

"The best way to make advances in technology turns out to be to understand the principles.(...) In establishing such principles we must start by studying detail, often apparently trivial detail of things that are queer and appeal to human curiosity." Thomson, G., Science, 132 (1960) 996-999.

Publications and Communications of Maria da Graça Videira Sousa Carvalho

Publications in International journals

In press:

-

Published:

- Cátia V. Mendes, Jorge M. Rocha, Fabrícia F. Menezes, M. Graça Carvalho (2017). Batch and Fed-Batch Simultaneous Saccharification and Fermentation of Primary Sludge from Pulp and Paper Mills. Environmental Technology, 38(12): 1498-1506. Published online: 26 Sep 2016 DOI: 10.1080/09593330.2016.1235230
- Ivo M. Rodrigues, M. Graça V. S. Carvalho and Jorge M. S. Rocha. Increase of protein extraction yield from rapeseed meal through a pretreatment with phytase. Journal of the Science of Food and Agriculture. J Sci Food Agric, 97(8), pp. 2641-2646 (2017) online 14.10.2016 DOI: 10.1002/jsfa.8087
- Cátia V.T. Mendes, M. Graça V.S. Carvalho, Jorge M.S. Rocha (2017) "Bioethanol production from cellulosic fibers: comparison between batch and fed-batch saccharification. Cellulose Chemistry & Technology, 51:291-299.
- Cátia V.T. Mendes, Crispin H.G. Cruz, Diana F.N. Reis, M. Graça V.S. Carvalho, Jorge M.S. Rocha. Integrated bioconversion of pulp and paper primary sludge to second generation bioethanol using *Saccharomyces cerevisiae* ATCC 26602. Bioreources Technology, 220: 161-167 (2016). DOI: 10.1016/j.biortech.2016.07.140
- Joana I. T. Sousa, Ana I. G. Moura, Dmitry V. Evtuguin, M. Graça V. S. Carvalho (2015) Enzymatic treatment applied as a final stage in *E. globulus* kraft pulp bleaching. J Chem Technol Biotechnol. 91 (2): 547-554 (2016) DOI 10.1002/jctb.4624. online 19.Jan.2015;
- Cátia V.T. Mendes, Jorge M.S. Rocha, M. Graça V.S. Carvalho (2014) Valorization of Residual Streams from Pulp and Paper Mills: Pretreatment and Bioconversion of Primary Sludge to Bioethanol. Ind. Eng. Chem. Res., 53 (50) 19398–19404. DOI: 10.1021/ie503021y
- Rodrigues, I. M., Carvalho, M. G. V. S., and Rocha, J. M. S. (2014). "Increasing the protein content of rapeseed meal by enzymatic hydrolysis of carbohydrates," BioRes. 9(2), 2010-2025. DOI: 10.15376/biores.9.2.2010-2025.
BioRes_09_2_2010_Rodrigues_CR_Enzy_Hydrol_Rapeseed_Meal_Carbohydrates_4812

- Pedro E. G. Loureiro, Joana I. T. Sousa, M. Graça V. S. Carvalho, Dmitry V. Evtuguin (2013), Contribution of xylan to the brightness development and stability in the final ECF bleaching of eucalypt (*Eucalyptus globulus* Labill.) kraft pulp. *Holzforschung*. vol 67 Volume 67 (5), 497–503, DOI: 10.1515/hf-2012-0185, Published Online: 2013-03-14
- G.V. Duarte, A.I. Moura, R. Moreira, J. Nunes, M.M. Figueiredo, M. G. Carvalho (2013), Evaluation of several forest residues as potential raw material for bioethanol production in Portugal. *J. Bioprocess Eng. Biorefinery*, Vol. 2(1), 73-78. doi:10.1166/jbeb.2013.1035
- Paulo J.T. Ferreira, José A.F. Gamelas, Maria G.V.S. Carvalho, Gustavo V. Duarte, Jorge M.P.L. Canhoto, Raphael Passas (2013), Evaluation of the papermaking potential of *Ailanthus altissima*, *Industrial Crops and Products*, 42, 538– 542. doi: 10.1016/j.indcrop.2012.06.030
- M. G. Rasteiro, M.G. Carvalho, A. Ferreira, C. B Gaudencio, J. Granjo, Using a Web Platform Developed for the Teaching of Chemical Processes to Reach Secondary School Students, *International Journal of Online Engineering iJOE*, Volume 8, Special Issue 2: "exp.at'11", March 2012, p.42-48.
- Hélio J. M. Carreira, Pedro E. G. Loureiro, M. Graça V. S. Carvalho, Dmitry V. Evtuguin (2012) Reductive Degradation of Residual Chromophores in Kraft Pulp with sodium dithionite. *Tappi J.* 11(3) 59-67. IF: 0.788
- Pedro E. G. Loureiro, Sandrine Duarte, Graça V. S. Carvalho, Dmitry V. Evtuguin (2012) The Role of Copper Ions in Hydrogen Peroxide Bleaching: Their origin, removal, and effect on pulp quality, *Tappi J.* 11(7) 37-46 IF: 0.788
- Rodrigues, I.M., Coelho, J.F.J., Carvalho, M.G.V.S. "Isolation and valorisation of vegetable proteins from oilseed plants: methods, limitations and potential" *Journal of Food Engineering*, 109 (2012), pp. 337-346. Published online: 17-DEC-2011. DOI: 10.1016/j.jfoodeng.2011.10.027. IF:2.168
- Pedro E. G. Loureiro, M. Rosário M. Domingues, António J. S. Fernandes, M. Graça V. S. Carvalho, Dmitry V. Evtuguin (2012) Discriminating the brightness stability of cellulosic pulp in relation to the final bleaching stage. *Carbohydrate Polymers*. 88(2):726-733. doi:10.1016/j.carbpol.2012.01.024 IF: 3.463
- Tatiana M. Póvoas, Dina A.G. Angélico, Ana P.V. Egas, Pedro E.G. Loureiro, Licínio M. Gando-Ferreira and M.Graça V.S. Carvalho (2012) Pre-Bleaching of Eucalypt Kraft Pulps With OP Stages: Effect of an Acid Pretreatment or a Chelation Step. *Tappi J.* 11 (6) 31-38. IF: 0.788
- Area, M.C. Felissia, F.E., Carvalho, M. G.V.S., Ferreira, P.J., Barboza, O., Bengoechea, D. (2011) Characterization of *Eucalyptus grandis* Kraft Pulps Treated with Phosphonates in Different Stages of TCF Bleaching. *BioResources*, 6(2): 2077-2090. IF: 1.418
- Cátia V.T. Mendes, Jorge M.S. Rocha, Belinda I.G. Soares, Gabriel D.A. Sousa, M. Graça V.S. Carvalho (2011) Extraction of hemicelluloses prior to kraft cooking: a step for an integrated biorefinery in the pulp Mill. *O papel*, 72(9) 79-83.
- João P. F. Simão, M. Graça V. S. Carvalho and Cristina M. S. G. Baptista, (2011) Heterogeneous Studies in Pulping of Wood: Modelling Mass Transfer of Dissolved Lignin, *Chem Eng Journal*,170: 264-269. IF: 3.074 doi:10.1016/j.cej.2011.03.046
- Pedro E.G. Loureiro, António J.S. Fernandes, Fernanda P. Furtado, M. Graça V.S. Carvalho, Dmitry V. Evtuguin (2011) UV-Resonance Raman micro-spectroscopy to assess residual chromophores in cellulosic pulps, *Journal of*

Raman Spectroscopy 42(5), 1039–1045 (DOI 10.1002/jrs.2816). Article first published online: 4 NOV 2010. IF: 3.137.

