Curriculum Vitae:

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Background

M.F. Montemor graduated in Chemical Engineering at INSTITUTO SUPERIOR TÉCNICO (IST), the school of engineering of the TECHNICAL UNIVERSITY OF LISBON in 1989 and obtained her Ph.D, also from the THECNICAL UNIVERSITY OF LISBON, in 1995.

Actually, she has a permanent position as Assistant Professor in the Department of Chemical and Biological Engineering of Instituto Superior Técnico. Her research objectives are focussed in the area of new surface functionalisation strategies and development of novel coatings for metallic substrates (steels, Mg and Al alloys) for application in the transportation sector (automotive and aeronautics), construction (building and off shore) and energy production systems (fuel cells and supercapacitors).

She has been involved in several National and EU funded projects, either a partner or coordinator, mainly in the areas of surface modifications for deployment of materials for advanced technological applications.

She is co-chair of the EuroCorr 2013 to be organized in Estoril, Portugal and was co-chair of EIS2010.

She collaborates with several Journals and was considered Elsevier “Top Ten referee”. She received 2 awards for the most cited papers in Electrochimica Acta and Applied Surface Science. She is member of the Editorial Boards of Surface and Coatings Technology and Cement and Concrete Composites. She was guest Editor of two special issues of Cement and Concrete Composites and one of Electrochimica Acta.

She has more than 100 publications, most of them in high-level International Journals and more than 150 communications in International and national conferences, including 5 plenary Lectures and several Keynotes.

She was appointed as Deputy Director for International Affairs of Instituto Superior Técnico, in September, 2009 and has been involved in several Institutional projects for the internationalization of the education and scientific activities.

She is permanent member of TGS5 for the monitoring and evaluation of RFS-EC funded projects and has been regularly involved in the evaluation of EC funded projects and evaluation of EU research Institutes.

Selected Publications

Book Chapters:

M.F. Montemor, W. Trabelsi, M.G.S. Ferreira, "Electrochemical study of cold rolled steel substrates pre-treated with silane films modified with CeO2 and TiO2 nanoparticles" em "Self-Healing Properties of New Surface Treatments" Published for the European Federation of Corrosion Series, Vol. 58, ISBN: 978 1 906540 36 4, Eds.: L Fedrizzi, W Fürbeth, **M.F Montemor**, UK, Março 2011.

M.F.Montemor, M.G.S. Ferreira, "A review on the use of nanostructured and functional organosilane coatings modified with corrosion inhibitors as environmentally friendly pre-treatments for metallic substrates" em "Self-Healing Properties of New Surface Treatments" Published for the European Federation of Corrosion Series, Vol. 58, ISBN: 978 1 906540 36 4, Eds.: L Fedrizzi, W Fürbeth, **M.F Montemor**, UK, Março 2011.

- ### International Journals

1. J. Tedim, A. Kuznetsova, A.N. Salak, **F. Montemor**, D. Snihirova, M. Pilz, M.L. Zheludkevich, M.G.S. Ferreira, Zn-Al layered double hydroxides as chloride nanotraps in active protective coatings, Corrosion Science, 55 (2012) p. 1-4, doi:10.1016/j.corsci.2011.10.003

2. **M.F.Montemor**, D. V. Snihirova, M. G.Taryba, S. V. Lamaka, I.A. Kartsonakis, A.C. Balaskas, G.C. Kordas, J. Tedim, A. Kuznetsova, M. L. Zheludkevich, M. G. S. Ferreira "Evaluation of self-healing ability in protective coatings modified with combination of nanocontainers filled with corrosion inhibitors" Electrochimica Acta, Electrochimica Acta 60 (2012) 31- 40, doi:10.1016/j.electacta.2011.10.078.

3. M. Mrad, L. Dhouibi, **M.F. Montemor**, E. Triki, "Effect of doping by corrosion inhibitors on the morphological properties and the performance against corrosion of polypyrrole electrodeposited on AA6061-T6"; Progress in Organic Coatings 72 (2011) 511- 516, doi:10.1016/j.porgcoat.2011.06.010

4. A.C. Balaskas, I.A. Kartsonakis, D. Snihirova, **M.F. Montemor**, G. Kordas, "Improving the corrosion protection properties of organically modified silicate-epoxy coatings by incorporation of organic and inorganic inhibitors", Progress in Organic Coatings 72 (2011) 653-662, doi:10.1016/j.porgcoat.2011.07.008

5. L. Freire, M.J. Carmezim, M.G.S. Ferreira, **M. F. Montemor,** "The electrochemical behaviour of stainless steel AISI 304 in alkaline solutions with different pH in the presence of chlorides Electrochimica Acta, 56 (2011) 5280-5289. http://dx.doi.org/10.1016/j.electacta.2011.02.094

6. M.Taryba, D. Snihirova, S. V. Lamaka, M.G.S. Ferreira, **M. F. Montemor**, W. K. Wijting, S. Toews, G. Grundmeier; "The combined use of SVET and micro-potentiometry to assess the self-repair processes in defects on "smart" coatings applied on galvanized steel", Electrochimica Acta, 56 (2011) 4475-4488. http://dx.doi.org/10.1016/j.electacta.2011.02.048

