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## Qualifications

Microelectronics and Optoelectronics, Doctorate, Universidade NOVA de Lisboa  
1 Jan 2002 → 31 Dec 2007  
Award Date: 29 Sep 2008

Materials Engineering, Master, Faculdade de Ciências e Tecnologia (FCT)  
9 Dec 1996 → 31 Jul 2001  
Award Date: 31 Oct 2001

## Employment

### Assistant Professor between Dec. 2012 and Dec. 2015

Associate Professor  
DCM - Departamento de Ciência dos Materiais  
Universidade NOVA de Lisboa  
Portugal  
3 Dec 2012 → present

### Researcher

CENIMAT-i3N - Centro de Investigação de Materiais (Lab. Associado I3N)  
Universidade NOVA de Lisboa  
Caparica, Portugal  
1 Jul 2009 → 2 Dec 2012

### Researcher

UNINOVA-Instituto de Desenvolvimento de Novas Tecnologias  
Universidade NOVA de Lisboa  
1 Oct 2006 → 28 Feb 2008

### Technical & Scientific Director

AlmaScience  
Caparica, Portugal  
4 Nov 2020 → present

### Researcher

Saint Gobain Recherche  
1 Mar 2008 → 30 Jun 2009

## Research outputs

### Combining Soft with Hard Condensed Matter for Circular Polarized Light Sensing and Logic Operations

Grey, P., Chapa, M., Alexandre, M., Mateus, T., Fortunato, E., Martins, R., Mendes, M. J. & Pereira, L., 18 Mar 2021, In: Advanced Optical Materials. 9, 6, 2001731.

### The Role of Particle Contact in Densification of FLASH Sintered Potassium Sodium Niobate

Serrazina, R., Senos, A. M. O. R., Pereira, L., Dean, J. S., Reaney, I. M. & Vilarinho, P. M., 22 Oct 2020, In: European Journal of Inorganic Chemistry. 2020, 39, p. 3720-3728 9 p.

**Cellulose-Based Solid Electrolyte Membranes Through Microwave Assisted Regeneration and Application in Electrochromic Displays**

Duarte, P., Pereira, S., Cunha, I., Pimentel, A., Dionísio, M., Fortunato, E., Martins, R. & Pereira, L., 14 Aug 2020, In: *Frontiers in Materials* . 7, 269.

**Modelling the particle contact influence on the Joule heating and temperature distribution during FLASH sintering**

Serrazina, R., Vilarinho, P. M., Senos, A. M. O. R., Pereira, L., Reaney, I. M. & Dean, J. S., 1 Apr 2020, In: *Journal of the European Ceramic Society*. 40, 4, p. 1205-1211 7 p.

**Application of ultrasonic sprayed zirconium oxide dielectric in zinc tin oxide-based thin film transistor**

Oluwabi, A. T., Katerski, A., Carlos, E., Branquinho, R., Mere, A., Krunks, M., Fortunato, E., Pereira, L. & Oja Acik, I., 21 Mar 2020, In: *Journal of Materials Chemistry C*. 8, 11, p. 3730-3739

**Ionically Modified Cellulose Nanocrystal Self-Assembled Films with a Mesoporous Twisted Superstructure: Polarizability and Application in Ion-Gated Transistors**

Grey, P., Fernandes, S. N., Gaspar, D., Deuermeier, J., Martins, R., Fortunato, E., Godinho, M. H. & Pereira, L., 25 Feb 2020, In: *ACS Applied Electronic Materials*. 2, 2, p. 426-436

**Influence of Post-UV/Ozone Treatment of Ultrasonic-Sprayed Zirconium Oxide Dielectric Films for a Low-Temperature Oxide Thin Film Transistor**

Oluwabi, A. T., Gaspar, D., Katerski, A., Mere, A., Krunks, M., Pereira, L. & Oja Acik, I., 1 Jan 2020, In: *Materials*. 13, 1, 6.

**Touch-Interactive Flexible Sustainable Energy Harvester and Self-Powered Smart Card**

Ferreira, G., Goswami, S., Nandy, S., Pereira, L., Martins, R. & Fortunato, E., 1 Jan 2020, In: *Advanced Functional Materials*. 30, 5, 1908994.

**Mechanism of densification in low-temperature FLASH sintered lead free potassium sodium niobate (KNN) piezoelectrics**

Serrazina, R., Dean, J. S., Reaney, I. M., Pereira, L., Vilarinho, P. M. & Senos, A. M. O. R., 7 Dec 2019, In: *Journal of Materials Chemistry C*. 7, 45, p. 14334-14341 8 p.