<http://onlinelibrary.wiley.com/doi/10.1002/jrs.2816/pdf>

- Pedro E.G. Loureiro, Dmitry V. Evtuguin, M. Graça V.S. Carvalho (2011) The final bleaching on eucalypt kraft pulps with hydrogen peroxide: relationship to industrial ECF bleaching history and cellulose degradation. Journal of Chemical Technology & Biotechnology 86(3): 381–390 (DOI 10.1002/jctb.2527) Article first published online: 28 OCT 2010.
<http://onlinelibrary.wiley.com/doi/10.1002/jctb.2527/pdf>
- Pedro E. G. Loureiro, A. Sofia M. Santos, Dmitry V. Evtuguin and M. Graça V. S. Carvalho (2011), The influence of ECF bleaching history on the performance of a final hydrogen peroxide stage. Appita J., 64(1)83-88
- Pedro E. G. Loureiro, Eva F. Domingues, Dmitry V. Evtuguin, M. Graça V. S. Carvalho (2010), ECF bleaching with a final hydrogen peroxide stage: impact on the chemical composition of Eucalyptus globulus kraft pulp, BioRes. 5(4):2576-2580.
http://www.ncsu.edu/bioresources/BioRes_05/BioRes_05_4_2567_Loureiro_D_ECF_Bleach_H2O2_Chem_Comp_Eucalyptus_1143.pdf
- Pedro E. G. Loureiro, António J. S. Fernandes, M. Graça V. S. Carvalho, Dmitry V. Evtuguin, (2010) The assessment of chromophores in bleached cellulosic pulps employing UV-Raman spectroscopy. Carbohydr. Res. 345(10):1442-1451. DOI: 10.1016/j.carres.2010.02.016 .
http://www.sciencedirect.com/science?_ob=MImg&_imagekey=B6TFF-4YFTM4M-2&_cdi=5225&_user=2459680&_pii=S0008621510000741&_origin=browse&_zone=rslt_list_item&_coverDate=07%2F02%2F2010&_sk=996549989&wchp=dGLzVlz-zSkWA&md5=2645fa666fbbce8481f27d3a94c840a6&ie=/sdarticle.pdf
- J. F. Granjo, M. G. Rasteiro, L. M. Gando-Ferreira, F. P. Bernardo, M. G. Carvalho, A. G. Ferreira (2009) A Virtual Platform to Teach Separation Processes. Computational Applications in Engineering Education doi.wiley.com/10.1002/cae.20383; Computer applications in Eng. Education. Article first published online: 28 October 2009 IF: 0.321
- M. G. Rasteiro, L. Ferreira, J. Teixeira, F. P. Bernardo, M. G. Carvalho, A. Ferreira, R. Q. Ferreira, F. Garcia, C.M.S.G. Baptista, N. Oliveira, M. Quina, L. Santos, P. A. Saraiva, A. Mendes, F. Magalhães, A. S. Almeida, J. Granjo, M. Ascenso, R. M. Bastos, R. Borges (2009) "LABVIRTUAL - a Virtual Platform to Teach Chemical Processes" Education for Chemical Engineers, Vol 4, Issue 1, April 2009, Pages e9-e19, doi:10.1016/j.ece.2009.02.001. (Top 25 hottest articles April/June 2010 (1st place) and July/September 2009 Top 10 of the "most cited articles" 2008-2010 - 2nd place)
- Area, M. C., Carvalho, M.G.V.S., Ferreira, P.J., Felissia, F.E., Barboza, O.M., Bengoechea, D.I. (2009) The Influence Of Pulping And Washing Conditions on The Properties of Eucalyptus grandis Unbleached Kraft Pulps treated with chelants, Bioresources Technology Volume 101, Issue 6, March 2010, Pages 1877-1884, <http://dx.doi.org/10.1016/j.biortech.2009.10.004>
- Loureiro, P. E. G., Ferreira, P. J., Evtuguin, D. V., Carvalho M. G. V. S. (2009), "Effect of the final ECF bleaching stage on eucalyptus kraft pulp properties - a comparison between hydrogen peroxide and chlorine dioxide" Pulp Pap.-Can., 110(9): 23 (Full peer-reviewed manuscript available on www.paptac.com) (5

pages) invited paper;

http://www.paptac.ca/index.php?option=com_content&task=view&id=140&Itemid=77

- Mendes, C.V.T., Carvalho, M.G.V.S., Baptista, C.M.S.G., Rocha, J.M.S., Soares, B. I. G., Sousa, G.D.A (2009) "Valorisation of hardwood hemicelluloses in the kraft pulping process by using an integrated biorefinery concept", *Food and Bioproducts Processing*, (special issue "Biorefinery Integration") 87(3): 197-207. <http://dx.doi.org/10.1016/j.fbp.2009.06.004>
- Cátia V.T. Mendes, Cristina M.S.G. Baptista, Jorge M.S. Rocha, M. Graça V.S. Carvalho (2009)"Prehydrolysis of Eucalyptus globulus hemicelluloses prior to pulping and fermentation of the hydrolysates with the yeast *Pichia stipitis*", *Holzforschung*, vol 63, pp 737-743. DOI 10.1515/HF/2009.106.
- Loureiro, P.E.G., Antunes, J.M.C., Gando-Ferreira, L.M., Evtuguin, D.V., Carvalho, M.G.V.S, 2009, Comparison of brightening kinetics in the final hydrogen peroxide stage of DE_{OP}DP and OQ(PO)DP bleaching sequences. *O papel*, 70(5):56-68 (Maio). http://www.revistaopapel.org.br/noticia-anexos/1271337913_3361319f43e3d5b1967122085611cce3_1755794848.pdf
- J. P. F. Simão, A. P. V. Egas, M. G. Carvalho, C. M. S. G. Baptista, and J. A. A. M. Castro (2008) Heterogeneous studies in pulping of wood: modelling mass transfer of alkali. *Chem Eng Journal* 139(3) 615-621
- M. Graça V.S. Carvalho, Nuno M. V. Carvalho Pedro E. G. Loureiro (2008) Performance of a Final Hydrogen Peroxide Stage in the ECF Bleaching of Eucalypt D₀E_{OP}D₁ Kraft Pulps" *Tappi J.* , 7(8), 8-13. <http://www.tappi.org/Bookstore/Technical-Papers/Journal-Articles/TAPPI-JOURNAL/Archives/2008/August/Table-of-Content/Performance-of-a-final-hydrogen-peroxide-stage-in-the-ECF-bleaching-of--Eucalypt-D0EOPD1-kraft-pulps.aspx>
- S. F. Mota, M.G.Carvalho, L.M.G. Ferreira, 2006, "Pressurized hydrogen peroxide bleaching of Eucalyptus globulus pulps. Part II: Kinetics" *Nord. Pulp Paper Res J.* 22(1) 23-27. 10.3183/NPPRJ-2007-22-01-p023-027
- S. F. Mota, J.G. Paulo,C.A. Van Zeller, L.M.G. Ferreira, M.G.Carvalho, 2006, "Pressurized hydrogen peroxide bleaching of Eucalyptus globulus pulps. Part I: Effect of process variables" *Nord. Pulp Paper Res J.* 22(1) 17-22. 10.3183/NPPRJ-2007-22-01-p017-022
- M. G. Carvalho, J.R. Fernandes, L.A. Ferreira, C.A. Van Zeller, J.Pinho Ferreira, P.J. T. Ferreira (2005) "Efeito da Secagem no Potencial Papeleiro de Pastas Kraft de Eucalipto – Uma Experiência Industrial" *O Papel*, ano LXVI, nº 10 (Out 2005): 2-10.
- J. P. F. Simão, A.P.V. Egas, C.M. S. G. Baptista, M. G. Carvalho (2005) "Cinética das reacções dos ácidos glucurónicos e hexenurónicos no cozimento kraft de Eucalyptus globulus " *O papel (Suplemento técnico)* Ano V, nº2, Maio 2005: 37-44.
- J. P. F. Simão, A. P. V. Egas, C. M. S. G. Baptista, M. G. Carvalho and J. A. A. M. Castro (2005) "Evolution of Methylglucuronic and Hexenuronic Acid Contents of Eucalyptus globulus pulp during Kraft delignification" *Ind Eng Chem Res*, 44(9):2990-2996. DOI: 10.1021/ie049062e. <http://pubs.acs.org/cgi-bin/article.cgi/iecred/2005/44/i09/pdf/ie049062e.pdf>
- J. P. F. Simão, A. P. V. Egas, C. M. S. G. Baptista and M. G. Carvalho (2005) "Heterogeneous Kinetic Model for the Methylglucuronic and Hexenuronic Acids Reactions During Kraft Pulping of Eucalyptus globulus" *Ind Eng Chem*

