

CURRICULUM VITAE

Name: Gabriela Ventura Alves da Silva

Date of birth: 28 October 1968

Nationality: Portuguese

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Institution: IDMEC – Instituto de Engenharia Mecânica

Professional Category: Researcher

Main area of interest: Indoor air quality; VOCs emissions from building materials

Qualification:

- Chemistry Degree – Scientific Area by Faculdade de Ciências da Universidade do Porto, in September 1991.
- Master degree in Chemistry by Faculdade de Ciências da Universidade do Porto, in December 1993.
- PhD degree in Chemistry by Faculdade de Ciências da Universidade do Porto, in September 2000.

Actual Position:

- Researcher of IDMEC - Instituto de Engenharia Mecânica (IDMEC) na Faculdade de Engenharia da Universidade do Porto, develops work in LQAI (Laboratory of Indoor Air Quality) in the characterization of VOCs emissions of building materials and supports Industrial manufacturers in the development of cleaner building materials. Regular participation in round robin tests.

Other Activities:

- participation in several European Projects, namely: EDBIAPS “European Data Base on Indoor Air Pollution Sources in Buildings” (1995-1997); VOCEM “Further development and validation of a small test chamber method for measuring VOC emissions from building materials and products” (1998); GEV “Round robin test: Test chamber measurement and TVOC determination of adhesives – Classification according to EMICODE” (2000); MATHIS “Materials for Healthy Indoor Spaces and More Energy Efficient Buildings” (1997-2001), HOPE “Health Optimisation Protocol for Energy-Efficient Buildings” (2002-2004), EnVIE - Co-ordination action on Indoor Air Quality and Health Effects (2004-2007), “Saúde ambiental em ambiente escolar” in the frame of Programa de apoio a Projectos na área da Saúde Pública da Fundação Calouste Gulbenkian (2004-2006), Collaboration in the Organisation of the international conference Healthy Buildings 2006, that took place in Lisbon, 4-8 June, a major international event (687 participants) integrating technologies, health and socio-economical aspects. Participation in the preparation of proposals of Projects in the frame of FCT programme, namely in the approval project “Diffusion of organic vapours in building materials indoors. Influence of the material microstructure.” Support to research activities. Participation in the Round robin test (Interlaboratory Study on VOC/SVOC emissions from floor coverings) conducted by Federal Institute for Materials Research and Testing (BAM) (2006/2008). Participation in calls during 2007 in the frame of 7th Framework Programme, more concretely as partner of the projects Babe and Indoor. Participation in calls in the frame of QREN (2008), more concretely with the project LowVOC.
- Since the year 2005/2006 participates in the orientation of students in projects in the frame of Degree in Environment Engineering of Faculty of Engineering of University of Porto (FEUP). During the year 2005/2006 participated in the Master Course of Mechanical Engineering – Option Climatization. In 2004 collaborated in the Course "Energia nos Edifícios-Introdução na Perspectiva da Certificação Energética" organized by FEUP. In 2006 collaborated in the Course "Iniciação ao Estudo da Térmica de Edifícios e Sistemas de AVAC - Módulo II: Edifícios, Sistemas de AVAC e Eficiência Energética" organized by FEUP. Since 2007 participates as former in Courses organized by FEUP on Regulation RSECE-QAI.
- Participation with approval in the Course of Formation of Regulation RSECE - QAI (Sistema Nacional de Certificação Energética e da Qualidade do Ar Interior nos Edifícios) in March 2007.

- Participation on working group CEN/TC 351/WG2 (Construction products: assessment of release of dangerous substances, emissions into indoor air)

Publications:

- PhD Thesis:

Gabriela Ventura Alves da Silva " Estudo de Emissões de COVs por Materiais Usados em Interiores de Edifícios", Dissertação de Doutoramento, Faculdade de Ciências da Universidade do Porto, 2000.