**Sustainable fully printed UV sensors on cork using zinc oxide/ethylcellulose inks**

Figueira, J., Gaspar, C., Carvalho, J. T., Loureiro, J., Fortunato, E., Martins, R. & Pereira, L., 1 Sep 2019, In: *Micromachines*. 10, 9, 601.

**Field-Effect Transistors on Photonic Cellulose Nanocrystal Solid Electrolyte for Circular Polarized Light Sensing**

Grey, P., Fernandes, S. N., Gaspar, D., Fortunato, E., Martins, R., Godinho, M. H. & Pereira, L., 23 May 2019, In: *Advanced Functional Materials*. 29, 21(SI), 1805279.

**Back Cover: Field-Effect Transistors: Field-Effect Transistors on Photonic Cellulose Nanocrystal Solid Electrolyte for Circular Polarized Light Sensing (Adv. Funct. Mater. 21/2019)**

Grey, P., Fernandes, S. N., Gaspar, D., Fortunato, E., Martins, R., Godinho, M. H. & Pereira, L., 1 May 2019, In: *Advanced Functional Materials*. 29, 21, p. 1970145

**Role of structure and composition on the performances of P-type tin oxide thin-film transistors processed at low-temperatures**

Barros, R., Saji, K. J., Waerenborgh, J. C., Barquinha, P., Pereira, L., Carlos, E., Martins, R. & Fortunato, E., 1 Mar 2019, In: *Nanomaterials*. 9, 3, 320.

**Fully printed zinc oxide electrolyte-gated transistors on paper**

Carvalho, J. T., Dubceac, V., Grey, P., Cunha, I., Fortunato, E., Martins, R., Clausner, A., Zschech, E. & Pereira, L., 1 Feb 2019, In: *Nanomaterials*. 9, 2, 169.

**Cellulose based functional materials in electrical and electrochemical flexible devices**

Cunha, I., Gaspar, D., Grey, P., Carvalho, J. T., Fortunato, E., Martins, R. & Pereira, L., 2019, *International Conference on Nanotechnology for Renewable Materials 2019*. TAPPI Press, Vol. 1. p. 327-340 14 p.

### **Planar Dual-Gate Paper/Oxide Field Effect Transistors as Universal Logic Gates**

Gaspar, D., Martins, J., Bahubalindrani, P., Pereira, L., Fortunato, E. & Martins, R., 1 Dec 2018, In: *Advanced Electronic Materials*. 4, 12, 1800423.

### **Papertronics: Multigate paper transistor for multifunction applications**

Martins, R., Gaspar, D., Mendes, M. J., Pereira, L., Martins, J., Bahubalindrani, P., Barquinha, P. & Fortunato, E., 1 Sep 2018, In: *Applied Materials Today*. 12, p. 402-414 13 p.

### **Paper electronics: a sustainable multifunctional platform**

Fortunato, E., Gaspar, D., Cunha, I., Mendes, M., Vicente, A., Aguas, H., Marques, A. C., Pimentel, A., Nunes, D., Pereira, L. & Martins, R., 20 Aug 2018, *2018 76th Device Research Conference, DRC 2018*. Institute of Electrical and Electronics Engineers Inc., 8442238. (IEEE Device Research Conference Proceedings; vol. 2018-June).

### **Influence of magnetron sputtering conditions on the chemical bonding, structural, morphological and optical behavior of Ta<sub>1-x</sub>O<sub>x</sub> coatings**

Almeida Alves, C. F., Mansilla, C., Pereira, L., Paumier, F., Girardeau, T. & Carvalho, S., 25 Jan 2018, In: *Surface and Coatings Technology*. 334, p. 105-115 11 p.

### **Circularly polarized light detection on transistors using cellulose photonic dielectrics**

Grey, P., Fernandes, S. N., Gaspar, D., Martins, R., Fortunato, E., Godinho, M. H. & Pereira, L., 1 Jan 2018, *International Conference on Nanotechnology for Renewable Materials 2018*. TAPPI Press, Vol. 1. p. 479-491 13 p.

### **Flexible thin film solar cells on cellulose substrates with improved light management**

Smeets, M., Wilken, K., Bittkau, K., Aguas, H., Pereira, L., Fortunato, E., Martins, R. & Smirnov, V., 1 Aug 2017, In: *Physica Status Solidi (A) Applications and Materials Science*. 214, 8, 1700070.