- Res, 44(9):2997-3002. DOI: 10.1021/ie049061m. <http://pubs.acs.org/cgi-bin/article.cgi/iecred/2005/44/i09/pdf/ie049061m.pdf>
- M. G. Carvalho, J.M.R.C.A. Santos, A. A. Martins and M. M. Figueiredo (2005) – The effects of beating, web forming and sizing on the surface energy of Eucalyptus globulus kraft fibres evaluated by inverse gas chromatography, Cellulose, 12:371-383. DOI 10.1007/s10570-004-7738-0.
<http://www.springerlink.com/content/37x2215233088j81/fulltext.pdf>
 - M. G. Carvalho, P. J. Ferreira, J.M.R.C.A. Santos, J.L. Amaral, M. M. Figueiredo (2005) - Effect of extended cooking and oxygen prebleaching on the surface energy of Eucalyptus globulus kraft pulps, Journal of Pulp and Paper Science, 31(2) 90-94;
 - A.I. Pedroso, M.G. Carvalho (2003) - Alkaline pulping of Portuguese Eucalyptus globulus: Effect on Hexenuronic Acid Content, Journal of Pulp and Paper Science, 29(5) 150-154.
 - M. G. V. Carvalho, A.A. Martins e M.M. Figueiredo (2003) - Kraft pulping of Portuguese Eucalyptus globulus: effect of process conditions on yield and pulp properties, Appita, 56(4) 267-274.
 - I. Luís, M. Figueiredo, A. Martins, G. Carvalho (2002) “Influência do teor de finos nas propriedades papeleiras de pasta kraft de Eucalyptus globulus” O Papel, 63(4) 83-89.
 - G. V. Carvalho e M.L. Figueiredo (2001) “Cocción kaft de Eucalyptus globulus portugués: Modelos Empíricos”, Información Tecnológica, 12(5), 131-138 (revista do Centro de Información Tecnológica, Chile)
 - M.G.Carvalho, P.J. Ferreira e M.M. Figueiredo (2000) “Cellulose Depolymerisation and Paper Properties in E. globulus Kraft Pulps”, Cellulose, 7(4) 359-368.
<http://www.springerlink.com/content/jtt6262019077426/fulltext.pdf>
 - M.G. Carvalho, A.A. Martins e M.M. Figueiredo (1997) “Fraccionamento de pasta kraft de eucalipto: caracterização físico-química e desempenho papeleiro”, O Papel, 58(7) 83-86
 - M. G. Carvalho, P.J. Ferreira, A.A. Martins and M.M. Figueiredo (1997) “ A comparative study of two automated techniques for measuring fiber length” Tappi J., 80(2), 137-142.
 - F. M. Gama, M. G. Carvalho, M. M. Figueiredo and M. Mota (1997) “Comparative study of cellulose fragmentation by enzymes and ultrasound”, Enzyme Microb. Technol., 20(1), 12-17.
 - Barros, M.T., M.G.V. Carvalho, F.A.P. Garcia and E.M.V. Pires (1992) “Stability Performance of Cynara cardunculus L. Protease in Aqueous - Organic Biphasic Systems”, Biotechn. Lett., 14(3)179-184.

Book Chapters

L.P. Ramos, M. Maximino, M.G. Carvalho (2008) Analytical Methods for cellulose chemical characterization". Cap. VII. in Panorama de la Industria de Celulosa y Papel en Iberoamérica 2008. Area M. C. (Ed) Red Iberoamericana de Docencia e Investigación en Celulosa y Papel (RIADICYP). Argentina. ISBN 978-987-24513-0-1. pp 277-312.

Carvalho, M.G.V.S., Baptista, C.F.A., Mendes, C.V.T., Rocha, J.M.S (2009) “Hemicelluloses: from wood to the fermenter” in Current Research Topics in

Applied Microbiology and Microbial Biotechnology", A. Mendez-Dias (ed) ISBN: 978-981-283-754-7, World Scientific Publishing Co., p. 46-50.

Rocha, J.M.S., Gomes, L.F.F., Mendes, C.V.T., Carvalho, M.G.V.S., Baptista, C.M.S.G. (2009) "Xylose from Eucalyptus globulus wood as a raw material for bioethanol production", in Current Research Topics in Applied Microbiology and Microbial Biotechnology", A. Mendez-Dias (ed) ISBN: 978-981-283-754-7, World Scientific Publishing Co., p. 475-480.

Publications in Conference Proceedings

- Cátia V.T Mendes, Jorge M.S. Rocha, Ângelo A.S. Feliciano, M. Graça V.S. Carvalho. The scale-up of the simultaneous saccharification and fermentation of primary sludge for ethanol production. XXIII TECNICEELPA - International Forest, Pulp and Paper Conference 12-14 October, 2016 - Porto, Portugal (oral presentation). Book of Abstracts ISBN 978-989-20-7003-2. Pg 81. Full paper in CD-Rom, 8 pages.
- M. Graça V.S. Carvalho, Joana I.T. Sousa, Dmitry V. Evtuguin. Advanced ECF bleaching of E. globulus kraft pulp using bacterial and fungal xylanases: a comparative study. XXIII TECNICEELPA - International Forest, Pulp and Paper Conference 12-14 October, 2016 - Porto, Portugal (oral presentation). Book of Abstracts ISBN 978-989-20-7003-2. Pg 47. Full paper in CD-Rom, 8 pages.
- M. Graça V.S. Carvalho, Filipe M.R. Afonso, Tânia S.N. Marques, Jorge M.S. Rocha, Abel G.M. Ferreira. Deconstruction of lignocellulosic biomass with green solvents. XXIII TECNICEELPA - International Forest, Pulp and Paper Conference 12-14 October, 2016 - Porto, Portugal (poster presentation and 5 min oral pitch). Book of Abstracts ISBN 978-989-20-7003-2. Pg 175. Full paper in CD-Rom, 8 pages.
- Joana I. T. Sousa, Dmitry V. Evtuguin, M. Graça V. S. Carvalho, Performance of enzymatic stage in ECF bleaching sequences of eucalypt kraft pulp. IPBC 2014 – International Pulp Bleaching Conference, October 29-31, 2014, Grenoble, France. CD Proceedings, pp121-127 (oral presentation).
- C.V.T. Mendes, M.G.V.S. Carvalho, J.M.S. Rocha. Fermentation in two operation scales of enzymatic hydrolysates of industrial lignocellulosic materials for the production of bioethanol. Chempor 2014, 12th International Chemical and Biological Engineering Conference, September 10-12, Porto (poster presentation). pp10.32-10.34.
- Joana I. T. Sousa, Dmitry V. Evtuguin, M. Graça V. S. Carvalho, Effect of xylanase origin on removal of xylan-associated chromophore structures in bleached E. globulus kraft pulp, Book of proceedings of the EWLP 2014 - 13TH EUROPEAN WORKSHOP ON LIGNOCELLULOSICS AND PULP, (pg. 803-806) Poster presentation (P-162), June 24-27, 2014, Seville, Spain
- Pedro E. G. Loureiro, Joana I. T. Sousa, M. Graça V. S. Carvalho, Dmitry V. Evtuguin. Impact of Remaining Xylan to the Brightness Development and Stability of Eucalypt Kraft Pulp, XXII Encontro Nacional da TECNICEELPA, 2-4 Outubro 2013, Tomar, Portugal (oral presentation – O05, Book of abstracts, p.37). CD-ROM, 8 pages.
- Cátia V.T. Mendes, Jorge M.S. Rocha, Fabrícia F. Menezes, M. Graça V.S. Carvalho. Alternative Pathways for the Biological Valorization of Primary Sludge From Pulp and Paper Mills. XXII Encontro Nacional da TECNICEELPA,

2-4 Outubro 2013, Tomar, Portugal (oral presentation – O28, Book of abstracts, p.87). CD-ROM, 8 pages.

- Jorge M. S. Rocha, Cátia V. T. Mendes and M. Graça V. S. Carvalho. Bioconversion of residual biomass from the centre of Portugal into energy and chemicals. Energy for Sustainability 2013. Sustainable Cities: Designing for People and the Planet. Coimbra, Portugal, 8 to 10 September 2013. Oral Presentation (5 pages).
- Mendes, Cátia V. T.; Carvalho, M. Graça V. S.; Menezes, Fabrícia F.; Rocha, Jorge M. S. Simultaneous Saccharification and Fermentation of Primary Sludge from a Portuguese Pulp Mill. CIAB 2013 2º congreso iberoamericano sobre biorrefinerias. Jaen, Spain, 10-12 April. Poster presentation Book of abstracts, p.457-458.
- Mendes, Cátia V.T.; Carvalho, M. Graça V.S.; Menezes, Fabrícia F., Rocha, Jorge M.S. Kinetics Of Bioethanol Yield In Different Cellulosic Mater In Separated Hydrolysis And Simultaneous Saccharification Fermentation. SAM-CONAMET 2013 (International Congress of Science and Technology of Metallurgy and Materials) - International Symposium On Lignocellulosic Materials. Puerto Iguazú, Argentina, 20-23 Agosto. Poster presentation (33-T4 POSTER TC). 9 pages. <https://drive.google.com/folderview?id=0Bwg2HE6z6CGZHpaYVpwTFNxYTA&usp=sharing&tid=0Bwg2HE6z6CGTzE1eE5LSVotSms#list>
- Cátia V. T. Mendes, M. Graça V. S. Carvalho, Jorge M. S. Rocha (2012) Pretreatment, enzymatic hydrolysis and ethanolic fermentation of pulp and paper mill residues, IAMAW, 1st international workshop - Valorization of mediterranean biowastes and effluents, 5-8 June Santarém (oral presentation).
- Ivo M.A. Rodrigues, M. Graça V.S. Carvalho, Jorge M.S. Rocha (2012) Valorisation of rapeseed meal: crucial factors in protein extraction and issues related to protein evaluation method , IAMAW, 1st international workshop - Valorization of mediterranean biowastes and effluents, 5-8 June Santarém (poster presentation)
- Cátia V.T. Mendes, Jorge M.S. Rocha, M. Graça V.S. Carvalho, Primary sludge from pulp and paper mills as a potential raw-material to produce value-added products. ABTCP-CIADICYP2012, São Paulo-Brasil (oral presentation).
- M. Graça V.S. Carvalho, Pedro E.G. Loureiro, Dmitry V. Evtuguin, The role of xylan on the brightness gain and stability of eucalypt bleached pulp in relation to the final bleaching stage. ABTCP-CIADICYP2012, São Paulo-Brasil (poster)
- Pedro E. G. Loureiro, M. Graça V. S. Carvalho, Dmitry V. Evtuguin. "Xylan contribution to the brightness development and stability in the final ECF bleaching of eucalypt kraft pulp". EWLP 2012 - 12TH EUROPEAN WORKSHOP ON LIGNOCELLULOSICS AND PULP August 27 - 30, 2012, Espoo, Finland (oral presentation)
- C.V.T. Mendes, M.G.V.S. Carvalho, J.M.S. Rocha, Bioconversion of primary sludge from Portuguese pulp and paper mills to fermentable sugars. NWBC-2012. Helsinki, October. (poster)
- Cátia MENDES, M. Graça CARVALHO, Jorge ROCHA, "Biochemical conversion of Pulp and Paper Mill streams to valorize their carbohydrate content", 2012 IUFRO All Division 5 Conference, Lisbon 8-13 July. (oral presentation) OP131, page 115.
- Carreira HJM, Loureiro PEG, Evtuguin DV, Carvalho MGVS. Reductive degradation of residual chromophores in kraft pulp. IPBC'2011, International

