G - Integration of Biology and Engineering into an Economical and Energy-Efficient 2G Bioethanol Biorefinery”. **XI.2010-X.2014**. Project includes 10 European and several Brazilian partners and aims to develop a new integrated methodology of the production of 2nd generation bioethanol biorefinery. *Team member*
- 14) SSAD-Deconstruction of Biomass using solid super(acids) – R&D Project of Portuguese Foundation for Science and Technology **IV.2012-II.2015**. The project aims at development of novel methods of biomass pre-treatment with solid super(acids). *Team member*
- 15) ERA-IB Project “Development of a process for the utilization both the carbohydrate and the lignin content from lignocellulosic materials of annual plants for the production of valuable products - Products from lignocellulose” **IV.2011-III.2014**. The project is a collaboration of 10 partners and its general aim is the development of the process for the material utilization of both the carbohydrate and the lignin content from lignocellulosic substrates of annual plants. *Team member*
- 16) BIOFFA - Biofuels Production by (Trans)Esterification and Hydrogenation of High Fatty Acid Content Residues – R&D Project of Portuguese Foundation for Science and Technology. **III.2011-II.2014**. The project aims at synthesis of biodiesel from classical oils and residues. *Team member*
- 17) The "Concerted Action supporting the transposition and implementation of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (RES Directive) CA-RES" **VII.2010-VI.2013**. It is a project supported by Intelligent Energy Europe (IEE). The CA-RES is a structured and confidential dialogue supporting the effective implementation of the RES Directive 2009/28/EC and puts emphasis on the exchange of best-practice between the Member States. *National Delegate*

Curriculum Vitae

- 18) COST Action “Utilisation of Biomass for Sustainable Fuels & Chemicals (UBIOCHEM)” CM0903. **XI.2009-XI.2013**. The objective of the Action is to generate a synergistic approach for utilisation of biomass for sustainable fuels, materials and chemicals through cooperation between scientists from different member states and various areas and disciplines. *National delegate*
- 19) RefinOlea – Integrated Valorisation of Residues and Sub-Products of Olive Oil Extraction. **VII.2009–VI.2012**. The National Strategic Reference Framework R&D project involving the Portuguese Industry working with the olive bagasse. *Team member*
- 20) ERA-NET Chemistry “Molecular catalysis for CO₂ incorporation into glycerol” **I.2008–III.2010**. The project links 3 universities (University of Dortmund, University of Dijon and Universidade Nova de Lisboa) and aims to develop the catalytic method of CO₂ sequestration and glycerol to glycerol carbonate. My input in the project was the mentoring the experimental determination of mutual solubility of CO₂ and glycerol (studied very rarely due to the specific properties of both compounds) and its modelling using various equations of state. *Team member*
- 21) Marie Curie Initial Training Network SUPERGREENCHEM **I.2005 – XII.2007**. Project aims at the formation of highly educated young researchers in the research area of green chemistry. Project involved more than a dozen of European partners. *Team member*

Reviewer of scientific publications and projects

- 1) **2017**: Scientific reviewer and opponent of the PhD thesis of Ricardo Pezoa, PhD in Industrial Chemistry from Abo Akademi, Turku, Finland.
- 2) **2017**: Scientific reviewer of the PhD thesis of Yue Dong, PhD thesis in Chemistry from University of Oulu, Finland.
- 3) **2017**: Scientific reviewer of the PhD thesis of Laura Schneider, PhD thesis in Chemistry from University of Oulu, Finland.
- 1) **2017**: Editor of RSC Book entitled High Pressure Technologies in Biomass Conversion.
- 2) **2017**: External expert of UNI-SET (Universities in the SET Plan) of the Energy Transition and the Future of Energy Research, Innovation and Education: An Action Agendas for Europe’s Universities Report.
- 3) **2016-present**: External expert of European Commission for H2020 projects.
- 4) **2016-present**: Member of the Editorial Board of Bioethanol Journal of De Gruyter Open publisher.
- 5) **2016-present**: Guest Editor of special issue on Biorefinery of Sustainable Chemistry Processes of Springer publisher.
- 6) **2016-present**: Guest Editor of special issue on Green Biorefinery of Molecules Journal of MDPI publisher.
- 7) **2015**: Editor of RSC Book entitled Ionic liquids in the biorefinery concept.
- 8) **2015**: External expert of Fondazione Cariplo, Italy.
- 9) **2014**: Guest Editor of special issue on White Biotechnology of Sustainable Chemistry Processes of Springer publisher.
- 10) **2014**: External expert of Kazakhstan National Centre of Science and Technology.
- 11) **2012-2016**: Member of the Editorial Board of the Sustainable Chemistry Processes of Springer publisher.
- 12) **2010**: External expert of Estonian Foundation for Science
- 13) **2008-present**: A referee of more than 500 manuscripts. For more detail consult: <https://publons.com/author/952009/rafal-lukasik#stats>.

