

Curriculum vitae



i) Personal information

Luís Miguel Nunes Pereira

Born 1st October 1977, Lisboa, Portugal

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ii) Education

2008 - PhD, Faculty of Science and Technology of New University of Lisbon (FCT-UNL) "Production and characterization of polycrystalline silicon for application in thin film transistors"

2001 - MSc (5 years program) in Materials Science and Engineering, Faculty of Science and Technology of New University of Lisbon, with the thesis: "Optimization of a Constant Photocurrent Method system for determination of the density of states in a-Si thin films", score 19/20

iii) Current position

2015 – to date - Associate Professor, Materials Science Department/Faculty of Sciences and Technology /Universidade Nova de Lisboa/ Portugal.

iv) Previous positions

2012 – 2015 - Assistant Professor, Materials Science Department/Faculty of Sciences and Technology Universidade Nova de Lisboa / Portugal.

2009 – 2012 - Assistant researcher, CENIMAT/I3N /Faculty of Sciences and Technology/ Universidade Nova de Lisboa / Portugal

2008 – 2009 – Researcher, Saint Gobain Research/France

v) Supervision of graduate students and postdoctoral fellows

2010 – to date, 2 Postdocs/ 9 PhD Students (2 finalized, 7 on-going)/ 24 Master Students (20 finalized, 4 on going)

vi) Organization of scientific meetings and workshops

2019 – TCM-NET Graduation School, ("Materials for flexible electronics, smart surfaces an sensing") April 14th, Lisbon/Portugal

2018 – BET-EU H2020 project summer school, Chania/Crete/Greece, October 14th

2017 - BET-EU H2020 project workshop, E-MRS Spring Meeting, Strasbourg/France

2015 - Symposium BB organizer ("Paper electronics: a new challenge for materials a new opportunity for devices II") E-MRS Spring Meeting, Lille/France

2014 - Symposium R organizer ("Towards lightweight and flexible electrochemical devices"), E-MRS Spring Meeting, Lille/France

2013 - Symposium D organizer ("Paper electronics: a new challenge for materials a new opportunity for devices") E-MRS Fall Meeting, Warsaw/Poland

2011 - Symposium L organizer ("Towards lightweight and flexible and self-sustained ion based devices") E-MRS Fall Meeting, Warsaw/Poland

vii) Memberships and commissions of trust

Since 2017 – Associated editor "2D Materials and Applications", Nature Publishing Group, Springer Nature

Since 2017 – Member of the board of the Portuguese Materials Society, SPM

Since 2019 – Member of the board of Portuguese Professional Engineer Association – South Region

I belong to evaluation panels of national projects (Innovation Agency, Portugal) and international (European Research Council – ERC, H2020 FET OPEN, Agence Nationale de la Recherche - AMR France, National Scientific Research Council and National Council for Research and Development, Romania). I am also a referee of several scientific journals, including Nature Communications, Advanced Materials family journals, Journal of Materials Chemistry, Small, Solar Energy Materials and Solar Cells, Electrochimica Acta, Materials Chemistry Physics IEEE journals, MDPI journal, among many others.

viii) Most recent/relevant publications

I have authored and co-authored 175 publications in peer-reviewed journals and proceedings of the ISI. My H factor is 43 (Google Scholar, Jan. 2019) and 39 (WoS, Jan. 2019)) and my publications have about 5800 citations (about 5400 without self-citations, WoS Jan. 2019). Some of the most representative are:

1. D Gaspar, J Martins, P Bahubalindrani, **L Pereira**, E Fortunato, R Martins, “Planar Dual-Gate Paper/Oxide Field Effect Transistors as Universal Logic Gates”, *Advanced Electronic Materials* 4 (2018), 1800423
2. R Martins, D Gaspar, MJ Mendes, **L Pereira**, J Martins, P Bahubalindrani, P. Barquinha, E. Fortunato, “Papertronics: Multigate paper transistor for multifunction applications”, *Applied Materials Today* 12 (2018) 402-414
3. CFA Alves, C Mansilla, **L Pereira**, F Paumier, T Girardeau, S Carvalho, “Influence of magnetron sputtering conditions on the chemical bonding, structural, morphological and optical behavior of Ta_{1-x}O_x coatings”, *Surface and Coatings Technology* 334 (2018) 105-115
4. P Grey, SN Fernandes, D Gaspar, E Fortunato, R Martins, MH Godinho, **L. Pereira**, “Field-Effect Transistors on Photonic Cellulose Nanocrystal Solid Electrolyte for Circular Polarized Light Sensing” *Advanced Functional Materials* (2018) 1805279
5. P. Grey, D. Gaspar, I. Cunha, R. Barras, JT Carvalho, JR Ribas, E. Fortunato, R. Martins, **L. Pereira**, “Handwritten Oxide Electronics on Paper”, *Advanced Materials Technology* 2 (2017) 1700009
6. I. Cunha, R. Barras, P. Grey, D. Gaspar, E. Fortunato, R. Martins, **L. Pereira**, “Reusable Cellulose-Based Hydrogel Sticker Film Applied as Gate Dielectric in Paper Electrolyte-Gated Transistors”, *Advanced Functional Materials*, 27 (2017) 1606755
7. H. Águas, T. Mateus, A. Vicente, D. Gaspar, M. J. Mendes, W. A. Schmidt, **L. Pereira**, E. Fortunato and R. Martins “Thin Film Silicon Photovoltaic Cells on Paper for Flexible Indoor Applications” *Advanced Functional Materials*, 25 (2015) 3592-3598
8. P. J. Wojcik, L. Santos, **L. Pereira**, R. Martins, E. Fortunato “Tailoring nanoscale properties of tungsten oxide for inkjet printed electrochromic devices” *Nanoscale* 2015, Advance Article. DOI: 10.1039/C4NR05765A
9. **L. Pereira**, D. Gaspar, D. Guerin, A. Delattre, E. Fortunato and R. Martins, “The influence of fibril composition and dimension on the performance of paper gated oxide transistors” *Nanotechnology* 25 (2014) 094007
10. D. Gaspar, S. N. Fernandes, A. G. de Oliveira, J. G. Fernandes, P. Grey, R. V. Pontes, **L. Pereira**, R. Martins, M. H. Godinho and E. Fortunato, “Nanocrystalline cellulose applied simultaneously as the gate dielectric and the substrate in flexible field effect transistors” *Nanotechnology* 25 (2014) 094008 (*cover article*)
11. R.F.P. Martins, A. Ahnood, N. Correia, **L.M.N. Pereira**, R. Barros, P.M.C. Barquinha, R. Costa, I.M.M. Ferreira, A. Nathan, E.M.C. Fortunato, "Recyclable, Flexible, Low-Power Oxide Electronics" *Advanced Functional Materials*, 23 (2013) 2153-2161
12. R. Martins, A. Nathan, R. Barros, **L. Pereira**, P. Barquinha, N Correia, R Costa, A Ahnood, I Ferreira, E Fortunato, “Complementary metal oxide semiconductor technology with and on paper”, *Advanced Materials*, 23 (2011) 4491