Pulp Bleaching Conference, October 05 - 07, 2011, Portland, Oregon, USA – (oral communication). Proceedings book (p.185-188)+CD-Rom (11 pages: p.431-441).

- Loureiro, P.E.G., Duarte, S., Evtuguin, D.V., Carvalho, M.G.V.S. On the role of copper ions in alkaline hydrogen peroxide bleaching of kraft pulps. IPBC2011 International Pulp Bleaching Conference, October 05 - 07, 2011, Portland, Oregon, USA (oral presentation). Proceedings book (p.97-116)+CD-Rom (15 pages: p.200-214).
- M. Graça V.S. Carvalho, Ana R. C. Simões, Jorge M.S. Rocha. Isolation of proteins from rapeseed meal. Chempor 2011, 11th International Chemical and Biological Engineering Conference, 05 - 07 September, 2011, Caparica, Lisbon, Portugal (extended abstract, p.114). Poster presentation.
- Jorge M.S. Rocha, Diana L.T.F.M. Correia, M. Graça V.S. Carvalho Valorisation of soybean meal: protein concentration by ethanolic extraction of carbohydrates. Chempor 2011, 11th International Chemical and Biological Engineering Conference, 05 - 07 September, 2011, Caparica, Lisbon, Portugal (extended abstract, p.130). Poster presentation.
- Jorge M.S. Rocha, M.Graça V.S. Carvalho. Enzymatic hydrolysis studies of hemicelluloses from eucalyptus wood autohydrolysates. Chempor 2011, 11th International Chemical and Biological Engineering Conference, 05 - 07 September, 2011, Caparica, Lisbon, Portugal (extended abstract, p.150). Poster presentation.
- Cátia V.T. Mendes, Jorge M.S. Rocha, M. Graça V.S. Carvalho. Enzymatic hydrolysis of pretreated primary sludge from a Portuguese pulp and paper mill. Chempor 2011, 11th International Chemical and Biological Engineering Conference, 05 - 07 September, 2011, Caparica, Lisbon, Portugal (extended abstract, p.23). Oral presentation.
- Fátima A. V. Coimbra, Pedro E. G. Loureiro, Eduardo L. T. Conceição, Dmitry V. Evtuguin and M. Graça V. S. Carvalho. Development of kinetic models in the final ECF bleaching of *E. globulus* kraft pulps with hydrogen peroxide. Chempor 2011, 11th International Chemical and Biological Engineering Conference, 05 - 07 September, 2011, Caparica, Lisbon, Portugal (extended abstract, p.601). Oral presentation.
- M. Graça V. S. Carvalho; Cátia V. T. Mendes, Belinda I. G. Soares, Gabriel D. A. Sousa, Jorge M. S. Rocha (2011) Valorisation of lignocellulosic biomass for an integrated biorefinery in the pulp and paper industry, 5th ICEP (International Colloquium on Eucalyptus Pulp) Porto Seguro, Brasil, Maio 9-12 (poster). CD-Rom (10 pages)
- Pedro E. G. Loureiro, Dmitry V. Evtuguin, M. Graça V. S. Carvalho, (2011) A comprehensive study on the final bleaching of eucalyptus kraft pulps with hydrogen peroxide, 5th ICEP (International Colloquium on Eucalyptus Pulp) Porto Seguro, Brasil, Maio 9-12 (poster). CD-Rom proceedings, 4 pages
- Pedro E. G. Loureiro, M. Graça V. S. Carvalho, Dmitry V. Evtuguin. On the role of xylan in the final bleaching of eucalypt kraft pulps with hydrogen peroxide and chlorine dioxide. 16th ISWFPC, International Symposium on Wood, Fibre and Pulping Chemistry - will be held in Tianjin, China, June 08-10, 2011 (4 pages). poster presentation.

- Loureiro, Pedro; M.G.V.S. Carvalho; D.V. Evtuguin; Towards Better Understanding Of Brightness Reversion In ECF Bleached Eucalypt Kraft Pulps Employing Uv/Vis Diffuse Reflectance And Uv Resonance Raman Spectroscopy EWLP 2010, 11th European Workshop on Lignocellulosics and Pulp,, Hamburg, (Agust 16-19) 2010. (poster presentation). pp.521- 524 (4 pages).
- Pedro E. G. Loureiro, A. Sofia M. Santos, Dmitry V. Evtuguin, M. Graça V. S. Carvalho, Desempenho de um estágio final de peróxido de hidrogénio em diferentes sequências de branqueamento ECF (Performance of a final hydrogen peroxide stage in different ECF bleaching sequences), XXI Encontro Nacional da TECNICELPA / VI CIADICYP 2010, 12-15 Outubro 2010 - Lisboa, Portugal. (Cd-Rom) 8 pgs ISBN 978-989-20-1927-1 (ORAL communication, O14). Book of Abstracts p.70-71. ISBN 978-989-20-1926-0
- Pedro E.G. Loureiro, António J.S. Fernandes, Fernanda P. Furtado, M. Graça V.S. Carvalho, Dmitry V. Evtuguin, Progressos na química de cromóforos de pastas de eucalipto utilizando micro-espectroscopia de raman ressonante no UV (New insights into chromophore chemistry of eucalypt pulps assessed by UV-resonance raman micro-spectroscopy), XXI Encontro Nacional da TECNICELPA / VI CIADICYP 2010, 12-15 Outubro 2010 - Lisboa, Portugal. (Cd-Rom) 8 pgs. ISBN 978-989-20-1927-1 (ORAL communication, O46). Book of Abstracts p.136-137. ISBN 978-989-20-1926-0.
- M. Graça V.S. Carvalho, Jorge M.S. Rocha, Perspectivas para a valorização de lamas primárias na indústria de pasta (An approach on the valorisation of pulp sludge), XXI Encontro Nacional da TECNICELPA / VI CIADICYP 2010, 12-15 Outubro 2010 - Lisboa, Portugal. (Cd-Rom ISBN 978-989-20-1927-1) 8 pgs (Poster P61). Book of Abstracts p.322-323. ISBN 978-989-20-1926-0.
- Cátia V.T. Mendes, Jorge M.S. Rocha, Gabriel D.A. Sousa, M. Graça V.S. Carvalho, Extracção de hemiceluloses antes do cozimento kraft: um passo para biorefinaria integrada numa fábrica de pasta (Extraction of hemicelluloses prior to kraft cooking: a step for an integrated biorefinery in the pulp mill). XXI Encontro Nacional da TECNICELPA / VI CIADICYP 2010, 12-15 Outubro 2010 - Lisboa, Portugal. (Cd-Rom ISBN 978-989-20-1927-1) 8 pgs (ORAL communication O65), Book of Abstracts p.178-179. ISBN 978-989-20-1926-0 posterior publicado por convite na revista “O papel” vol72 (9) 79-83, Set 2011.
- P.E.G. Loureiro, A.J.S. Fernandes, M.G.V.S. Carvalho, D.V. Evtuguin (2009) On the origin and removal of chromophores in kraft pulps during hydrogen peroxide and chlorine dioxide bleaching employing uv-raman spectroscopy, 15th European Carbohydrate Symposium (EUROCARB15), Viena (July 19-24), oral presentation (CD-Rom)
- Loureiro, P.E.G., Domingues, E.F.,Evtuguin, D.V.,Carvalho, M.G.V.S.,2009 “Further Insights into Hydrogen Peroxide Decomposition in Chemical Pulp Bleaching”, 15th International Symposium on Wood, Fibre and Pulping Chemistry – ISWFPC 2009, Oslo (June 15-18) (poster) CD-Rom
- Area, María C., Felissia, Fernando E., Ferreira, Paulo J., Carvalho, M. Graça, Barboza, Olga, Bengoechea, D. (2008) Caracterización de pulpas kraft de Eucalyptus grandis tratadas con fosfonatos en diferentes etapas de blanqueo TCF. Proceedings of the CIADICYP 2008 – V Congreso Iberoamericano de Investigacion en Celulosa y Papel 2008, Guadalajara, Jalisco, México (October 20-23), nº 16-20, p. 50-51, full paper em CD-ROM (10 págs), (oral presentation)