Scientific and academic awards and honours

- 1) **2016**: Supervisor of the Green Talents 2016 Awards (by German Federal Ministry of Education and Research) winner – Ana Rita Colaço Morais
- 2) **2016**: Luso-American Development Foundation Travel Award

Curriculum Vitae

- 3) **2016:** Full Member of American Chemical Society
- 4) **2016:** Green Chemistry Cover award for Green Chemistry 2016, 18, 2985-2994.
- 5) **2014:** Innovation for Sustainability in category: processes for the RefinOlea- Integrated Valorisation of Residues and Sub-Products of Olive Oil Extraction Project by Portuguese Environmental Agency (Lisbon, PT), Lisbon, Portugal
- 6) **2013:** Green Project Award for the RefinOlea- Integrated Valorisation of Residues and Sub-Products of Olive Oil Extraction Project by GCI Edelman Affiliate Lisbon, Portugal
- 7) **2012:** Poster award at the 3rd UBIOCHEM COST Action Conference for the work entitled Biological pathways of isoprene production, Thessaloniki, Greece.
- 8) **2012:** Certificate of Appreciation for the valuable contribution and dedicated service in the peer review of manuscripts submitted to ACS journals by Susan King, Senior Vice President of ACS Publication Group.
- 9) **2012:** “Rank #1 (Energ. Fuel., 2010, 24, 737) as The Most Cited Article” in Energy & Fuels published in the last 3 years.
- 10) **2012:** Hot news on Sustainable power generation in RSC Advances (RSC Publishing, 20/01/2012) <http://blogs.rsc.org/ra/2012/01/20/the-power-of-the-dragon/>
- 11) **2010:** Gulbenkian Foundation Travel Award
- 12) **2010:** Paper Awarded selection to Ionic Liquids Virtual Special Issue by the American Chemical Society (Energ. Fuel., 2010, 24, 737).
- 13) **2010:** Paper Awarded contribution to Biofuel Virtual Special Issue by the American Chemical Society (Energ. Fuel., 2010, 24, 737).
- 14) **2010:** Green Chemistry Cover award for Green Chemistry 2010, 12, 1947-1953.
- 15) **2009:** Green Chemistry Cover award for Green Chemistry 2009, 11, 1847-1856.
- 16) **2008:** The International Association of Chemical Thermodynamics Junior Award for Excellence in Thermodynamics by Elsevier.

Teaching activities

- 1) **X.2002-IX.2004:** Lecturer (laboratory and theoretical classes) of Physical Chemistry to BSc and MSc students at Warsaw University of Technology, Faculty of Chemistry, Warsaw, Poland.

Students' mentoring

Post-doctoral researchers

- 1) **VII.2017-VIII.2017:** Hassan Hosseini-Monfared: University of Zanjan, Zanjan, Iran, (researcher in the frame of BRI project).
- 2) **VI.2017-II.2018:** (foreseen) Joana Bernardo: Fellow in the frame of the AMBITION project.
- 3) **II.2015-III.2016:** Marcoaurélio Almenara Rodrigues: Federal University of Rio de Janeiro, Brazil (researcher in the frame of bilateral project between Portugal and Brazil).
- 4) **VII.2013-XII.2015:** Sandro Mireski: Regional University of Blumenau, Brazil (researcher in the frame of Pesquisador Visitante Especial project).

