

Curriculum Vitae

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Materials Science and Engineering



CONTACT INFORMATION

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EDUCATION

Ph.D. in Physics Engineering, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Jan 2003

Thesis Topic/Título: "ELECTRICAL AGEING STUDIES OF POLYMERIC INSULATION FOR POWER CABLES" Advisors: Professor J. Marat-Mendes(FCT/UNL), Dilip K. Das Gupta, Univ Bangor, UK

BSc. in Physics, Faculdade de Ciências, Universidade de Lisboa, Set 1988

PROFESSIONAL EXPERIENCE

Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2003–present *Assistant Professor*, Department Dept. Ciência e Eng. dos Materiais and I3N/Cenimat

Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 1999–2003 *Assistant*, Department Dept. Ciência e Eng. dos Materiais

RESEARCH INTERESTS

Piezoelectric biomaterials
Electrical and dielectric properties of biomaterials for biomedical applications
Electrical aging of polymeric insulation
Electrical charge storage and conductivity in polymers and cellular materials

MAIN PEER-REVIEWED PUBLICATIONS

1. P. R. Prezas, B. M. G. Melo, L. C. Costa, M. A. Valente, **M. C. Lança**, J. M. G. Ventura, L. F. V. Pinto, and M. P. F. Graça, "TSDC and impedance spectroscopy measurements on hydroxyapatite, β -tricalcium phosphate and hydroxyapatite/ β -tricalcium phosphate biphasic bioceramics," *Appl. Surf. Sci.*, pp. 28–38, Dec. 2017.
2. E. R. Neagu, **M. C. Lança**, C. J. Dias, and J. N. MARAT-MENDES, "Space charge and dipolar charge contribution at polar polymers polarization," *IEEE Trans. Dielectr. Electr. Insul.*, vol. 22, no. 3, pp. 1419–1426, Jun. 2015.
3. E.R. Neagu, C.J. Dias, **M.C. Lança**, R. Igreja, P Inacio, J.N. Marat-Mendes, "The use of the final thermally stimulated discharge current technique to study the molecular movements around glass transition", *Journal of Non-Crystalline Solids*, Vol. 357(2), pp. 385-390, 2011.
4. **M. C. Lança**, M. Brandt, E. R. Neagu, C. J. Dias, and J. N. Marat-Mendes, "Dielectric spectra of natural cork and derivatives," *J. Non. Cryst. Solids*, vol. 356, no. 11–17, pp. 763–767, 2010.
5. E.R. Neagu, C.J. Dias, **M.C. Lança**, J.N. Marat-Mendes, "The study of molecular movements in dielectrics using isothermal and non- isothermal current measurements", *J. Phys.: Conf. Ser.* 183 012012, 2009.
6. **M. C. Lança**, M. Fu, E. Neagu, L. A. Dissado, J. Marat-Mendes, A. Tzimas, and S. Zadeh, "Space charge analysis of electrothermally aged XLPE cable insulation," *J. Non. Cryst. Solids*, vol. 353, no. 47, pp. 4462–4466, 2007.
7. **M. C. Lança**, W. Wirges, E. R. Neagu, R. Gerhard, and J. Marat-Mendes, "Influence of humidity on the electrical charging properties of cork agglomerates," *J. Non. Cryst. Solids*, vol. 353, no. 47, pp. 4501–4505, 2007.
8. **M. C. Lança**, E. R. Neagu, R. M. Neagu, C. J. Dias, J. N. Marat-Mendes, D. K. Das-Gupta, "Space charge studies in LDPE using combined isothermal and non-isothermal current measurements," *IEEE Trans. Dielectr. Electr. Insul.*, vol. 11, no. 1, pp. 25–34, Feb. 2004.
9. **M. C. Lança**, E. R. Neagu, and J. N. Marat-Mendes, "Combined isothermal and non-isothermal current measurements applied to space charge studies in low-density polyethylene," *Journal of Physics D: Applied Physics*, vol. 35, no. 8. pp. L29–L32, 2002.
10. **M. C. Lança**, J. N. Marat-Mendes, and L. A. Dissado, "The fractal analysis of water trees: an estimate of the fractal dimension," *IEEE Trans. Dielectr. Electr. Insul.*, vol. 8, no. 5, pp. 838–844, 2001.
11. P. Judeinstein, **M.C. Lança**, J. Marat-Mendes, and J. Rault, "Pore dimension of water trees in PE: NMR studies," *Polymer*, vol. 41, no. 22. pp. 8151–8154, 2000.
12. **M.C. Lança**, J. Domingues, I. Franco, "Study of fractal properties in Lichtenberg Figures" in "Fractal Reviews in the Natural and Applied Sciences", ed. Miroslav Novak, Chapman & Hall, pg 133-144, 1995.

CURRENT AND PAST FUNDING**Active Grants**

2016-10-01/ 2019-09-30, PT2020 017956

"DENTALBLAST - Desenvolvimento de revestimentos antibacterianos à base de biovidros para implantes dentários"

FCT/UNL Team member

Completed Grants

2014-04-01/ 2015-06-30, Compete-QREN

“Polarbone - New synthetic bone replacement materials based on calcium phosphates electrically polarized”

FCT/UNL Principal Investigator