- Carvalho, M. Graça V.S., Mendes, Cátia V.T., Baptista, Cristina M.S.G., Rocha, Jorge M.S. (2008) Valorização energética das hemiceluloses de Eucalyptus globulus extraídas antes do cozimento. Proceedings of the CIADICYP 2008 – V Congreso Iberoamericano de Investigacion en Celulosa y Papel 2008, Guadalajara, Jalisco, México (October 20-23), nº 61-98, abstract p. 202-204, full paper em CD-ROM (10 págs), (poster)
- Carvalho, M.G.V.S., Evtuguin, D.V., Loureiro, P.E.G., (2008) “Using Hydrogen Peroxide in the Final ECF Stage of E. globulus Kraft Pulps – optimization studies”, Proceedings of the CIADICYP 2008 – V Congreso Iberoamericano de Investigacion en Celulosa y Papel 2008, Guadalajara, Jalisco, México (October 20-23), nº 17-95, p. 53-54, full paper em CD-ROM (10 págs), (oral presentation)
- Loureiro, P.E.G., Antunes, J.M.C., Gando-Ferreira, L.M., Evtuguin, D.V., Carvalho, M.G.V.S., (2008) “Comparison of Brightening Kinetics in the Final Hydrogen Peroxide Stage of DEOPDP and OQ(PO)DP Bleaching Sequences”, Proceedings of the ABTCP 2008 – 41st International Pulp and Paper Congress, São Paulo (October 13-16) ST-CP20 (CD-ROM), (oral presentation)
- Mendes, CVT, Baptista, CMSG, Rocha, JMS, Carvalho, MGVS (2008) Fermentation of wood hydrolysates extracted prior to pulping for valorisation of Eucalyptus globulus hemicelluloses. EWLP 2008, 10th European Workshop on Lignocellulosics and Pulp, STOCKHOLM (Agust 25-28), pg 113-116, full paper em CD-ROM (4 págs) (oral presentation)
- M. G. Rasteiro, L. Gando-Ferreira, J. C. Teixeira, F. P. Bernardo, M. G. Carvalho, A. Ferreira, R. Quinta-Ferreira, F. Garcia, C. G. Baptista, N. Oliveira, M. Quina, L. Santos, P. A. Saraiva, A. Mendes, F. Magalhães, J. Granjo, R. Moura, M. Ascenso, R. Borges, A. Sofia (2008) Enhancing engineering education in the area of chemical processes through a virtual platform – The LABVIRTUAL, Proceedings of the Chempor 2008 - 10th International Chemical and Biological Engineering Conference, Braga, (September 4-6), F01, p.227-228 (Book of Abstracts), full paper em CD-ROM ISBN 978-972-97810-3-2 (6 págs) (oral presentation)
- Cátia V.T. Mendes, Jorge M.S. Rocha, Cristina M.S.G. Baptista, M. Graça V.S. Carvalho (2008) Treatment of wood hydrolysates for bioethanol production by fermentation. Proceedings of the Chempor 2008 - 10th International Chemical and Biological Engineering Conference, Braga, (September 4-6) E21, p.212-213 (Book of Abstracts), full paper em CD-ROM ISBN 978-972-97810-3-2 (6 págs) (oral presentation)
- João P. F. Simão, Cristina M. S. G. Baptista, M. Graça Carvalho (2008) Heterogeneous model for mass transfer of dissolved lignin during kraft pulping of Eucalyptus globulus, Proceedings of the Chempor 2008 - 10th International Chemical and Biological Engineering Conference, Braga, (September 4-6) PA008, p.253-254 (Book of Abstracts), full paper em CD-ROM ISBN 978-972-97810-3-2 (6 págs) (poster)
- Loureiro, P.E.G., Evtuguin, D.V., Carvalho, M.G.V.S., (2008) “Kinetics of Kraft Pulp Brightening in a Final ECF Stage”, Proceedings of the Chempor 2008 - 10th International Chemical and Biological Engineering Conference, Braga, (September 4-6) PC063, p.599-600 (Book of Abstracts), full paper em CD-ROM ISBN 978-972-97810-3-2 (6 págs) (poster)
- M.G. Rasteiro, M.G.V.S. Carvalho, C. M. S. G. Baptista, A. Ferreira and J. Granjo (2008) Using a Web Platform to the Teaching of Chemical Processes for

- Secondary School Students Outreach" ICEE, nº44, full paper em CD-ROM (10 págs) (oral presentation)
- Loureiro, P.E.G., Ferreira, P.J., Evtuguin, D.V., Carvalho, M.G.V.S., (2008) "Effect of the Final ECF Bleaching Stage on the Eucalyptus Kraft Pulp Properties – a comparison between hydrogen peroxide and chlorine dioxide", Proceedings of the International Pulp Bleaching Conference, Québec City, 259-263 (June 2-5, 2008) (poster)
 - Carvalho, M.G.V.S., Baptista, C.F., Mendes, C.V.T., Rocha, J.M.S (2007) "Hemicelluloses: from wood to the fermenter" BioMicroWorld-2007, II International Conference on Environmental, Industrial and Applied Microbiology, 28Nov-1Dec , Seville, p.32 (oral presentation)
 - J.M.S. Rocha; L.F.F. Gomes; C.V.T. Mendes; M.G.V.S. Carvalho; C.M.S.G. Baptista (2007) "Xylose from Eucalyptus globulus wood as a raw material for bioethanol production", BioMicroWorld-2007, II International Conference on Environmental, Industrial and Applied Microbiology, 28Nov-1Dec, Seville, p.452 (poster)
 - M.G. Rasteiro, L. Ferreira, J. Teixeira, F.P. Bernardo, M.G. Carvalho, A. Ferreira, R.Q. Ferreira, F. Garcia, C.G. Baptista, N. Oliveira, M. Quina, L. Santos, P.A. Saraiva and A. Mendes (2007) "A Virtual Platform to Teach Chemical Processes" ICEE, Coimbra ID 132 (CD-Rom) 6 pgs
 - S.M.F. Mota, L.M.G.A. Ferreira, M.G.V.S. Carvalho (2007) "Cinética de branqueamento e de degradação da celulose num estágio de peróxido de hidrogénio pressurizado aplicado a pastas kraft de eucalipto" XX Encontro Nacional da Tecnicelpa, Tomar, p.57-63.
 - P.J.T. Ferreira, M.G.V.S. Carvalho, N.Barbeiros, F.E. Felissia, M.C. Area (2007) "Study of Complementary treatments in the bleaching process of eucalypt kraft pulps – handsheets surface characterization using non-conventional techniques" XX Encontro Nacional da Tecnicelpa, Tomar, p.239-242
 - M.G.V.S. Carvalho, N.M.V. Carvalho, M.A.R. Campos, L.M.G.A. Ferreira, J.L. Amaral, (2007) "Final Bleaching of Eucalypt Kraft Pulp using Hydrogen Peroxide" XX Encontro Nacional da Tecnicelpa, Tomar, p13-19.
 - Area, M. C., Carvalho, M.G., Ferreira, P.J., Felissia, F.E., Jorge, C.S., Vilalba, L (2006) "Relaciones entre las condiciones del procesamiento y las propiedades de pulpas kraft de Eucalyptus grandis" CIADICYP'2006, Congresso Iberoamericano de Investigação em Celulose e Papel, Santiago/Valdivia, Chile.
 - Sofia F. Mota, Joana G. Paulo, Carlos A. Van Zeller, Licínio M.G. Ferreira, Graça V.S. Carvalho (2005) "Optimization of a pressurized hydrogen peroxide stage in the bleaching of Eucalyptus globulus pulps" Chempor-9^a Conferência Internacional de Engenharia Química, Coimbra, p.20-21 (Book of Abstracts), IP038 CD-ROM (6 pág). (comunicação oral)
 - Marco A.R. Campos, José L. Amaral, Licínio M.G.A. Ferreira, Graça V.S. Carvalho (2005) "Hydrogen peroxide applied to a final bleaching stage of Eucalyptus globulus kraft pulps" Chempor-9^a Conferência Internacional de Engenharia Química, Coimbra, p.64-65 (Book of Abstracts), IP037 CD-ROM (6 pág). (poster)
 - João Nuno Simões, Graça V.S. Carvalho (2005) "Supporting Computer Tools for Learning/Teaching Heat Transfer Phenomena" Chempor-9^a Conferência Internacional de Engenharia Química, Coimbra p.497-498 (Book of Abstracts), CEE003 CD-ROM (6 pág). (poster)