PhD students

- 5) **V.2017-VII.2017:** Hatice Neval Mucuk: PhD student from University of Gaziantep, Turkey (Erasmus student).
- 6) **XI.2016-X.2017:** Douglas Fockink: PhD student from Federal University of Parana, Curitiba, Brazil (researcher the frame of bilateral project between Portugal and Brazil).
- 7) **II.2015-I.2016:** Andréia Toscan: PhD student from University of Caxias do Sul, Brazil (researcher in the frame of bilateral project between Portugal and Brazil).
- 8) **V.2014-VII.2014:** Susana Peleteiro: PhD student from University of Vigo, Spain (Spanish Research Foundation grant).

Curriculum Vitae

- 9) **III.2014-II.2018:** (foreseen) Ana R. C. Morais: PhD student from REQUIMTE, Universidade Nova de Lisboa, Caparica, Portugal.
- 10) **IX.2013-VIII.2017:** André M. da Costa Lopes: PhD student from REQUIMTE, Universidade Nova de Lisboa, Caparica, Portugal.
- 11) **IX.2010-XII.2010:** Karina Gurganova: Extraction of thymoquinone using supercritical CO₂ University of Lodz, Lodz, Poland (Erasmus student).
- 12) **IV.2009-IX.2009:** Dobrochna Matkowska: Phase equilibria of systems containing ionic liquids and supercritical fluids, Warsaw University of Technology, Warsaw, Poland (Erasmus student).
- 13) **V.2008-VII.2008:** Karim Kriaa: Sustainable Hydrogenation of CO₂-Expanded Terpenes, University of Pau, Pau, France (Erasmus student).

Master students

- 14) **X.2017-III.2018:** (foreseen) Arelí Aguirre Fierro: MSc student from Autonomous University of Coahuila, Coahuila, Mexico (researcher in the frame of BBRI project).
- 15) **IX.2015-XI.2015:** Maria Daniela Matuschaki: MSc student from Regional University of Blumenau, Brazil (researcher in the frame of bilateral project between Portugal and Brazil).
- 16) **IX.2013-VIII.2014:** Vanessa Carvalho: Integrated ionic liquid-mediated biomass fractionation and hydrolysis, New University of Lisbon. Faculty of Science and Technology, Caparica, Portugal.
- 17) **II.2013-VII.2014:** Frederico Relvas: Alternative solvents for biomass valorisation. Biorefinery approach, University of Aveiro, Aveiro, Portugal
- 18) **IX.2013-II.2014:** Ana Mata: Supercritical fluids for biomass valorisation. Biorefinery approach. New University of Lisbon. Faculty of Science and Technology, Caparica, Portugal.
- 19) **IV.2013-II.2014:** Ana R. C. Morais: Fellow in the frame of the BIOFFA project.
- 20) **V.2013-VI.2013:** Stefania Muto: STSM of the COST UBIOCHEM CM0903 Action
- 21) **IV.2013-VIII.2013:** André Lopes: Fellow in the frame of the BIOFFA project.
- 22) **X.2012-III.2013:** André Lopes: Fellow in the frame of the PROETHANOL2G project
- 23) **X.2012-IX.2013:** Catarina Melo Fellow in the frame of the BIOFFA project
- 24) **IX.2012-VII.2013:** Sara Magalhães da Silva: Alternative Solvents in the Biomass Refinery Concept. University of Aveiro, Aveiro, Portugal
- 25) **IX.2011-VII.2012:** André M. da Costa Lopes: The biofuel and high value added product productions from the biomass and residues. University of Aveiro, Aveiro, Portugal.
- 26) **IX.2011-VII.2013:** Karen João: Pre-treatment of different types of lignocellulosic biomass using ionic liquids. New University of Lisbon, Caparica, Portugal.
- 27) **I.2009-II.2009:** Julia Wind: Hydrogenation of β -Myrcene in high-pressure carbon dioxide: Effect of hydrogen pressure, University of Vienna, Vienna, Austria (Erasmus student).
- 28) **X.2008-XII.2008:** Agnieszka Szudarska: Sustainable Hydrogenation of CO₂-Expanded Terpenes: Thermodynamics and Kinetics Studies, Warsaw University of Technology, Warsaw, Poland (Erasmus student).