ix) *Books and book chapters*

1. Daniela Nunes, Ana Pimentel, Lidia Santos, Pedro Barquinha, **Luis Pereira**, Elvira Fortunato, Rodrigo Martins, *Metal Oxide Nanostructures: Synthesis, Properties and Applications*, Elsevier (November 2018) ISBN 9780128115053
2. Elvira Fortunato, Diana Gaspar, Paulo Duarte, Luís Pereira, Hugo Águas, António Vicente, Fernando Dourado, F. M. Gama, Rodrigo Martins, *Bacterial Nanocellulose: From Biotechnology to Bio-Economy*, Elsevier (2017) ISBN 9780444634580 Pags. 179-197
3. Pedro Barquinha, Rodrigo Martins, **Luís Pereira**, Elvira Fortunato, *Transparent Semiconductors: From Materials to Devices*. West Sussex: Wiley & Sons (March 2012), ISBN 9780470683736
4. E. Fortunato, P. Barquinha, G. Gonçalves, **L. Pereira**, R. Martins in: *Oxide semiconductors: from materials to devices*, *Transparent Electronics: from synthesis to applications*, Edts: A. Facchetti and T. J. Marks, Wiley, 2010
5. E. Fortunato, P. Barquinha, A. Pimentel, A. Goncalves, A. Marques, **L. Pereira**, R. Martins. “Thin Film Transistor based on ZnO”. In *NATO ARW on Zinc Oxide*, edited by N. Nickel and E. Terukov, Springer (2004/2005).

x) *Recent Invited presentations*

From 2006 to date I gave more than 30 invited talks at conferences such as the SID Display Week, Plastic Electronics, SPIE OPTO MRS and EMRS meetings or Conference on Transparent Conductive Materials, among others. Most recent ones are:

1. “Cellulose in electrical and electrochemical flexible devices” International Mechanical Engineering Congress and Exposition, IMECE2018, Pittsburgh, USA, November 9-15th 2018
2. “Functional cellulose materials enabling oxide based electronic and photonic devices”, International Symposium on Transparent Conductive Materials, Chania/Crete/Greece, October 14-19th 2018

3. “An introduction to paper electronics” ELBYSIER - IC in Electronics Beyond Silicon Era, July 2-7th 2018, Chania/Crete/Greece
4. “ERC – the million (an half) euros question”, Young EMRS workshop, EMRS Spring Meeting, Strasbourg, France May 2018
5. “A new era of cellulose based electronics, ionics and photonics” ELBYSIER - IC in Spintronics Technologies, April 10-14th Warsaw, Poland
6. “*Printed electrical and electrochemical devices based on oxide nanoparticles*”, Ceramic Interconnect and Ceramic Microsystems Technologies, CICMT2018 March 18-20th, 2018, Aveiro, Portugal
7. “*A new era of electronics and photonics on paper*” EurASc2017 Symposium, The Future in Science in the 21st Century: Science and Technology for the better future of Humankind, October 26 & 27, 2017, Lisbon, Portugal
8. “*Oxide nanoparticles based printed electrical and electrochemical devices on paper substrates*” 15th International conference on Advanced Materials, symposium C4, IUMRS-ICAM 2017, August 27-September 1, 2017, Kyoto, Japan
9. “*Printed oxide nanoparticles based devices on paper substrates*”, Innovations in Large Area Electronics Conference, INNOLAE 2017, Cambridge, UK, January 31st-February 1st 2017

xj) Awards

2018 – Best Professor at Materials Science Department FCT/UNL 2016/2017, by FCT Student Association

2017 – Innovation award, Instituto Nacional Casa da Moeda 2017

2017 – Best Professor at Materials Science Department FCT/UNL 2015/2016, by FCT Student Association

2016 – Eminent researcher award, by Materials Science Department, FCT/UNL

2015 - European Research Council Staring Grant, project number 640598

2010 - Best SID paper, Korean Information Display Society/Korea, work on paper transistors and memory

2009 - R&D Green Project Award/Portugal, work on paper transistors

2009 - Exame Informatica/Portugal – Innovation prize, work in transparent electronics and paper electronics

2009 – IdTechEx – Academic R&D