- Graça V.S. Carvalho, José M.R.C.A. Santos, António A. Martins and Margarida L. Figueiredo (2005) "Surface energy, surface area and SEM imaging of Eucalyptus globulus fibres network after beating, web forming and sizing" Chempor-9^a Conferência Internacional de Engenharia Química, Coimbra p.50-51 (Book of Abstracts), IP029 CD-ROM (6 págs). (poster)
- Tatiana M. Póvoas, Carlos A. Van Zeller, Licínio M. A. Ferreira e M. Graça Carvalho "Estudos de selectividade da deslenhificação com oxigénio de pastas kraft de Eucalyptus globulus" XIX Encontro Nacional da Tecnicelpa, Tomar, Portugal, 281-290 (comunicação oral) 2005.
- M. Graça Carvalho, João R. Fernandes, Luís A. Ferreira, Carlos A. Van Zeller, João Pinho Ferreira, Paulo J. T. Ferreira "Efeito da secagem no potencial papeleiro de pastas kraft de eucalipto – uma experiência industrial" XIX Encontro Nacional da Tecnicelpa, Tomar, Portugal, 247-255 (comunicação oral) 2005
- Tatiana M. Póvoas, Ana Paula Egas, Maria Graça V.S. Carvalho and Licínio M. A. Ferreira "Studies on oxygen delignification of Eucalyptus Kraft Pulps" International Pulp Bleaching Conference – IPBC'2005, Stockholm – Suécia pgs. 236-239 (CD-ROM)
- Velho, J., Santos, N. F., Conceição, S., Ferreira, P. J., Carvalho, M. G., Ferreira, J. M. (2004) Technical aspects relatively to surface, structure and print characterization of coated papers, Proc. PulPaper 2004 1-3 June 2004, Helsinki Finland (versão CD-ROM, 8 pp.) (comunicação oral).
- J. P. F. Simão, A.P.V. Egas, C.M. S. G. Baptista, M. G. Carvalho (2004) - cinética das reacções dos ácidos urónicos e hexenurónicos no cozimento kraft de Eucalyptus globulus, CIADICYP'2004, Congresso Iberoamericano de Investigação em Celulose e Papel, Cordova, Espanha, Proceedings p. 473-477 e CD-ROM (TR052). (Comunicação oral)
- T.M. Póvoas, L.G. Ferreira, M.G. Carvalho (2004) - Optimização de um duplo estágio de oxigénio na deslenhificação de pastas kraft de Eucalyptus globulus, CIADICYP'2004, Congresso Iberoamericano de Investigação em Celulose e Papel, Cordova, Espanha, Proceedings p. 267-272 e CD-ROM (TR053). (poster)
- C.A. F. Ventura, M. H. Gil, M. G. Carvalho (2004) - Caracterização de superfícies de cartão: efeito do tratamento com copolímeros fluorados, CIADICYP'2004, Congresso Iberoamericano de Investigação em Celulose e Papel, Cordova, Espanha, Proceedings p. 384-389 e CD-ROM (TR063). (poster)
- Egas, A.P., Ferreira, L.M.A. and Carvalho, G.V.S. (2003) - Alternatives to acidic chelation (Q): impact of a stabilizer on bleaching sequences with oxygen and peroxide, Int. Conf. in Chemical Technology of Wood, Pulp and Paper, Bratislava, Sep 17-19, 189-193.
- Póvoas, T.M., Egas, A.P. V., Carvalho, M.G.V.S. and Ferreira, L.M.A.(2003) – Minimizing environmental impact by enhanced usage of oxygen and peroxide in the bleaching of eucalyptus kraft pulp, ECCE – 4th European Conference of Chemical Engineering, Sep., Granada. (CD-ROM, P3.3-015)
- Barroca M.J.M.C., Carvalho, M.G.V.S. (2003) - Influence of hexenuronic acids on consumption of chlorine dioxide and kappa number in D0 bleaching stage, Proc. 28th Eucep Conference, Lisboa – Portugal, 316-317.
- Cerqueira, P.A., Angélico, D.A.G., Egas, A.P.V., Carvalho, M.G.V.S. (2003) - Optimization of operating parameters in a Q-bleaching stage, Proc. 28th Eucep Conference, Lisboa – Portugal, 321-322.

- Primo, C.A.P., Carvalho, M.G.V.S. (2003) - Acid treatment applied to portuguese Eucalyptus globulus kraft pulp before bleaching: effect on quality and hexenuronic acids and metals contents Proc. 28th Eucea Conference, Lisboa – Portugal, 281-283
- Aquino, A.I., Martins, A.A., Figueiredo, M.M., Carvalho, M.G. (2003) - Effect of beating and sizing on the surface properties of Eucalyptus globulus fibres Proc. 28th Eucea Conference, Lisboa – Portugal, 147-151.
- A.I. Aquino, M.H. Gil, M.M. Figueiredo, M.G. Carvalho (2002) - Study of the influence of oxygen stage bleaching onto the surface properties of Eucalyptus globulus fibres by IGC, 7th European Workshop on Lignocellulosics and Pulp, EWLP'2002, Turku/Abo – Finlândia, 443-446.
- A.I. Pedroso, M.M. Figueiredo, M.G. Carvalho (2002) - Impact of alkaline pulping parameters on the hexenuronic acid content of Eucalyptus globulus pulps, 7th European Workshop on Lignocellulosics and Pulp, EWLP'2002, Turku/Abo – Finlândia, 273-276.
- A. I. Aquino, P. J. Ferreira, M. G. Carvalho, J.L. Amaral, M. M. Figueiredo (2002) - Influence of cooking and bleaching conditions on the surface characterization and paper properties of Eucalyptus globulus bleached kraft pulps, CIADICYP'2002, Proc. Congresso Iberoamericano de Investigação em Celulose e Papel, Campinas, Brasil. (CD-ROM, 10pp.).
- Rocha, J., Carvalho, M.G. (2002) “Evaluation of University Courses: The Pedagogic Effect”, 5th “Toulon Verona” International Conference– ESOE (European Society for organizational excellence) “Quality in Higher Education, Health Care, Local Government” ISEG, 19-20 Sep. (CD-ROM, 8pp.).
- Carvalho, M.G.V.S. (2002) “A problemática do ensino de Laboratórios de Engenharia Química: Um caso” XIV Congresso da Ordem dos Engenheiros, Coimbra, 27-29 Junho. (CD-ROM, 699-706).
- Luís, I, Figueiredo, M., Martins, A., Carvalho, G. (2001) “Influência do teor de finos no desempenho papeleiro de uma pasta kraft de Eucalyptus globulus” XVIII Encontro Nacional da Tecnicelpa, Figueira da Foz, Portugal, 181-190.
- J Almiro Castro, M.G.V.S. Carvalho, C.G. Baptista, A.P.V. Egas (2001) “Chemical Engineering Laboratories at FCT/UC” em A. Mendes, C. Henriques, I. Portugal, M. Alves, J. Almiro Castro, A.M. Ramos, “Na Overview of Portuguese Chemical Engineering Undergraduate Laboratories” Chempor'2001- 8^a Conferênciac Internacional de Engenharia Química, Aveiro, 163-170.
- P.J. Ferreira, M. G. Carvalho e M.M. Figueiredo (2001) “ Efeito das características químicas de pastas kraft de E. globulus na variação do comprimento das fibras durante a refinação”. Chempor'2001- 8^a Conferênciac Internacional de Engenharia Química, Aveiro, 1223-1230.
- M.G.Carvalho e M.M. Figueiredo (2000) “Influencia das condiciones de cozimento nas características de pastas kraft cruas de E. globulus português”, CIADICYP'2000, Congreso Ibero-Americanano de Investigación en Celulosa y Papel, Iguazú, Argentina. (CD-ROM, 10pp.).
- M.G.Carvalho e M.M. Figueiredo (2000) “Estudios de branqueabilidad de pastas kraft de Eucalyptus globulus igualmente deslenhificadas”, CIADICYP'2000, Congreso Ibero-Americanano de Investigación en Celulosa y Papel, Iguazú, Argentina. (CD-ROM, 10pp.).
- M.G.Carvalho and M.M. Figueiredo (2000) “Evolution of relative carbohydrate composition with DED bleaching in pulps equally delignified”, EWLP'2000 – Sixth European Workshop on Lignocellulosics and pulp, Bordeaux, 245-248.