### **Reusable Cellulose-Based Hydrogel Sticker Film Applied as Gate Dielectric in Paper Electrolyte-Gated Transistors**

Cunha, I., Barras, R., Grey, P., Gaspar, D., Fortunato, E., Martins, R. & Pereira, L., 25 Apr 2017, In: *Advanced Functional Materials*. 27, 16, 1606755.

### **High mobility hydrogenated zinc oxide thin films**

Gaspar, D., Pereira, L., Gehrke, K., Galler, B., Fortunato, E. & Martins, R., 1 Apr 2017, In: *Solar Energy Materials and Solar Cells*. 163, p. 255-262 8 p.

### **Printable cellulose-based electroconductive composites for sensing elements in paper electronics**

Barras, R., Cunha, I., Gaspar, D., Fortunato, E., Martins, R. & Pereira, L., 1 Mar 2017, In: *Flexible and Printed Electronics*. 2, 1, 014006.

### **Optoelectronics and Bio Devices on Paper Powered by Solar Cells**

Vicente, A. T., Araújo, A., Gaspar, D., Santos, L., Marques, A. C., Mendes, M. J., Pereira, L. M. N., Fortunato, E. & Martins, R., 22 Feb 2017, *Nanostructured Solar Cells*. Das, N. (ed.). InTech

### **Handwritten Oxide Electronics on Paper**

Grey, P., Gaspar, D., Cunha, I., Barras, R., Carvalho, J. T., Ribas, J. R., Fortunato, E., Martins, R. & Pereira, L., 1 Jan 2017, In: *Advanced Materials Technologies*. 2, 6, 1700009.

### **Sustainable cellulose containing inks for printed electronics on paper substrates**

Pereira, L., 1 Jan 2017, *International Conference on Nanotechnology for Renewable Materials 2017*. TAPPI Press, Vol. 1. p. 506-522 17 p.

### **Solid State Electrochemical WO<sub>3</sub> Transistors with High Current Modulation**

Grey, P., Pereira, L., Pereira, S., Barquinha, P., Cunha, I., Martins, R. & Fortunato, E., 1 Sep 2016, In: *Advanced Electronic Materials*. 2, 9, 1500414.

**Transistors: Solid State Electrochemical WO<sub>3</sub> Transistors with High Current Modulation (Adv. Electron. Mater. 9/2016)**  
Grey, P., Pereira, L., Pereira, S., Barquinha, P., Cunha, I., Martins, R. & Fortunato, E., 1 Sep 2016, In: *Advanced Electronic Materials*. 2, 9

**Interpreting anomalies observed in oxide semiconductor TFTs under negative and positive bias stress**  
Jin, J. W., Nathan, A., Barquinha, P., Pereira, L., Fortunato, E., Martins, R. & Cobb, B., 1 Aug 2016, In: *RCS Advances*. 6, 8, 085321.

**Bacterial Nanocellulose: From Biotechnology to Bio-Economy: Optoelectronic Devices from BacterialNanoCellulose**  
Fortunato, E. M. C., Gaspar, D., Duarte, P., Pereira, L. M. N., Aguas, H., Vicente, A., Dourado, F., Gama, M. & Martins, R. F. D. P., 12 Jul 2016, *Optoelectronic Devices from BacterialNanoCellulose*. Gama, M., Dourado, F. & Bieleki, F. (eds.). 1st edition ed. Elsevier, p. 179-197 19 p.

#### **Optoelectronic Devices from Bacterial NanoCellulose**

Fortunato, E., Gaspar, D., Duarte, P., Pereira, L., Águas, H., Vicente, A., Dourado, F., Gama, M. & Martins, R., 11 Jul 2016, *Bacterial Nanocellulose: From Biotechnology to Bio-Economy*. Elsevier Inc., 19 p.

#### **Smart optically active VO<sub>2</sub> nanostructured layers applied in roof-type ceramic tiles for energy efficiency**

Gonçalves, A., Resende, J., Marques, A. C., Pinto, J. V., Nunes, D., Marie, A., Gonçalves, R. F., Pereira, L., Martins, R. & Fortunato, E., 1 Jun 2016, In: *Solar Energy Materials and Solar Cells*. 150, p. 1-9 9 p.

#### **THE FRONT EDGE OF MATERIALS SOCIETAL CHALLENGES**

Martins, R. F. D. P., Barquinha, P. M. C., Fortunato, E. M. C. & Pereira, L. M. N., 16 May 2016.