7. R. Pinto, M.G.S. Ferreira, M.J. Carmezim, **M. F. Montemor**," The corrosion behaviour of rare-earth containing magnesium alloys in borate buffer solution", Electrochimica Acta 56 (2011) 1535–1545. http://dx.doi.org/10.1016/j.electacta.2010.09.081

8. S.V. Lamaka, M.Taryba, **M. F. Montemor**, H.S. Isaacs, M.G.S. Ferreira, "Quasi-simultaneous measurements of ionic currents by vibrating probe and pH distribution by ion-selective

microelectrode", Electrochemistry Communications 13 (2011) 20–23. http://dx.doi.org/10.1016/j.elecom.2010.11.002

9. D. Snihirova, S.V. Lamaka, M. Taryba, A.M. Salak, S. Kallip, M.L. Zheludkevich, M.G.S. Ferreira, **M.F. Montemor**, "Hydroxyapatite microparticles as feed-back active reservoirs of corrosion inhibitors", ACS Appl. Mater. Interfaces, 2, 11 (2010) 3011–3022. http://dx.doi.org/10.1021/am1005942

10.R.Pinto, M.J. Carmezim, M.G.S.Ferreira, **M.F. Montemor**, "A two-step surface treatment, combining anodisation and silanisation for improved corrosion protection of the Mg alloy WE54", Progress in Organic Coatings 69 (2010) 143–149.http://dx.doi.org/10.1016/j.porgcoat.2010.04.014

11.P.H. Suegama, V.H.V. Sarmento, **M.F. Montemor**, A.V. Benedetti, H.G. de Melo, I.V. Aoki, C.V. Santilli "Effect of cerium (IV) ions on the anticorrosion properties of a siloxane-PMMA based film applied on tin coated steel", Electrochimica Acta 55 (2010) 5100–5109. http://dx.doi.org/10.1016/j.electacta.2010.04.002

12.L. Freire, M.J. Carmezim, M.G.S. Ferreira, **M.F. Montemor**, "The passive behaviour of AISI 316 in alkaline media and the effect of pH: A combined electrochemical and analytical study", Electrochimica Acta 55 (2010) 6174-6181. http://dx.doi.org/10.1016/j.electacta.2009.10.026

13.R. Pinto, M.G.S. Ferreira, M.J. Carmezim, **M.F. Montemor**, "Passive behavior of magnesium alloys (Mg-Zr) containing rare-earth elements in alkaline media", Electrochimica Acta 55 (2010) 2482–2489. http://dx.doi.org/10.1016/j.electacta.2009.12.012

14.N.C.T. Martins, T. Moura e Silva, **M.F. Montemor**, J.C.S. Fernandes, M.G.S. Ferreira, "Polyaniline coatings on aluminium alloy 6061-T6: electrosynthesis and characterization", Electrochimica Acta, 55 (2010) 3580-3588. http://dx.doi.org/10.1016/j.electacta.2009.12.007

15.**M.F. Montemor**, R. Pinto, M.G.S. Ferreira "Chemical composition and corrosion protection of silane films modified with CeO2 nanoparticles" Electrochimica Acta, 54 (2009) 5179-5189. http://dx.doi.org/10.1016/j.electacta.2009.01.053

16.Luis M. Palomino, Patrícia H. Suegama, Idalina V. Aoki, **M. F. Montemor**, Hercílio G. De Melo, "Electrochemical Study of modified cerium-silane bi-Layer on Al Alloy 2024-T3", Corrosion Science, 51(2009) 1238-1250. http://dx.doi.org/10.1016/j.corsci.2009.03.012

17.L. Freire, X.R. Nóvoa, **M.F. Montemor**, M.J. Carmezim, "Study of passive films formed on mild steel in alkaline media by the application of anodic potentials" Materials Chemistry and Physics, 114 (2009) 962-972. http://dx.doi.org/10.1016/j.matchemphys.2008.11.012

18.**M.F.Montemor**, M.G.S. Ferreira, "Analytical characterization of silane films modified with cerium activated nanoparticles and its relation with the corrosion protection of galvanised steel substrates", Progress in Organic Coatings 63 (2008) 330–337. http://dx.doi.org/10.1016/j.porgcoat.2007.11.008

19.**M.F.Montemor**, M.G.S. Ferreira, "Analytical characterisation and corrosion behaviour of bis-aminosilane coatings modified with carbon nanotubes activated with rare-earth salts applied on AZ31 Magnesium alloy", Surface and Coatings Technology, 202 (2008) 4766-4774. http://dx.doi.org/10.1016/j.surfcoat.2008.04.071

20.**M.F. Montemor**, W. Trabelsi, S.V. Lamaka, K.A. Yasakau, M. L. Zheludkevich, A.C. Bastos, M.G.S. Ferreira, "The synergistic combination of bis-silane and CeO2•ZrO2 nanoparticles on the electrochemical behaviour of galvanised steel in NaCl solutions", Electrochimica Acta, 53 (2008) 5913-5922 . http://dx.doi.org/10.1016/j.electacta.2008.03.069