- M.G.V. Carvalho, M.M.M. Bastos, V.L.F. Silva, C.M.M. Pires e M.M.L. Figueiredo (1998) “Estudos de variabilidade num clone de E. globulus”, XVI Encontro Nacional da Tecnicelpa, 331-338, Covilhã, Portugal.
- M.G.V. Carvalho, S.I.C. Saleiro, A.A. Martins e M.M.L. (1998) Figueiredo, “Branqueabilidade de pastas kraft de E. globulus”, XVI Encontro Nacional da Tecnicelpa, 382-389, Covilhã, Portugal.
- M.G. Carvalho, A.A. Martins, M.M. Figueiredo (1998) “Efeito de Algumas Variáveis de Cozimento nas Características de Pastas Kraft de E. globulus”, XVI Encontro Nacional da Tecnicelpa, 113-120, Covilhã, Portugal.
- P.J. Ferreira, M. G. Carvalho, A.A. Martins e M.M. Figueiredo (1998) “ Efeito das Variáveis de Cozimento kraft na Refinação de Pastas de E. globulus Nacional - Avaliação das Propriedades Papeleiras”. Chempor’98- 7ª Conferência Internacional de Engenharia Química, 353-360, Lisboa, Portugal.
- M.G. Carvalho, A.A. Martins, M.M. Figueiredo (1996) “Fraccionamento de Pasta Kraft de Eucalipto: Caracterização Físico-Química e Desempenho Papeleiro”, XV Congresso Nacional da Tecnicelpa, 220-229, Aveiro, Portugal.
- P.J. Ferreira, M.G. Carvalho, A.A. Martins, M.M. Figueiredo (1996) “Caracterização Dimensional de Fibras de Eucalipto”, XV Congresso Nacional da Tecnicelpa, 208-219, Aveiro, Portugal.
- Barros, M.T., Carvalho, M.G.V., Garcia, F.A.P. and Pires, E.M.V. (1991) “Stability Performance of Cynara cardunculus L. Protease in Aqueous - Organic Biphasic Systems”, IV Portuguese-Spanish Biochemistry Congress, Póvoa de Varzim, Portugal, Setembro.
- Eusébio, M.E.S., Carvalho, M.G.V.S., Leitão, M.L.P. e Redinha, J.S. (1983) Estudo de Misturas Binárias Água/Não-Electrólito por Espectroscopia do Infrared Próximo, Congresso Ibérico de Espectroscopia, Salamanca, Espanha.

Other publications/communications

National Journals:

- C.A.F. Ventura, M.H. Gil, M.G. Carvalho (2005) “Caracterização de Superfícies de Cartão: Efeito do Tratamento com Copolímeros Fluorados” Pasta e Papel, nº39, Nov 2005, 37-44
- J.N. Simões, M.G.V.S. Carvalho (2006) “Supporting computer tools for learning/teaching heat transfer phenomena” Engenharia Química, nº 4, p. 45-48
- M. Graça V.S. Carvalho, Jorge M.S. Rocha, Cátia V.T. Mendes, “Conversão Bioquímica de correntes secundárias da indústria de pasta e papel para valorização da biomassa lenhocelulósica – Parte I” Info@tecnicelpa 42 (revista da Associação Portuguesa dos Técnicos das Indústrias de Celulose e Papel): Biorefinaria. Junho 2014, 39-46
- M. Graça V.S. Carvalho, Jorge M.S. Rocha, Cátia V.T. Mendes, “Conversão Bioquímica de correntes secundárias da indústria de pasta e papel para valorização da biomassa lenhocelulósica – Parte II” Info@tecnicelpa 42 (revista da Associação Portuguesa dos Técnicos das Indústrias de Celulose e Papel): Biorefinaria. Junho 2014, 48-58
- M. Graça V.S. Carvalho, Dmitry V. Evtyugin, Pedro E. G. Loureiro, “O Papel das Xilanas no desenvolvimento e estabilidade de branura nos estágios finais do branqueamento de pastas kraft”. Info@tecnicelpa 39 (revista da Associação

- Portuguesa dos Técnicos das Indústrias de Celulose e Papel): Inovação e Novos Desenvolvimentos na Indústria de Pasta e Papel. Junho 2013, 31-42.
- M. Graça V.S. Carvalho, Dmitry V. Evtuguin, Ana Moura, Joana Sousa, Cláudia Esteves, Joana Ferraz. Efeito da aplicação de xilanases no aumento da estabilidade da branura e na redução do consumo de reagentes no branqueamento de pastas kraft de *Eucalyptus globulus*. Newsletter Tecnicelpa Info@tecnicelpa 39 (revista da Associação Portuguesa dos Técnicos das Indústrias de Celulose e Papel): Inovação e Novos Desenvolvimentos na Indústria de Pasta e Papel. Junho 2013, p.62.
 - Eucalyptus Newsletter “Os Amigos dos Eucalyptus”, nº 34, Abril 2011, http://www.eucalyptus.com.br/newspt_abril11.html
 - Pedro E.G. Loureiro, M. Graça V.S. Carvalho, Dmitry V. Evtuguin. O papel da xilana no branqueamento final de pastas kraft de *Eucalyptus globulus* com dióxido de cloro ou com peróxido de hidrogénio. Info@tecnicelpa Nº 37 (revista da Associação Portuguesa dos Técnicos das Indústrias de Celulose e Papel), Agosto 2012. p. 74.
 - Fátima A. V. Coimbra, Pedro E. G. Loureiro, Eduardo L. T. Conceição, Dmitry V. Evtuguin, M. Graça V. S. Carvalho. Desenvolvimento de modelos cinéticos do branqueamento final de pasta kraft de *Eucalyptus globulus* com peróxido de hidrogénio. Info@tecnicelpa Nº 34 (revista da Associação Portuguesa dos Técnicos das Indústrias de Celulose e Papel), Setembro 2011. p. 98.
 - Pedro E.G. Loureiro, M. Graça V.S. Carvalho, Dmitry V. Evtuguin. Avaliação do potencial da espectroscopia de Raman ressonante no UV aplicado ao branqueamento de pasta kraft de *E. globulus*. Info@tecnicelpa Nº 33 (revista da Associação Portuguesa dos Técnicos das Indústrias de Celulose e Papel), Maio 2011. p. 78.
 - Pedro E.G. Loureiro, Dmitry V. Evtuguin, M. Graça V.S. Carvalho. Aspectos do branqueamento final de pastas kraft de *E. globulus* com peróxido de hidrogénio. Info@tecnicelpa Nº 33 (revista da Associação Portuguesa dos Técnicos das Indústrias de Celulose e Papel), Maio 2011. p. 77.
 - Cátia V.T. Mendes, Cristina M.S.G. Baptista, Jorge M.S. Rocha, M. Graça V.S. Carvalho. Valorização energética das hemiceluloses de *Eucalyptus globulus* extraídas antes do cozimento. Newsletter Tecnicelpa Info@tecnicelpa Nº 29, Junho 2009. p. 33.
 - Pedro E.G. Loureiro, João M.C. Antunes, Licínio M.G.A. Ferreira, Dmitry V. Evtuguin, M. Graça V.S. Carvalho. Comparação da cinética de branqueamento num estágio final de peróxido de hidrogénio das sequências de branqueamento DEOPDP e OQ(PO)DP. Newsletter Tecnicelpa Info@tecnicelpa Nº 29, Junho 2009. p. 34.
 - Jorge M.S. Rocha, Luís F.F. Gomes, Cátia V.T. Mendes, Cristina M.S.G. Baptista, M. Graça V.S. Carvalho. Xilose de *Eucalyptus globulus* como matéria-prima para a produção de bioetanol. Tecnicelpa - Folha Informativa Nº 25, Março 2008. Pag. 31-32
 - Marco A.R. Campos, José L. Amaral, Licínio M.G.A. Ferreira, M. Graça V.S. Carvalho. “Aplicação de peróxido de hidrogénio no branqueamento final de pastas kraft de eucalipto: Parte 1”. Tecnicelpa - Newsletter Digest N.º 1 / Julho 2006 (Versão eletrónica).
 - Nuno M.V. Carvalho, José L. Amaral, Fernanda P. Furtado, M. Graça V.S. Carvalho. “Aplicação de peróxido de hidrogénio no branqueamento final de

- pastas kraft de eucalipto: Parte 2” Tecnicelpa - Newsletter Digest N.º 1 / Julho 2006 (Versão eletrónica).
- Sofia M. F. Mota. Newsletter Digest N.º 0 / Junho 2006 (Versão eletrónica) “Branqueamento de Pastas kraft de E. globulus com Peróxido de Hidrogénio”.