#### **Synthesis of WO<sub>3</sub> nanoparticles for biosensing applications**

Santos, L., Silveira, C. M., Elangovan, E., Neto, J. P., Nunes, D., Pereira, L., Martins, R., Viegas, J., Moura, J. J. G., Todorovic, S., Almeida, M. G. & Fortunato, E., 1 Feb 2016, In: *Sensors And Actuators B-Chemical*. 223, p. 186-194 9 p.

#### **Metal oxide nanoparticle engineering for printed electrochemical applications**

Wojcik, P. J., Pereira, L., Martins, R. & Fortunato, E., 1 Jan 2016, *Handbook of Nanoelectrochemistry: Electrochemical Synthesis Methods, Properties, and Characterization Techniques*. SPRINGER INTERNATIONAL PUBLISHING AG, p. 783-818 36 p.

#### **Electrochemical transistor based on tungsten oxide with optoelectronic properties**

Grey, P., Pereira, L. M. N., Pereira, S., Barquinha, P. M. C., Cunha, I., Martins, R. F. D. P. & Fortunato, E. M. C., 2016, *Technological Innovation for Cyber-Physical Systems: Proceedings of the 7th IFIP WG 5.5/SOCOLNET Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, DoCEIS 2016*. Camarinha-Matos, L. M., Falcão, A., Vafaei, N. & Najdi, S. (eds.). Cham: Springer, p. 542-550 9 p. (IFIP Advances in Information and Communication Technology; vol. 470).

#### **Photocatalytic behavior of TiO<sub>2</sub> films synthesized by microwave irradiation**

Nunes, D., Pimentel, A., Pinto, J. V., Calmeiro, T. R., Nandy, S., Barquinha, P., Pereira, L., Carvalho, P. A., Fortunato, E. & Martins, R., 2016, In: *Catalysis Today*. 278, p. 262-270 9 p.

#### **Electrodeposition of WO<sub>3</sub> Nanoparticles for Sensing Applications**

Santos, L. S. L., Neto, J., Crespo, A., Baião, P., Barquinha, P. M. C., Pereira, L. M. N., Martins, R. F. D. P. & Fortunato, E. M. C., 2 Dec 2015, *Electroplating of Nanostructures*. Aliofkhae, M. (ed.). InTech, p. 27-47

#### **Engineered cellulose fibers as dielectric for oxide field effect transistors**

Gaspar, D., Pereira, L., Delattre, A., Guerin, D., Fortunato, E. & Martins, R., 1 Dec 2015, In: *Physica Status Solidi (C) Current Topics In Solid State Physics*. 12, 12, p. 1421-1426 6 p.

#### **Handbook of Nanoelectrochemistry: Metal Oxide Nanoparticle Engineering for Printed Electrochemical Applications**

Wojcik, P. J., Pereira, L. M. N., Martins, R. F. D. P. & Fortunato, E. M. C., 11 Jun 2015, *Metal Oxide Nanoparticle Engineering for Printed Electrochemical Applications: Electrochemical Synthesis Methods, Properties and*

*Characterization Techniques*. Aliofkhazraei, M. & Makhlof, A. (eds.). 1st edition ed. SPRINGER INTERNATIONAL PUBLISHING AG, p. 1-29 30 p.

#### **Thin Film Silicon Photovoltaic Cells on Paper for Flexible Indoor Applications**

Águas, H., Mateus, T., Vicente, A., Gaspar, D., Mendes, M. J., Schmidt, W. A., Pereira, L., Fortunato, E. & Martins, R., 1 Jun 2015, In: *Advanced Functional Materials*. 25, 23, p. 3592-3598 7 p.

#### **Tailoring nanoscale properties of tungsten oxide for inkjet printed electrochromic devices**

Wojcik, P. J., Santos, L., Pereira, L., Martins, R. & Fortunato, E., 7 Feb 2015, In: *Nanoscale*. 7, 5, p. 1696-1708 13 p.

#### **Towards environmental friendly solution-based ZTO/AIO<sub>x</sub> TFTs**

Branquinho, R., Salgueiro, D., Santa, A., Kiazadeh, A., Barquinha, P., Pereira, L., Martins, R. & Fortunato, E., 1 Feb 2015, In: *Semiconductor Science And Technology*. 30, 2(SI), 024007.

#### **Structure and Morphologic Influence of WO<sub>3</sub> Nanoparticles on the Electrochromic Performance of Dual-Phase a-WO<sub>3</sub>/WO<sub>3</sub> Inkjet Printed Films**

Santos, L., Wojcik, P., Pinto, J. V., Elangovan, E., Viegas, J., Pereira, L., Martins, R. & Fortunato, E., 15 Jan 2015, In: *Advanced Electronic Materials*. 1, 1-2, 1400002.

