

Curriculum Vitae

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Nationality Portuguese

Date of Birth October 14, 1983

Gender Male

Languages Portuguese and English.



Education

- since Sep 2007* PhD candidate at the *School of Chemical & Bioprocess Engineering* at University College Dublin (UCD), Ireland. Proposed submission date for thesis is August 2010.
Topic: “*Microemulsions as Templates for New Materials*”
Supervisor: Prof. Cosima Stubenrauch, UCD & University of Stuttgart.
- 2001–2006* Diploma Degree in *Chemistry (Physical Chemistry)* University of Coimbra, Coimbra, Portugal.
Topic: “*Interactions between DNA and cationic surfactants*”
Supervisor: Prof. Maria da Graça Miguel, University of Coimbra.

Additional Courses

1. Project Management for Research – University College Dublin, 28 Jan – 26 Mar 2010.
2. High-Resolution Transmission Electron Microscopy and Electron Holography – Technical University of Dresden (Prof. Dr. Hannes Lichte), 16 – 27 Feb 2009.
3. Calibration and Quantification – University of Coimbra 12 – 23 Nov 2005.
4. Residual Water Treatment in Companies of Treatment of Surfaces - University of Coimbra, 24 Oct – 11 Nov 2005.
5. Basic Knowledge of Statistics - University of Coimbra 16 – 26 Nov 2005.

Attended Workshops

- 31 Mar – 03 Apr 2009* Interfacial Engineering in Nanotechnology (Cost D43 School) – Leibniz Institute of Polymer Research, Dresden, Germany.

Fund Raising

- Mar 2010, Nov, Oct, Jun 2009* Seed funding **ESTEEM** (Enabling Science and Technology through European Electron Microscopy), Max-Planck Institute for Metals Research – Stuttgart. RII3 Contract No. 026019.
- Sep 2010* Science Foundation of Ireland Scholarship (16,500 per annum).

Short Summary of Research Interests

Colloids, Microemulsions, Polymers, Aggregation, Polymer-Surfactant Interactions, Gels, Polyelectrolytes, Metallic Nanoparticles, Nanoparticles Semiconductors, Catalysts for Fuel Cells.

Experimental Methods

- Small/Wide Angle X-ray Diffraction (SAXS/WAXS)
- Rheology
- Transmission Electron Microscopy (TEM) / Energy Dispersive X-ray analysis (EDX) / Selected Area Electron Diffraction (SAED)
- Fluorescence Spectroscopy and Fluorescence Microscopy
- Tensiometry
- Polarization Microscopy

Research Experience

- Mar 2010, Nov, Oct, Jul 2009* TEM / EDX and SAED measurements at the StEM Group (Prof. Peter van Aken) of Max-Planck Institute for Metals Research, Stuttgart, Germany (under the financial support of ESTEEM).
- Feb 2009* Training in Small Angle X-ray scattering (SAXS) and GIFT (Software) at the Group of Prof. Otto Glatter, Karl – Franzen University, Graz, Austria (2 weeks).
- Jan 2008* Research visitor in the group of Prof. Reinhard Strey at the Institute of Physical Chemistry, University of Cologne, Germany.
Topic: “*Measuring phase diagrams of microemulsions*”.
- Jan - Aug 2007* Research project at the group of Prof. Maria da Graça Miguel, Department of Chemistry, University of Coimbra, Portugal.
Topic: “*Interactions between DNA and cationic surfactants*”.
- Sep - Dec 2006* Research project at the group of Prof. Jan van Stam, Department of Physical Chemistry, University of Karlstad,

Sweden. Topic: “*Preparation and Characterization of CdS and CdSe Nanoparticulate Semiconductors*” under the supervision of Dr. Wuge Briscoe.

Jul 2006 Research project at Physical Chemistry 1, University of Lund, Sweden. Topic: “*Compaction of DNA in the presence of cationic surfactants. A fluorescence microscopy study*” under the supervision of Dr. Rita Dias.

Sep 2005- Sep 2006 Research project at the group of Prof. Maria da Graça Miguel, Department of Chemistry, University of Coimbra, Portugal. Topic: “*Interactions between DNA and cationic surfactants*” (Diploma work project).

