

NAME: Marco António Mourão Cartaxo

DATE AND PLACE OF BIRTH: 10 March 1975; Tomar, Portugal

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ACADEMIC AND PROFESSIONAL CAREER

- 1997:** Graduation (4 years degree) in Chemistry – Faculty of Sciences, University of Lisbon (FCUL)
- 2001:** M.Sc. in Applied Electrochemistry, specialization in Electroanalysis – FCUL
- 2002:** Assistant 1st triennium – ESTT, IPT
- 2005:** Assistant 2nd triennium – ESTT, IPT
- 2012:** Ph.D. Chemistry (Physical Chemistry) – University of Lisbon
- 2012-....:** Associate Professor – ESTT, IPT

TEACHING AND MANAGEMENT

- Supervision of M.Sc. Thesis, B.Sc. projects and CET reports; Teaching duties (more than 14 years)/Lectures and Laboratory Practice: General Chemistry (B.Sc. and TESP), Chemistry (B.Sc.), Inorganic Chemistry (B.Sc.), Organic Chemistry I and II (B.Sc. and TESP), Chemistry I and II (B.Sc.), Applied Chemistry I and II (B.Sc.), Instrumental Analytical Methods (B.Sc. and CET), Introduction to Physical Chemistry (B.Sc.), Physical Chemistry (B.Sc.), Bioenergies (B.Sc.), Renewable Fuels (CET), Biofuel Production (CET), Optimization of Energetic Resources (CET), Wastewater Treatment (CET), Food Chemistry (TESP), Environmental Engineering (M.Sc. and short course), Biodiesel Production in Small Scale (short course), Environmental Impact Assessment (TESP), Raw Materials and Natural Resources (TESP), at the IPT.
- Supervision of training in work context of Professional Courses students of secondary schools, at the IPT.
- Member of the Evaluation and Seriation Panel of Applications to TESP, responsible for the general and scientific formation component of the CET in Energy and Biofuels, member of the Committee preparing a new CTSP course in Bioprocess Technology, member of the ESTT Coordination Committee of the Network of Technological and Professional Formation of the *Medio Tejo*, pivot of the ESTT Network of Technological and Professional Formation of the *Medio Tejo*, Member of the Development Commission of the Chemical and Environmental Engineering Department (DEQA) internet page, Member of the Divulagation Committee of DEQA, Coordinator of the DEQA participations in the Child and the Environment Week organized by the Municipality of Tomar, Responsible of DEQA under the Science Culture and Technology Festival, at the IPT.

RESEARCH/PROJECTS

- Currently is a research collaborator of the Center of Chemistry and Biochemistry, FCUL, where is starting research in developing new materials usable in the electrochemical degradation of pollutants, collaborating also with the *Beira Interior* University.
- Electrochemical characterization of steel electrodes coated with cobalt and iron oxides ($\text{Co}_{1.7}\text{Fe}_{1.3}\text{O}_4$) in collaboration with the group of Prof. P. Tailhades, Université Paul Sabatier, Toulouse, France, 2008.
- Project "Optimization of conditions for phenol degradation using metal oxides as anodes containing cobalt and iron ($\text{Co}_{3-x}\text{Fe}_x\text{O}_4$, $0 \leq x \leq 3$)," Portugal-Morocco Bilateral Cooperation Program, GRICES/CNRST, from 01-01-2006 to 31-12-2007, University of Lisbon / University of Agadir.

- Project "Treatment of industrial wastewater containing organic pollutants: phenol electrooxidation on metal oxide anodes", Portugal-Morocco Bilateral Cooperation Programme GRICES/CNRST 2004-2005, University of Lisbon / University of Agadir.
- Project "Mixed Oxides: Alternative materials in electrolytic processes", PRAXIS/PCEX/QUI/83/96 - PRAXIS XXI Program: University of Lisbon.

PUBLICATIONS IN INTERNATIONAL JOURNALS WITH PEER REVIEW

1. "Electrochemical oxidation of paraquat in neutral medium", **M. A. M. Cartaxo**, C. M. Borges, M. I. S. Pereira, M. H. Mendonça, *Electrochim. Acta*, 176 (2015) 1010–1018, <http://dx.doi.org/10.1016/j.electacta.2015.07.099>
2. "Phenol electrooxidation on Fe–Co₃O₄ thin film electrodes in alkaline medium", **M. A. M. Cartaxo**, K. Ablad, J. Douch, Y. Berghoute, M. Hamdani, M. H. Mendonça, J. M. F. Nogueira, M. I. S. Pereira, *Chemosphere*, 86 (2012) 341-347
3. "Studies on Fe-Co spinel electrodes", **M. A. M. Cartaxo**, T. A. S. Ferreira, M. R. Nunes, M. Helena Mendonça, M. I. da Silva Pereira and F. M. Costa, *Solid State Sci.*, 9 (2007) 744-749
4. "Electrochemical study of spinel oxide systems with nominal compositions Ni_{1-x}Cu_xCo₂O₄ and NiCo_{2-y}Cu_yO₄", A. C. Tavares, **M. A. M. Cartaxo**, M. I. da Silva Pereira and F. M. Costa, *J. Solid State Electrochem.*, 5 (2001) 57-67
5. "Effect of the partial replacement of Ni or Co by Cu on the electrocatalytic activity of the NiCo₂O₄ spinel oxide", A. C. Tavares, **M. A. M. Cartaxo**, M. I. da Silva Pereira and F. M. Costa, *J. Electroanal. Chem.*, 464 (1999) 187-197

OTHER RELEVANT PUBLICATIONS

1. **Cartaxo, M. A. M.**, Rosa, M. A. N. H., Henriques, N. (2015). Assesment of gastropod sensitivity to nitrates downstream of a wastewater treatment plant. 1st Natural Hazards Research Center Meeting, Tomar, 15-18 June.
2. **Cartaxo, M. A. M.** (2015). Processos Avançados de Oxidação no Tratamento de Águas. SYMPOSIUM IBÉRICO – ÁGUA & TECNOLOGIAS, Abrantes, 05 June.
3. **Cartaxo, M. A. M.** (2013). Métodos electroquímicos: uma alternativa aos métodos convencionais no tratamento de águas. Jornadas de Engenharia Química e do Ambiente – A Água, Tomar, 05-06 April.
4. **Cartaxo, M. A. M.**, Nogueira, J. M. F., Mendonça M. H., Pereira. M. I. (2011). Degradação electroquímica do fenol. Ciência QB – 1º Encontro dos alunos de doutoramento do DQB-FCUL, Lisboa, 07 Junho.

AWARDS AND DISTINCTIONS

- Scholarship SIBAE Costa Rica of the Portuguese Society of Electrochemistry, 2004.

RESEARCH AREAS

- Environmental Chemistry; Catalysis and Electrocatalysis; Electrochemical properties of metal oxides; Electrochemical remediation and degradation of organic pollutants on oxide electrodes.