- Master Thesis:

Gabriela Ventura Alves da Silva " Complexos Tetragonais de Níquel(II) com Ligandos Derivados de Imidazola Contendo o Grupo Amida", Dissertação de Mestrado, Faculdade de Ciências da Universidade do Porto, 1993.

International Journals

- J.J. Gonçalves, A.S. Santos, G.V. Silva, E.O. Fernandes. "Presentation of a new method for determination of diffusion coefficients of gaseous pollutants in cladding wall materials indoors", Defect and Diffusion Forum Vols. **297-301**, 881-886, 2010.
- Silva, G.V.A., Vasconcelos, M.T.S.D., Santos, A.M. and Fernandes, E.O., Comparison of the substrate effect on VOC emissions from water based varnish and latex paint. Environmental Science Pollution Research, **10** (4), 209-216, 2003.
- M. Clara R. M. P. Basto, Gabriela V. A. Silva and Adélio A. S. C. Machado, Nickel(II) Complexes of Imidazole-Derived Ligands with an Amide Group: Some Compounds with Complex Magnetic Behaviour, Synth. React. Inorg. Met.-Org. Chem., **32**, 305-327, 2002.

International Conferences:

- Silva, G.V.A., Vasconcelos, M.T., Fernandes, E.O. e Santos, A.M.S., 1998. VOC Emissions from Cork Materials. In *EPIC'98*. G. Guarracino (Ed.). École Nationale des Travaux Publics de l'État, Lyon, **1**: 27-32.
- Silva, G.V.A., Vasconcelos, M.T., Fernandes, E.O. e Santos, A.M.S., 1999. The Effect of Substrate in Volatile Organic Compounds Emissions from a Varnish. In *Indoor Air'99*. G. Raw, C. Aizlewood e P. Warren (Eds.). Construction Research Communications Ltd, London, **1**, 493-498.
- Silva, G.V., Fernandes, E.O., Vasconcelos, M.T.S.D. and Santos, A.M., 2003 Adsorption/desorption of volatile organic compounds by uncoated cork parquet. Proceedings of Healthy Buildings 2003, Singapore, Edit. Tham Kwok Way, Chandra Sekhar and David Cheong, **1**, 414-419.
- Active vs passive sampling in VOCs in IAQ field studies in selected energy-efficient European office and residential buildings - G Ventura Silva, E Oliveira Fernandes, MJ Samúdio, T Tirkkonen, H Järnström, K Villberg, K Saarela, C.Cox, C Aizlewood, D Crump, V Brown, S Dimitroulopoulou, Proceedings: Indoor Air 2005, pp 816.
- Evaluating VOC emissions and concentrations: small scale versus full scale studies. Gabriela Ventura Silva, Maria Teresa Vasconcelos, Maria João Samúdio, Eduardo Oliveira Fernandes, Proceedings Clima2000, paper 338.
- Energy efficient buildings: comparison of the indoor environment in office buildings perceived healthy and building perceived unhealthy. Christian Cox, Henrik N.Knudsen, Wiet Koren, Claire Aizlewood, Sani Dimitroulopoulou, Gabriela Ventura Silva, Proceedings Clima2000, paper 339
- VOCs in Indoor Air in Several Schools of Porto. G. Ventura Silva, A. O. Martins, E. Oliveira Fernandes, J. Guedes and M.T.S.D. Vasconcelos. Proceedings of Healthy Buildings 2006, Lisbon, Edit. E.de Oliveira Fernandes, M. Gameiro da Silva e J. Rosado Pinto, **3**, 227-230.
- A Detailed Indoor Air Study in a School of Porto. M.J. Samúdio, G. Ventura Silva, E. Oliveira Fernandes, J. Guedes and M.T.S.D. Vasconcelos. Proceedings of Healthy Buildings 2006, Lisbon, Edit. E.de Oliveira Fernandes, M. Gameiro da Silva e J. Rosado Pinto, **4**, 345-349.