Bachelor students

- 29) **IX.2015-XI.2015** Roberto Manoel G. Lins, BSc student from Regional University of Blumenau (researcher in the frame of Pesquisador Visitante Especial project).
- 30) **VIII.2013-I.2014:** Miriam Brenner: Extraction of phenolics from the post pre-treatment broth. University of Applied Science, Krems, Austria (Erasmus student).
- 31) **I.2013-VII.2013:** Márcia Almeida Ribeiro: Novel solvents for extraction of high value products from lignocellulosic biomass. University of Lisbon, Lisbon, Portugal.
- 32) **II.2012-VII.2012:** João Lino, Selective fractionation of hemicellulose and lignin from rice straw (Fraccionamento selectivo das hemiceluloses e lenhina da palha de arroz), New University of Lisbon, Caparica, Portugal.
- 33) **II.2012-VII.2012:** Antonio Lopes, Benchmarking of pre-treatment methods on the wheat straw example. New University of Lisbon, Caparica, Portugal.
- 34) **II.2012-VII.2012:** Joana Mafalda da Cruz Telhada: Optimization of hemicellulose hydrolysis using a pilot scale reactor. New University of Lisbon, Caparica, Portugal.

Curriculum Vitae

- 35) **VII.2011-VIII.2011:** Djonatam Rubik: Pre-treatment of biomass with ionic liquids, BSc student of FURB - Regional University of Blumenau, Brazil (researcher in the frame of PROETHANOL2G project).
- 36) **II.2011-VI.2011:** Lucinda Jesus A Conceição: Renewable materials processing in “green” solvents, New University of Lisbon, Caparica, Portugal.
- 37) **IX.2010-II.2011:** Andreia S. de Almeida Baptista Forte: Liquid-liquid Equilibria (LLE) - Solubility of Ionic Liquids in Alcohols. New University of Lisbon, Caparica, Portugal.
- 38) **IX.2010-II.2011:** Catarina I. Fernandes Lourenço: Solubility measurements of dienes in ionic liquids. New University of Lisbon, Caparica, Portugal.
- 39) **II.2010-VII.2010:** Linda Maria Nobre Gonçalves: Green/Sustainable Chemistry - Phase equilibrium phenomena in solutions involving antioxidants and ionic liquids. New University of Lisbon, Caparica, Portugal.
- 40) **II.2009-VII.2009:** Carlos Trindade: Green/Sustainable Chemistry Phase demixing phenomena in solutions involving Ionic Liquids. New University of Lisbon, Caparica, Portugal.

Other students

- 41) **VII.2017:** Mafalda Vincente, Use of ionic liquids as solvents for biomass fractionation - Lisbon, Portugal (student in the frame of the Ciência Viva programme).
- 42) **VII.2017:** Rodrigo Rodrigues, Use of ionic liquids as solvents for biomass fractionation - Lisbon, Portugal (student in the frame of the Ciência Viva programme).
- 43) **VII.2015:** Margarida Fidélis, Microalgae: their use as origin of biofuels and bioproducts - Lisbon, Portugal (student in the frame of the Ciência Viva programme).
- 44) **VII.2015:** Débora Andrade, Microalgae: their use as origin of biofuels and bioproducts - Lisbon, Portugal (student in the frame of the Ciência Viva programme).
- 45) **VII.2014:** Miguel Pires: Ionic liquids as biomass fractionation solvents - Lisbon, Portugal (student in the frame of the Ciência Viva programme).
- 46) **VII.2014:** Rafaela Reves: Ionic liquids as biomass fractionation solvents - Lisbon, Portugal (student in the frame of the Ciência Viva programme).
- 47) **VII.2013:** Catarina Casimiro: Waste to biofuel - student in the frame of the Ciência Viva programme).
- 48) **VII.2013:** Beatriz Colaço: Use of supercritical fluids for biomass fractionation – Lisbon, Portugal (student in the frame of the Ciência Viva programme).
- 49) **VII.2012:** Carolina Silva: Ionic liquids as solvents for biomass fractionation - Lisbon, Portugal (student in the frame of the Ciência Viva programme).
- 50) **VII.2011:** Ana Moreira: The contribution of ionic liquids in the bioenergy production - Aveiro, Portugal (student in the frame of the Ciência Viva programme).

Lisbon, 2nd February 2018