#### **Solvothermal synthesis of gallium-indium-zinc-oxide nanoparticles for electrolyte-gated transistors**

Santos, L., Gomes, D. D. S. N., Calmeiro, T., Branquinho, R., Salgueiro, D., Barquinha, P., Pereira, L., Martins, R. & Fortunato, E., 14 Jan 2015, In: *Acs Applied Materials & Interfaces*. 7, 1, p. 638-646 9 p.

#### **Engineering of metal oxide nanoparticles - Applications in electrochemical devices**

Santos, L., Pereira, L. M. N. & Fortunato, E., 2015, Lambert Academic Publishing.

#### **Flexible and Transparent WO<sub>3</sub> Transistor with Electrical and Optical Modulation**

Barquinha, P., Pereira, S., Pereira, L., Wojcik, P., Grey, P., Martins, R. & Fortunato, E., 2015, In: *Advanced Electronic Materials*. 1, 5, 1500030.

#### **Aqueous Combustion Synthesis of Aluminum Oxide Thin Films and Application as Gate Dielectric in GZTO Solution-based TFTs**

Branquinho, R., Salgueiro, D., Santos, L., Barquinha, P., Pereira, L. M. N., Martins, R. F. D. P. & Fortunato, E., 26 Nov 2014, In: *Acs Applied Materials & Interfaces*. 6, 22, p. 19595-19599 5 p.

#### **WO<sub>3</sub> nanoparticles-based conformable pH sensor**

Santos, L. S. L., Neto, J. P., Crespo, A., Nunes, D., Costa, N., Fonseca, I. M. D. F. L. D., Barquinha, P. M. C., Pereira, L. M. N., Silva, J., Martins, R. F. D. P. & Fortunato, E. M. C., 13 Aug 2014, In: *Acs Applied Materials & Interfaces*. 6, 15, p. 12226-12234

#### **Nanocrystalline cellulose applied simultaneously as the gate dielectric and the substrate in flexible field effect transistors**

Gaspar, D., Fernandes, S. N., De Oliveira, A. G., Fernandes, J. G., Grey, P., Pontes, R. V., Pereira, L., Martins, R., Godinho, M. H. & Fortunato, E., 7 Mar 2014, In: *Nanotechnology*. 25, 9, 094008.

#### **Contrast enhancement in polymeric electrochromic devices encompassing room temperature ionic liquids**

Fortunato, E. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2014, In: *International Journal Of Electrochemical Science*. 9, 4, p. 1650-1662

#### **Electronic structure of amorphous ZnO films**

Fortunato, E. M. C., Barquinha, P. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2014, *Physica Status Solidi C-Current Topics in Solid State Physics*. p. 1476-1480

#### **Statistical mixture design and multivariate analysis of inkjet printed a -WO<sub>3</sub>/TiO<sub>2</sub>/WO<sub>x</sub> electrochromic films**

Fortunato, E. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2014, In: *ACS Combinatorial Science*. 16, 1, p. 5-16

### **The future is paper based**

Fortunato, E. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2014, In: Information Display. 30, 2, p. 20-24

### **The influence of fibril composition and dimension on the performance of paper gated oxide transistors**

Fortunato, E. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2014, In: Nanotechnology. 25, 9, p. 094007

### **Electrochromic behavior of NiO thin films deposited by e-beam evaporation at room temperature**

Pereira, S., Gonçalves, A., Correia, N., Pereira, L. M. N., Martins, R. F. D. P. & Fortunato, E. M. C., Jan 2014, In: Solar Energy Materials and Solar Cells. 120, SI, p. 109-115 7 p.

### **Current transport mechanism at metal-semiconductor nanoscale interfaces based on ultrahigh density arrays of p-type NiO nano-pillars**

Nandy, S., Gonçalves, G., Pinto, J. V., Busani, T., Figueiredo, V., Pereira, L., Paiva Martins, R. F. & Fortunato, E., 7 Dec 2013, In: Nanoscale. 5, 23, p. 11699-11709 11 p.