21.S.V. Lamaka, **M.F. Montemor**, A.F. Galio, M.L. Zheludkevich, C. Trindade, L.F. Dick, M.G.S. Ferreira "Novel hybrid sol-gel coatings for corrosion protection of magnesium alloys", Electrochimica Acta, 53 (2008) 4773-4783 . http://dx.doi.org/10.1016/j.electacta.2008.02.015

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25.S. V. Lamaka, M.L. Zheludkevich , K.A. Yasakau, **M.F. Montemor**, M.G.S. Ferreira, "High effective organic corrosion inhibitors for 2024 aluminium alloy", Electrochimica Acta, 52 (2007) 7231-7247. http://dx.doi.org/10.1016/j.electacta.2007.05.058

26.**M.F. Montemor**, M.G.S. Ferreira, "Cerium Salt Activated Nanoparticles as Fillers For Silane Films: Evaluation of the Corrosion Inhibition Performance on Galvanised Steel Substrates", Electrochimica Acta 52 (2007) 6976-6987. http://dx.doi.org/10.1016/j.electacta.2007.05.022

27.W. Trabelsi, M.G.S. Ferreira, K. Yasakau, M.L. Zheludkevich, **M.F. Montemor**, "Surface evaluation and electrochemical behaviour of doped silane pre-treatments on galvanised steel substrates", Progress in Organic Coatings 59 (2007) 214-223. http://dx.doi.org/10.1016/j.porgcoat.2006.09.013

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29.**M.F. Montemor**, W. Trabelsi, A.M. Cabral, M.G.S.Ferreira, "The corrosion resistance of hot dip galvanised steel and aluminium alloys pre-treated with bis-(triethoxysilylpropyl) tetrasulfide solutions doped with Ce(NO3)3, "Corrosion Science, 48, 11 (2006) 3740-3758. http://dx.doi.org/10.1016/j.corsci.2006.01.010

30.**M.F. Montemor**, W. Trabelsi, M. Zheludevich, M.G.S.Ferreira, P. Cecílio; "Modification of bis-silane solutions with rare-earth cations for improved corrosion protection of galvanized steel substrates", Progress in Organic Coatings, 57 (2006) 67-77. http://dx.doi.org/10.1016/j.porgcoat.2006.06.009

31.Sviatlana V. Lamaka, Mikhail L. Zheludkevich, Kiril A. Yasakau, **M.F. Montemor**, P. Cecilio , Mário G.S. Ferreira; "TiOx self-assembled nets prepared by templating approach as nanostructured reservoir for self-healing anticorrosion pre-treatments", Electrochemistry Communications, 8 (2006) 421-428. http://dx.doi.org/10.1016/j.elecom.2005.12.019

32.W. Trabelsi, E. Triki, L. Dhouibi, M.G.S.Ferreira, M.L. Zheludkevich, **M.F. Montemor**, "The use of pre-treatments based on doped silane solutions for improved corrosion resistance of galvanised steel substrates", Surface and Coatings Technology, 200 (2006) 4240-4250. http://dx.doi.org/10.1016/j.surfcoat.2005.01.044

33.**M.F. Montemor**, A.M. Cabral, M.L. Zheludkevich, M.G.S.Ferreira, "The corrosion resistance of hot dip galvanised steel pre-treated with Bis-functional silanes modified with micro silica",

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34.M.L. Zheludkevich, R. Serra, **M.F. Montemor**, I.M. Salvado, M.G.S. Ferreira, "Corrosion Protective Properties of Nanostructured Sol-Gel Hybrid Coatings to AA2024-T3", Surface and Coatings Technology, 2000 (2006) 3084-3094. http://dx.doi.org/10.1016/j.surfcoat.2004.09.007

35.M.L. Zheludkevich, R. Serra, **M.F. Montemor**, K.A. Yasakau, I.M. Miranda Salvado, M.G.S. Ferreira, "Nanostructured Sol-Gel Coatings Doped with Cerium Nitrate as Pre-Treatments for AA2024-T3. Corrosion Protection Performance", Electrochimica Acta, 51 (2005) 208-217. **ELSEVIER AWARD**: Most Cited Article 2006-2009 – Electrochimica Acta http://dx.doi.org/10.1016/j.electacta.2005.04.021

36.A.M. Cabral, R.G. Duarte, **M.F. Montemor**, M.G.S. Ferreira, "A comparative study on the corrosion resistance of AA2024-T3 substrates pre-treated with different silane solutions: Composition of the films formed" Progress in Organic Coatings, 54 (2005) 322-331. http://dx.doi.org/10.1016/j.porgcoat.2005.08.001

37. W.Trabelsi, P.Cecilio, M.G.S. Ferreira, **M.F.Montemor**, "Electrochemical assessment of the self-healing properties of Ce-doped silane solutions for the pre-treatment of galvanised steel substrates" Progress in Organic Coatings, 54 (2005) 276-284. http://dx.doi.org/10.1016/j.porgcoat.2005.07.006

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