- Indoor/Outdoor environment in Portuguese schools. Anabela O. Martins, Gabriela V. Silva, Eduardo O. Fernandes, Teresa Nunes, Joana Valente, Ana M. Costa, Oxana Tchepel and Carlos Borrego. Proceedings of the 11th International Conference on Indoor Air Quality and Climate, Copenhagen, Denmark, 17-22 August 2008, Paper ID: 678.
- Preliminary results on a modified cup method to determine diffusion coefficients of VOCs in building materials. Armando M. Santos, José J. Gonçalves, Anabela O. Martins, Gabriela V. Silva and Eduardo O. Fernandes. Proceedings of the 11th International Conference on Indoor Air Quality and Climate, Copenhagen, Denmark, 17-22 August 2008, Paper ID: 687.
- J.J. Gonçalves, A.S. Santos, G.V. Silva, E.O. Fernandes. "Presentation of a new method for determination of diffusion coefficients of gaseous pollutants in cladding wall materials indoors", 5th International Conference on Diffusion in Solids and Liquids DSL-2009, Rome, 24-26 June.
- Martins, A., Martins, S., Silva, G. and Fernandes, E., 2009. "Laboratory of Indoor Air Quality – a successful Portuguese project", Proceedings of the Course 7 – Experimental Assessment of Indoor Environment Parameters, Climacademy, 8-16 October, Pamporovo, Bulgaria. (ISBN 978-954-92261-6-4).
- Martins, S., Martins, A.O., Ventura Silva, G., Madureira, J. and Oliveira Fernandes, E., 2009. "Evaluation of Indoor Air Quality in a Museum and in a Library", Proceedings of the Course 7 – Experimental Assessment of Indoor Environment Parameters, Climacademy, 8-16 October, Pamporovo, Bulgaria. (ISBN 978-954-92261-6-4).

National Conferences

- Oliveira Fernandes, E., Vasconcelos, M.T., Santos, A.M. e Silva, G.V:A., 1996. Emissões de COVs de materiais utilizados em espaços interiores - estudo em câmaras de teste. In *Proceedings da 5ª Conferência Nacional sobre a Qualidade do Ambiente*. C. Borrego, C. Coelho, L. Arroja, C. Boia e E. Figueiredo (Eds.). Comissão de Coordenação da Região Centro, Aveiro, **1**, 713-721.

Chapters in books

- "Saúde Ambiental em Ambiente Escolar" in *Investigação em Ambiente e Saúde. Desafios e Estratégias*. Editores Carlos Borrego, Anabela Carvalho, Ana Isabel Miranda, Ana Margarida Costa, Alexandra Monteiro, Jorge Humberto Amorim, Joana Valente, Myriam Lopes, Nuno Neuparth. Universidade de Aveiro, Abril de 2009. (ISBN 978-972-789-288-4).

Communications

Posters in Conferences

- M. C. R. M. P. Basto, G. V. A. Silva e A. A. S. C. Machado " Síntese e caracterização de alguns complexos de níquel(II) com derivados de imidazola e oxoaniões", Resumos das Comunicações à 1ª Conferência de Química Inorgânica da Sociedade Portuguesa de Química, Águeda, Maio de 1993, comunicação CP2, p. 47.
- G. V. A. da Silva, M. C. R. M. P. Basto e A. A. S. C. Machado "1-(2-carbamylethyl)benzimidazole nickel(II) complexes with unusual magnetic behaviour", Latin-American Inorganic Chemistry Meeting, Resumos, Santiago de Compostela, Setembro de 1993, comunicação LAICM1345P, p. 151.
- M. C. R. M. P. Basto, G. V. A. Silva e A. A. S. C. Machado "Síntese e caracterização de alguns complexos de níquel(II) com derivados de imidazola e oxoaniões", Resumos das Comunicações à 1ª Conferência de Química Inorgânica da Sociedade Portuguesa de Química, Águeda, Maio de 1993, comunicação CP2, p. 47.
- Silva, G.V.A., Vasconcelos, M.T., Fernandes, E.O. e Santos, A.M.S. 1998. Studies of the VOC Emissions from Cork Flooring Materials. In Abstracts of the 6th FECS Conference on Chemistry in the Environment: "Atmospheric Chemistry and Air Pollution", Environmental Science and Pollution Research, **5** (3), 160.