### **Plastic Compatible Sputtered Ta2O5 Sensitive Layer for Oxide Semiconductor TFT Sensors**

Branquinho, R., Vaz Pinto, J., Busani, T. L., Barquinha, P. M. C., Pereira, L. M. N., Baptista, P. M. R. V., Martins, R. F. D. P. & Fortunato, E. M. C., Sep 2013, In: Journal Of Display Technology. 9, 9, p. 723-728

### **Gelatin/Zn(CF3SO3)2 polymer electrolytes for electrochromic devices**

Alves, R. D., Rodrigues, L. C., Andrade, J. R., Fernandes, M., Pinto, J. V., Pereira, L., Pawlicka, A., Martins, R., Fortunato, E., deZea Bermudez, V. & Silva, M. M., Jun 2013, In: Electroanalysis. 25, 6, p. 1483-1490 8 p.

### **Preparation and characterization of cellulose nanocomposite hydrogels as functional electrolytes**

Ramos, A. M., Pereira, S., Cidade, M. T., Pereira, G., Branquinho, R., Pereira, L., Martins, R. & Fortunato, E., 20 May 2013, In: Solid State Ionics. 242, p. 26-32 7 p.

### **Fast Switching Electrochromic Devices Containing Optimized BEMA/PEGMA Gel Polymer Electrolytes**

Fortunato, E. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2013, In: International Journal of Electrochemistry. 2013, NA, p. 1-10

### **Performances of Microcrystalline Zinc Tin Oxide Thin-Film Transistors Processed by Spray Pyrolysis**

Elamurugu, E., Parthiban, S., Nayak, P. K., Gonçalves, A., Nunes, D., Pereira, L. M. N., Barquinha, P. M. C., Busani, T. L., Fortunato, E. M. C. & Martins, R. F. D. P., 1 Jan 2013, In: Journal Of Display Technology. 9, 10, p. 825-831

### **Recyclable, Flexible, Low-Power Oxide Electronics**

Fortunato, E. M. C., Ferreira, I. M. M., Barquinha, P. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2013, In: Advanced Functional Materials. 23, 17, p. 2153-2161

### **Study and Characterization of a Novel Polymer Electrolyte Based on Agar Doped with Magnesium Triflate**

Alves, R. D., Rodrigues, L. C., Andrade, J. R., Pawlicka, A., Pereira, L. M. N., Martins, R. F. D. P., Fortunato, E. M. C. & Silva, M. M., 1 Jan 2013, In: Molecular Crystals And Liquid Crystals. 570, 1, p. 1-11

### **Paper electronics: A challenge for the future**

Martins, R., Pereira, L. M. N. & Fortunato, E., 2013, In: Journal Of The Society For Information Display. 44, 1, p. 365-367 3 p.

### **Transparent Oxide Electronics: From Materials to Devices**

Barquinha, P. M. C., Martins, R. F. D. P., Pereira, L. M. N. & Fortunato, E. M. C., Mar 2012, John Wiley & Sons. 360 p.

### **Microstructure control of dual-phase inkjet-printed a-WO3/TiO2/WOX films for high-performance electrochromic applications**

Wojcik, P. J., Cruz, A. S., Santos, L. S. L., Pereira, L. M. N., Martins, R. F. D. P. & Fortunato, E. M. C., 1 Jan 2012, In: Journal Of Materials Chemistry. 22, 26, p. 13268-13278

**Multicomponent dielectrics for oxide TFT**

Fortunato, E. M. C., Barquinha, P. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2012, *Proceedings of SPIE*. Vol. 8263. p. 826316-1-826316-16

**Amorphous multicomponent dielectric based on the mixture of high band gap and high k materials, respective devices and manufacture**

Barquinha, P. M. C., Martins, R. F. D. P., Fortunato, E. M. C., Pereira, L. M. N., Gonçalves, G., Kuscer, D. & Kosec, M., 10 Feb 2011, World Intellectual Property Organization (WIPO), Patent No. WO2011016741, 5 Aug 2010, Priority date 5 Aug 2009, Priority No. PT104709

**Away from silicon era: the paper electronics**

Fortunato, E. M. C., Ferreira, I. M. M., Busani, T. L., Barquinha, P. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2011, *Oxide-based materials and devices II*. Vol. 7940. p. 79400P

**Complementary Metal Oxide Semiconductor Technology With and On Paper**

Fortunato, E. M. C., Ferreira, I. M. M., Barquinha, P. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2011, In: *Advanced Materials*. 23, 39, p. 4491-4496

**The effect of dopants on the morphology, microstructure and electrical properties of transparent zinc oxide films prepared by the sol-gel method**

Fortunato, E. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2011, In: *Thin Solid Films*. 520, 4, p. 1174-1177

**Oxide Semiconductors: From Materials to Devices**

Fortunato, E. M. C., Barquinha, P. M. C., Gonçalves, G., Pereira, L. M. N. & Martins, R. F. D. P., 9 Oct 2010, *Transparent Electronics: From Synthesis to Applications*. Facchetti, A. & Marks, T. J. (eds.). Chichester, UK: John Wiley & Sons, Ltd, p. 141-183

**Small area estimation of mean price of habitation transaction using time-series and cross-sectional area-level models**

Pereira, L. N. & Coelho, P. S., 1 Apr 2010, In: *Journal of Applied Statistics*. 37, 4, p. 651-666 16 p.