Education: Web pages development

Contribution to the development of the Web page "Virtual Lab in Chemical Engineering" - <http://labvirtual.eq.uc.pt/siteJoomla/>

Chapters:

- M.G. Carvalho (2008) “Física” in Ensino Secundário,
- M.G. Carvalho (2008) “Transferência de calor e de massa” in Processos Químicos,
- M.G. Carvalho (2008) “Absorção” in Processos Químicos

posters:

- D. P. Rodrigues; M.C. Gaspar; C. Mendes; R. Moreira; M.J. Quina; M.G. Carvalho; A. T. Portugal; M.E.M. Braga “Characterization of agroforestry residues: their potential in the biorefinery context” (poster), EMEC, 2017.
- Godinho, D., Mendes, C.V.T., Lourenço, A.F., Carbajo, J.M., Ferreira, P.J.T., Carvalho, M.G.V.S., Villar, J.C "Cellulose nanofibrils from pine stumps and rice straw: production, characterization and influence in filler-containing papers" WCCE10-10th World Congress of Chemical Engineering, 1-5 Outubro 2017, Barcelona, Espanha - Topic: Internat. Symposium on Lignocellulosic Materials (poster). Awarded Best Poster.
- J. Kruyeniski, P. Ferreira, M.G.V.S. Carvalho, F.E. Felissia, María Cristina Area - Physical and chemical characteristics of pretreated pine sawdust and its enzymatic hydrolysis, Proc. IX Congresso Iberoamericano de Investigação em Celulose e Papel, 4-9 September, Espoo – Finland, (oral presentation) Abstract pg 14, total páginas: pp. 1 (2016). Abstract
URL:http://www.riadicyp.org/images/ciadicyp/2016/ciadicyp_2016_book_of_abstracts.pdf
- Fátima A. V. Coimbra, Pedro E. G. Loureiro, Eduardo L. T. Conceição, Dmitry V. Evtuguin and M. Graça V. S. Carvalho. Modelling of the brightening and degradation kinetics of cellulosic pulps in the final alkaline hydrogen peroxide bleaching stage. 11th annual meeting of European Network for Business and Industrial Statistics (ENBIS-11), 4-8 September 2011, Coimbra, Portugal (accepted poster), p.54.
- Ivo M.A. Rodrigues, Jorge M.S. Rocha, M. Graça V.S. Carvalho, protein extraction from rapeseed meal: mass balance closure and selection of Bradford method to evaluate protein in solution, ANQUE-ICCE 2012 Congress, Sevilla, Spain (poster presentation).
- J.M.S. Rocha; L.F.F. Gomes; C.V.T. Mendes; M.G.V.S. Carvalho; C.M.S.G. Baptista (2007) “Xylose from Eucalyptus globulus wood as a raw material for bioethanol production”, BioMicroWorld2007, II Int. Conf. on Environmental Ind. And Applied Microbiology, Seville, p.452.
- C.A.F. Ventura, M.G. Carvalho, M.H. Gil Preparation and Characterization of modified chitosan fibres 5th advanced course in Cell-Material Interactions, Porto, 2004 (poster)
- A.F.M. Silva, M.H. Gil, G.V.S. Carvalho (2004) – Estudo de espalhamento/ absorção

de líquidos em superfícies de folhas de papel por medição de ângulos de contacto, XIX Encontro Nacional da Sociedade Portuguesa de Química, Coimbra, p.234 (poster QF#56).

- Silva A.F.M., Gil M H, Carvalho, GVS (2003) - Interactions between inks and paper evaluated by contact angle measurements, GLUPOR 5 – 5th International Meeting of the Portuguese Carbohydrate group, Covilhã Portugal (P21)).
- M.G. Carvalho, P.J. Ferreira, e M.M. Figueiredo (1999) “Cellulose Depolymerization and Paper Properties in E. globulus kraft pulps”, International Conference on Biopolymer Technology, Coimbra, Portugal (poster 8).
- P.J. Ferreira, M.G. Carvalho, A.A. Martins e M.M. Figueiredo (1998) “Influence of the chemical characteristics of E. globulus kraft pulps on their beating potential and paper properties” Final European Conference of the COST Action E1 ‘Paper Recyclability’, LXXXIII-LXXXIV, Las Palmas de Gran Canaria, Espanha. (poster)

oral communications:

- M. Graça V.S. Carvalho, Ana R. Fernandes, Jorge M.S. Rocha, Abel G.M. Ferreira “Valorization of an invasive wood species by lignin extraction with low environmental impact solvents”. FP1306 COST Action (LIGNOVAL), Book of abstracts of Joint WG1 & WG3 meeting, p.18, Lisbon, 2016 (oral presentation).
- M. Graça V.S. Carvalho, Jorge M.S. Rocha, Abel G.M. Ferreira. Dissolution of wood residues in green solvents. FP1306 COST Action (LIGNOVAL), Book of abstracts of Joint WG1 & WG2 meeting, p.7, Bucharest, 2015 (oral presentation).
- Cátia V.T. Mendes, Diana F.N. Reis, Jorge M.S. Rocha, M. Graça V.S. Carvalho. Bioethanol production by simultaneous saccharification and fermentation of unbleached pulp and primary sludge from pulp mills. FP1306 COST Action (LIGNOVAL), Book of Abstracts of First Workshop, p.23, Belgrade 2015 (apresentação oral).
- Carvalho, M.G.V.S. Forest Products and Biorefineries Thematic Line at CIEPQPF. FP1306 COST Action (Valorisation of lignocellulosic biomass side streams for sustainable production of chemicals, materials & fuels using low environmental impact technologies), First WG1 Meeting (Pretreatment/fractionation of lignocellulosic biomass), Brussels, 1-2 October 2014 (oral presentation)
- C.V.T. Mendes, J.M.S. Rocha, M.G.V.S. Carvalho, "Pretreatment of pulp and paper mill primary sludge to enhance its biochemical conversion", ANQUE-ICCE 2012 Congress, Sevilla, Spain.
- P.E.G. Loureiro, D.V. Evtuguin, M.G.V.S. Carvalho. A comprehensive study on the final bleaching of eucalyptus kraft pulps with hydrogen peroxide. PRODEQ10 Meeting (10 anos – Dia Aberto CIEPQPF), 11.Nov.2011. Coimbra (poster communication). p. 46.
- C.V.T. Mendes, M.G.V.S. Carvalho, J.M.S. Rocha. Lignocellulosic biomass valorisation in a pulp and paper mill. PRODEQ10 Meeting (10 anos – Dia Aberto CIEPQPF), 11.Nov.2011, Coimbra, p. 55. Trabalho seleccionado para apresentação oral, como prémio de destaque dentro da categoria "Projecto de Investigação"
- P.E.G. Loureiro, A.J.S. Fernandes, M.G.V.S. Carvalho, D.V. Evtuguin (2010) On the origin and removal of chromophores in kraft pulps during hydrogen peroxide and chlorine dioxide bleaching employing uv-raman spectroscopy. VII CICECO Meeting, Aveiro, January 29, 2010, book of abstracts, p.21
- Carvalho, M.G.V.S., Baptista, C.F., Mendes, C.V.T., Rocha, J.M.S (2007) “Hemicelluloses: from wood to the fermenter” BioMicroWorld-2007, II International Conference on Environmental, Industrial and Applied Microbiology, 28Nov-1Dec ,

Seville, p.32

- Carvalho, M.G. (2005) “Medidas implementadas na disciplina de fenómenos de transferência para combater o absentismo e promover o sucesso escolar”, Fórum FCTUC “Medidas utilizadas na FCTUC para implementar o sucesso escolar” Conselho Pedagógico da FCTUC, 7 de Junho.
- Carvalho, M.G. (2004) “Chemical Engineering Department, University of Coimbra, Portugal” apresentação na acção COST Action E41 “Analytical tools with applications for wood and pulping chemistry” Espoo, 21-22 Oct.
- Carvalho, M.G. (2003) “A problemática do ensino de laboratórios de engenharia química: um caso” 2º Encontro da AELEQ - Associação para o Ensino de Laboratórios de Engenharia Química, DEQ-FEUP, 04.Fevereiro.03
- Eusébio, M.E.S., Carvalho, M.G.V.S. (1981) "Algumas Propriedades de Misturas Binárias de Água com Líquidos Polares", Departamento de Química, Universidade Coimbra.

Dec.2017