- A. Buchtova, G. Ventura, A. Martins, I. Ćurina and S. Katuscak: Determination of VOC with FLEC (Field and Laboratory Emission Cell)-alternative for chamber method. Int. Conference: Pulp and Paper - Technology, Properties, Environment. 11.9.-12.9.2001, Bratislava, SR. ISBN 80-227-1566-2, 2001.
- Silva, G.V.A., Vasconcelos, M.T.S.D., Santos, A.M. and Fernandes, E.O., 2002. Volatile organic compound emission from a latex paint - influence of the substrate. In Abstracts of the 8th FECS Conference on Chemistry in the Environment: " Chemistry for a Sustaining World", Environmental Science and Pollution Research, 3, 166-167.
- Martins, A.O., Silva, G.V.A. and Vasconcelos, M.T.S.D., 2002. Influence on the Indoor Air Quality of a recently applied vinyl coated cork flooring material and surface care products.. In Abstracts of the 8th FECS Conference on Chemistry in the Environment: " Chemistry for a Sustaining World", Environmental Science and Pollution Research, 3, 155-156.
- Martins, Anabela O., Silva, Gabriela V.A. and Vasconcelos, M. Teresa D., 2003. Effects of building renovation or cleaning on indoor air quality: the air we breathe.... . In Abstracts of the 13th Annual Conference of the International Society of Exposure Analysis. Stresa, Italy, September 21-25, P3.1-21.
- Vasconcelos, M.T.S.D, Oliveira Fernandes, E. e. Silva, G.V. 2001. Emissões de compostos orgânicos voláteis por materiais de construção e a qualidade do ar interior. In Livro de Actas Conferência Ibérica sobre Protecção ambiental, Instituto Piaget, Viseu, 79.
- Martins, Anabela O., Silva, Gabriela V.A. and Vasconcelos, M. Teresa D., 2003. VOCs emissions from a cork varnished flooring material: small scale and full scale measurements. In Proceedings of the International Symposium Environment 2010 Situation and Perspectives for the European Union.. University of Porto, Poster 11.
- Detailed study of indoor air in two Portuguese office and residential buildings – comparison, Gabriela Ventura Silva, Maria João Samúdio, Anabela O. Martins, Eduardo Oliveira Fernandes, Abstracts of 6th Iberian and 3rd Iberoamerican Congresso Environment Contamination and Toxicology, Cadiz, Spain, September 2005, pp 298.
- General study of indoor air in ten Portuguese office buildings Gabriela Ventura Silva, Maria João Samúdio, E. Oliveira Fernandes Abstracts of 6th Iberian and 3rd Iberoamerican Congresso Environment Contamination and Toxicology, Cadiz, Spain, September 2005, pp 301.

Other oral communications

- Evaluation of emission from flooring materials in Portugal, Gabriela Ventura Silva, Maria Teresa Vasconcelos, Graça Rocha, Eduardo Oliveira Fernandes, Conference “Emissions and odours from materials”, Brussels, October 2005.
- Deconstruction of a multilayer flooring material in order to understand the secondary emissions, Gabriela Ventura Silva, Anabela Martins, Graça Rocha, Eduardo Oliveira Fernandes, Conference “Emissions and odours from materials”, Brussels, October 2009.
- G. V. Silva, “Saúde Ambiental em Ambiente Escolar”, Workshop: Projectos financiados pela FCG na temática “Ambiente e Saúde”, Fundação Calouste Gulbenkian, 14 de Janeiro 2009.

Reports

Oliveira Fernandes, E., Gustafsson, H., Seppänen, O., Crump, D., Ventura Silva, G., Madureira, J., and Martins, A., 2008. WP3 Final Report on Characterization of Spaces and Sources. EnVIE Project. European Commission 6th Framework Programme of Research, Brussels.