**Nanostructured silicon based thin film transistors processed in the plasma dark region**

Pereira, L. M. N., Aguas, H., Gomes, L., Barquinha, P. M. C., Fortunato, E. M. C. & Martins, R. F. D. P., Apr 2010, In: *Journal Of Nanoscience And Nanotechnology*. 10, 4, p. 2938-2943

**Insight on the SU-8 resist as passivation layer for transparent Ga<sub>2</sub>O<sub>3</sub>-In<sub>2</sub>O<sub>3</sub>-ZnO thin-film transistors**

Fortunato, E. M. C., Barquinha, P. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2010, In: *Journal Of Applied Physics*. 108, 6, p. nr. 064505

**Low-temperature sputtered mixtures of high-kappa and high bandgap dielectrics for GIZO TFTs**

Fortunato, E. M. C., Barquinha, P. M. C., Martins, R. F. D. P. & Pereira, L. M. N., 1 Jan 2010, In: *Journal Of The Society For Information Display*. 18, 10, p. 762-772

**Floating gate memory paper transistor**

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#### **Polycrystalline silicon obtained by gold metal induced crystallization**

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DCM Group Author, Silva, R. J. C., Braz Fernandes, F. M. & Pereira, L. M. N., 1 Jan 2004, *Materials Science Forum*. Vol. 455-456. p. 342-345

**MIS photodiodes of polymorphous silicon deposited at higher growth rates by 27.12 MHz PECVD discharge**

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**ZnO: Ga thin films produced by RF sputtering at room temperature: Effect of the power density**

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**Sputtering preparation of silicon nitride thin films for gate dielectric applications**

Pereira, L. M. N., Águas, H. M. B., Igreja, R. A. G. B. D. N., Martins, R. M. S., Fortunato, E. M. C. & Martins, R. F. D. P., Apr 2003, *Materials Science Forum - ADVANCED MATERIALS FORUM II*. Vol. 455-456. p. 69-72 4 p.

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**Gallium zinc oxide coated polymeric substrates for optoelectronic applications**

Fortunato, E., Gonçalves, A., Marques, A., Assunção, V., Ferreira, I., Águas, H., Pereira, L. & Martins, R., 2003, In: *MRS Proceedings*. 769, p. 291-296 6 p.

**Polymorphous Silicon Films Produced in Large Area Reactors by PECVD at 27.12 MHz and 13.56 MHz**

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**Dependence of the strains and residual mechanical stresses on the performances presented by a-Si: H thin film position sensors**

Fortunato, E., Brida, D., Pereira, L., Águas, H., Silva, V., Ferreira, I., Costa, M. F. M., Teixeira, V. & Martins, R., Aug 2002, In: *Advanced Engineering Materials*. 4, 8, p. 612-616 5 p.

**a-Si : H interface optimisation for thin film position sensitive detectors produced on polymeric substrates**

Pereira, L. M. N., Brida, D., Fortunato, E. M. C., Ferreira, I. M. M., Águas, H. M. B., Silva, V., Costa, M. F. M., Teixeira, V. & Martins, R. F. D. P., Apr 2002, In: *Journal of Non-Crystalline Solids*. 299-302, PART 2, p. 1289-1294 6 p.

**New insights on large area flexible position sensitive detectors**

Brida, D., Fortunato, E., Águas, H., Silva, V., Marques, A., Pereira, L., Ferreira, I. & Martins, R., Apr 2002, In: *Journal of Non-Crystalline Solids*. 299, 302, p. 1272-1276 5 p.

**Performance of a-Six: C1-x:H Schottky barrier and pin diodes used as position sensitive detectors**

Cabrita, A., Figueiredo, J., Pereira, L., Silva, V., Brida, D., Fortunato, E. & Martins, R., Apr 2002, In: *Journal of Non-Crystalline Solids*. 299-302, 302, p. 1277-1282 6 p.

