

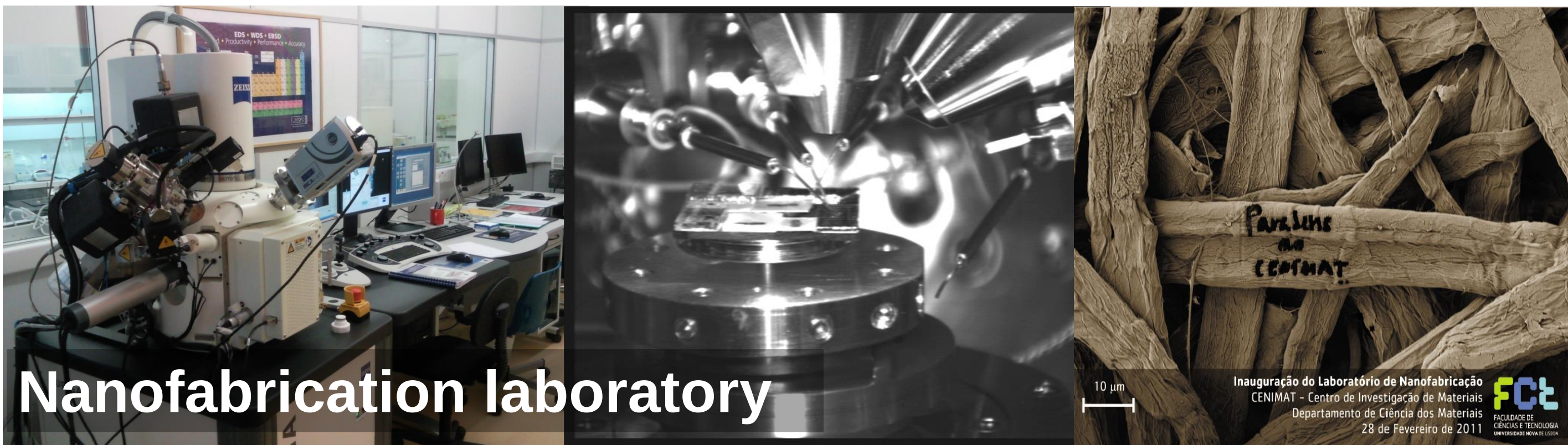
Advanced Materials/Devices Technologies @CENIMAT/I3N



Numbers

Staff (integrated members):	27
Researchers with PhD:	27
PhD Students:	36
Grant holders:	47
PhD thesis concluded:	30
Articles in journals (ISI):	531
Books/Chapters:	19
Projects	
International:	52
National:	66
Industry:	23
Patents:	92

Materials for Devices



Solar Cells	Integrated Circuits
Batteries/Biobatteries	UV-vis Optical Sensors
Nanobiosensors	Electrochromic Devices
Paper Electronics	Microfluidics/Lab-on-Paper
Transparent Electronics	Interdigital Electrode Sensors
Intelligent Windows	Smart Textiles
Thin Film Transistors	Cellulose Liquid Crystals

Technologies / Facilities



Ink-jet Printing	CO ₂ laser
Sol-Gel	Severe Plastic Deformation (ECAP)
Hydrothermal	Casting
Microwave synthesis	Rapid Thermal Annealing
Combustion Synthesis	Rolling
PECVD/LPCVD/CVD	Oxygen Plasma
Thermal Evaporation	Diffusion Furnaces
Magnetron Sputtering	Oxidation Furnaces
Langmuir Blodgett	Fiber extruder
Electrospinning/Dip coating	Spray Pyrolysis
Dry Etching	Single Screw Extruder
Parylene Deposition	Screen-printing
Oxygen Plasma	Flexoprinting

Projects 2013-2018



Relevant Publications

- Oliveira, J. P.; Miranda, R. M.; Braz Fernandes, F. M., Welding and Joining of NiTi Shape Memory Alloys: A Review. **Progress in Materials Science** 2017, 88, 412-466.
- Fernandes, S. N.; Almeida, P. L.; Monge, N.; Aguirre, L. E.; Reis, D.; de Oliveira, C. L. P.; Neto, A. M. F.; Pieranski, P.; Godinho, M. H., Mind the Microgap in Iridescent Cellulose Nanocrystal Films. **Advanced Materials** 2017.
- Liu, A.; Zhu, H.; Guo, Z.; Meng, Y.; Liu, G.; Fortunato, E.; Martins, R.; Shan, F., Solution Combustion Synthesis: Low-Temperature Processing for p-Type Cu:NiO Thin Films for Transparent Electronics. **Advanced Materials** 2017, 29.
- Goswami, S.; Nandy, S.; Banerjee, A. N.; Kiazadeh, A.; Dillip, G. R.; Pinto, J. V.; Joo, S. W.; Martins, R.; Fortunato, E., "Electro-Typing" on a Carbon-Nanoparticles-Filled Polymeric Film using Conducting Atomic Force Microscopy. **Advanced Materials** 2017.
- Mendes, M. J.; Araújo, A.; Vicente, A.; Águas, H.; Ferreira, I.; Fortunato, E.; Martins, R., Design of optimized wave-optical spheroidal nanostructures for photonic-enhanced solar cells. **Nano Energy** 2016, 26.