Publications

1. **Size Control of PtPb Nanoparticles Prepared via Microemulsions**, M. Magno, W. Sigle, P. van Aken, D. Angelescu, C. Stubenrauch, submitted.
2. **Nanoparticles: Size and Composition of Particles**, M. Magno, W. Sigle, P. van Aken, D. Angelescu, C. Stubenrauch, submitted.
3. **Microemulsion as Reaction Media for the Synthesis of Pt Nanoparticles**, M. Magno, W. Sigle, D. Angelescu, C. Stubenrauch, *PCCP*, submitted.
4. **Gelled Polymerizable Microemulsions. 3. Rheology**, M. Magno, R. Tessorf, B. Medronho, M. G. Miguel, C. Stubenrauch, *Soft Matter*, 2009, 5, 4763-4772.
5. **Phase diagrams of non-ionic microemulsions containing reducing agents and metal salts as bases for the synthesis of bimetallic nanoparticles**, M. Magno, D.G. Angelescu, C. Stubenrauch, *COLSUA*, 2009, 348, 116-123.
6. **Binary Interaction between DNA and Cationic Surfactants: Effect of DNA Conformation and Surfactant Headgroup**, R. Dias, L. M. Magno, A. J. M. Valente, D. Das, P. K. Das, S. Maiti, M. G. Miguel, B. Lindman, *J. Phys. Chem B*, 2008, 112, 14446.

Presentations

Conferences

- 28-30 Sep 2009 **Microemulsions as Template for the Synthesis of Metallic Nanoparticles**
44th Biennial Meeting of the German Colloid Society, Hamburg, Germany (Poster contribution).
- 6-11 Sep 2009 **Rheology of Gelled Polymerizable Microemulsions**
23rd Conference of the European Colloid and Interface Society, Antalya, Turkey (Poster contribution).
- 31 Aug-5 Sep 2008 **Phase Behaviour of Microemulsion Containing Metal Salts**
22nd Conference of the European Colloid and Interface Society, Cracow, Poland (Poster contribution).
- 27 Jun-1 Jul 2008 **Phase diagrams of Microemulsions Containing Reducing Agents and Metal Salts: Templates for the Synthesis of Metallic Nanoparticles**
7th Liquid Matter Conference, Lund, Sweden (Poster contribution).
- 16-19 Jun 2008 **Interactions between DNA and Cationic Surfactants**
Polyelectrolytes 2008, Coimbra, Portugal (Poster contribution).

Seminars

- 10 May 2007,
06 Dec 2007,
21 Jan 2009,
24 Nov 2009 **Microemulsion as Templates for New Materials**
School of Chemical and Bioprocess Engineering, UCD, Dublin, Ireland.
- 24 Jul 2007 **Interactions between DNA and Cationic Surfactants with different headgroups**
School of Chemical and Bioprocess Engineering, UCD, Dublin, Ireland.
- 29 Nov 2006 **Preparation and Characterization of CdS and CdSe Nanoparticulate Semiconductors**, Karlstad University, Karlsad, Sweden.
- 26 Sep 2006 **Interactions between DNA and Cationic Surfactants.**
Department of Chemistry, University of Coimbra, Coimbra, Portugal.

Responsibilities / Teaching

- Running of PhD research project focus on the development of a new route for the synthesis of Pt and Pt-Bimetallic nanoparticles as catalysts for fuel cells (PhD thesis).

- Responsible for maintenance and training of SAXS at the Nano Imaging and Material Analysis Center, Dublin, Ireland (<http://www.ucd.ie/nimac/saxs.htm>).
- Supervision of final year student's research project in the field of Colloid Science at the School of Chemical and Bioprocess Engineering, UCD, Dublin (CHEN 40200 Final Year Project).
- Demonstration from 2007 until 2009 of 2nd year Laboratory Sessions of Chemical and Bioprocess Engineering (CHEN 20040 and CHEN 20010 Chemical Engineering Laboratory).

Additional Information

2008	Volleyball Intervarsity Champion of Republic of Ireland and Northern Ireland.
Oct 2007-	Member, player and team coach of UCD Volleyball Club, Dublin, Ireland.
Oct 2005 - Oct 2006	First President of the Plenary Assembly of Chemistry Students of the Academic Association of Coimbra, Coimbra, Portugal.
Sep 2004 - Oct 2006	Member of the Chemistry Students Association of the Academic Association of Coimbra, Coimbra, Portugal.
1996 - 2006	Volleyball Player in Academic Association of Coimbra.

EU – Driving License (Category B)

References

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