**The properties of a-Si: H films deposited on Mylar substrates by hot-wire plasma assisted technique**

Ferreira, I., Fortunato, E., Pereira, L., Costa, M. E. V. & Martins, R., Apr 2002, In: *Journal of Non-Crystalline Solids*. 299-302, p. 30-35 6 p.

**High quality a-Si:H films for MIS device applications**

Águas, H. M. B., Fortunato, E. M. C., Silva, V., Pereira, L. M. N. & Martins, R. F. D. P., 1 Feb 2002, In: *Thin Solid Films*. 403, NA, p. 26-29 4 p.

**Role of the density of states in the colour selection of the collection spectrum of amorphous silicon-based Schottky photodiodes**



Cabrita, A., Pereira, L., Brida, D., Silva, V., Ferreira, I., Fortunato, E. & Martins, R., 2002, In: Bioceramics 18, Pts 1 And 2. 230-232, p. 559-562 4 p.

**Role of the i-layer thickness in the performance of a-Si: H Schottky barrier photodiodes**

Águas, H., Fortunato, E., Pereira, L., Silva, V. & Martins, R., 2002, In: Bioceramics 18, Pts 1 And 2. 230-232, p. 587-590 4 p.

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Cabrita, A. M. F., Pereira, L., Brida, D., Lopes, A. A. S., Marques, A. J. S., Ferreira, I., Fortunato, E. & Martins, R., 12 Dec 2001, In: Applied Surface Science. 184, 1-4, p. 437-442 6 p.

**Thin film position sensitive detectors based on pin amorphous silicon carbide structures**

Cabrita, A., Figueiredo, J., Pereira, L., Águas, H., Silva, V., Brida, D., Ferreira, I., Fortunato, E. & Martins, R., 12 Dec 2001, In: Applied Surface Science. 184, 1-4, p. 443-447 5 p.

**Silicon carbide alloys produced by hot wire, hot wire plasma-assisted and plasma-enhanced CVD techniques**

Ferreira, I. M. M., Costa, M. E. V., Pereira, L. M. N., Fortunato, E. M. C. & Martins, R. F. D. P., 1 Jan 2001, In: Applied Surface Science. 184, 1-4, p. 8-19

## Activities

**Journal of Materials Chemistry C (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2017 → ...

**Sociedade Portuguesa de Materiais (External organisation)**

Luis Miguel Nunes Pereira (Chair)  
2017 → ...

**2D Materials and Applications (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2016 → ...

**E-MRS Spring Meeting 2015 (Event)**

Luis Miguel Nunes Pereira (Chair)  
2015

**IEEE Electron Device Letters (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2015 → 2017

**Materials Science in Semiconductor Processing (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2015 → 2017

**Applied Physics Letters (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2014 → 2017

**Electrochimica Acta (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2014 → 2017

**EMRS Spring Meeting 2014 (Event)**

Luis Miguel Nunes Pereira (Chair)  
2014

**PHYSICA STATUS SOLIDI A (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2014 → 2017

**Physica Status Solidi-Rapid Research Letters (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2014 → 2017

**EMRS Fall Meeting (Event)**

Luis Miguel Nunes Pereira (Chair)  
2013

**Semiconductor Science And Technology (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2012 → 2017

**Solar Energy Materials and Solar Cells (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2012 → 2017

**THIN SOLID FILMS (Journal)**

Luis Miguel Nunes Pereira (Editorial board member)  
2012 → 2017

**EMRS Fall Meeting 2011 (Event)**

Luis Miguel Nunes Pereira (Chair)  
2011

**Awards****Best SID paper, Korean Information Display Society/Korea**

Pereira, Luis Miguel Nunes (Recipient), 2010

**ERC Starting Grant, New-Fun, New era of printed paper electronics based on advanced functional cellulose**

Pereira, Luis Miguel Nunes (Recipient), 2015

**Innovation award**

Fortunato, Elvira Maria Correia (Recipient), Martins, Rodrigo Ferrão de Paiva (Recipient), Pereira, Luis Miguel Nunes (Recipient), Barquinha, Pedro Miguel Cândido (Recipient), Goes, João Carlos da Palma (Recipient) & Oliveira, João Pedro Abreu de (Recipient), 2017

**R&D Green Project Award**

Pereira, Luis Miguel Nunes (Recipient), 2009

**Projects****SYNERGY: SYmbiosis for eENERGY harversting concepts for smart platforms on foils**

Martins, R. F. D. P., Pereira, L. M. N., Águas, H. M. B. & Gaspar, D. F. P.

European Commission: €216,335.00

1/10/20 → 30/09/23